

## НАУЧНЫЕ СООБЩЕНИЯ

Research communication

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## GROWING INTEREST IN ARCTIC AFFAIRS ON THE PART OF NON-ARCTIC STATE INDIA

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**Abstract.** This Research Communication examines how and why India's interest in Arctic affairs has evolved since it became an Observer state to the Arctic Council (AC) in 2013. The paper also asks what strengths India can offer to support AC member states to resume joint scientific research involving Russia? The study is based on the analysis of reports and media texts. The graphical method is used to present research results. Our findings demonstrate that India's interest in Arctic affairs has grown since 2013 and today, in 2023, through achievements in scientific works, India has a goal to establish itself as an influential presence within the Arctic. Since 2011 India has been conducting studies on climate change in the Arctic. After becoming an Observer state in the AC, India actively participates in meetings of the Senior Arctic Officials, contributes to the six working groups of the AC and sustains engagement with the Arctic Energy Summit, Arctic Science Ministerial and Task Forces. India's focus on cryospheric research has helped improve Arctic oceanography, atmosphere, pollution and microbiology. The study showed that the Arctic region is crucial for India as processes in this region affect atmospheric, oceanographic and biogeochemical cycles of the Earth's ecosystem, especially in the Himalayas, commonly referred to as the Third Pole. The Arctic and the Himalayas are interconnected and share similar concerns. In considering how India's activities can aid the Arctic region, we found that India has one of the most advanced space programs in the world and can offer expertise in providing satellite communication in remote areas. We also paid attention to how India may contribute politically to stability between the AC states. We conclude that with India taking over the G20 Presidency in 2022 it is likely that India could potentially act as a credible and legitimate mediator to restore stability within the Arctic region. The G20 is extremely relevant to the Arctic, as six of the eight AC Permanent members and 12 of the 13 AC Observers are represented at the G20 Forum, and the G20 Forum's agenda includes climate change, sustainable development, and the environment all of which are threatened by the downsizing of scientific research in the Arctic.

**Keywords:** Arctic, India, non-Arctic state, geopolitics, strategy

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## RESEARCH COMMUNICATION

Научное сообщение

## РАСТУЩИЙ ИНТЕРЕС К АРКТИКЕ СО СТОРОНЫ НЕАРКТИЧЕСКОГО ГОСУДАРСТВА ИНДИЯ

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**Аннотация.** В данном научном сообщении рассмотрено, как и почему развивался интерес Индии к арктической повестке с тех пор, как эта страна стала государством-наблюдателем в Арктическом совете (АС) в 2013 г. Также затрагивается вопрос, какие сильные стороны Индии могут способствовать поддержке стран — членов АС в возобновлении совместных научных исследований с участием России? Исследование основано на анализе отчетов и текстов СМИ и правительственных сайтов. Для представления результатов используется графический метод. Показано, что с 2013 г. интерес Индии к арктической повестке возрастал, и сегодня, в 2023 г., благодаря ее научным достижениям, Индия ставит перед собой задачу утвердить свое влиятельное присутствие в Арктике. С 2011 г. Индия проводит исследования по изменению климата в Арктике. Будучи государством-наблюдателем в АС, она активно участвует во встречах старших должностных лиц Арктики, вносит вклад в работу шести рабочих групп АС, поддерживает взаимодействие с Арктическим энергетическим саммитом и целевыми группами, занимается научными исследованиями в Арктическом регионе (Arctic Science Ministerial — ASM4).

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Внимание Индии к изучению криосферы способствовало развитию исследований в области океанографии, состояния атмосферы, микробиологии и борьбы с загрязнением в Арктике. Нами показано, что Арктический регион имеет большое значение для Индии, поскольку процессы, идущие в нем, влияют на атмосферные, океанографические и биогеохимические циклы экосистемы Земли, особенно в Гималаях, которые обычно называют третьим полюсом. Арктика и Гималаи взаимосвязаны и имеют общие проблемы. Рассматривая, как деятельность Индии может помочь Арктическому региону, мы обнаружили, что Индия имеет одну из самых передовых космических программ в мире, ее опыт может быть полезен при обеспечении спутниковой связи в отдаленных районах. Мы также обратили внимание на то, что Индия может внести политический вклад в обеспечение стабильности между государствами АС. Мы пришли к выводу, что с учетом того, что Индия председательствует в Форуме G20 с декабря 2022 г., эта страна может выступать в качестве авторитетного и легитимного посредника для восстановления стабильности в Арктическом регионе. Форум G20 чрезвычайно актуален для Арктики, поскольку шесть из восьми постоянных членов АС и 12 из 13 наблюдателей АС представлены на Форуме G20, а повестка дня Форума G20 включает изменение климата, устойчивое развитие и защиту окружающей среды — вопросы, находящиеся под угрозой из-за сокращения научных исследований в Арктике.

*Ключевые слова:* Арктика, Индия, неарктическое государство, геополитика, стратегия

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## Introduction

From as early as 1996, through the work of Sanjay Chaturvedi [1] (who proposed that the polar scene should be approached and understood in terms of its broader regional as well as its global contexts) to the more recent, 2023 work of Alexander Sergunin [2] (who investigates options to overcome obstacles towards implementing the “2017 Arctic Science Cooperation Agreement”) many authors observed that the Arctic region has maintained a strong regional identity, underpinned by non-political cooperation across all its member states. Continued scientific participation between both Arctic and non-Arctic States has been the focus for promoting peaceful development within the region<sup>1</sup>. Today, in the light of events in 2022, the Arctic Council is suspended and a significant part of international joint activity in the Arctic is ceased<sup>2</sup>. India, as an Observer state to the Arctic Council on the one hand and an ever-peaceful country towards Russia on the other, is the focus of our research.

This Research Communication examines how, and why, India’s interest in Arctic affairs has changed in the period since it became an Arctic Observer state in 2013. The question is asked, as a non-Arctic state, what advantages can India offer to help the Arctic Council State members resume scientific research involving Russia? The Arctic region is crucial for India because processes in this region influence atmospheric, oceanographic and biogeochemical cycles of the Earth’s ecosystem, especially within the Himalayas. Although geographically distant, the Arctic and the Himalayas, are interconnected and do share similar concerns. Arctic meltdown is leading the Indian scientific community to better understand glacial

melts in the Himalayas. Commonly referred to as the Third Pole, the Himalayas are the source of many the major rivers that flow through India. Climate change occurring in the Arctic, while not fully understood, does influence the monsoons in India. India’s agricultural operations are directly dependent upon the monsoons.

## Methods and data

This research communication is based on the analysis of reports and media texts describing the role of India in Arctic affairs. Information is collected from authoritative websites and publications pertinent to the topic of this study. Only “content-neutral” and “context-unbiased” materials are referenced. Overtly nationalistic or jingoistic materials have been deliberately excluded. A graphical method is used to present the results of this research.

## Results and discussion

### I. Geopolitical interests in the Arctic and international memberships

In our study, we looked to build a picture of Arctic geopolitical memberships, by asking which countries are regarded as accredited, Arctic Council State members, or Arctic Council Observers and what is India’s position in Arctic geopolitical memberships. We then extended this picture to include the countries of the European Union and the Northern Atlantic Treaty Organisation (NATO), both of which have become increasingly interested in the affairs of the Arctic in the last decade. It is noted that many Arctic State members or Observer countries do also have memberships in both the European Union and in NATO.

<sup>1</sup> Arctic Council — 25 years of Peace and Cooperation — Highlights from Arctic Frontiers. Published: 19/02/2021. URL: <https://arctic-council.org/news/25-years-of-peace-and-cooperation-highlights-from-the-arctic-frontiers-panel/>.

<sup>2</sup> Sharma B. A Suspended Arctic Council: New Hope with Norway’s Chairmanship / Russian International Affairs Council. Analytics and Comments.

Published: 02/03/2023. URL: <https://russiancouncil.ru/en/analytics-and-comments/columns/arctic-cooperation/a-suspended-arctic-council-new-hope-with-norway-s-chairmanship/#:~:text=The%20Arctic%20Council%2C%20which%20in,to%20the%20conflict%20in%20Ukraine.>

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Figure 1 provides a detailed picture of the involvement of different countries in Arctic affairs through various international geopolitical organizations such as Arctic Council (AC), NATO, European Union (EU). The results of this paper conclude that role of the Arctic Council as non-political region of peace, stability and constructive cooperation has succumbed to global geopolitical pressures of 2022, Western sanctions against Russia, and the cessation of joined scientific workings and cooperation within the 8 Arctic State member countries. The affairs of the Arctic Council (AC) are expected to remain in limbo for the foreseeable future, at least till the resolution of the Russia–Ukraine conflict.

The Arctic Sea shares its borders with 5 countries, known as the “Arctic 5”. Greenland’s inclusion within the Kingdom of Denmark, positions Denmark also as an Arctic 5 member<sup>3</sup>. The physical territorial boundaries between the Arctic States are under discussion with UNCLOS/CLCS (United Nations Convention on the

Law of the Sea/Commission for the Limitation of the Continental Shelf).

The Arctic Council is the leading intergovernmental forum promoting cooperation, coordination and interaction among the Arctic States, Arctic Indigenous peoples and other Arctic inhabitants on common Arctic issues, in particular on issues of sustainable development and environmental protection in the Arctic. It was established on 19 September 1996 when the governments of Canada, the Kingdom of Denmark, Finland, Iceland, Norway, the Russian Federation, Sweden, and the United States signed the Ottawa Declaration. All Arctic Council decisions and statements require consensus of the eight Arctic States. Observer status in the Arctic Council is open to non-Arctic states, along with inter-governmental, inter-parliamentary, global, regional and non-governmental organizations that the Council determines can contribute to its work. Arctic Council Observer states primarily contribute through their engagement at the level of Working Groups<sup>4</sup>.

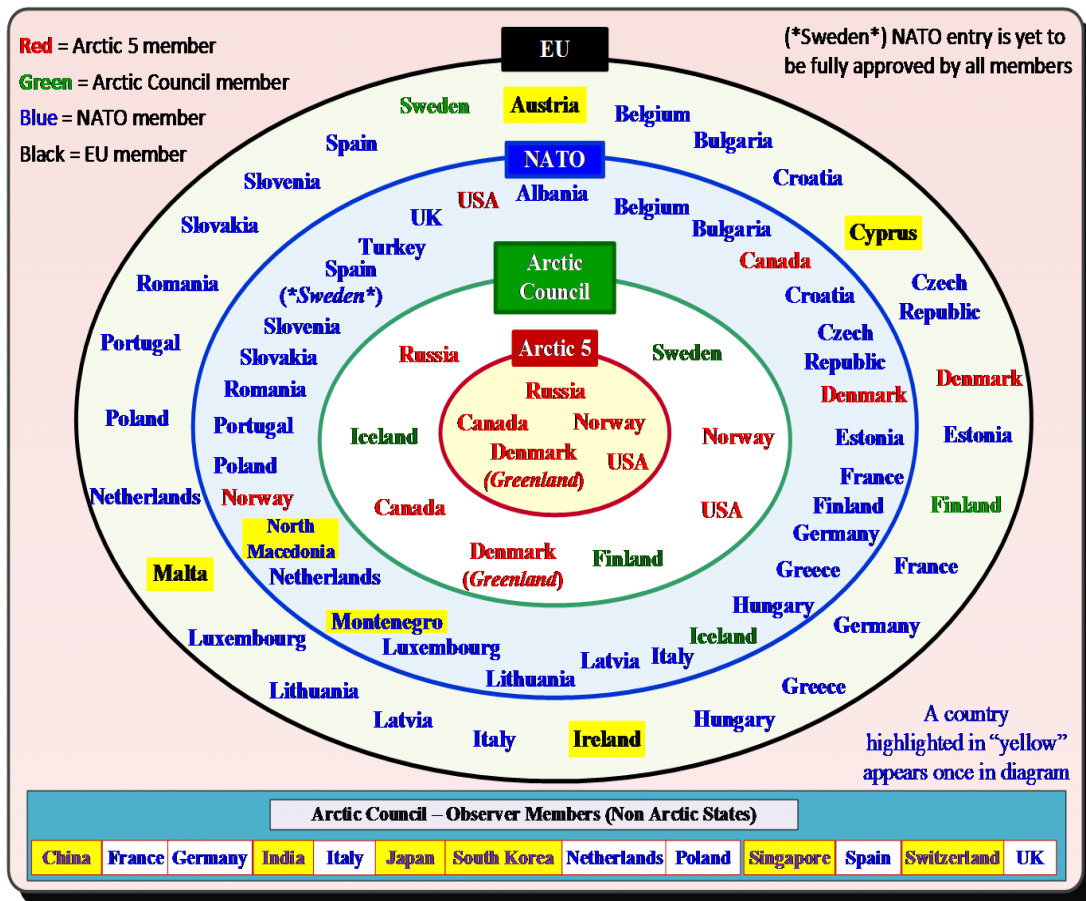


Fig. 1. Countries with an Arctic interest or an international geopolitical interest as of 2023 (created by the authors)

<sup>3</sup> The Arctic Five Versus the Arctic Council, The Arctic Five, Andreas Kuersten 2016, <https://arcticyearbook.com/arctic-yearbook/2016/2016-briefing-notes/205-the-arctic-five-versus-the-arctic-council#:~:text=The%20Arctic%20Five%20is%20the,the%20states%20that%20comprise%20it>.

<sup>4</sup> The Arctic Council, About the Arctic Council, <https://arctic-council.org/about/>.

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The North Atlantic Treaty Organisation (NATO)<sup>5</sup> was founded in Washington on 4 April 1949. As of 4<sup>th</sup> April 2023, NATO has 31 member countries. In 1949, there were 12 founding members of the Alliance: Belgium, Canada, Denmark, France, Iceland, Italy, Luxembourg, the Netherlands, Norway, Portugal, the United Kingdom and the United States. Since then, 19 more countries have joined the Alliance: Greece and Turkey (1952); Germany (1955); Spain (1982); Czechia, Hungary and Poland (1999); Bulgaria, Estonia, Latvia, Lithuania, Romania, Slovakia and Slovenia (2004); Albania and Croatia (2009); Montenegro (2017); North Macedonia (2020); Finland (2023). Sweden has the status of NATO Invitee.

The European Union Commission is a member of the Barents Euro-Arctic Council<sup>6</sup>, and party to UNCLOS and all its connected agreements directly, or indirectly are related to the Arctic. The European Union is represented at the Arctic Council either via European Arctic Council State members (so Denmark, Finland, and Sweden), or via its Observer states (France, Germany, Italy, Poland, the Netherlands, Spain). Since the EU Commission is a supranational body and not an intergovernmental organization, it does not meet the criteria established by the Arctic Council to acquire Observer status. As part of the process of constantly expanding its policy remit, the EU Commission has long sought a bigger role in Arctic issues. However, when it comes to the Arctic Council, Canada (because of the EU's position against the seal trade) and Russia (because of European economic sanctions over Russia's armed conflict with Ukraine) have traditionally been opposed to EU membership of the Arctic Council in any form—including as an Observer. At the Kiruna Ministerial Meeting in 2013, the Arctic Council received the application of the EU for Observer status affirmatively, but deferred a final decision. Until such time as Ministers of the Arctic States may reach a final decision, the EU's application is in a state of limbo, it is allowed to sit in and watch council proceedings, but it is not allowed to participate in them<sup>7</sup>. In September 2022, Clara Ganslandt took up the role as Special Envoy for Arctic matters. Her role is to drive forward the EU's Arctic policy, enhance cooperation with partner countries and other interested parties, improve coordination between the different EU institutions, mainstream Arctic issues in policy-making, and promote and publicise the EU's Arctic engagement externally<sup>8</sup>.

Our analysis shows that among countries with geopolitical interest in the Arctic, India is not involved in most of the international geopolitical memberships and has Observer status to the Arctic Council (Figure 1). There are thirteen Arctic Council Observer states: Germany (1998), Netherlands (1998), Poland (1998), United Kingdom (1998), France (2000), Spain (2006), China (2013), India (2013), Italy (2013), Japan (2013), South Korea (2013), Singapore (2013), Switzerland (2017). It is a testament to the growing importance of the Council that additional states, such as the Czech Republic, Estonia, Greece, Ireland, and Turkey, are interested in becoming Observer<sup>9</sup>.

The Russian-Ukraine conflict in 2022 saw an immediate “pausing” of all activities within the Arctic Council. This was followed by Canada, Finland, Iceland, the Kingdom of Denmark, Norway, Sweden and the United States announcing a limited resumption of work within the Arctic Council on projects that did not involve the participation of the Russia Federation<sup>10</sup>. The legitimacy of such a limited Arctic Council resumption without the involvement of Russia was questioned by Gao Feng, China's special envoy for Arctic Affairs<sup>11</sup>. In April 2023, China has offered to play a constructive role in helping Norway to efficiently restore the councils functions and cooperation between all parties<sup>12</sup>.

The cessation of scientific engagement with Russia presents a practical problem. Geographically, Russia stretches across 53 per cent of the Arctic Ocean coastline and its Arctic population accounts for nearly half of the population living in the Arctic worldwide<sup>13</sup>. Its physical presence in the Arctic cannot be ignored. Russia is a major stakeholder in the Arctic. A constant accumulation of data from sensors distributed all over the Arctic is needed.

Without continuously providing updated data from across the Arctic, it is impossible to create mathematical models of climate change that predict environmental impacts as well as further global changes [3]. Without mathematical models, it is impossible to study the mechanism of unpredictable consequences of climate change in the Arctic and distant non-Arctic States. On balance, it can be observed that this schism, preventing data exchange between the West and Russia is irrational and not in the long-term interests of both the Arctic and non-Arctic States [3]. The geopolitical changes that took place in 2022 are given in the Table 1.

<sup>5</sup> North Atlantic Treaty Organisation <https://www.britannica.com/topic/North-Atlantic-Treaty-Organization>.

<sup>6</sup> The Barents Euro-Arctic Council. URL: <https://barents-council.org/about-us/international-arctic-barents-and-northern-cooperation>.

<sup>7</sup> The Heritage Foundation, Global Politics, Why the US should oppose Observer status for the EU in the Arctic, 25.04.2019 <https://www.heritage.org/global-politics/report/why-the-us-should-oppose-observer-status-the-european-union-the-arctic#:~:text=Since%20the%20EU%20Commission%20is,observer%20in%20the%20Arctic%20Council>.

<sup>8</sup> The EU in the Arctic, [https://www.eeas.europa.eu/eeas/eu-arctic\\_en](https://www.eeas.europa.eu/eeas/eu-arctic_en).

<sup>9</sup> The rising importance of Non-Arctic States in the Arctic. URL: <https://www.wilsonquarterly.com/quarterly/the-new-north/the-rising-importance-of-non-arctic-states-in-the-arctic>.

<sup>10</sup> Government of Canada Joint statement on limited resumption of Arctic Council cooperation <https://www.canada.ca/en/global-affairs/news/2022/06/joint-statement-on-limited-resumption-of-arctic-council-cooperation.html>.

<sup>11</sup> Arctic Today, China will not recognize an Arctic Council without Russia <https://www.arctictoday.com/china-will-not-recognize-an-arctic-council-without-russia-envoy-says/>.

<sup>12</sup> The High North News. China Wants To Support Norway in Restoring the Arctic Council. 28.04.2023. <https://www.highnorthnews.com/en/china-wants-support-norway-restoring-arctic-council>.

<sup>13</sup> The Arctic Council, The Russian Federation, Quick Facts, <https://arctic-council.org/about/states/russian-federation/>.

Table 1

The geopolitical changes that took place in 2022<sup>1</sup>

2022	Geopolitical Event
3 March	Seven <sup>2</sup> of the eight Arctic Council State members announced a historic suspension of participation in all activities of the council <sup>3</sup> . This was followed on the same day by the Nordic Council of Members <sup>4</sup> suspended all cooperation with Russia <sup>5</sup>
4 March	The European Commission and the Barents Euro-Arctic Council (BEAC) <sup>6</sup> suspended cooperation with Russia in research, science, and innovation <sup>7</sup> . Later, on 11 June 2022, the USA elected to stop “institutional, administrative, funding, and personnel relationships and research collaborations in the fields of science and technology with Russian government-affiliated research institutions and individuals” <sup>8</sup>
8 June	The 7 Arctic States issued a joint statement on a limited resumption of projects that do not involve the participation of Russian activities <sup>9</sup>
October	China refused to recognise the legitimacy of the limited resumption of the Arctic Council and stated that it will continue collaboration with Russia and other Arctic nations in pursuance of its interests <sup>10</sup>

<sup>1</sup> Compiled by the authors.<sup>2</sup> Canada, Finland, Iceland, Denmark, Norway, Sweden and the USA.<sup>3</sup> Zellen B. S. The World Needs the Arctic Council Now More than Ever / The Barents Observer. Published: 19.04.2022. URL: <https://thebarentsobserver.com/en/opinions/2022/04/world-needs-arctic-council-now-more-ever/>.<sup>4</sup> Denmark, Finland, Iceland, Norway and Sweden.<sup>5</sup> Aagaard N. Nordic Council of Ministers Suspends All Cooperation with Russia / Nordic Co-operation 2022. Published: 03.03.2022. URL: <https://www.norden.org/en/news/nordic-council-ministers-suspends-all-co-operation-russia>.<sup>6</sup> BEAC member states include Russia, Finland, Denmark, Iceland, Norway, Sweden, and the European Union.<sup>7</sup> Maria Gabriel. Commission Suspends Cooperation with Russia on Research and Innovation / European Commission: Statement on research by commissioner Maria Gabriel. Published: 04.03.2022. URL: [https://ec.europa.eu/commission/presscorner/detail/en/ip\\_22\\_1544](https://ec.europa.eu/commission/presscorner/detail/en/ip_22_1544).<sup>8</sup> White House Press Release: Guidance on Scientific and Technological Cooperation with the Russian Federation for U. S. / Government and U. S. Government Affiliated Organizations. Published: 11.06.2022. URL: <https://www.whitehouse.gov/ostp/news-updates/2022/06/11/guidance-on-scientific-and-technological-cooperation-with-the-russian-federation-for-u-s-government-and-u-s-government-affiliated-organizations/>.<sup>9</sup> Government of Canada Press Release: Blanchard A. Joint Statement on Limited Resumption of Arctic Council Cooperation. Global Affairs Canada, Government of Canada. Published: 08.06.2022. URL: <https://www.government.ca/press-releases/2022/06/08/joint-statement-on-limited-resumption-of-arctic-council-cooperation.html>.<sup>10</sup> Schreiber M. China Will Not Recognize an Arctic Council without Russia, Envoy Says / Arctic Today. Published: 17.10.2022. URL: <https://www.arctictoday.com/china-will-not-recognize-an-arctic-council-without-russia-envoy-says/>.

In summary, restrictions, imposed by funding agencies in Europe and the USA have restrained the sharing of data between scientists. Importantly, this is particularly evident in the field of permafrost research from Russia, a key source for this information and used to assist scientists to produce climate models predicting future warming patterns [4].

This lack of engagement is regrettable and is markedly contradictory to the legally abiding, 2017, “Agreement on Enhancing International Arctic Scientific Cooperation between the eight Arctic Council State members” [3] whose purpose is to enhance cooperation in scientific activities towards the development of scientific knowledge about the Arctic. These views are in line with the opinion of the authors of a recent book on science diplomacy in the Arctic Zaika Y., Riabova L. and Sergunin A. who say that in the current geopolitical situation scientific dialogue in the Arctic is necessary because environmental and socio-economic processes in this region have a huge impact on the rest of the world [5, p. 173].

Furthermore, the suspension of activities within the Arctic Council carries across to activities of the 5 Asian Arctic Observer states, India, China, Japan, South Korea, and Singapore because the rules for Observer states is that their engagement inside the Arctic Council is at the level of Working Groups and they are not empowered to propose projects within these working groups [3]. The affairs of the Arctic Council (AC) are expected to remain in limbo for the foreseeable future, at least until the resolution of the Russia–Ukraine conflict.

## II. India as a non-Arctic State and Observer at the Arctic Council

The Arctic is warming up to four times faster than the rest of the world. In March 2023, Arctic sea ice reached its fifth-smallest winter peak in 45 years. In 2019 the UN called the thawing of permafrost one of the top ten emerging issues of environmental concern<sup>14</sup>. Countries such as the United Kingdom, France, Germany, China, Japan, South Korea and India are taking special interest in many aspects

<sup>14</sup> UK Parliament, 27 March 2023 — The UK and the Arctic environment — What does change in the Arctic mean for the UK and the wider world? <https://committees.parliament.uk/event/17917/formal-meeting-oral>

evidence-session/#:~:text=Meeting%20details&amp;text=The%20Arctic%20is%20warming%20up,emerging%20issues%20of%20environmental%20concern.

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of the Arctic that focus on scientific research, shipping, and resource development<sup>15</sup>. As an area of the planet experiencing rapid environmental change, there is increasing justification for international collaboration, and countries outside of the Arctic are an integral part of that collaboration. Moreover, while non-Arctic States do not have the same level of influence in the region as the Arctic States do, they have a role in the Arctic's governance and its future prosperity. The Arctic States and their local and Indigenous communities have much to gain in actively harnessing the economic power and scientific capabilities of external partners. Multilateral cooperation is increasing and is supported by the Arctic's well-established governance structure. Non-Arctic States support their researchers through world class science institutions with a major Arctic focus. These include the Alfred Wegener Institute, the Korea Polar Research Institute, Japan's National Institute of Polar Research, and the British Antarctic Survey.

India is an example of such a non-Arctic State member: Through contributing scientific knowledge and expertise, India believes it can leverage its strength in space technology and digital connectivity to help fill the gap of low digital connectivity in the Arctic region [6]. Figure 2 presents an assessment of the India involvement in the Arctic through to the present day in 2023. Our findings show that India has extremely good and productive relations with all Arctic countries and it is well positioned to seek a more inclusive role in the affairs of the Arctic Council.

The Arctic is experiencing rapid environmental change, and India is particularly vulnerable to these changes. Firstly, through the how changing Arctic air patterns can make to the Himalayas and to the Indian monsoon. Secondly, through India's extensive area of more than 7,500 square kilometers of coastline that is vulnerable to becoming submerged through rising seas water levels. Indian scientists anticipate that by 2100, 36 million Indians will likely live in locations that will regularly flood should sea levels rise by 8.5 cm over the next 50 years. Furthermore, for the millions who live near the sea, will be long-term worries through progressive coastal erosion, land subsidence, and delta inundation<sup>16</sup>.

In March 2022 India's Ministry of Earth Science unveiled its Arctic Policy, titled "India and the Arctic: Building a partnership for sustainable development" [6]. The policy articulates six Arctic pillars: (1) science and research, (2) climate and environmental protection, (3)

economic and human development, (4) transportation and connectivity, (5) governance and international cooperation, (6) national capacity building in Arctic Region (Figure 2). Through these, India desires to create a permanent presence in the Arctic though establishing more research stations and satellite ground stations in the region.

The National Centre for Polar and Ocean Research (NCPOR) in Goa is an autonomous institute under the Ministry of Earth Sciences. It is the "nodal institution" for India's Polar research programme and Arctic studies. While the Ministry of External Affairs looks after the engagements with the Arctic Council, other ministries such as the Ministry of Environment, Forests and Climate Change, Ministry of Science and Technology, and Ministry of Space are all involved in polar research. India seeks to play a constructive role in the Arctic by leveraging its vast scientific pool and expertise in Himalayan and Polar research. The India's Arctic Policy notes "India would also like to contribute in ensuring that as the Arctic becomes more accessible, the harnessing of its resources is done sustainably and in consonance with best practices formulated by bodies such as the Arctic Council"<sup>17</sup>.

Figure 2 presents an assessment of the role of India as a Non-Arctic State Observer of the AC as of 2023. The figure includes current, historical, strategic and headline summaries of India's involvement in the Arctic:

- \* Historic events are those activities that have occurred and have completed, these are shown as brown circles;
- \* Current events are those that are shaping India's involvement in the Arctic today, these are shown cyan circles;
- \* Strategic events are those that are central to India's long term security & the Arctic, these are shown as lemon circles;
- \* Headline events are those that are current and are of global interest, these are shown as magenta circles.

Strategic events point to a near-term future or, to a longer term future. Outcomes can be considered or can be modelled but cannot be fully evaluated. Content here is a distillation of the authors analysis of India's Arctic Policy document [6].

Headline events point to a near-term future, outcomes can be considered with more certainly, but are themselves subject to outcomes in wider, higher, geopolitical events. For example, an early ending to the ongoing Russian-Ukraine conflict or an extended continuation of the Russian-Ukraine conflict.

The history of India's presence in the Arctic and its Arctic policy objectives are shown in Figure 2, and Table 2.

<sup>15</sup> BRILL, 11 February 2021, Non-Arctic States' Role in the High North: Participating in Arctic Governance through cooperation, <https://brill.com/display/book/edcoll/9789004422438/BP000023.xml>.

<sup>16</sup> Climate Fact Checks. 23 February 2023. India among nations facing highest threat from se-level rise. [https://climatefactchecks.org/india-among-nations-](https://climatefactchecks.org/india-among-nations-facing-highest-threat-from-sea-level-rise-wmo/#:~:text=Indian%20coastlines%20covering%20more%20than,over%20the%20past%2050%20years.)

<https://www.thearticinstitute.org/contours-indias-arctic-policy/>.

<sup>17</sup> The Arctic Institute, 03.08.2021, The contours of India's Arctic Policy, <https://www.thearticinstitute.org/contours-indias-arctic-policy/>.

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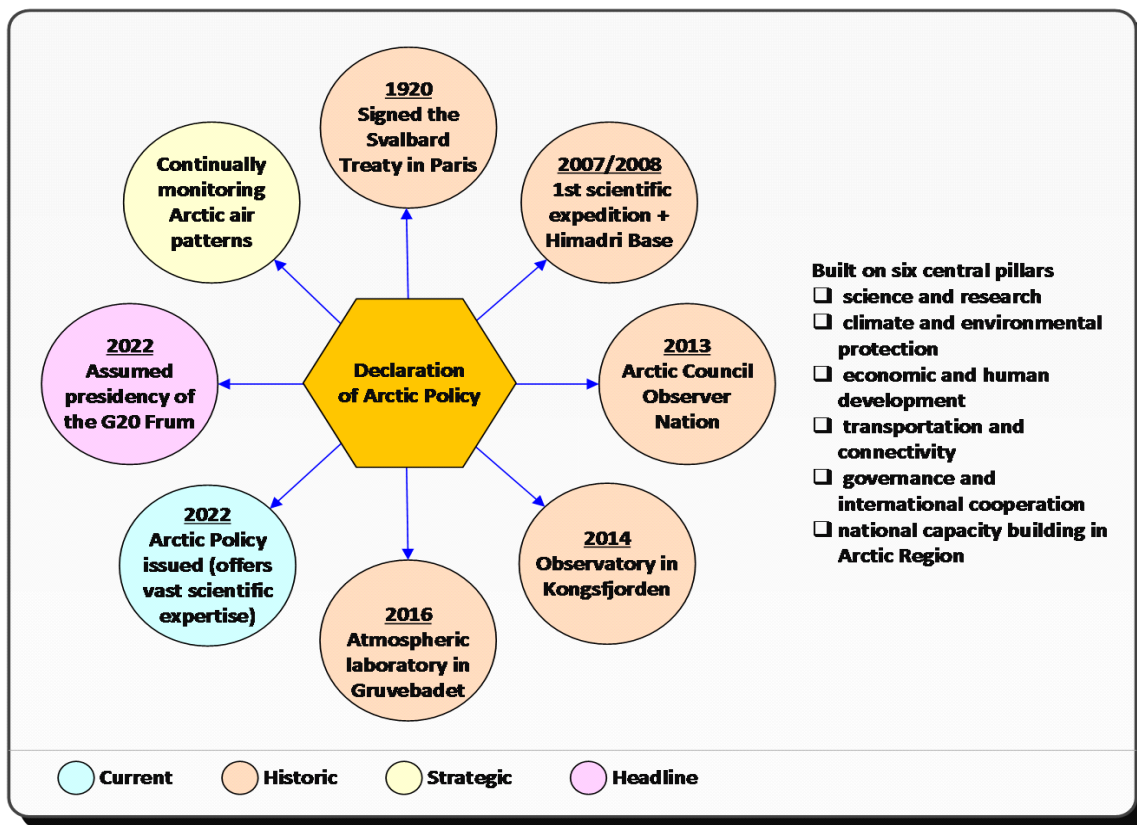


Fig. 2. India as a non-Arctic State Observer of the Arctic Council as of 2023 (created by the authors)

Table 2

India’s history within the Arctic\*

Year	Activity
1920	India’s engagement with the Arctic began when it signed the Svalbard Treaty in Paris between Norway, the US, Denmark, France, Italy, Japan, the Netherlands, Great Britain, and Ireland, and the British overseas Dominions and Sweden concerning Spitsbergen
2007–2008	India launched its Arctic research program with a focus on climate change in the region with the objectives of studying connections between Arctic climate and Indian monsoon, characterizing sea ice in the Arctic using satellite data, estimating the effect on global warming. India set up a research station ‘Himadri’ in the international Arctic research base at Ny-Ålesund in Spitsbergen/Svalbard, Norway. Research personnel are usually present for 180 days. India is in the process of procuring an ice-breaker research vessel that can navigate the region
2013	India was granted Observer status in the Arctic Council
2014	India set up its first multi-sensor moored observatory in Kongsfjorden
2019	India was re-elected as an Observer in the Arctic Council
2020	India’s engagement with the Arctic countries evidenced by India-Denmark relations to a “green strategic” partnership where both countries stressed the need to strengthen research cooperation and collaboration within the framework of the Arctic Council to fight climate change
2022	The Government of India hosted the Convention of Migratory Species under the 13th United Nations Environmental Programme Conference of the Parties (UNEP-COP-13) in Gujarat’s capital city Gandhinagar. This declaration emphasizes that the improvement of ecological connectivity is the top priority for the Convention on Migratory Species and has been recognized as a significant contribution, by India, to the Arctic Council. India has privileged India’s Headlines in the Arctic
2022	India’s Ministry of Earth Science unveiled its Arctic Policy, titled “India and the Arctic: Building a partnership for sustainable development” The policy articulates six Arctic pillars (see Figure 2)

\* Compiled by the authors according to India's Arctic Policy (2022).

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India has memberships in both the International Arctic Science Committee and in the Asian Forum for Polar Sciences. India is also a member of the Ny-Alesund Science Managers Committee, the International Arctic Science Committee, University of Arctic and Asian Forum for Polar Sciences.

India has sent 13 expeditions to the Arctic since 2007 and runs 23 active science projects. India's study of permafrost snow and ice, has assisted in increasing the understanding of the Arctic. The country is actively involved in studies related to Arctic oceanography, atmosphere, pollution and microbiology<sup>18</sup>. Over twenty-five institutes and Universities are involved in Arctic research for India. Approximately one hundred peer reviewed papers have been published on Arctic issues since 2007 [6].

Since its establishment, over three hundred Indian researchers have worked in the station India's Arctic station Himadri. It is manned 180 days a year [6].

Since becoming an Observer in the Arctic Council, India has been actively participating in meetings of Senior Arctic Officials and contributing to six Working Groups of the Arctic Council. India has also had sustained engagement with the Arctic Energy Summit, Arctic Science Ministerial and meetings of Task Forces [6].

India has one of the most highly advanced spaces programmes in the world. Indian Space Research Organisation (ISRO) operates a vast set of satellites including the radar imaging earth observation RISAT series of satellites can be deployed for studies within the Arctic region. Similarly, ISRO's optical high resolution and hyper spectral imaging capabilities can be deployed to assist studies in the Arctic region [6].

The NASA-ISRO SAR (NISAR) mission will launch in 2023. It will measure the earth's changing ecosystems, dynamic surface masses, sea level rise and groundwater. NISAR's data will help better understand the causes and consequences of land surface changes and the effects and speed of climate change to better enable management of natural resources and hazards, globally, including the Arctic [3].

The Arctic region is influenced atmospheric, oceanographic and biogeochemical cycles of the earth's ecosystem, especially within the Himalaya's [3]. Although geographically distant, the Arctic and the Himalayas, are interconnected and do share similar concerns. Arctic meltdown is leading the Indian scientific community to better understand glacial melts in the Himalayas. Commonly referred to as the "Third Pole", the Himalaya's are the source of many the major rivers that flow through

India. Climate change occurring in the Arctic, while not fully understood, does influence the monsoons in India. India's agricultural operations are directly dependent upon the monsoons. As an agriculture-reliant country, Indian environmental concerns are intertwined with the Arctic's climate change concerns, especially rising sea levels and unpredictable monsoon patterns. The level of sea ice in the region has been reducing by 13 per cent per decade<sup>19</sup>; a further worsening of the climate conditions and glacial melting could be disruptive for the indigenous communities and wellbeing of the Indian rural sector.

Crucially, the melting of Arctic ice also entails the opening of new shipping routes which could redraw global trade flows and maritime navigation. India has the intention to develop the International North-South Corridor with Moscow and link it to the Arctic to build trans-Arctic shipping routes and decrease shipping costs<sup>20</sup>. Another reason for India to engage the Arctic is to achieve energy security by diversifying energy supplies. Previously, Russia — a leading Arctic power with vast Arctic resources — was an important partner to India's energy strategy. Indian firms and political leaderships have linked agreements and memorandums of understanding with Russian counterparts to cooperate on oil and gas projects<sup>21</sup>.

Another area where India has leverage in the Arctic region is human development. Specialized cultures of the Arctic's indigenous inhabitants are being inexorably impacted by climate change as well as economic development and improved connectivity. This is similar to the socio-ecological-economic predicament of the Himalayan peoples. The disruption of unique ecosystems and erosion of traditional knowledge are common to both. India has substantial expertise in addressing such issues and is uniquely placed to make a positive contribution in assisting the Arctic's indigenous communities cope with similar challenges. The goals of India's Arctic Policy are given in the Table 3.

In summary, from starting with a modest station at Svalbard in 2007, India has come a long way to establishing itself as a credible actor in the Arctic region. India's Arctic Policy declarations are multifaceted and multidimensional, setting out longer-term prospects for engagement in the region. Its "Building a Partnership for Sustainable Development" Arctic policy (2022) is predicated on six pillars, three of which are Science and Research; Climate and Environmental Protection; and Governance and International Cooperation, "themes" that align greatly to the security and the sustainability of the Arctic.

<sup>18</sup> ClearIAS, India's Arctic policy, 1st December 2022, <https://www.clearias.com/india-arctic-policy/>.

<sup>19</sup> Climate.gov. 18 October 2022, Climate change: Arctic sea ice summer minimum <https://www.climate.gov/news-features/understanding-climate/climate-change-arctic-sea-ice-summer-minimum>.

<sup>20</sup> ISAS, NUS National University of Singapore, 22 March 2022, India Officially Ventures into the Arctic, <https://www.isas.nus.edu.sg/papers/india-officially-ventures-into-the-arctic/>.

<sup>21</sup> Ibid.



Table 3

## The goals of India's Arctic Policy (2022)

Ref #	Goal
1	<b>To enhance India's cooperation within the Arctic region:</b> To enhance understanding of the impact of climate change in the Arctic region on India's climate, economic, and energy security
2	<b>To harmonise polar research with the third pole — the Himalayas:</b> To study the linkages between polar regions and the Himalayas and deepen the cooperation between India and the countries of the Arctic region under various Arctic forums, drawing expertise from scientific and traditional knowledge
3	<b>To contribute to efforts to enhance humankind's understanding of the Arctic region:</b> To strengthen institutional and human resource capacities within the government and academic, research and business institutions through inter-ministerial coordination in pursuit of India's interests in the Arctic
4	<b>To strengthen international efforts on combating climate change and protection of the environment:</b> To strengthen national capabilities and competencies in science and exploration, climate and environmental protection, maritime and economic cooperation with the Arctic region
5	<b>To advance the study and understanding of the Arctic within India:</b> To increase India's participation in the Arctic Council and improve understanding of the complex governance structures in the Arctic, relevant international laws, and geopolitics of the region

\* Compiled by the authors according to India's Arctic Policy (2022).

### III. India as Presidency of the Group of 20 (G20) in 2022/2023

The Group of 20 (G20) is an intergovernmental forum comprising 19 countries and the European Union (EU). It does not have a permanent secretariat. One member country takes over the presidency each year. The G20 Presidency steers G20 agenda for the coming year. The groups agenda is split into two tracks, one led by finance ministers (referred to as the Finance Track) and one led by emissaries of member countries (referred to as the Sherpa track). During its term, India will hold more than 200 meetings across some 50 cities involving ministers, officials and civil society, leading up to a marquee summit in the capital New Delhi in September 2023. The summit will be attended by around 30 heads of state and government, from G20 members and invited countries<sup>22</sup>.

Figure 3 provides a detailed picture of the countries that are either an Arctic Council State member or an Observer and also a G20 member. This paper notes that the G20 is extremely relevant to the Arctic with many Arctic State or Observer countries also being members of the G20 forum. We suggest that India as a member of G20 and as G20 Presidency in 2022–2023 can act as a credible and legitimate mediator to better promote security and to restore stability within the Arctic region.

The resumption of scientific exchange is an imperative that can be ignored only at the cost of collective detriment to the world. On 1<sup>st</sup> December 2022 India assumed the role

of the G20 Presidency through to 30 November 2023<sup>23</sup>. The G20 agenda includes climate change, sustainable development and the environment, all of which are under threat due to the cessation of Arctic-related scientific engagement involving Russia. The G20 also represents a rare platform where engagement between Russia and the West has not yet ceased. The suspension of dialogue and scientific exchange in the Arctic is driven by a deep distrust that will need to be overcome by a “speaker” that is acceptable to all stakeholders. India's theme for its G20 Presidency resonates strongly with the Arctic and its impact on the world. If the resumption of Arctic-related scientific exchange is to become an achievable goal, can India, which has the legitimacy, credibility and relevance, use its G20 Presidency to strive for a resumption of scientific research in the Arctic?

In setting out the platform's G20 priorities for the year, is there an opportunity for New Delhi to play an important role in strengthening a resumption of Arctic Council engagements within all the Arctic Council State members? From a geopolitical perspective, India could leverage its historical and amenable ties with Russia and through 200 or more to come G20 roundtable meetings, could bring about a discussion and diplomacy for peace towards reconciliation. This would certainly echo Prime Minister Narendra Modi's G20 communique message to Russian President Vladimir Putin that “today's era must not be of war”<sup>24</sup>.

<sup>22</sup> Reuters, 2nd December 2022, India G20 presidency 2023: What does it mean and what can we expect. <https://www.reuters.com/world/india/india-g20-presidency-2023-what-does-it-mean-what-can-we-expect-2022-12-02/>.

<sup>23</sup> India.gov.in National Portal of India, <https://www.india.gov.in/spotlight/group-twenty-g20>.

<sup>24</sup> Opportunities and challenges of India's G20 Presidency. 27 Dec 2022. <https://www.politico.eu/article/opportunities-and-challenges-of-india-pm-narendra-modi-g20-presidency/>.

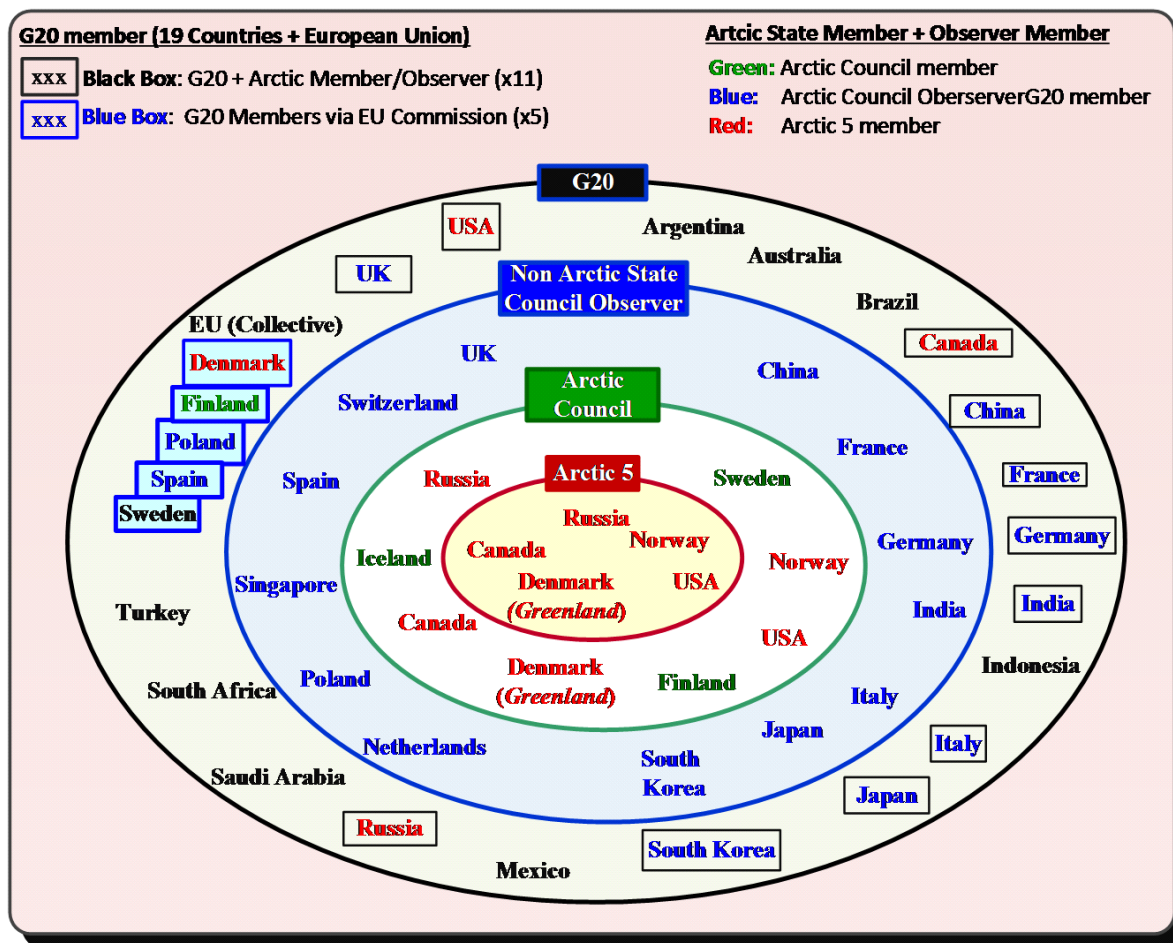


Fig. 3. G20 members that also have an Arctic interest as of 2023 (created by the authors)

The Group of Twenty (G20) is the premier intergovernmental forum for international economic cooperation. The forum plays an important role in shaping and strengthening global architecture and governance on all major international economic issues. The G20 members represent around 85 % of the global GDP, over 75 % of the global trade, and about two-thirds of the world population.

The G20 is extremely relevant to the Arctic. From Figure 3 it can be seen that: 16 G20 countries have a legitimate involvement in Arctic State interest through their membership as an Arctic State member or an Arctic Council State Observer. 8 G20 countries are Observer states (China, France, Germany, India, Italy, Japan, South Korea, UK); 2 G20 countries are Observer states (Poland, Spain) via their EU membership (EU being the 20<sup>th</sup> G20 member); 3 G20 countries are Arctic Council States (Denmark, Finland, Sweden) are via their EU membership (as above); 3 G20 countries are Arctic Council States (Russia, USA, Canada) directly through their Arctic Coastal borders.

The theme of India's G20 Presidency is "VasudhaivaKutumbakam" or "One Earth. One Family"<sup>25</sup>.

One Future". The priorities that India have set, as their agenda, for their presidency are:

- \* Green Development, Climate Finance & Lifestyle for Environment (LiFE);
- \* Accelerated, Inclusive & Resilient Growth;
- \* Accelerating progress on Sustainable Development Goals (SDGs);
- \* Technological Transformation & Digital Public Infrastructure;
- \* Multilateral Institutions for the 21st century;
- \* Women-led development.

G20 Mechanism [3] operates through two parallel tracks: the Finance Track and the Sherpa Track. Within the two tracks there are thematically oriented working groups (WGs) in which representatives from the member countries, as well as from invited/ guest countries and various international organisations, participate.

The "Sherpas" of member countries are personal emissaries of the leaders of their respective member states. Under the Sherpa Track there are 13 WGs and two "initiatives" to discuss priorities and provide recommendations. "Environment" and "Climate

<sup>25</sup> The Ministry of Earth Sciences – Overview of G20. [https://moes.gov.in/g20-india-2023/moes-g20?language\\_content\\_entity=en#:~:text=Vasudhaiva](https://moes.gov.in/g20-india-2023/moes-g20?language_content_entity=en#:~:text=Vasudhaiva)

%20Kutumbakam%2C%20which%20translates%20to,Upanishad%2C%20an%20old%20Sanskrit%20scripture.

Sustainability” are two such WGs that focus on environmental and climate issues and ways to mitigate and adapt to climate change.

Additionally, G20 engagement groups (EGs) bring together countries’ civil society organisations, parliamentarians, think tanks, women, youth, labour, businesses and researchers. These groups, comprising non-governmental participants, provide recommendations to the G20 leaders and contribute to the forum’s policymaking processes. Among others, the 11 EGs include Science20 (S20), which presents policymakers with consensus based science-driven recommendations formulated through task forces comprising international experts; 62 and Think20 (T20), which serves as an “ideas bank” for the G20 by bringing together think tanks and high-level experts to discuss relevant international socio-economic issues. T20 recommendations are synthesised into policy briefs and presented to G20 WGs, ministerial meetings and leaders’ summits to help the G20 deliver concrete policy measures.

In summary, can India’s G20 presidency and “the world is but one family” agenda kickstart new dialogues with the Arctic Council by using its “Sherpa Track” personal emissaries dialogues to expeditiously revive scientific engagement in the Arctic and using its Scientific & Think Tank engagement groups to initiate reconciliation among the Arctic Council State members?

## Conclusions

In analyzing geopolitical interests and international partnerships in the Arctic we found, that prior to 2022, the Arctic was celebrated as a bastion of international cooperation and was one of the few arenas to remain outside the broader global geopolitics. Following the Russian-Ukraine conflict in 2022, this arena of cooperation came to an abrupt end. Canada, Denmark, Finland, Iceland, Norway, Sweden, and the United States released a statement saying they would pause their activities in the Arctic Council. Russia was suspended from Arctic regional bodies, such as the Barents Euro-Arctic Council and the Northern Dimension. At the same time, traditionally non-aligned, Sweden and Finland began their NATO accession processes. When it became clear that the Russian-Ukraine conflict would not end imminently, the remaining seven Arctic states allowed some resumption of work in the Council on projects (more than 70 out of 128) that did not involve Russia. A year later, important questions remain about the future of the Arctic Council and its international cooperation among the Arctic Council State members.

Restrictions, imposed by funding agencies in Europe and the USA have stopped the sharing of data between

scientists. Consequently, shared scientific research has stopped. Furthermore, the suspension of activities within the Arctic Council cascades across to the activities of Arctic Council Observer states (including India who possesses this status) because the rules for Observers is that their engagement inside the Arctic Council is at the level of Working Groups and they are not empowered to propose projects within these working groups [3]. Consequently, work undertaken by Asian observers is through Arctic working forum groups. Lanteigne, from the University of Tromso commented that New Delhi’s Arctic initiatives could be affected both by the pause in the Councils activities and the resulting “diplomatic chasm” that has opened between The 7 Arctic States and Russia<sup>26</sup>.

Our results demonstrate that since 2013, India’s interest in Arctic affairs has grown and that today, in 2023, through involvement, participation and achievement in scientific works of importance, India as a non-Arctic State, has set out to establish itself as a permanent and an influential presence within the Arctic. India’s focus on cryospheric research — the study of permafrost, snow and ice — has assisted in increasing the understanding of the Arctic oceanography, atmosphere, pollution, and microbiology. Since 2011, India has continually been monitoring the ecosystem in the Gulf of Kongsfjorden of the Arctic region for climate change studies. From 2014 through to the present day, India has been monitoring cloud precipitations in the Arctic. In 2016 India established an atmospheric laboratory at Gruvebadet in Ny-Alesund. Since 2016, India conducted research into mass balance and dynamics of glaciers of Spitsbergen/Svalbard.

India’s access to the most highly developed space programs in the world, plus its vast expertise in providing satellite communications and digital technology in remote areas do certainly position the country well towards achieving its goal to establish a greater, permanent presence in the Arctic region.

India’s Arctic Policy (2022) aims to prepare the country for a future in which the greatest challenges facing humanity, such as climate change, can only be successfully addressed through collective good will and concerted effort. India can, and is ready to play its part and contribute to the global good. The authors conclude that India has successfully managed to position itself to achieve this goal. What remains unclear at the time of writing this paper is how this goal will be realized geopolitically, and how a greater Indian presence in the Arctic will manifest itself. The authors note that while US and Europe have raised sanctions against Russia, India has refused to criticise Russia or to back the Western sanctions against Russia. India has historically maintained good relationships with Russia<sup>27</sup>. Russia remains an important supplier of weapons and, more recently, oil. The authors suggest that either through

<sup>26</sup> This week in Asia, April 27, 2022, <https://www.scribd.com/article/571930231/Will-Russia-Sanctions-Freeze-Asia-s-Climate-Change-Research-On-The-Arctic>.

<sup>27</sup> Carnegie Endowment for International Peace, Russia and India: A new chapter. 20-09-2022. <https://carnegieendowment.org/2022/09/20/russia-and-india-new-chapter-pub-87958>.

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the West or through the East, or through both, India will achieve its goal to maintain a greater permanent presence within the Arctic region.

We note that India's presidency of the Group of 20 in 2022–2023 is very important for the Arctic region. Can India's G20 presidency and "the world is but one family" agenda kickstart new dialogues with the Arctic Council? With India taking over the G20 Presidency in 2022 it is likely that India could potentially act as a creditable and legitimate mediator to promote security and restore stability within the Arctic region. The G20 is of great

importance to the Arctic, as six of the eight Arctic Council Permanent Members and 12 of the 13 Observers of the Arctic Council are represented in the G20 forum, and the agenda of the G20 forum includes climate change, sustainable development and the environment all of which are threatened by the cessation of scientific research in the Arctic. We hope that India, as part of its G20 Presidency, will be able to bring parties, including Russia, to the table to share dialogues during 2023–2024. However, the results of those achievements will always be curtailed until the Russian-Ukraine conflict is resolved.

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**Declaration of conflicting interests**

The authors declare that there are no conflicts of interest.