

INTERNATIONAL JOURNAL OF LAW  
MANAGEMENT & HUMANITIES  
[ISSN 2581-5369]

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Volume 8 | Issue 5

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2025

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# Navigating the Ice: A Legal Lens to India's Role in the Arctic's Emerging Geopolitical Landscape

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KAASHVI MALIK<sup>1</sup>

## ABSTRACT

*Once considered a remote expanse of frozen wilderness, the Arctic, is now, with due course of time emerging as a focal point for global governance, climate science and geopolitical competition, making it a key area of deliberation in the eyes of major world powers.*

*This paper seeks to examine India's engagement in the Arctic region through a multidisciplinary lens which intends to integrate the disciplines of International Law, Environmental Law and Geopolitics.*

*Additionally, it seeks to draw the attention to how India's interest in Arctic is neither symbolic nor peripheral but instead rooted in its climate vulnerability, maritime ambitions, and energy security needs.*

*The research methodology of this paper is doctrinal and analytical in nature examining both primary legal instruments and secondary literature and policy documents.*

*This paper is structured in such a way so as to provide the readers with a clear conceptual and legal overview of governance in Arctic region while simultaneously analysing India's existing research infrastructure and policy initiatives concerning the region; along with identifying the key legal and geopolitical challenges that India might have to confront when increasing its engagement in Arctic. Additionally, it also explores the various opportunities that India can utilise to increase its engagement in Arctic in a sustainable manner so as to ensure that it doesn't get left behind in this global polar pursuit.*

**Keywords:** UNCLOS, International Law, Geopolitics, Public Policy, Environmental Law, Global Commons, Sustainable Development, Arctic Council, Climate Change.

## I. INTRODUCTION

The northernmost region of Earth, the Arctic, which was for a long time considered by various strategists and policy watchers as a remote region of frozen wilderness, is now witnessing rapid transformations in the global forum by slowly being recognised as one of the most consequential regions for global governance, climate stability, and economic opportunity by

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various key players of geopolitics, as such it becomes both cardinal and intriguing to analyse these recent developments through a legal and multidisciplinary lens encompassing both international law and environmental law along with geopolitical considerations.

The accelerated melting of ice has inadvertently led to not only the discovery of new shipping routes but also succeeded in uncovering untapped hydrocarbon and mineral reserves, thereby, intensifying scientific, strategic and environmental debates;<sup>2</sup> Therefore, it has become unfathomable to not sense the urgent need for coherent legal frameworks and government mechanisms that can be deemed capable of balancing sovereign rights and environmental sustainability and simultaneously ensuring that interests of both arctic and non arctic states can go hand-in-hand.<sup>3</sup>

Zooming onto India, which, though can be considered as a geographically distant nation from Arctic, yet because of its vulnerability to climate change, Arctic is far from an abstract concept to India. Change in the ice cover of Arctic and its ocean circulation patterns have been discovered to have direct implications on the Indian Monsoon System, with profound effects on India's agriculture, water security and disaster preparedness.<sup>4</sup>

This paper seeks to investigate India's engagement with Arctic through a comprehensive framework which shall integrate International Law {by laying emphasis on the United Nations Convention on the Law of the Sea (UNCLOS), territorial claims, and multilateral governance mechanism}, Environmental Law (by focusing on climate impacts, sustainable methods of using resources, and international environmental principles and obligations induced by them), geopolitical and policy dimensions by examining non-Arctic state participation, power competition, and India's strategies concerning Arctic.

This paper delves around three core research questions:

- How has India been able to engage with Arctic all along through with special emphasis on development of research infrastructure, diplomatic channels and policy initiatives?
- What can be regarded as the key legal, environmental and geopolitical challenges impelling India's role in the governance of Arctic?
- What strategies and opportunities should India leverage in order to enhance its influence in Arctic while simultaneously ensuring sustainable and equitable

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<sup>2</sup> Katarzyna Zysk, "Military Power and Cooperation in the Arctic: Towards Conventional Deterrence?", 33 POLAR J. 21, 22 (2020)

<sup>3</sup> Malgosia Fitzmaurice, *The Law of the Sea* 212–15 (Edward Elgar 2017).

<sup>4</sup> S. Sundaram et al., *A Physical Mechanism for the Indian Summer Monsoon Teleconnection to Arctic Sea Ice*, 13 Atmosphere 566 (2022), available at <https://www.mdpi.com/2073-4433/13/4/566>

development in the region?

- The main body of this paper is broadly divided into five sections. The objective of the first section is to introduce the readers to the conceptual and legal framework of governance in Arctic region by discussing UNCLOS in addition to acquainting readers with the Arctic Council and sectoral instruments such as Polar Code. The second section seeks to bring the focus on India by examining its Arctic engagement, by throwing light on India's research stations in Arctic, observer status of India and her policy initiatives concerning the region. Third section brings the legal lens to use while analysing the legal, environmental and geopolitical challenges that India faces in its engagement with the Arctic region. Fourth section, in continuation of the third section, seeks to explore strategic and legal opportunities for India, that can further aid her by strengthening her role in the region. The fifth section seeks to present in it, additional actionable recommendations for a coherent national Arctic strategy. At last, this paper concludes by taking a wider view into cognisance by reflecting on the broader implications of India's engagement for global law, environmental stewardship and the governance of the commons.

#### **(A) Review of Literature:**

- Over the past two decades, due to the rapid transformation of Arctic from a remote periphery to a significant site from the geopolitical and environmental lens, the scholar work on Arctic has grown steadily, unlike how it was in the previous geopolitical order. If we look at the early works that concerned the region, it can be observed that those works primarily focused on the application of international law, often revolving around the United Nations Convention on the Law of the Sea (UNCLOS).<sup>5</sup>
- Whereas, legal scholars such as Oran R. Young have in their research work preferred to extensively analyse the institutional architecture of Arctic governance by particularly focusing on the Arctic Council.<sup>6</sup>
- On the other hand, if we look at the recent literature concerning the region, it has gone ahead expanding the ambit of research on Arctic by also attempting to analyse the involvement of non-Arctic states, for instance, research scholars have attempted to

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<sup>5</sup> Donald R. Rothwell, *The Polar Regions and the Development of International Law* (Cambridge Univ. Press 1996).

<sup>6</sup> Oran R. Young, *Governing the Arctic: From Cold War Theater to Mosaic of Cooperation*, 11 *Global Governance* 9 (2005).

study China's "Polar Silk Road" initiative and Japan's scientific diplomacy with an intent of exploring how the observer states are endeavouring to influence the Arctic discourse through research work and participation in the multilateral fora.<sup>7</sup>

- However, while going through different scholarships concerning this region, it was noted that work of scholars focusing specifically on India's Arctic engagement was relatively nascent. India's Arctic Policy of 2022 marked the first formal articulation of India's national strategy concerning the region and yet only a limited number of commentaries have attempted to assess its scope; further, even those limited commentaries have assessed it from a policy or climate science perspective rather than a legal perspective.<sup>8</sup> For instance, the work of scholars such as Harsh V. Pant and Kriti Shah have underlined India's potential to become a normative contributor to Arctic governance, yet, only few studies have attempted to integrate the different dimensions that need to be taken into cognisance when analysing India's engagement in the Arctic region.<sup>9</sup>
- This paper is formulated to address this observed research gap by attempting to provide a comprehensive, multidisciplinary analysis of India's role in the Arctic by integrating the legal, environmental and geopolitical dimensions into a single analytical framework.

### **(B) Research Methodology:**

- This study employs a doctrinal and analytical research methodology. The doctrinal approach used for this paper involves a systematic examination of primary legal instrument which dominates the landscape of governance in Arctic, such as United Nations Convention on the Law of Sea (UNCLOS), the Svalbard Treaty, the Polar Code, and official documents of the Arctic Council.<sup>10</sup>
- In addition, secondary sources such as peer reviewed journal articles, educational books, and policy reports are also referred to ensure a seamless multidisciplinary analysis.
- Further, this study also uses comparative analytical approach in order to examine the strategies of other non-Arctic observer states, such as Japan, South Korea and

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<sup>7</sup> Anne-Marie Brady, *China as a Polar Great Power* (Cambridge Univ. Press 2017).

<sup>8</sup> Ministry of Earth Sciences (MoES), India's Arctic Policy: Building a Partnership for Sustainable Development (2022), available at <https://moes.gov.in>.

<sup>9</sup> Harsh V. Pant & Kriti M. Shah, *India's Stakes in the Arctic: The Geopolitical Dimension*, Observer Research Foundation Occasional Paper No. 370 (2021).

<sup>10</sup> United Nations Convention on the Law of the Sea, Dec. 10, 1982, 1833 U.N.T.S. 397.

Singapore. This methodology ensures that the conclusion of this paper and the recommendations given herein are practical, evidence-based and relevant for scholars, policymakers and practitioners.

## **II. CONCEPTUAL AND LEGAL FRAMEWORK OF ARCTIC GOVERNANCE**

As unique the geographical character of this region is, even more unique is its system of governance which is characterised by a decentralised legal order which has somehow successfully blended binding international treaties, customary international law and soft law instruments. Unlike its polar opposite Antarctic which is regulated by a single treaty system, a seamless mosaic of legal norms and institutions exist in Arctic and govern the region, which are enforced not only on Arctic but also on non Arctic states<sup>11</sup>. In this section, the paper seeks to acquaint readers with the three key elements that constitute the backbone of the governance of Arctic

- Legal status of Arctic under International Law with a special focus on UNCLOS.
- Institutional role of Arctic Council which is often regarded as the region's primary intergovernmental forum.
- Sectoral and soft law instruments that complement and operationalise these legal frameworks

### **(A) Legal Status of Arctic Under International Law**

As already stated in the preceding paragraph, Arctic is a region that is not governed by a single comprehensive treaty unlike Antarctica, which is regulated under the Antarctic Treaty System.<sup>12</sup>

As we can already gauge from everything stated till now, the legal framework of Arctic is fragmented, as it draws not only upon one but multiple instruments of international law; foremost of them being the United Nations Convention on the Law of the Sea, hereafter referred as UNCLOS, which provides the principal legal framework for regulating maritime zones, navigation rights, and resource exploitation in the Arctic Ocean.<sup>13</sup>

Article 76 of UNCLOS entitles the Arctic Coastal States to not only exercise sovereignty over their territorial seas and exclusive economic zones but also allows them to claim an extended

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<sup>11</sup> Akiho Shibata, *The Legal Status of the Arctic and Its Governance: A Fragmented but Evolving Regime*, 10 Y.B. Polar L. 3 (2018).

<sup>12</sup> Timo Koivurova, *Limits and Possibilities of the Arctic Council in a Rapidly Changing Scene of Arctic Governance*, 46 Polar Rec. 146 (2010).

<sup>13</sup> United Nations Convention on the Law of the Sea, Dec. 10, 1982, 1833 U.N.T.S. 397.

continental shelf beyond two hundred nautical miles<sup>14</sup>; and it is precisely this article which has become a bone of contention by giving rise to overlapping claims, for instance, the overlapping claims of Russia, Canada and Denmark (via Greenland) that are currently under consideration by the Commission on the Limits of the Continental Shelf (CLCS).<sup>15</sup>

Therefore, we can conclude that because of complex interplay of sovereign rights, jurisdictional overlaps and collective interests in Arctic, it would not be inappropriate to consider that the concept of cooperative governance is necessary in Arctic.

### **(B) The Role of Arctic Council**

The council that is the leading intergovernmental forum for promoting cooperation among Arctic states, indigenous communities and other stakeholders, tracing its roots back to the Ottawa Declaration of 1996, is referred to as the Arctic Council.<sup>16</sup>

Predominantly, it has been this council's mandate that plays a crucial role in coordinating scientific research, environmental protection and sustainable development initiatives in the Arctic; though its mandate explicitly excludes military security issues.<sup>17</sup>

There are six working groups, such as, the Arctic Monitoring and Assessment Programme (AMAP) and the Protection of Arctic Marine Environment (PAME) that are specifically created to carry out the work of the council, which aid by producing influential assessments on various factors such as climate change, pollution and biodiversity.<sup>18</sup>

The council also plays an important role in enabling non-Arctic nations to contribute to Arctic governance by allowing participation by observing states including India, China, Japan and several European Countries in its working.<sup>19</sup>

### **(C) Sectoral and Soft Law Instruments**

First, it is necessary to acquaint readers with what does the paper mean when it refers to terminologies such as sectoral and soft law instruments. "Sectoral Instruments" is a terminology that is being used to refer to treaties or agreements focusing on specific sectors or issues within the Arctic; and the non binding frameworks, declarations or guidelines that influence the behaviour of state but do not have same legal force as treaties are referred to as "soft law

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<sup>14</sup> Id. art. 76.

<sup>15</sup> Commission on the Limits of the Continental Shelf (CLCS), *Outer Limits of the Continental Shelf Beyond 200 Nautical Miles*, United Nations, available at [https://www.un.org/depts/los/clcs\\_new/commission\\_submission.htm](https://www.un.org/depts/los/clcs_new/commission_submission.htm).

<sup>16</sup> Ottawa Declaration, Declaration on the Establishment of the Arctic Council, Sept. 19, 1996.

<sup>17</sup> Douglas C. Nord, *The Arctic Council: Governance within the Far North*, 37(1) Routledge (2016).

<sup>18</sup> Arctic Council, Working Groups, available at <https://arctic-council.org/working-groups/>

<sup>19</sup> Arctic Council, *Observers*, available at <https://arctic-council.org/observers/>.

instruments”.

In addition to UNCLOS and the Arctic Council, Arctic governance is influenced by different sectoral and soft law instruments too, for instance, the Polar Code which was adopted by the International Maritime Organisation (IMO) in 2014, wherein mandatory requirements for ships operating in polar waters were established, covering factors such as safety, training and environmental protection.<sup>20</sup>

Aside from this, there are several other instruments too, such as Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic dating back to 2013 and the Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean (2018).<sup>21</sup> It is the presence of such instruments collectively that forms, what we may refer to as a “Polycentric Framework of Governance” in Arctic. Though this framework allows for flexibility by voluntary compliance mechanisms, it also causes challenges when factors like accountability, harmonisation and enforcement are taken into consideration because of overlapping jurisdictions, and this poses an even greater challenge to non-Arctic states that are trying to assert their legitimate interests.<sup>22</sup>

### **III. INDIA’S ARCTIC ENGAGEMENT**

Traditionally, it was assumed that Arctic region was a geopolitical and environmental domain that would remain limited to the eight Arctic states. However, the ripple effects of Arctic transformations ended up reaching far beyond the polar circle and India remained no exception. Although India is clearly geographically distant from the region, Arctic plays a crucial role in influencing Indian Monsoon which in turn impacts India’s food security, water availability and disaster preparedness.<sup>23</sup>

This section of the paper seeks to throw light on when and how India’s Arctic engagement began, the diplomatic and institutional engagement, and the very recent India’s Arctic Policy of 2022.

#### **(A) Scientific Engagement and Research Infrastructure**

India’s Arctic engagement traces its roots back to 2007 when India launched its first scientific

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<sup>20</sup> International Maritime Organisation, International Code for Ships Operating in Polar Waters (Polar Code), IMO Resolution MSC.385(94) (2014).

<sup>21</sup> Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean, Oct. 3, 2018, available at <https://www.un.org/Depts/los/fish/CAOFish.html>

<sup>22</sup> Oran R. Young, Governing the Arctic: From Cold War Theater to Mosaic of Cooperation, 11 Global Governance 9 (2005).

<sup>23</sup> Ministry of Earth Sciences, India’s Arctic Policy: Building a Partnership for Sustainable Development (2022), available at <https://www.moes.gov.in/sites/default/files/2022-03/compressed-SINGLE-PAGE-ENGLISH.pdf>.



expedition to the Arctic, which eventually paved way to the establishment of India's first permanent research station in Arctic called "Himadri" which currently serves as a hub for studies on climate change, glaciology, atmospheric science and microbiology at Ny-Ålesund, Svalbard in the succeeding year, that is, 2008.<sup>24</sup> Subsequently, in the year 2014, India succeeded in deploying the IndARC moored observatory in the Kongsfjorden fjord in 2014, which further enabled India to continuously monitor the oceanographic parameters in Arctic and research their linkage to the Indian Monsoon.<sup>25</sup>

### **(B) Diplomatic and Institutional Engagement**

In the year 2013, India was granted observer status in the Arctic Council, thereby joining other major Asian powers who were already granted observer status, such as, China, Japan, and South Korea.<sup>26</sup>

Being an observer, India is now given the authority to contribute to the council's working groups, task forces, and expert groups which further allowed India to contribute in finding solutions to the problem of climate change and also aiding in sustainable development initiatives.

Ministry of Earth Sciences of India serves as the nodal agency for Arctic research at present, which is further supported by other stakeholders such as the Ministry of External Affairs and the National Centre for Polar and Ocean Research.<sup>27</sup>

This "inter-ministerial co-ordination" of India can in itself be regarded as a testament of India's Arctic engagement.

### **(C) India's Arctic Policy 2022**

In the month of March of year 2022, as a result of several converging factors, some of them being, scientific and climatic necessity, new shipping routes (which served as geopolitical and strategic divers), diplomatic maturity and observer role; India released its first Arctic Policy titled "India's Arctic Policy: Building a Partnership for Sustainable Development" which aimed to outline a comprehensive roadmap for India's engagement in the Arctic region.<sup>28</sup>

The policy ended up identifying six priority pillars in India's Arctic engagement, namely,

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<sup>24</sup> National Centre for Polar and Ocean Research (NCPOR), Indian Arctic Research Programme, available at <https://ncpor.res.in/arctic/arctic-research-programme>.

<sup>25</sup> NCPOR, IndARC: India's First Multi-Sensor Moored Observatory in the Arctic, available at <https://ncpor.res.in/arctic/indarc>.

<sup>26</sup> Arctic Council, Observers, available at <https://arctic-council.org/observers/>.

<sup>27</sup> Ministry of Earth Sciences, India's Arctic Policy, supra note 17

<sup>28</sup> Id.

- Science and Research: Where it proposed sustained research initiatives to strengthen India's scientific presence in the Arctic.
- Climate and Environmental Protection: Where it pursued to not only address the impact of climate changes in Arctic on India, but also vice versa.
- Economic and Human Development: Where it was proposed to explore economic development by focusing on sectors such as shipping and energy while at the same time keeping in mind the principles of sustainability.
- Connectivity: By proposing methods of data sharing and promoting infrastructure for better cooperation.
- Governance and International Cooperation.
- National Capacity Building: As it proposed training and capacity development for Indian researchers and policymakers.

The 2022 Policy was significant not only because of its comprehensiveness but also because it marked a paradigm shift in India's Arctic engagement as it transformed it from a primarily research driven stance to a strategically coherent and multidisciplinary initiative.<sup>29</sup>

#### **IV. LEGAL, ENVIRONMENTAL AND GEOPOLITICAL CHALLENGES FOR INDIA'S ARCTIC ENGAGEMENT**

In the preceding section, the paper provided a gist of India's Arctic engagement, however, it is necessary to take into cognisance that these developments are not independent of challenges that are multidimensional in nature. These challenges not only determine the ambit of India's participation in Arctic region but also scrutinise India's ability to balance both its national interest and global responsibilities. As such, it becomes consequential for the readers to acquaint themselves with these challenges.

##### **(A) Legal Challenges under International Law**

In the previous sections, this paper has already introduced readers with how despite UNCLOS being the principal framework for maritime governance in the Arctic region, its application and interpretation is in itself contentious, for instance, the submissions of overlapping continental shelf claims by Arctic Coastal states under Article 76, which has become a bone of contention in jurisdictional disputes, particularly in areas such as Lomonosov Ridge.<sup>30</sup> For India, these

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<sup>29</sup> Uttam Kumar Sinha, Why India's Arctic Policy Matters, Manohar Parrikar Institute for Defence Studies and Analyses (IDSA) Issue Brief (Apr. 5, 2022).

<sup>30</sup> Commission on the Limits of the Continental Shelf (CLCS), Outer Limits of the Continental Shelf Beyond 200

disputes are not something limited to just Lomonosov Ridge, but, on the other hand play a significant role in complicating the legal environment by making India choose its engagement policies in such a manner that they are able to balance the stance of respect of sovereign right, and at the same time able to assert freedom of navigation and research.

The other legal challenge is posed due to the newly emerging sea routes in Arctic region, for instance, Northern Sea Route (NSR) on which Russia asserts its regulatory control under article 234 of UNCLOS and United States on the other hand contends that NSR is an international strait.<sup>31</sup> This matter is of great importance to India as it hints at the freedom of navigation and transit rights in the region which can have direct implications on India's future interests in trade and energy security in the region.

Furthermore, as already discussed in this paper, the Arctic governance also possesses a soft law nature, which, needless to say, poses challenges of enforceability and accountability in the region despite the presence of Arctic Council as a key forum, as it lacks the power of making legally binding decisions (except for the few negotiated agreements that has happened in the past).<sup>32</sup>

### **(B) Environmental and Climate-Related Challenges**

We all are aware of the climate changes that our globe is currently being subjected to. However, the adverse effects of these changes are not as much apparent in our well conditioned houses as they are in the polar regions. The Arctic being the northernmost region on globe, has not been spared of these adverse effects. An unprecedented loss of sea ice and permafrost is visible in Arctic because of its warming at a pace that is nearly four times faster than the global average.<sup>33</sup>

In such a circumstance, India is facing the dilemma of balancing her own development imperatives while at the same time trying to take into consideration her role as a developing country that champions the principle of "common but differentiated responsibilities" (CBDR) in International Climate Law.

### **(C) Geopolitical and Strategic Challenges**

With time the geopolitical landscape shifted quite significantly and Arctic has morphed itself

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Nautical Miles, United Nations, available at [https://www.un.org/depts/los/clcs\\_new/commission\\_submissions.htm](https://www.un.org/depts/los/clcs_new/commission_submissions.htm)

<sup>31</sup> United Nations Convention on the Law of the Sea, Dec. 10, 1982, 1833 U.N.T.S. 397, art. 234; see also Geir Ulfstein, The Legal Regime of the Arctic Ocean, 65(3) *International & Comparative Law Quarterly* 533 (2016).

<sup>32</sup> Timo Koivurova, Limits and Possibilities of the Arctic Council in a Rapidly Changing Scene of Arctic Governance, 46 *Polar Rec.* 146 (2010).

<sup>33</sup> Jack Landy et al., Arctic Amplification: Four Times Faster Warming Revealed by Updated Observational Dataset, 12 *Nat. Comm.* 1549 (2021).

from a remote region of frozen wilderness to one of the major theatres of renewed great power competition. Major world powers such as Russia<sup>34</sup> and China are trying to increase their presence in the region, with China declaring itself a “near-Arctic state” and expanding its “Belt and Road Initiative” to “Polar Silk Road”.<sup>35</sup>

For India, these dynamics create a situation which presents both opportunities and dilemmas. India can benefit from increased presence of global powers in Arctic by using the region as a frontier to deepen its partnerships with like minded democracies, for instance, how it deepens its partnerships with other countries through forums like QUAD, and at the same time, it is necessary for India to ensure that while sailing through this theatre of power competition, it doesn't end up entangling its own self in these major power rivalries that could with time corrode the scientific and cooperative agenda of the country.

And yet at the same time, despite the presence of all these challenging factors in the region, it is of great importance for India to engage with the region to grapple with its “resource security dimension” because the competition for Arctic hydrocarbons and rare earth metals is, though in a lento, intensifying and if at such a conjuncture India doesn't proactively shape its engagement strategy, it risks being being left behind in this Arctic race.<sup>36</sup>

## **V. STRATEGIC AND LEGAL OPPORTUNITIES FOR INDIA IN THE ARCTIC**

In the previous section the paper provided the readers with a gist of the challenges that India faces in its Arctic engagement, though these challenges are considerable on the face of it, India can not concur the cost of being left behind in this region because of these challenges. Therefore, it becomes inadvertent for India to examine the opportunities in the region that lies at the intersection of law, diplomacy, science and sustainable development.

### **(A) Leveraging International Law and Multilateral Mechanism**

India can leverage international law and multilateral mechanism with three different approaches:

- India can utilise the legal framework of UNCLOS to safeguard its freedom of navigation and the right to conduct scientific marine research in Arctic.<sup>37</sup>

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<sup>34</sup> Katarzyna Zysk, Russia's Arctic Strategy: Military and Security Dimensions, 45 *Journal of Military & Strategic Studies* 23 (2020).

<sup>35</sup> State Council of the People's Republic of China, China's Arctic Policy (2018), available at [https://english.www.gov.cn/archive/whitepaper/2018/01/26/content\\_281476026660336.htm](https://english.www.gov.cn/archive/whitepaper/2018/01/26/content_281476026660336.htm).

<sup>36</sup> Harsh V. Pant & Kriti M. Shah, India's Stakes in the Arctic: The Geopolitical Dimension, Observer Research Foundation Issue Brief (Sept. 2022).

<sup>37</sup> United Nations Convention on the Law of the Sea, Dec. 10, 1982, 1833 U.N.T.S. 397.

- Increase its credibility as a responsible stakeholder by participating in the work of the commission on the limit of the Continental Shelf (CLCS).<sup>38</sup>
- Contributing technical expertise to working groups and co-sponsoring climate resilience, biodiversity and community welfare projects, thereby, also intensifying its engagement within the Arctic Council.<sup>39</sup>

By applying these approaches, India can move beyond its role as a passive observer and can be considered as an active, agenda shaping, participant in the region.

### **(B) Expanding Scientific Research and Technological Capacity**

The paper has already made the readers aware of India's scientific presence in Arctic by introducing the readers to India's two research facilities, namely, "Himadri" and "IndARC"; building on this already existing infrastructure, India can further approach the region in three possible ways:

- Advancing into the field of "cryospheric sciences", and concepts of atmospheric modelling, and carbon flux studies; which will aid India to further strengthen its climate prediction abilities.
- Developing satellite based monitoring systems for sea ice and shipping ones in collaboration with both Arctic and non-Arctic states.
- Enhancing its autonomous scientific capabilities by investing in "ice-class research vessels" and long term access agreements.<sup>40</sup>

### **(C) Harnessing Economic and Connectivity Opportunities**

Due to the recent melting of ice, the sea routes of Arctic have also started becoming increasingly navigable, which in disguise provides an opportunity for India to diversify its energy and trade supply chains in the region. This can be approached via three different ways:

- If India ends up participating in projects that explore the Northern Sea Route (NSR), it can easily lower its shipping costs and emissions as this route has the potential of decreasing transit time between Europe and Asia by upto forty percent.<sup>41</sup>

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<sup>38</sup> Commission on the Limits of the Continental Shelf (CLCS), Outer Limits of the Continental Shelf Beyond 200 Nautical Miles, *supra* note 24.

<sup>39</sup> Arctic Council, Working Groups, available at <https://arctic-council.org/working-groups/>.

<sup>40</sup> National Centre for Polar and Ocean Research (NCPOR), Indian Arctic Research Programme, *supra* note 20.

<sup>41</sup> Malte Humpert, The Future of Arctic Shipping: A New Silk Road for China?, The Arctic Institute (2018), available at <https://www.thearcticinstitute.org>.

- Exploring partnerships with both Arctic and non Arctic states in Arctic hydrocarbon and mineral projects, paving way for a diversified resource base while ensuring energy security, provided, strict environmental safeguards are adhered to. For instance, Russo's Yamal LNG Project which has attracted the participation of several Asian states.<sup>42</sup>
- Collaboration between Indian shipping and logistics companies with Arctic littoral states to develop infrastructures like "green port infrastructure", which aligns both economic ambitions and environmental commitments while also ensuring that the increased shipping activity is consistent with IMO's 2050 decarbonisation goals.<sup>43</sup>

#### **(D) Strategic Partnerships and Climate Leadership**

Lastly, taking into account India's presence in plurilateral forums such as that in QUAD and BRICS can be utilised to foster cooperative frameworks for Arctic research, technology sharing and sustainable governance.<sup>44</sup>

For a broader perspective, India can also position itself as a bridge between developing and developed world perspectives by articulating a vision of Arctic engagement that would be anchored in the principle of "common but differentiated responsibilities" (CBDR).

Not only this, but if India ends up aligning its Arctic strategy with the concept of sustainable development goals (SDGs), it can further strengthen its credentials as a proponent of climate sensitive development while ensuring equitability, which can eventually end up setting a potential benchmark for other non-Arctic states.<sup>45</sup>

## **VI. RECOMMENDATIONS & CONCLUSIONS**

Last but not least, it is necessary to pivot the analysis of this paper in a such a direction so as to provide concrete strategies and recommendations to deal with the challenges identified in this paper in India's Arctic engagement in such a manner that it can enable India to transform its observer status into an active, constructive and norm shaping presence in the region and thereafter, successfully conclude the paper having discussed all the important pointers that this paper was meant to deal with.

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<sup>42</sup> International Energy Agency (IEA), The Role of LNG in Energy Transition, available at <https://www.iea.org/reports/the-role-of-lng-in-the-energy-transition>.

<sup>43</sup> International Maritime Organization (IMO), Initial IMO Strategy on Reduction of GHG Emissions from Ships, IMO Doc. MEPC.304(72) (2018).

<sup>44</sup> Harsh V. Pant & Kriti M. Shah, India's Stakes in the Arctic: The Geopolitical Dimension, *supra* note 30.

<sup>45</sup> United Nations, Transforming Our World: The 2030 Agenda for Sustainable Development, U.N. Doc. A/RES/70/1 (2015).

### **(A) Additional Actionable Recommendations**

On the basis of the analysis in the preceding paragraphs, the following policy and legal recommendations are proposed in addition to the already proposed opportunities in preceding sections to enhance India's engagement in the Arctic region.

- Operationalise and periodically review the 2022 Arctic Policy:

With the changing dynamics it is of immense importance that India should constantly strive to keep its comprehensive Arctic Policy in tune with the dynamic nature of the region by periodically reviewing its Arctic Policy and ensuring that the six pillars of the policy, namely, science, climate change, economic development, connectivity, governance and capacity building remain aligned with evolving geopolitical and environmental realities.<sup>46</sup>

- Enhance Cooperative Learning from Other Observer States:

It would be of considerable aid to India if it does a comparative study of the engagement of other Asian countries in Arctic region, so as to be able to adopt best practices from their approach in accordance with its own priority, making India remain competitive and cooperative in Arctic fora. For instance, Japan's Arctic Research Plan which can serve as a model of institutionalised scientific roadmap and funding priorities.<sup>47</sup> And, similarly, a study of how Singapore's Arctic diplomacy ensures that the voice of Singapore is heard despite it being a tropical nation by focusing on shipping governance through the International Maritime Organisation (IMO).<sup>48</sup>

- Expand Research Infrastructure and Human Capital:

Although, Himadri station and IndARC observatory provide a good base, but the need of additional investments in ice class research vessels and Arctic fellowships, and the need for institutionalising "Polar Law Research Chairs" at NLUs and IITs are feasible options worth considering.<sup>49</sup>

### **(B) Conclusion**

To conclude, India's Arctic engagement, which evolved from a primarily scientific endeavour to a multidimensional strategy must ensure to be of such a nature that it continues to be forward

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<sup>46</sup> Ministry of Earth Sciences (MoES), India's Arctic Policy: Building a Partnership for Sustainable Development (2022), available at <https://moes.gov.in>

<sup>47</sup> Japan Ministry of Education, Culture, Sports, Science and Technology (MEXT), Arctic Research Plan 2021–2025, available at <https://www.mext.go.jp>.

<sup>48</sup> Ministry of Foreign Affairs Singapore, Singapore and the Arctic Council, available at <https://www.mfa.gov.sg>

<sup>49</sup> National Centre for Polar and Ocean Research (NCPOR), Indian Arctic Research Programme, available at <https://ncpor.res.in>

looking, rule based, and environmentally responsible because of Arctic's transition from a frozen periphery to one of the central theatres of global governance.

Through the medium of this paper, the author tried to demonstrate that India's stakes in Arctic are neither symbolic nor peripheral, but are integral to India's climate security, energy diversification, and maritime connectivity goals.

In the end, it won't be wrong to conclude that India's Arctic policy in the coming years will be a litmus test of India's ability to balance its developmental aspirations with stewardship of the global commons. As such, the need of a robust, multidisciplinary and legally informed engagement pattern is inconsequential to ensure India's interest along with the contribution to a more equitable and sustainable Arctic order, which would, ultimately be of immense significance to not only the Arctic states but to humanity at large.

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