PRAGUE UNIVERSITY OF ECONOMICS AND BUSINESS

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FACULTY OF INTERNATIONAL RELATIONS

The Old, the New and the Unknown

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Russia, China and India in the Race for the Arctic

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List of Abbreviations

A5	'Arctic Five' States
A8	'Arctic Eight' States
AC	Arctic Council
AGR	Arctic Governance Research
AZRF	Arctic Zone of the Russian Federation
BRICS	Brazil, Russia, India, China, and South Africa
EEZ	Exclusive Economic Zone
IN	Indian Navy
LNG	Liquid Natural Gas
OSCE	Organization for Security and Cooperation in Europe
NATO	North Atlantic Treaty Organization
NSR	Northern Sea Route
PLA	People’s Liberation Army (China)
UNCLOS	United Nations Convention on the Law of the Sea

Contents

Melting Ice and Heated Up Competition: Climate Change and the 'Arctic Race'

"The world has long felt magnetic pull towards the Arctic, but never more so than today […], the region has become an arena for power and for competition. […] Because far from the barren backcountry that many thought it to be […], the Arctic is at the forefront of opportunity and abundance."[1]

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Michael R. Pompeo, Former U.S. Secretary of State (2019)

Over the last decades, the Arctic has opened up both geographically and geopolitically. The region went from being perceived as an inaccessible *terra nullius* to being regarded as the next possible theatre for future global conflict over power and resources. As aggravating climate change is opening the doors for international actors and integrates the Arctic into global frameworks, power competition is heating up too. From Russia 'capturing' the North Pole in 2007 to Donald J. Trump proposing to buy Greenland from Denmark in 2019 – Arctic geopolitics have made their way into global headlines and public political discourse.

Three factors have generally enabled this trend: Global warming and growing resource scarcity make northern exploitation and export of raw materials more attractive, while technological developments make the Arctic increasingly accessible for industrial growth, shipping as well as digital connectivity and telecommunications.[2]

The resulting 'Arctic Race' has been subdivided into several contests for supremacy, resources, trading routes and tourist attraction as well as an environmental "race to save the Arctic"[3]. Recent research has shown the possibility of a completely ice-free Arctic by the summer of 2035.[4]

[1] Pompeo, Michael R.: Looking North: Sharpening America's Arctic Focus. Speech in Rovaniemi, Finland on May 6, 2019.
[2] See: Järvenpää, Pauli; Ries, Tomas. 'The Rise of the Arctic on the Global Stage'. In: Kraska, James (Ed.). *Arctic Security in an Age of Climate Change*. Cambridge: Cambridge University Press, 2011. p. 129 seq.
[3] Duxbury, Charlie. 'The 5 Most Important Races for the Arctic'. *POLITICO*, 01.01.2020.
[4] See: Guarino, Maria-Vittoria; et al. 'Sea-Ice-Free Arctic during the Last Interglacial Supports Fast Future Loss'. In: *Nature Climate Change* 10:10.

Over the years, the various interpretations of the region's future role in global affairs have produced many myths. Instead of solely considering facts on Arctic grounds, they often rather derive from domestic discourse in the countries involved: "This rhetoric characterizes the area […] by a forthcoming economic bonanza and realpolitik that together could create a 'perfect storm' leading to an interstate Arctic conflict."[5]

It is therefore necessary to carefully distinguish how such reports that "'sex up' the intra-Arctic conflict potential"[6] can "influence how big audience is reading and interpreting Arctic geopolitics"[7] – especially when it comes to military notions of a 'New Cold War'.

State of the Art

Many of these analyses do not distinguish between two different levels of Arctic geopolitics – the international and the regional level.[8] This work uses comparative policy analysis as a possibility to combine varying geopolitical perspectives of the 'Arctic Race' discourse in both contexts.

Especially Arctic Governance Research (AGR) has been attributed with a general "lack particularly of […] comparative research [which] is indicative of a deeper crisis in AGR"[9]: Many works are repeatedly analysing the same areas of regional cooperation and competition, especially concerning fossil fuel resources as well as shipping, but most literature rarely provides holistic approaches which consider future strategic developments and dare to give a broader outlook.[10] There exist several possible future outlooks for the Arctic – ranging from 'Arctic Boom' and 'Arctic Doom' scenarios to more rational middle ground perspectives.[11] Though, most either include a single country's perspective or a multitude of various (inter)-national views. This establishes the necessity for a tailored-down approach, integral to a general yet detailed perspective.

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[5] Käpylä, Juha; Mikkola, Harri. *Arctic Conflict Potential: Towards an Extra-Arctic Perspective*. Helsinki: Finnish Institute of International Affairs, 2013. p. 3.
[6] Käpylä; Mikkola, ibid, p. 8.
[7] Heininen, Lassi. 'Arctic Geopolitics from Classical to Critical Approach –Importance of Immaterial Factors'. In: *Geography, Environment, Sustainability* 11:1. p. 172.
[8] See: Østhagen, Andreas. 'The Different Levels of Geopolitics of the Arctic'. *Georgetown Journal of International Affairs*, 05.12.2019.
[9] Knecht, Sebastian; Laubenstein, Paula. 'Is Arctic Governance Research in Crisis? A Pathological Diagnosis'. In: *Polar Record* 56:35.
[10] See: Arbo, Peter; et al. 'Arctic Futures: Conceptualizations and Images of a Changing Arctic'. In: *Polar Geography* 36:3. p. 6.
[11] See: Arbo et al., ibid., p. 9.

A further research and knowledge gap concerns the mutual geostrategic relations of Asian members and observer states in the Arctic Council (AC), especially as Arctic geopolitical discourse is largely focused on either a confrontation of the U.S./NATO versus Russia or China. In the spirit of a 21st 'Asian Century' and 'easternising' global politics, research should thus focus more on the established and rising 'Eastern' powers in the Arctic space.

Russia, China and India are the world's largest countries by area and population (current and soon-to-be). They also represent appropriate relevant examples of an established yet diminishing power (Russia), an established yet still rising power (China), as well as a non-established yet rising power (India) in the international system.

Their geostrategic compatibility has been assessed in the past:
In the early 2000s, two separate works examined the possibility of a strategic triangle between Moscow, Beijing and New Delhi to counterbalance the post-Cold War systemic hegemony of the United States. It was even asked whether they could potentially form an anti-American axis, were a third world war to approach.[12] [13] These considerations were, however, established during a time of heightened ressentiments against Washington in all three countries, and have since been disproven, mostly through a growing Sino-Indian rivalry and the connected Western alignment of New Delhi.

Analyses of practical cooperation between Russia, China and India rely on larger, more general case studies:
The three actors are especially grouped within evaluations of the BRICS format, where the countries share similar stances towards the global system, but their individual developments differ, and progress is still dependent on bilateral ties.[14] [15]
Another main area of discussion are their stakes in global governance and normative foreign policy, because all three portray a general aversion towards Western-dominated

[12] See: Pant, Harsh V. 'Feasibility of the Russia-China-India 'Strategic Triangle'. Assessment of Theoretical and Empirical Issues'. In: *International Studies* 43:1. pp. 51–72.
[13] See: Rahm, Julie M. 'Russia, China, India: A New Strategic Triangle for a new Cold War?'. In: *U.S. Army War College Quarterly: Parameters* 31:4. pp. 87–97.
[14] See: Armijo, Leslie Elliott. 'The BRICS Countries as an Analytical Category: Mirage or Insight?'. In: *Asian Perspective*, 31:4. pp. 7–42.
[15] See: Lo, Bobo. 'The Illusion of Convergence–Russia, China and the BRICS'. In: *Russie.Nei.Visions* 92.

institutions.[16] [17] A focal point has also been their double-edged energy dependency as large ex- and importers and their shared efforts to reduce subsidies.[18]
Concerning the context of contemporary Arctic geopolitics, however, no direct tripartite comparison, apart from the BRCIS perspective, could be identified by the author.

This work thus aims to assess the positions of the Russian Federation, the People's Republic of China and the Republic of India in the ongoing 'Race for the Arctic', with its large unused potentials for resources, trade, security, tourism and scientific research, in a critical geopolitical framework that includes environmental and indigenous perspectives.
It first gives an introductory background analysis of recent policy trends in Arctic governance and the individual connections of the players within the region.
Through qualitative policy comparison, the actors' individual goals and motives in the Arctic are subsequently analysed and their deriving common grounds and possible conflicts finally set forth against a Strategic and Future Studies backdrop.
The concluding outlook ties the findings about Arctic geopolitics into the overarching framework of internationalising governance, global warming and North-South relations.

It can be assumed that the global geopolitical views of the three actors regarding the Arctic will vary because of their different cultural and historical backgrounds as well as ideological and strategic considerations towards the region.
Especially their geostrategic constellations could give incentives for both cooperation and competition, which should, however, be either propelled or hindered by their current diplomatic constellations.

[16] See: Grant, Charles. *Russia, China and Global Governance*. London: Centre for European Reform, '12.
[17] See: Tocci, Nathalie; Manners, Ian. 'Comparing Normativity in Foreign Policy: China, India, the EU, the US and Russia'. In: Tocci, Nathalie (Ed.). *Who is a Normative Foreign Policy Actor?*. Brussels: Centre for European Policy Studies, 2008. pp. 300–329.
[18] See: Dansie, Grant; et al. 'Reducing Energy Subsidies in China, India and Russia: Dilemmas for Decision Makers'. In: *Sustainability* 2010, 2. pp. 475–493.

Framework

During the Cold War period, political studies of the Arctic, as a possible front of global conflict, mostly followed empirical monitoring of enemy movements as well as situational assessment of military strategic developments.[19]

While the circumstances for Arctic policy research have fundamentally changed since, current International Relations studies of the region are still largely determined by two main theoretical thought currents of the 20th century:
Pessimist *realism* argues that the Arctic cannot forever protect itself from becoming a part of the global resource race and escalating military tensions elsewhere. The optimist *neoliberal* image, meanwhile, portrays the region as a continuing exceptionalist example for a 'zone of peace', guarded by fruitful intergovernmental cooperation and regional institutionalism.
From a neorealist standpoint, orthodox geopolitics present two kinds of spatial ordering in the Arctic: The open indeterminate nature of the Arctic makes it "a space of masculinist fantasy and adventure, which is mirrored in contemporary accounts of Arctic geopolitics. It is suggested that this is entwined with and nourishes the second ordering of Arctic space in terms of state-building and international relations."[20]

Academic research has thus objectively "only to a limited extent spurred theory-building or debate between (implicitly or explicitly defined) camps. Institutionalist approaches have dominated the field, but seldom sought outside its own confines."[21]
The Arctic presents indeed a dualist antithetic picture: On the one hand, competition is rising through confrontational military armament as well as increasing industrialisation and commercialisation, while, on the other hand, institutional stability and extensive research cooperation as well as environmental awareness are remaining high.[22]

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[19] See: Østerud, Øyvind; Hønneland, Geir. 'Geopolitics and International Governance in the Arctic'. In: *Arctic Review on Law and Politics* 5:2. p. 166.
[20] Dittmer, Jason; et al. 'Have You Heard the One about the Disappearing Ice? Recasting Arctic Geopolitics'. In: *Political Geography* 30:4. p. 202.
[21] Østerud; Hønneland, ibid., p. 171.
[22] See: Heininen, ibid., p. 172 seq. and Sinha, Uttam Kumar. 'The Arctic: An Antithesis'. In: *Strategic Analysis*, 37:1. p. 34.

Rudolf Kjellén described states as life forms which act upon their demographic, economic, political, social and geographical environment.

Geopolitics describe how both natural and man-made geographical conditions are guiding political decisions. While they neither determine nor predict them, the analysis of power structures on the basis of given geographical factors can serve as a strategic outlook into possible future developments and decisions of actors in state, society as well as the economy. In contrast, the more static *Political Geography* focuses mostly on past processes of interaction between humans and nature via a framework of spatial production of political order.[23]

As foreign policy continues to overcome physical hurdles of the natural environment, the spatialisation of international politics is diversifying as well.[24] This connection has progressed through different episodes – from a 'Geography Fabulous' that embraced the unknown parts of the world, over 19th century imperial and colonialist 'Geography Militant' to a 'Geography Triumphant', which elevates political spatialisation through the modern means of global transport and exploration.[25]

The policies of major Arctic states in both Eurasia and North America are characterised by an underlying spatial logic which influences their strategic behaviour and shapes the sometimes opaque, national understandings of 'internal' and 'common' Arctic waters.[26] So, even if states still largely have the last word in Arctic governance, the changing geographical landscape in the High North also similarly influences the regional geopolitical power structure and its perceptions.[27]

For this reason, the classical IR theories have been attested to bear a "negligence to the role of space(-making) in circumpolar politics […] [which] may lead to misinterpretations about scope and character of Arctic geopolitics"[28]. As this trend goes against the

[23] See: Suvanto, Veera Pauliina. 'Geopolitics of the Arctic: Challenges and Prospects'. Master Thesis, University of Barcelona, 2016. pp. 8 seq.
[24] See: Heininen, ibid., p. 176.
[25] See: Dodds, Klaus; Woon, Chih Yuan. 'Triumphant Geopolitics? Making Space of and for Arctic Geopolitics in the Arctic Ocean'. In: Sellheim, Nikolas et al. *Arctic Triumph: Northern Innovation and Persistence*. Cham: Springer International Publishing, 2019.
[26] See: Knecht, Sebastian; Keil, Kathrin. 'Arctic Geopolitics Revisited: Spatialising Governance in the Circumpolar North'. In: *The Polar Journal* 3:1. p. 178.
[27] See: Wegge, Njord; Keil, Kathrin. 'Between Classical and Critical Geopolitics in a Changing Arctic'. In: *Polar Geography* 41:2. p. 20 seq.
[28] Knecht; Keil, ibid, p. 198.

developments of globalisation in the region, the new definition of a 'Global Arctic' has in recent years been proposed as an alternative unencumbered research model. It envisages to better encompass the diversifying, yet complicating, matters of Arctic spatialisation.[29]

The Arctic represents a primary example for the interchanging narratives of exploration and exploitation, incorporating prospects for both great gains but even greater losses.[30]
A critical geopolitical approach must therefore not only consider hard facts but also their connection to identity and the processes of imagined geography, while mediating between theory and practice as well as goals and values.
In the Arctic context, these are especially climate change and the indigenous perspective. This work is framed to acknowledge both indigenous communities, as an omnipresent and unneglectable fourth (non-state) actor in Arctic alter-geopolitics, as well as nature itself as a more abstract fifth actor, which puts the region both in between and above the other involved forces.

Incidentally, "geopolitics is defined as one of the major environmental theories"[31].
It has, however, been pointed out that climate change still only plays a background role for many authors in Arctic Affairs, upon which to frame more 'important' geopolitical issues for discussion – an overarching link between global warming and regional socio-economic development is lacking. Global warming will indeed be the main future factor deciding over other accompanying developments in the Arctic and beyond.[32]
This work thus puts the analysis of state and non-state Arctic geopolitics into an overarching theme of global changes and evolving North-South, as well as East-West, relations.

[29] See: Heininen, Lassi; Finger, Matthias. 'The 'Global Arctic' as a New Geopolitical Context and Method'. In: *Journal of Borderland Studies* 33:2. p. 201.
[30] See: Arbo et al., ibid., p. 2.
[31] Heininen, ibid., p. 179.
[32] See: Arbo et al., ibid., pp. 4, 14.

1. The Changing Governance of a 'Global Arctic'

The Arctic is becoming "ever more entangled […] ever more at the mercy of decisions made elsewhere, often without the slightest consideration for the top of the world."[33]

The term 'Arctic' varies in interpretations. The most general and widely used geographical definition encompasses the land and sea areas above the Arctic Circle at about 66° 34' North latitude, which make up around 21 million square kilometres or circa 4% of the Earth's total surface, nearly as much as the African continent. This territory is expanded by certain national jurisdictions, for example, the U.S.-Alaskan Arctic Area.[34] Other provisions include the areas north of the 10ºC isotherm for July 30th or the Arctic Ocean extending up to 80º North latitude.[35] The region is populated by around four million people, half of which are living in the Russian Federation. The Arctic economy produces roughly US$230 billion every year.[36]

The Arctic thus integrates the five coastal states (A5) of Canada, Denmark (Greenland), Norway, the Russian Federation and the United States of America (Alaska). Finland, Iceland and Sweden also have territories above the Arctic Circle. Together, they make up the so-called 'Arctic Eight' (A8).

Since the end of the Cold War, international politics in the region have been characterised by an 'Arctic Spirit' of cooperation and peaceful conflict resolution: "High North, low tension"[37]. Arctic affairs can be viewed as a "governance barometer"[38] to test the global interactions of national and international interests on a smaller scale. They represent "a multi-level mosaic of collaborative frameworks and agreements that is fluid and dynamic, continuously shaped by members' conscious decisions and by informal practice."[39]

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[33] Anderson, Alun. *After the Ice: Life, Death, and Geopolitics in the New Arctic*. New York: Smithsonian Books, 2009.
[34] See: O'Rourke, Ronald; et al. *Changes in the Arctic: Background and Issues for Congress*. Washington D.C.: Congressional Research Service Report, 2020. pp. 1 seq.
[35] See: Suvanto, ibid., p. 13.
[36] See: Global Agenda Council. *Demystifying the Arctic*. Davos: World Economic Forum, 2014. p. 15.
[37] Perry, Charles M.; Andersen, Bobby. *New Strategic Dynamics in the Arctic Region. Implications for National Security and International Collaboration*. Cambridge: Institute for Foreign Policy, 2012. p .3.
[38] Perry; Andersen, ibid., p. 19.
[39] Perry; Andersen, ibid., p. 19.

The Arctic Council (AC) was established in 1996 and provides the main institutional framework for conversation and cooperation in the region. The Council's main focal point is the preparation and issuance of legally binding and non-binding comprehensive documents as well as empirical studies. However, it "does not and cannot implement or enforce its guidelines, assessments or recommendations. […] The Arctic Council's mandate […] explicitly excludes military security."[40]

Besides the membership of the 'Arctic Eight', the AC also has six Permanent Participants, representing the Arctic indigenous communities. By 2019, observer state status had been granted to China, France, Germany, India, Italy, Japan, Netherlands, Poland, Singapore, South Korea, Spain, Switzerland and the United Kingdom (for a list of non-state observers, see Figure 1). Further applications are considered by countries such as Greece, Turkey or Mongolia.[41] While the European Union has long expressed interest to join, its applications for observer status have thus far been blocked by Canada and Russia.[42] Observers can participate in and contribute to sessions of the AC's subsidiary bodies as well as initiate and engage in their policy plans – but they have no plenary voting rights or final say on the Council's general agenda.[43]

As a post-Cold War heritage, Arctic governance has represented a textbook example of neoliberal interdependence thinking because benefits of intergovernmental institutionalism were winning over confrontational costs of national solo attempts.[44] The Arctic Council has nevertheless been attested with "messy governance"[45] as well as increasing "political inability"[46] to progressively react to geopolitical challenges:

It "ushered in a new form of triumphant geopolitics which has allowed for the reconciliation and reclamation of Arctic space and relations"[47] and continues to lack

[40] Arctic Council. 'About the Arctic Council'. Accessed 20.03.2021.
[41] See: Knecht, Sebastian. 'New Observers Queuing Up: Why the Arctic Council should Expand – and Expel'. *The Arctic Institute*, 20.04.2015.
[42] See: Stokke, Olav Schram. 'The Promise of Involvement: Asia in the Arctic'. In: *Strategic Analysis* 37:4. p. 476, and Knecht, ibid.
[43] See: Knecht, ibid.
[44] See: Buchanan, Elizabeth; Burke, Ryan. 'Strategy and Competition at the Ends of Earth'. *Modern War Institute*, 06.01.2021.
[45] Lanteigne, Marc. '"Have You Entered the Storehouses of the Snow?" China as a Norm Entrepreneur in the Arctic'. In: *Polar Record* 53:2. p. 125.
[46] Heininen, Lassi; Everett, Karen; et al. *Arctic Policies and Strategies – Analysis, Synthesis, and Trends*. Laxenburg: International Institute for Applied Systems Analysis, 2020. p. 251.
[47] Doods; Woon. 'Triumphant Geopolitics', ibid.

structural capabilities to embrace the Arctic's growing influential role worldwide. The A5 have been criticised to be "usurping the Arctic Council's central position in northern governance"[48].

While the admission of Asian observer states in 2013 has internationalised the governing body and broadened its global scope, many have accused traditional member states to retain a certain 'Polar Orientalism'. Their continuous resistance against the admission of new actors plays into the thought that there are already "too many fingers in the pie"[49].

The main complications which arise from such "petty sovereigns"[50] behaviour revolve around the fundamental question of "who gets to 'speak' of and for the 'Arctic'"[51]. Particular dissent was caused by the Ilulissat Declaration of the 'Arctic Five' in 2008, in which the littoral states declared themselves to be "in a unique position to address […] possibilities and challenges"[52]. Additional public controversy flared up when the Greenlandic prime minister boycotted the AC's 2013 ministerial meeting over representation issues with Denmark.[53] Alternative forums with a more open and global focus, such as the 'Arctic Circle', have meanwhile been established by disappointed stakeholders outside of the A5.

To address the growing criticism, amendments to the Council's existing rules could be put forward, for example, by including issues of military security (as the region's ever-present "pink, prancing elephant"[54]). Otherwise, it was advised that the Arctic states should introduce a separate body, in some form of an "Arctic OSCE"[55]. While an *Arctic Security Forces Roundtable* had been initiated in 2011, it is currently working incomplete because Russia withdrew its participation after the Crimean Crisis in 2014.[56]

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[48] Kuersten, Andreas. 'The Arctic Five Versus the Arctic Council'. In: Heininen, Lassi; Exner-Pirot, Heather; Plouffe, Joël (Eds.). *The Arctic Yearbook 2016*. Akureyri: Northern Research Forum, 2016. p.389.
[49] Perry; Andersen, ibid., p. 19.
[50] Dodds, Klaus; Hemmings, Alan D. 'Arctic and Antarctic Regionalism'. In: Passi, Anssi; et al. (Eds.). *Handbook of Regions and Territories*. Cheltenham: Edward Elgar, 2017.
[51] Dodds; Hemmings, ibid.
[52] Centre for International Law of the National University of Singapore. '2008 Ilulissat Declaration'. Accessed 19.03.2021.
[53] See: Dodds, Klaus; Woon, Chih Yuan. 'Introduction: The Arctic Council, Asian States and the Global Arctic'. In: Woon, Chih; Dodds, Klaus. *'Observing' the Arctic*. Cheltenham: Edward Elgar Publishing, 2020. p. 8.
[54] Dams, Ties; van Schaik, Louise. *The Arctic Elephant*. Den Haag: Clingendael, 2019. p. 3.
[55] Dams; van Schaik, ibid., p. 9.
[56] See: Zandee, Dick; et al. *The Future of Arctic Security*. Den Haag: Clingendael, 2020. p. 41.

2. Historical and Ideological Starting Positions

2.1. The Russian Federation: Resurrection of Great Power?

The Russian Federation has been labelled the "quintessential Arctic state"[57] as it has "at least half of the Arctic in terms of area, coastline, population and probably mineral wealth."[58] Around 20% of the Russian territory lay above the Arctic Circle, with its northernmost land point (Cape Fligely, Franz Josef Land) only 911 kilometres from the North Pole. With around 17,500 kilometres, the country also possesses by far the longest shoreline of all Arctic states. The Arctic Zone of the Russian Federation (AZRF) currently accounts for 5.6% of the national gross domestic product and this figure is set to increase up to 14%.[59]

During Russia's post-Soviet economic decline, the AZRF particularly suffered because state resources were pulled out and military bases closed. Only a few healthy privatised companies were able to overcome the crisis. This led to stark emigration which continues in some regions until today. After Putin's rise to power, the Kremlin rediscovered its Arctic zone as a 'national heritage'.[60] Domestic representation of Arctic activism is much more important than in other countries. Russia's current discourse and policies in the region portray a duality: Both realist as well as neoliberal arguments fall into place for Moscow's strategic stance towards the Arctic. As it can neither be identified as a fully belligerent nor benevolent player, the truth lies in the middle.

First crafted back in 2001, Russia's current principles and strategy for Arctic development until 2035 were released in March and October of 2020. They portray the AZRF as Russia's main region for resource production, in which the country's national interests have to be protected. This includes military deterrence and expansion of border/coast guard capabilities. Increased exports to Asian countries and further development of the Northern Sea Route (NSR) shipping lane are seen as engines for future development of

[57] Zandee et al., ibid., p. 27.
[58] [n.a.]. 'The Melting North'. *The Economist*, 16.06.2012.
[59] See: Zagorski, Andrei. 'Arctic 2030 and Beyond: National Policies and Priorities. Perspective of the Russian Federation'. In: Corell, Robert W.; et al. (Eds.). *The Arctic in World Affairs*. Seoul: Korea Maritime Institute, 2018. p. 67.
[60] Zagorski, Andrei. 'The Future of Arctic Ocean Cooperation. Perspective of the Russian Federation'. In: Corell, Robert W.; et al. (Eds.). *The Arctic in World Affairs*. Seoul: Korea Maritime Institute, 2018. p. 126.

the region. Prosperity and well-being of the Russian Arctic population have also been elevated to national interest. The perceived efforts of 'some countries' to undermine international agreements in the region and the growing general potential for conflict are meanwhile seen as major challenges to Russia's sovereignty. The principles keep up Moscow's historic labelling of the Arctic as a 'zone of peace' which has to be maintained as such – with the Arctic Council at its core.[61] While the newest strategy contains material keystones and aims at increased shipping of Arctic liquid natural gas, expanding polar research or improving health and education services in the region,[62] the earlier assessment of climate change as man-made has vanished, as did the inclusion of development partners from civil society.[63]

Official numbers put the necessary financing volume for the AZRF at US$200 billion until 2050, but only fourteen billion have thus far been invested.[64] The current state funding regime is set to reach US$3 billion by 2025, while actual financing is lacking behind.[65] Projects like the acquisition of new icebreakers had to be postponed. A significant drop in Arctic investment activity was observed after the incorporation of Crimea, which caused a large amount of structural funding to be redirected from the High North towards the Kremlin's new southwestern 'pearl'.

It has been pointed out that, while Russia is indeed planning with ten-year policies, a strategic vision exceeding these timeframes is somewhat limited or even non-existent.[66] This could be explained with the budget dependency on revenues from state-owned oil and gas companies, which tie Arctic long-term development to a favourable global price regime. While Moscow's policies could be seen as a grand attempt to maintain national sovereignty and transform the society and economy, they can also serve as a pretext for undisturbed legal exploitation of the Russian Arctic 'resource base'.[67]

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[61] See: Klimenko, Ekaterina. *Russia's New Arctic Policy Document Signals Continuity Rather than Change*. Solna: SIPRI, 2020.
[62] See: Buchanan, Elizabeth. 'Russia's Grand Arctic Plan Will Face Tough Hurdles'. *The Moscow Times*, 28.10.2020.
[63] See: Kluge, Janis; Paul, Michael. *Russia's Arctic Strategy through 2035*. Berlin: SWP, 2020.
[64] See: Gifford, Charlotte. 'On Thin Ice: Thawing Permafrost Dampens Russia's Economic Growth Prospects'. *World Finance*, 27.01.2020.
[65] See: Kim, Yoon Hyung; et al. 'Overview: Arctic 2030 and Beyond – Pathways to the Future'. In: Corell, Robert W.; et al. (Eds.). *The Arctic in World Affairs*. Seoul: Korea Maritime Institute, 2018. p. 12.
[66] See: Kim; et al., ibid., p. 11.
[67] See: Suvanto, ibid., pp. 25, 28.

2.2. The People's Republic of China: The Last Global Frontier?

The People's Republic of China's northernmost point in Mohe County, Heilongjiang province, is located over 1400 kilometres away from the Arctic Circle. China nevertheless calls itself a "Near-Arctic State"[68].

In Chinese geographic conceptualism, the Himalayas and the Tibetan plateau function as the world's 'third pole'. Domestic discourse thus views the country as a 'tripolar nation'. The People's Republic stresses that its territory had geologically been combined with the Arctic in the ancient supercontinent Gondwana.[69] Beijing also maps the Arctic as strategic borderlands with the U.S.[70]

China sees the Arctic as part of a global 'community of shared future of mankind' which influences its geopolitical worldview and individual stakes in the region. President Xi Jinping in 2014 declared Beijing's aim to become a 'Polar Great Power'.[71] Vice-Minister of Foreign Affairs, Kong Xuanyou, in 2018, summarised China's Arctic stance as such: "*Firstly, China will not be overstepping and secondly, China will not be absent*"[72].

The polar regions were first mentioned in the 12th Five Year Plan in 2011 as possible future destinations for resource exploitation, security consolidation and maritime management.[73] The Arctic was added to the Belt and Road initiative in 2017, envisioning a 'Silk Road on Ice' (or 'Polar Silk Road') along the Arctic Ocean as a 'blue economic passage' between Asia and Europe.[74] China's official 2018 Arctic policy was a major renunciation of Deng Xiaoping's motto to hide Chinese capabilities from the outside (*tāo guāng yang huì*, 韬光养晦).[75] The document labels the country as an active contributor in Arctic affairs that provides wisdom to the region.[76] The newest Five Year Plan for

[68] State Council of the People's Republic of China. 'China's Arctic Policy'. Accessed 29.10.2020.
[69] See: Koivurova, Timo; et al. *China in the Arctic and the Opportunities and Challenges for Chinese-Finnish Arctic Co-operation*. Helsinki: Government of Finland, 2019. p. 30.
[70] See: Dodds, Klaus; Halliburton, Rachel. 'The Battle for the Arctic'. *Prospect*, 29.03.2021.
[71] See: Brady, A.-M. *China as a Polar Great Power*. Cambridge: Cambridge University Press, 2017.
[72] Lim, Kong Soon. 'China's Arctic Policy & the Polar Silk Road Vision'. In: Heininen, Lassi; Exner-Pirot, Heather; Plouffe, Joël (Eds.). *The Arctic Yearbook 2018*. Akureyri: Northern Research Forum, 2018. p. 3.
[73] See: Havnes, Heljar; Seland, Johan Martin. 'The Increasing Security Focus in China's Arctic Policy'. *The Arctic Institute*, 16.07.2019.
[74] See: Koivurova; et al., ibid., 26.
[75] See: Lim, ibid., p. 8.
[76] See: State Council of the People's Republic of China, ibid.

2021–2025 lays out that China would continue to actively construct its 'Polar Silk Road' and "participate in pragmatic cooperation in the North Pole"[77].

Beijing divides its policy discourse over Arctic affairs into a regional and a global category,[78] which upholds the principle of non-interference but also recognises Chinese stakeholder interests concerning worldwide topics, like climate change. China's official overall aim in the High North is to "safeguard the common interests of all countries and the international community in the Arctic, and promote sustainable development"[79]. An often-overlooked motivation lies in Taiwan's interests in the Arctic.[80] Nevertheless, China's policy approach to the Arctic is not monolithic as there are multiple different ministries and state agencies involved in shaping its 'stakeholder' interests in the region.[81]

With this pro-active approach, Chinese diplomatic self-understanding in the Arctic is torn in a conflict of identities between both favouring bilateral partnerships and relying on multilateral cooperation for stable regional institutionalism. It has been pointed out that the country is on the way from following the rules to making them.[82] Others meanwhile prefer to label China as an Arctic 'norm entrepreneur' that uses the regional setting to its advantage while also trying to not anger the local geopolitical heavyweights.[83]

For the Chinese leadership, the negative framing of its Arctic intentions ties into general Western hypocrisy about its policy choices and a perceived continuous imperialist behaviour on the global stage. Respect is thus a central theme for Beijing's Arctic cooperation narrative. While it is first and foremost presented as the Chinese acknowledgement of costal countries' rights and its own obligations as an Arctic Council observer state, it conversely also resonates with China's longing for more recognition from others in both Arctic and global affairs.

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[77] [n.a.]. 'China Pledges to Build 'Polar Silk Road' over 2021-2025. *Reuters*, 05.03.2021.
[78] See: Dodds; Woon. 'Arctic Council', ibid., p. 12.
[79] State Council of the People's Republic of China, ibid.
[80] See: Tonami, Aki. 'The Arctic Policy of China and Japan: Multi-Layered Economic and Strategic Motivations'. In: *The Polar Journal* 4:1. p. 109.
[81] See: Lackenbauer, Whitney; et al. *China's Arctic Ambitions and What they Mean for Canada*. Calgary, University of Calgary Press, 2018. p. 44.
[82] See: Havnes; Seland, ibid.
[83] See: Lanteigne, ibid., p. 118 seq.

2.3. The Republic of India: Between or Above the Lines?

The distance between the northernmost point of Indian-administered territory (Indira Col in the Ladakh union territory) and the northernmost point of Asia is over 5000 kilometres. Therefore, India does not propose any direct geographical connection with the Arctic, though, there exist several indirect cultural links.

Like China, India perceives the Himalayas to be a 'third pole' of the globe and thus also considers itself a 'tripolar nation'. A further connection between the South Asian subcontinent and the Arctic had been developed in the book '*The Arctic Home in the Vedas*' from 1903. It elaborated that Indo-Aryans had settled at the North Pole in the pre-glacial period, some 10,000 years ago, but were then forced to migrate to Asia and Europe. The ancient Hinduist Vedas scripts were said to support these claims, though, those have been debunked since.

New Delhi furthermore also promotes the Arctic to be a 'common heritage of mankind'. Implications made in the region do not stay there, which is said to explain Indian stakes in further engagement with the 'vital' High North. For India, any human-made changes to the region have to be "sustainable, responsible, and transparent"[84].

The country was admitted as an observer to the Arctic Council in 2013 and was re-approved in 2018. This was an important step for its goals in global agenda-setting. "India's Arctic Victory"[85] was celebrated in domestic media as a major diplomatic achievement on New Delhi's path to becoming a great power: "India would now be at the same table as China, which enjoys greater global clout, in parleys on the ownership of the North Pole and formulation of Arctic policy."[86]

A first overview of Arctic affairs was laid out by the Indian government shortly after, which portrayed the region as "effected by external global forces"[87] such as strategic concerns, commercial relations and climate change. The article thus labelled India's

[84] Government of India. 'India's Arctic Policy. Roadmap for Sustainable Engagement'. Accessed 06.01.2021.
[85] Ramachandaran, Shastri. 'India's Arctic Victory: A Major Diplomatic Achievement'. *DNA: Daily News & Analysis*, 21.05.2013.
[86] Ramachandaran, ibid.
[87] Ministry of External Affairs of the Republic of India. 'India and the Arctic'. Accessed 08.10.2020.

interests in the region as strategic, commercial, scientific and environmental.[88] This policy stance contradicted a comment made by a spokesperson of the Ministry of External Affairs earlier the same year, which stated that "*unlike China and South Korea which are going for commercial benefit, our interest is purely scientific.*"[89]

In January 2021, the Indian government then published the draft text for an official Arctic policy, asking for online participation from the public. It labels New Delhi's Arctic engagement approach as "multi-dimensional"[90] and defines India's 'Arctic Mission' to enhance humankind's study and understanding of the Arctic, to increase sustainable and mutually beneficial cooperation with the region as well as to strengthen efforts against global warming.[91]
The Indian strategy is said to be resting on five pillars: Science and research, economic and human development cooperation, transportation and connectivity, governance and international cooperation as well as national capacity building.[92]

Generally, Indian professional discourse about Arctic affairs is only slowly starting. New Delhi trusted in its former Antarctic experience while working out its Arctic stance, which does not simply translate. While the soon-to-be-released governmental policy represents a solid fundament to build upon, New Delhi still lacks behind other Asian competitors, above all China, when it comes to formulating a direct vision of how India could influence future Arctic affairs.

[88] See: Ministry of External Affairs of the Republic of India, ibid.
[89] Quoted in: Lackenbauer, Whitney. 'India and the Arctic: Revisionist Aspirations, Arctic Realities'. In: *Jindal Global Law Review* 8:1. p.28.
[90] Government of India, ibid.
[91] See: Government of India, ibid.
[92] See: Government of India, ibid.

3. Geostrategic Goals of the Arctic 'Great Game'

3.1. Sovereignty & Resources

"With ice cover at a record low and exploration at an all-time high, the Arctic presents a paradox—exploiting the melting sea ice to drill for more oil given that burning oil caused the melting in the first place."[93]

Since the end of the Cold War, most territorial disputes in the Arctic were resolved. Only a handful of small areas continue to be disagreed upon, all of them between fellow NATO allies. There furthermore exist rivalling petitions by Canada, Denmark and Russia to extend their Exclusive Economic Zones (EEZ) onto the continental shelf of the Lomonosov Ridge (see Figure 2). They are all processed by the United Nations Commission on the Limits of the Continental Shelf on the basis of previous geological exploration and detailed scientific reasoning.[94] This possibility is laid out in the United Nations Convention on the Law of the Sea (UNCLOS): Article 76 gives the right to littoral states to claim continental shelf up to 200 nautical miles as a 'natural prolongation of its land territory' and grants a ten-year period to further request an EEZ extension for up to 350 nautical miles.[95]

Most public discussions about a "great Arctic gold rush"[96] started after 2008, when the U.S. Geological Service prepared an extensive, yet uncertain, assessment of the region's riches. Until this day, the report is the most-quoted source for possible resource deposits in the Arctic: It estimated there to be an undiscovered potential of 412 billion barrels of petroleum, 240 billion located on land, as well as 90 billion barrels of oil and 48.3 trillion cubic meters of gas on the shelf – which would respectively constitute for up to 16% and 30% of all undiscovered deposits worldwide (for a map of compiled Arctic resources, see Figure 3).[97] The Arctic also accounts for around 10% of all fish and 5.3% of crustaceans caught worldwide.[98]

[93] Sinha: 'The Arctic: An Antithesis', ibid., p.38.
[94] See: Global Agenda, ibid., p. 15.
[95] See: Suvanto, ibid., pp. 14 seq.
[96] Borgerson, Scott G. 'Arctic Meltdown'. In: *Foreign Affairs* 87:2.
[97] See: Voronkov, Lev. 'Russian Perspectives on Asian Approaches to the Arctic'. In: Sakhuja, Vijay; Narula, Kapil (Eds.). *Asia and the Arctic*. Singapore: Springer, 2016. p. 116.
[98] See: Voronkov, ibid., p. 116.

Access is however limited by practical obstacles, such as changing weather patterns, sea ice distribution and polar darkness, as well as lowered expectations for the future of fossil fuel energy. It is therefore questionable to talk about an Arctic 'Gold Rush', at least for energy resources.

Minerals and rare earths, meanwhile, offer a much more lucrative opportunity for exploitation. "While mining in mature regions in the Arctic has stagnated, there has been a strong growth in frontier regions, spurred by increasing world market prices."[99] Emerging markets continue to increase the global demand for high-tech electronics and luxury articles. Due to these developments, combined with depleting land availability around the globe, there is rather a 'Land Rush' underway in many Arctic and sub-Arctic territories. A Norwegian study assessed that:

> "The Arctic is the home to 11 % of the world reserves of cobalt, 10.6 % of nickel, 9.2 % of tungsten, 4.2 % of chrome ore, 2.3 % of iron stores and about 2.1 % of coal. 40 % of world production of industrial diamonds, 25–27 % of jewelry diamonds, 40 % of palladian, 15 % of platinum, 7.8 % of zinc, 5.8 % of tungsten, 5.6 % of the stylus, 3.8 % of copper, 3.7 % of phosphate, 3.6 % of silver and bauxite and 3.2 % of gold are produced in the Arctic."[100]

In recent years, multiple large-scale mines have opened across the High North, unearthing, for example, iron ore in Canada, and further projects to exploit uranium or rare earths are also planned in previously inaccessible areas, such as Greenland. "In Finland, publicly owned mineral deposits worth billions of Euros have been given practically free to multinational companies or private entrepreneurs for export."[101] Some plans are even designated for surveillance by intelligence agencies because of their global importance.

Another booming branch of the Arctic 'land rush' economy is timber production in Taiga forests, especially in Scandinavia and Russia, where governments are deciding to lease large land concessions to international extractors for greenfield investment.[102]

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[99] Arbo et al., ibid., p. 5.
[100] Voronkov, ibid., p. 116.
[101] Kröger, Markus. 'The Global Land Rush and the Arctic'. In: Finger, Matthias; Heininen, Lassi (Eds.). *The Global Arctic Handbook*. Cham: Springer International Publishing, 2019. p. 34.
[102] See: Kröger, ibid., pp. 28 seq.

3.1.1. Russia

In 2007, a Russian research expedition planted a metal flag of the Russian Federation into the seabed underneath the North Pole. Landing back on land, the head of the team explained that: "*The Arctic always has been and always will remain Russian.*"[103]. An official spokesperson labelled it "*like putting a flag on the moon*"[104].

This domestic portrayal was not shared by Western observers, who rather saw the stunt as an unannounced starting shot for a belligerent 'Scramble for the Arctic'. The Canadian foreign minister countered by saying: "*This isn't the 15th century. You can't go around and just plant flags and say 'We're claiming this territory'*"[105]; to which his Russian counterpart responded with: "*We're not throwing flags around. We just do what other discoverers did.*"[106]

Most confrontational rhetoric of recent years in the Arctic space has generally happened between Russia and Canada which compete in a "global fight"[107]over their national embodiments of northernmost power, bordering "possession anxiety"[108] and "sovereignty fetishism"[109].

The Russian ambassador to Iceland summarised Moscow's approach towards Arctic sovereignty disputes as such: "*There's nothing to divide, everything has been already divided*"[110].

Although Russia solved its territorial disagreement with Norway over maritime demarcation in the Barents Sea in 2010, a new dispute evolved in early 2020 about Moscow's access to Svalbard, as stated in the 1920 international treaty.[111] Additionally, it never ratified a maritime boundary agreement between the U.S. and the USSR about

[103] Quoted in: Hønneland, Geir. *International Politics in the Arctic. Contested Borders, Natural Resources and Russian Foreign Policy*. London: I.B. Tauris, 2017. p. 281.
[104] Quoted in: Ingimundarson, Valur. 'Territorial Discourses and Identity Politics. Iceland's Role in the Arctic'. In: Kraska, James (Ed.). *Arctic Security in an Age of Climate Change*. Cambridge: Cambridge University Press, 2011. p. 178.
[105] Quoted in: Dodds, Klaus. 'A Polar Mediterranean? Accessibility, Resources and Sovereignty in the Arctic Ocean'. In: *Global Policy* 1:3. p. 303.
[106] Quoted in: Dodds, ibid., p. 303.
[107] Hønneland, ibid., p. 274 seq.
[108] Ingimundarson, ibid., p. 178.
[109] Ingimundarson, ibid.
[110] Quoted in: Staun, Jørgen. 'Russia's Strategy in the Arctic: Cooperation, Not Confrontation'. In: *Polar Record* 53:3. p. 327.
[111] See: O'Rourke; et al., ibid. p. 23.

their common Bering Strait border and demands expanded fishing rights. Oil discoveries in the area and the so-called 'Doughnut Hole' between both countries' exclusive economic zones further complicate negotiations.[112]

Through the UNCLOS system, there now exist rivalling claims by both Russia and Denmark over areas including the North Pole. Moscow first claimed the Lomonosov underwater range as part of its extended EEZ back in 2001, but the application was dismissed. In 2014, the international commission confirmed a Russian claim over 52,000 square kilometres in the Sea of Okhotsk. A revised application about the Lomonosov Ridge was submitted in 2015 and is currently under review. There are, however, discussions that Moscow, Ottawa and Copenhagen could settle for a compromise over their territorial claims in the next years.

In contrast to its actions in other parts of its neighbourhood, the Kremlin has so far stuck to the rules of the game in the Arctic. It is therefore questionable whether the international controversy in 2007 was necessary: "The North Pole, certainly, is a symbolic prize worth a flag contest, but it is not a profitable goal."[113]

The Arctic economy constitutes for 10% of global oil production and 25% of gas extraction, of which the Russian Federation in 2008 respectively shared 80% and 99%.[114] From the estimated untouched oil and gas deposits, around 80% are located on the Russian continental shelf. The Shtokman field contains the world's second largest offshore gas deposits.[115] The Vostok Oil project, which could exploit up to five billion tons of 'black gold', plans to develop two new airports as well as fifteen industrial towns and a total of at least 100,000 new jobs in its vicinity.[116]

A well-selling concept is to exploit and ship liquid natural gas (LNG) from the Yamal peninsula, especially since gas is perceived as a 'cleaner' energy source. Vessels can transport the resource eastwards during summer months and westwards in winter (see Figure 5).[117] The project, which is connected with new port facilities to facilitate a central

[112] See: Perry; Andersen, ibid., p. 58.
[113] Østerud; Hønneland, ibid., p. 176.
[114] See: Suvanto, ibid., p. 39.
[115] See: Perry; Andersen, ibid., p. 56.
[116] See: Dodds; Halliburton, ibid. and Sukhanin, Sergey. 'Looking Beyond China: Asian Actors in the Russian Arctic (Part One)'. In: *Eurasia Daily Monitor* 17:64.
[117] See: Weidacher Hsiung, Christopher. 'China and Arctic Energy: Drivers and Limitations'. In: *The Polar Journal* 6:2. p. 251.

shipping hub, has found multiple investors, for example, from China, Japan and South Korea, since its start in 2017 and is seen as the centrepiece for development of the Northern Sea Route. However, Russia is concurrently also continuing to promote southern gas pipelines, such as *Altai* and *Power of Siberia*, which would facilitate the purchase of large-scale amounts of gas much easier via landbound infrastructure.[118] Here, the Russian bid for fast-lane energy contracts is likely to stand against Moscow's efforts for Arctic development.

Another rising energy resource is coal, with a troubled large-scale project currently being revived in the Taymyr basin: 2023 should bring one million tons of mined coal, 2025 up to five million tons annually. A new loading terminal is planned at the port of Dikson, with a total of around US$167 million budgeted for regional exploration and infrastructure. Russia plans to boost coal extraction by a half until 2035 to 668 million tons, of which 392 million are to be shipped internationally.[119]

Still, Arctic drilling is estimated to cost between US$500-700 million for a singular borehole – around a fivefold of warmwater exploration.[120] Arctic onshore oil production priced up to US$100 per barrel in 2008 and offshore costs are assessed to even double the amount. Meanwhile, extraction in Middle Eastern countries costs a minimum of US$10 per barrel.[121] This does not even count in the additional near-trillion dollar 'money gap' to sustain maintenance of current production facilities.[122]

The Shtokman field already provided an insight into the short-lived nature of international resource cooperation in the Arctic: Being highly praised by the Kremlin in the 2000s, joint cooperation collapsed in 2012 as the Western *Statoil* and *Total* companies pulled out of the deal because of low global oil prices.[123]

[118] See: Weidacher Hsiung, ibid., p. 253.
[119] See: Staalesen, Atle. 'Investor Breathes New Life in Major Arctic Coal Project'. *The Barents Observer*, 25.06.2020.
[120] See: Dadwal, Shebonti Ray. 'Arctic: The Next Great Game in Energy Geopolitics?'. In: *Strategic Analysis* 38:6. p. 820.
[121] See: Perry; Andersen, ibid., p. 15 seq.
[122] See: Laruelle, Marlène. 'Resource, State Reassertion and International Recognition: Locating the Drivers of Russia's Arctic Policy'. In: *The Polar Journal* 4:2 p. 258.
[123] See: Baev, Pavel. *Russia's Race for the Arctic and the New Geopolitics of the North Pole*. Washington D.C.: Jamestown Foundation, 2007. p. 490.

The Russian example thus demonstrates the two-sided nature of the 'Arctic gold rush' discourse:

While international actors are on the one hand eyeing the region as an alternative energy source to diversify their imports, it would on the other hand give Moscow further leverage over its gas export negotiations, which it has continuously used as a political tool in the past.[124] Early cooperation between Russian and Western energy firms to jointly develop the Shtokman field showed ideological differences in perception of resource exploitation. While geoeconomics mean multilateral liberalism for one party, for the other, they can equally stand for national power projection through development.[125]

3.1.2. China

Chinese rear admiral Yin Zhuo stirred controversy in 2010, when he stated that:

> *"The current scramble for the sovereignty of the Arctic among some nations has encroached on many other countries' interests […] the Arctic belongs to all the people around the world as no nation has sovereignty over it […] in developing the Arctic, all nations are equal"*[126]*. "China must play an indispensable role in Arctic exploration as we have one-fifth of the world's population"*[127].

His colleague, army colonel Le Li, added in 2012 that "*it's impossible to turn a blind eye to the natural deposits in the area of the North Pole. One can say, it's the [Middle East] of the future or the second [Middle East].*"[128]

China's Arctic policy explains that the region has elevated itself to a global concern for all states and that non-Arctic states have vital interests in an international development of the region too.[129] This approach ties into the concept of the Arctic as a 'common heritage of mankind'. It "has enjoyed some currency in debates over Antarctica, where various national claims to sovereignty are unrecognised beyond the group of claimants"[130], but lacks concrete connection to Arctic realities.

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[124] See: Perry; Andersen, ibid., p. 14.
[125] See: Heininen, ibid., p. 177 seq.
[126] Quoted in: Chang, Gordon. 'China's Arctic Play'. *The Diplomat*, 09.03.2010.
[127] Quoted in: Jakobson, Linda; Peng, Jingchao. *China's Arctic Aspirations*. Solna: SIPRI, 2012. p. 15.
[128] Quoted in: Lackenbauer; et al.: 'China's Arctic Ambitions...', ibid., p. 99.
[129] See: State Council of the People's Republic of China, ibid.
[130] Stokke: 'The Promise of Involvement...', ibid., p. 476.

Beijing's 2018 strategy expresses that "China enjoys the freedom or rights of scientific research, navigation, overflight, fishing, laying of submarine cables and pipelines, and resource exploration and exploitation in the high seas, the Area and other relevant sea areas, and certain special areas in the Arctic Ocean"[131], although it also acknowledges the limits set by international law and maritime treaties. As a member of the United Nations Security Council, China would theoretically have veto power over disputes under UNCLOS.[132] By joining the Arctic Council as an observer state in 2013, though, the People's Republic had to publicly state that it will adhere to these rules and that it recognises the legal claims of the Arctic littoral states thereunder.

Thus, as "China has little or no legal basis to challenge Russia's or other nations' claims in the Arctic, and thus, in the absence of legal standing, […] Beijing must rely largely on moral arguments."[133]

In general, China's informal attitude towards sovereignty in the Arctic can be explained along the lines of: "*We know that we don't have claims in the Arctic, but if there's anything in the Arctic that we can get, we don't want to be left out.*"[134]

Beijing's only non-acceptable option would be a carving of the "Arctic melon"[135], or "blueberry pie scenario"[136], where the Arctic states would divide the region solely between each other, via their continental shelf claims. This fear seems somewhat misplaced, particularly regarding Chinese claims in the South China Sea which lack geological reasoning.[137]

China has well understood that being part of the prestigious 'Arctic Club' can only be beneficial in the future, even if it entails some criticism from others in the short term. But Beijing's fear of being left out in questions concerning the Arctic also drives weak risk assessment and hasty policy decisions.[138]

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[131] State Council of the People's Republic of China, ibid.
[132] See: Jakobson; Peng, ibid., p. 11.
[133] Perry; Andersen, ibid., p. 157.
[134] Shea, Neil. 'A thawing Arctic is heating up a new Cold War.' *National Geographic*, 15.08.2019.
[135] Lackenbauer; et al.: 'China's Arctic Ambitions...', ibid., p. 134.
[136] Koivurova; et al., ibid., p. 53.
[137] See: Peng, Jingchao; Wegge, Njord. 'China and the Law of the Sea: Implications for Arctic Governance'. In: *The Polar Journal* 4: 2 p. 302.
[138] See: Su, Ping. 'Challenges in the Arctic Exploitation and Their Impacts on China's Arctic Position'. In: Sakhuja, Vijay; Narula, Kapil (Eds.). *Asia and the Arctic*. Singapore: Springer, 2016. p. 39.

The People's Republic has been diagnosed with rising "energy nationalism"[139]. Until 2028, it could become the world's largest economy. Since 2011, it is already the biggest energy consumer globally, importing the most oil and the third most amount of gas. Most resources stem, however, from politically unstable regions and need to be diversified.[140] Beijing upholds an official resource extraction policy which favours the exploitation of short-supplied resources abroad while severely limiting or even banning foreign investment at home.[141]

China's 2018 whitepaper proposes that it will be "utilizing Arctic resources in a lawful and rational manner"[142], while at the same time also aiming at a "win-win result"[143] cooperation. This represents a hint that the Chinese 'rationale' of resource commerce may very well be similar to the Russian geo-economic one.

Russia generally represents the most important partner for Beijing when it comes to Arctic resource extraction:

China has heavily invested in the Yamal liquid natural gas project, in which *China National Petroleum Corporation* holds a 20% share and the Silk Road Fund another 9.9%. *Export Import Bank of China* and the *China Development Bank* invested a US$12 billion loan into the realisation of the large-scale resource deployment. *Sinopec* sealed a deal in 2019 with *Novatek* and *Gazprombank* on the joint delivery of liquid natural gas for the Chinese market. In the same year, Chinese and Russian firms agreed on the common maritime transportation of LNG goods from Yamal peninsula.[144] *China Oilfield Services Limited* is, together with *Gazprom*, also exploring Leningradskoye field, west of Yamal, which is supposed to contain over 1.9 trillion cubic meters of natural gas. And *China National Petroleum Corporation* was invited to explore offshore oil blocks in the Barents and Pechora Seas as well as onshore fields in Nenetsk, Krasnoyarsk and Irkutsk.[145]

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[139] Rainwater, Shiloh. 'Race to the North: China's Arctic Strategy and Its Implications'. In: *Naval War College Review* 66:2. p. 66.
[140] See: Weidacher Hsiung, ibid., p. 245 seq.
[141] See: Tonami, ibid., p. 114.
[142] State Council of the People's Republic of China, ibid.
[143] State Council of the People's Republic of China, ibid.
[144] See: Sevastyanov, Sergey; Kravchuk, Aleksey. 'Russia's Policy to Develop Trans-Arctic Shipping along the Northern Sea Route'. In: *The Polar Journal* 10:2. p. 15.
[145] See: Lim, ibid., p. 10.

However, Russia does not represent the only Chinese partner for traditional energy cooperation in the wider Arctic region:

China Oilfield Services Limited acquired Norway's drilling firm *Awilco Offshore* for around US$2.5 billion back in 2008.[146] *China Investment Corporation* holds large shares in the petroleum company operating Snøhvit, the first Norwegian Arctic gas field.[147] In 2013, *China National Offshore Oil Corporation* announced its interests to partner with Icelandic *Eykon Energy* to survey the Dreki region, close to Jan Mayen, for fossil deposits. Canadian oil sand developer *Nexen* had been bought by the Chinese for US$15.1 billion in 2013.[148] And, in 2017, Alaska and China signed a memorandum of understanding for the future construction of a US$43 billion liquid natural gas pipeline, spanning 1250 km.[149]

While Russia could also provide possible locations for rare earths, such as vanadium or wolframite, China's gaze for valuable future resources wanders elsewhere. Chinese investors have in recent years ramped up their 'land rush' efforts for potential mines as well as forested areas in the High North:

Within different forestry projects, for example in Finnish Lapland, a significantly fastened wood harvest is intended to produce energy, fibres, feed or biofuel. In Russia, one million hectares of forested area have also been leased to China's firms.[150]

In the case of Denmark's autonomous Greenland, *Shenghe Resources Holding* bought, for about US$3.5 million, a 12.5% share in the Australian developer firm of the Kvanefjeld/Kuannersuit mining site which could potentially provide uranium and rare earths. In 2015, the Isua iron mining site was sold to a company from Hong Kong.[151] Further Sino-Australian cooperation in Greenland could happen at the Citronen Fjord zinc mining project.[152] Should resources in Western and Northern Greenland be developed and deployed, the needed infrastructure build-up alone is estimated to bring nearly three hundred thousand workers into the country of 56.000 during a five- to ten-year period.[153]

[146] See: Weidacher Hsiung, ibid., p. 248.
[147] See: Stokke, Olav Schram. 'Asian Stakes and Arctic Governance'. In: *Strategic Analysis* 38:6.
[148] See: Weidacher Hsiung, ibid., p. 249.
[149] See: Koivurova; et al., ibid., pp. 46 seq.
[150] See: Kröger, ibid., p. 34.
[151] See. Lanteigne, ibid., p. 122.
[152] See: Koivurova; et al., ibid., p. 49.
[153] See: Järvenpää; Ries, ibid., p. 133 seq.

The potential inflow of domestically contracted Chinese workers caused the Greenlandic government in 2012 to pass legislation that allowed foreign workforce to earn salaries below the local legal minimum wage.[154] "China may view Greenland as an entity that China can seek to engage using an approach similar to ones that China has used for engaging with small Pacific and Indian Ocean island states."[155] In the April 2021 elections, the long-ruling Siumut party was however defeated by the oppositional Inuit Ataqatigiit party, which had campaigned against large-scale uranium and rare earth mining projects on the island over both environmental and economic concerns.[156]

3.1.3. India

India is on the way to becoming the world's third-largest energy consumer by 2030 (surpassing the EU) and could account for nearly a third of global consumption between 2019–2040. Until then, Indian economic growth is projected to bring additional value in the size of Japan's total gross domestic product to the world economy. The rapid industrialisation is said to triple India's gas consumption and drive its oil needs up by 74%, all the way to the global top, by 2040.[157] In 2016, Indian energy hunger was still fed to 57% with coal.[158] India currently needs to import more than 80% of its oil supplies, mainly from the Middle East (2.6 million barrels per day).[159]

Retired Commander Neil Gadihoke thus called the Arctic a future "petroleum province"[160] for India and Admiral R.K. Dhowan predicted that "*as resources on land deplete, humankind will inevitably turn to the last bastion, the Arctic Ocean*."[161]

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[154] See: Tonami, ibid., p. 112.
[155] O'Rourke; et al., ibid. p. 29 seq.
[156] See: Neuman, Scott. 'Opposition Wins Elections In Greenland, Casting Doubt On Future Of Rare-Earth Mine'. *WVTF*, 07.04.2021.
[157] See: [n.a.]. India To Overtake EU As World's Third Largest Energy Consumer By 2030: IEA. *Bloomberg Quint*, 09.02.2021.
[158] See: British Petroleum. 'BP Statistical Review of World Energy June 2016'. *British Petroleum*, June 2016.
[159] See: Sinha, Uttam Kumar. 'India in the Arctic: A Multidimensional Approach'. In: *Vestnik of Saint Petersburg University – International Relations* 12:1 p. 121.
[160] Gadihoke, Neil. 'Arctic Melt: The Outlook for India'. In: *Maritime Affairs: Journal of the National Maritime Foundation of India* 8:1. p. 3.
[161] Dhowan, R.K. 'Foreword 2'. In: Sakhuja, Vijay; Narula, Kapil (Eds.). *Asia and the Arctic*. Singapore: Springer, 2016. pp. xi–xii.

New Delhi has generally shown great interest in accessing and allocating resources, also outside of other nations' domains: It concluded a 15-year agreement for deep seabed resource exploration of polymetallic nodules back in 2002 and could probe further polymetallic sulphides and cobalt crusts in its marine region. The responsible international authority has so far granted several frameworks in the Indian, Pacific and Atlantic Ocean, encompassing a total seafloor surface of about 900,000 square kilometres.[162]

Indian considerations towards Arctic sovereignty largely stem from its previous experiences in Antarctica: Before the local treaty system was put into place, New Delhi, as a leader of the Non-Aligned Movement, committed to a post-colonial trusteeship regime around the South Pole, emphasising the importance to include the 'Third World' into Antarctica's political framework. However, it later failed to have the continent considered as 'common heritage of mankind' under UNCLOS.[163]
Its official draft strategy acknowledges that the Arctic region "includes nation states with their respective sovereign jurisdictions as well as areas beyond national jurisdiction."[164] New Delhi also particularly points out "the Canadian and Russian domestic laws that draw authority from Article 234 of UNCLOS [but] also affect international shipping."[165] While proposing that states should adhere to international legal regulations, it is also mentioned that there should be a differentiated regime for the "common heritage of humankind in the deep seabed area in the Arctic"[166].

The 2021 policy for a "responsible exploration of natural resources and minerals from the Arctic"[167], while options for off-grid renewable energy and bioenergy should also be explored. Indian discourse on Arctic sovereignty and resources is generally characterised by the competing imagery of an 'Arctic paradox': While the country should continue its sustainability stance towards environmental protection, it also cannot afford to stay out

[162] See: Rajan, H.P. 'The Legal Regime of the Arctic and India's Role and Options'. In: *Strategic Analysis* 38:6. p. 910 seq.
[163] See: Lackenbauer: 'India and the Arctic', ibid., p. 36.
[164] Government of India, ibid.
[165] Government of India, ibid.
[166] Government of India, ibid.
[167] Government of India, ibid.

of accessing the region's riches for its own economic growth that is rising millions out of poverty.

Some Indian authors shamed their government that it had "succumbed to the temptation of sharing in the emerging opportunities for resource extraction as the Arctic continues to melt"[168] and called on Arctic nations to impose a general moratorium on Arctic resource extraction in order to avoid a developing global race.[169] An early commentary after India's celebrated AC accession reads:

> "*It is hypocritical of the developed, industrialised countries, in particular, the rich Arctic states, to preach low carbon development strategies to poor, developing countries, while they themselves, rush headlong into ensuring the perpetuation of their own carbon and fossil fuel intensive patterns of production and consumption.* […] *If we keep silent and look away because of the prospect of sharing in this unseemly Gold Rush, India's credentials as a responsible member of the international community and as a champion of the principle of equitable burden-sharing and inter-generational equity, would become deeply suspect.*"[170]

Main Arctic resource investments of India's companies happen in the Russian Federation: Until now, New Delhi mostly presented itself as a credible addition and reliable alternative to money flows from East Asia. When, for example, share purchase negotiations with Chinese investors for the East Siberian Vankor onshore oil field failed, Indian firms jumped in instead.[171] Multiple memoranda have been entered to enhance the countries' commercial cooperation in the Arctic. Current Indian financing of projects in the Russian oil and gas sector cumulate to US$15 billion.[172]

Russian President Vladimir Putin himself invited Indian firms into various energy projects. During his visit to India in 2014, agreements were signed for ten million tons of oil supplies for ten years from 2015 as well as 2.5 million annual tons of liquified natural gas shipments, beginning in 2017. Since then, the latter contract was extended and increased to 4.5 million tons.[173] Indian companies were negotiating participation in the Yamal LNG project back in 2013 but withdrew. Still, stakes for the second development phase had been offered afterwards. In 2016, a consortium of *Oil India Limited* acquired a 23.9% share of *Vankorneft* company, which is operating the Vankor oilfield, as well as a

[168] Shyam, Saran. 'India's Date With the Arctic'. *The Hindu*, 16.07.2013.
[169] See: Lackenbauer: 'India and the Arctic', ibid., p. 32 seq.
[170] Shyam, ibid.
[171] See: Weidacher Hsiung, ibid., p. 249.
[172] See: Government of India, ibid.
[173] See: Voronkov, ibid., p. 124 seq.

29.9% stake in the Tass-Yuryakh field. *Oil and Natural Gas Corporation Videsh* followed purchased a total 26% stake in the Vankor field. *Videsh* is furthermore participating in the Sakhalin I project in the Russian Far East.[174] India is also joining the US$157 billion Vostok Oil development project, which is expected to start operation by 2024. And *Tata Power* is financing the Krutogorovskoye coalpit, the biggest deposit in the Kamchatka peninsula, with US$560 million.[175]

Still, while Russian resource extraction project already struggle with a lack of technical expertise in deep-sea shelf exploitation from the Chinese side, this problem is even bigger with Indian firms.[176] Though, millions of young Indians are already working in West Asian oil production and could represent a huge potential for poorly populated Russia.
In the grand scheme of things, global energy supplies seem a rather uncritical point between the three countries, especially as "India has nothing to do but adhere to the Chinese energy security scheme and diversify power flows by importing energy from Africa, Latin America, the Middle East. Exploiting northern resources fits into announced scheme harmoniously and responds to the Indian national interests."[177]

3.2. Shipping & Infrastructure

Receding sea ice is opening up new global trade routes on the northern half of the globe and could further drive investments into marine and rail infrastructure as well as digital connectivity projects. Shipping accounts for around 90% of worldwide trade in goods.[178] In the American part of the Arctic alone, it is estimated to increase between 100-500% from 2015 to 2025.[179] Many countries, especially in Asia, are equipping themselves for rising sea trade in the High North.

[174] See: Sinha: 'India in the Arctic...', ibid., p. 120.
[175] Morgan, James. 'India's Tata Power to Invest US$560M in Kamchatka Coal Deposit'. *S&P Global*, 17.03.2017.
[176] See: Sinha: 'India in the Arctic...', ibid., p. 119.
[177] Pronina, V.; et al. 'India's Arctic Policy'. In: *Earth and Environmental Science* 539. p. 5.
[178] See: Hadrovic, Anna. *New Opportunities 2021: Covid-19 and the Future of Shipping and Aviation*. Vaduz: Geopolitical Intelligence Services, 2021.
[179] See: Zandee, et al., ibid., p. 9.

Condensing vessel traffic in the Arctic made specific legal frameworks necessary, such as the International Maritime Organization's Polar Code from 2014. It nevertheless remains disputed whether global shipping lanes within sovereign territorial waters are to be considered as part of national jurisdiction or as international passages.

Recent scientific studies have shown that an alternative shipping lane to both the Northwest Passage (in Canadian waters) and the Northern Sea Route (in the Russian domain) could open up by the mid- to late-2030s when Arctic sea ice is estimated to fully vanish during summer months.[180] The Transpolar Passage (or North Pole Route) would provide an Alaska–Iceland corridor for vessels to directly traverse the Arctic Ocean straight over the North Pole (see Figure 4). The route could save another two days compared with the NSR. If enough cargo were to be shipped over the Transpolar Passage during summertime, it could possibly render the other Arctic passages obsolete and only a few hub harbours would suffice for shifting cargo onto 'polar shuttles'.[181]

Establishing trade connections through Arctic waters will, however, likely remain risky due to varying and refreezing sea ice, seasonal darkness as well as limited charting infrastructure.[182] Further complications arise from the shallowness of certain passages and the narrowness of icebreaker lanes, which would not fit bigger tankers, as well as additional costs for winterisation of vessels. These circumstances could ultimately make Arctic shipping timelier than routes via the recently enlarged Suez and Panama channels.

While the Arctic is heating and opening up, it is still one of the coldest and most remote places on earth. Tech giants, like Google, already consider building centres for data-storage and -processing in the region, as it provides physical cooling of processors as well as geographical distance from the highly frequented – and thus targeted – current digital communication channels.[183] The Arctic could thus enable a much higher-speed internet connectivity between East and West. The race for tendering these large-scale sea cable laying projects is already underway, as cables carry up to 99% of all digital communications.

[180] See: Aksenov, Yevgeny; et al. 'On the Future Navigability of Arctic Sea Routes: High-Resolution Projections of the Arctic Ocean and Sea Ice'. In: *Marine Policy* 75. pp. 300–317.
[181] See: Bennett, Mia. 'The Arctic Shipping Route No One's Talking About'. *Cryopolitics*, 23.04.2019.
[182] Global Agenda, ibid., p. 12.
[183] See: Järvenpää; Ries, ibid., p. 132.

3.2.1. Russia

The Northern Sea Route corridor has now achieved the importance of a national transport artery in Russian Arctic policy planning.

The lane was established for domestic transport in 1931 and opened to international shipping in 1991. Alongside the opening of Arctic Sea ports and mining towns, cargo traffic had increased until 1987 (6.6 million annual tons) but collapsed together with the USSR (1.45 million tons in 1998).[184] The NSR can reduce travel times for routes between European ports and their Asian counterparts northeast of Singapore.[185] Recent voyages through the passage were recorded to take around 5-6 days, total sailing from Norway to South Korea 19 days,[186] or even only 18 days for Rotterdam-Japan.[187]

The Russian Federation lays claim upon large parts of the Northern Sea Route, while other global trade nations, such as the U.S. and China, view the passage as an open strait under global maritime guidelines.[188] While international law generally grants free access to all commercial vessels, article 234 of UNCLOS constitutes that littoral states can enforce laws on passing ships to reduce pollution within the ice-covered areas of their EEZ.[189]

Moscow is using this clause to control all traffic in its maritime territory and expel any unwanted vessels: Foreign shipowners are obliged to notify Russia a minimum of 45 days ahead of the voyage with the names of ship and captain, vessel measurements, sailing objective and period as well as further information. Additionally, a Russian navy pilot needs to be on board and the country reserves its right to seize or eliminate the vessel if rules are breached.[190] Oil and gas transport opportunities along the NSR are already exclusively available to Russian vessels.[191]

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[184] See: Lasserre, Frédéric. 'Arctic Shipping: A Contrasted Expansion of a Largely Destinational Market'. In: Finger, Matthias; Heininen, Lassi (Eds.). *The Global Arctic Handbook*. Cham: Springer International Publishing, 2019. p. 93.
[185] See: O'Rourke; et al., ibid., p. 52.
[186] See: Sevastyanov; Kravchuk, ibid., p. 13.
[187] See: Dodds; Halliburton, ibid.
[188] See: Perry; Andersen, ibid., p. 9.
[189] See: Suvanto, ibid., p. 44.
[190] See: O'Rourke; et al., ibid., p. 25.
[191] See: Devyatkin, Pavel. 'Russia's Arctic Strategy: Maritime Shipping (Part IV)'. *The Arctic Institute*, 27.02.2018.

Sea ice is melting at a faster pace in the Russian Arctic than in the Canadian part, which gives the Northern Sea Route an advantage over the Northwest Passage.[192] It would additionally lower Russia's dependency on more vulnerable routes through the Baltic or Black Sea. Further development along the NSR could also open up long-term possibilities to ship the great Siberian rivers Lena and Yenisei, which would build up missing North-South connections in the secluded and underdeveloped central parts of Asian Russia.[193]

In order to streamline and accelerate developments, Moscow expects to privatise many state-owned infrastructure and transportation firms as well as Siberian river ports.[194] This stands in contrast to the large-scale nationalisation of companies in Russia that accompanied the political ascent of President Putin. Even the – now Chinese-promoted – 'Polar Silk Road' was first proposed by Russian emergency minister Sergey Shoigu back in 2011 and was only endorsed by China's foreign minister in 2017.[195]
Russia aimed to boost cargo shipments along the NSR per year to 80 million tons annually by 2024 and is currently set on 130 million tons by 2035. Though, in 2019 only 31.5 million tons were being shipped.[196] Even former President and Prime Minister Dmitry Medvedev admitted in 2015 that: "*To put it mildly, its use is not so hot*"[197].

Russian Prime Minister Mikhail Mishustin recently declared urgency to further develop his country's digital footprint. The AZRF is set to serve as a lab for large-scale national digitisation efforts, in combination with increased infrastructure connectivity as well as next-generation economic growth along the Northern Sea Route.
The US$1.2 billion sea cable project *Arctic Connect* is intended to have submarines lay over ten thousand kilometres of cables along the NSR. The ideal natural environment for storage technology could provide Moscow with a chance to transfer some parts of an

[192] See: O'Rourke; et al., ibid. p. 23.
[193] See: Suvanto, ibid., p. 43.
[194] See: Sakhuja, Vijay. 'Sailing through the Northern Sea Route: Opportunities and Challenges'. In: *Strategic Analysis* 37:4. p. 495.
[195] See: Tillman, Henry; et al. 'The Polar Silk Road: China's New Frontier of International Cooperation'. In: *China Quarterly of International Strategic Studies* 4:3. p. 347.
[196] See: Zandee et al., ibid. p. 9 and Buchanan, Elizabeth. 'Russia's Grand Arctic Plan Will Face Tough Hurdles'. *The Moscow Times*, 28.10.2020.
[197] Quoted in: Staun, ibid., p. 320.

increasingly globalising Silicon Valley to its northernmost parts and develop facilities for future financial blockchain technology as well as digital currency mining.[198]

While technological cooperation with China would enhance these efforts, it would also leave Russian domestic companies further behind because they would not be able to compete for tenders with Chinese global giants, like Huawei. Moscow, too, has not been immune to critical reports about Chinese 5G technology and how it could allegedly be weaponised to undermine national information security. Though, "it is perhaps the case that the Kremlin would rather expose itself to the risk of being wiretapped by the Chinese than being vulnerable to Western technology."[199]

3.2.2. China

> "China is the world's largest trading nation in goods, and three Chinese shipping companies are among the ten largest container-shipping companies in the world, responsible for approximately 10 percent of the global trade in goods. […] China's shipping ports are among the busiest in the world, and eight out of the ten busiest container ports in the world are located in China, with the Port of Shanghai being the world's busiest. Beijing is the world's third-largest ship-owning nation, and the largest shipbuilding nation."[200]

East Asia boasts nine out of the ten most-frequented container ports and also shipbuilding itself is more and more undertaken by Asian companies. In the first decade of the 21st century, Chinese trade numbers with Arctic countries increased by tenfold.[201]

Shanghai hosted a *Harmonious Oceans Conference* in 2007. The title expanded the concept of a 'harmonious world' by then-President Hu Jintao onto the world oceans.[202] A 'harmonious ocean', in this sense, primarily entails Beijing's right of innocent passage of its trade vessels (and possibly warships) through all seven seas.[203] In comparison to other regions, China has however cooperated for a peaceful solution of Arctic maritime matters.

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[198] See: Shagina, Maria; Buchanan, Elizabeth. 'China Enters the Arctic Digitization Race'. *The National Interest,* 17.01.2021.
[199] Shagina; Buchanan, ibid.
[200] Chaziza, Mordechai. 'The Chinese Maritime Silk Road Initiative: The Role of the Mediterranean'. In: *Mediterranean Quarterly* 29:2. p. 67
[201] See: Dadwal, ibid., p. 817.
[202] See: Perry; Andersen, ibid., p. 159.
[203] See: Peng, Wegge, ibid., p. 293.

The leadership in Beijing is suffering from the strategic 'Malacca Dilemma': 85% of all oil imports to China derive from politically unstable regions of the Middle East and Africa and have to pass through one single small Southeast Asian strait which could rather easily be blocked by countries such as India or Indonesia.

The Northern Sea Route would therefore provide a viable alternative, at least on the map, as shipping distance between Shanghai and Rotterdam could be cut by nearly a quarter. In 2013, the Chinese vessel *Eternal Life* was the first such cargo ship to traverse the Arctic from Dalian to Rotterdam. The thirty-three-day trip saved around two weeks in comparison to its normal route.[204]

In 2014, a Chinese scholar predicted that 5–15% of Beijing's global trade would pass through the NSR by 2020. Meanwhile, a Korean colleague estimated that the share of this northern route within international shipping could increase to a quarter by 2030.[205] These expectations were, however, nowhere nearly met in recent years: While in 2013 a total of 71 vessels officially transited the NSR, this number actually declined to only 19 in 2016. This can be attributed to declining freight rates and commodity prices as well as the Russian tariff regime.[206] China is meanwhile the only country that also acknowledges the possibilities of a soon-to-be-open Transpolar Passage in its official Arctic policy, mentioned as the "Central Passage"[207].

Beijing's investment regime in the High North profits from several bilateral "polar partnerships"[208], which are mostly focused on energy/mineral extraction and transport. Especially Scandinavia is attractive for China as the Northern European states have Russia as an ideological and military rival but are also in competition with North America over Arctic governance.

Iceland has been a gateway for China's commercial interests in the Arctic. Severely hit by the Financial Crisis of 2008, Reykjavík was on a global hunt for emergency bailout. Rejected by its Western partners, it first asked Russia and then China for a loan – Beijing

[204] See: Dadwal, ibid., p. 817.
[205] See: Lasserre, ibid., p. 84.
[206] See: Lasserre, ibid., p. 94 seq.
[207] State Council of the People's Republic of China, ibid.
[208] Moscato, Derek. 'The Polar Silk Road in the Popular Press: Global Media Framing of China's 2018 Arctic Policy White Paper'. In: Heininen, Lassi; Exner-Pirot, Heather; Plouffe, Joël (Eds.). *The Arctic Yearbook 2018*. Akureyri: Northern Research Forum, 2018. p. 7.

agreed.[209] In 2013, a free trade agreement was signed. Since then, China has opened up its domestic market for Icelandic products, such as seafood and mutton, and Chinese investors have sought to build ports in Finnafjörður bay and at Dysnes.[210] This financial assistance was negatively framed by Western observers, even though their governments did not help Reykjavík in the first place. A similar situation can nowadays be seen in the example of the Faroe Islands: The independent Danish islands' decision to tender for Chinese 5G technology caused busy diplomatic activity and even a visit by then U.S. foreign minister Pompeo in Tórshavn.[211]

China would furthermore like to include landbound infrastructure projects into its Polar Silk Road connectivity framework, such as a €3 billion 'Arctic Corridor' railway line between the Norwegian port town of Kirkenes and Finnish Rovaniemi as well as a €15 billion tunnel connecting Finland and Estonia, which (together with the extended *Rail Baltica* project through Latvia and Lithuania) would provide a direct rail transport corridor from the Arctic Ocean all the way to Central and Western Europe.[212] *China Ocean Shipping Company*, one of the largest globally, has recently elevated Kirkenes to be a 'location of strategic interest' and the world's largest port infrastructure developer, *China Communications Construction*, also sent a delegation to northern Norway.[213]

Still, China's biggest Arctic investment deals to date happened in the Russian Federation: *China National Petroleum Corporation* and *Sovcomflot* agreed in 2010 to jointly ship oil and gas along the NSR and thus contribute to the route's further development.[214] In June 2018, *China Development Bank* and *Vnesheconombank* reached a deal over possible infrastructure investments for up to US$9.5 billion along the Polar Silk Road.[215] Firms, such as *China Communications Construction Company*, *China Heavy Industry Corporation Nantong* and *China Shipbuilding & Offshore International*, are financing joint shipbuilding projects in order to increase coastal capacities and development.[216]

[209] See: Ingimundarson, ibid., p. 180.
[210] See: Tillman, ibid., p. 351 seq.
[211] See: Poulsen, Regin Winther. 'Forget Greenland, There's a New Strategic Gateway to the Arctic'. *Foreign Policy*, 07.12.2020.
[212] See: Lim, ibid., p. 10 seq.
[213] See: Borshoff, Isabella. 'Norway's 'Northernmost Chinatown Eyes Arctic Opportunity'. *POLITICO*, 20.11.2019.
[214] See: Dams; van Schaik, ibid., p. 7.
[215] See: O'Rourke; et al., ibid., p. 29.
[216] See: Seavastyanov; Kravchuk, ibid., p. 18.

Beijing also wants to initiate a joint partnership with Moscow for digitisation in the High North, as part of its Digital Silk Road. Therewith, China could not only export high-tech products and digital savviness but also bridge the existing digital gap between East and West. The remoteness of a northern digital communication channel would significantly reduce the risk of human-induced disruptions. This could create a Sino-Russian 'win-win' cooperation.[217]

3.2.3. India

"India ranks third in the list of seafarer supplying nations catering to almost ten per cent of global demand"[218]. The Indian Maritime Agenda 2010-2020 saw an increase in budget and was specifically tasked to enhance standards in the spheres of Indian marine and shipping as well as to better map global port and route developments and their effect for the Indian economy.[219]

The opening of northern trade routes possesses the potential of diverting shipping traffic away from the South Asian subcontinent and thus Indian-controlled marine waters. This is especially detrimental for the military strategic vision of being able to cut of the large majority of Chinese resource supplies by blocking off the Malacca Strait, once a geopolitical stand-off would escalate into a full-blown conflict.

New Delhi's draft Arctic policy proposes that "India seeks to engage in economic development in a manner that is sustainable and is of value to the Arctic residents, especially indigenous communities. […] India supports sustainable business development in the Arctic"[220]. Just like Beijing, New Delhi is interested in diversifying its growing energy supplies, which still largely derive from politically instable regions, such as the Middle East, Nigeria or Venezuela.

[217] See: Shagina; Buchanan, ibid.
[218] Government of India, ibid.
[219] See: Gadihoke, ibid., p. 10.
[220] Government of India, ibid.

This can happen through increased imports of shipped energy sources from the Arctic, such as oil and liquid natural gas from Russia: *Indian Oil* signed a deal with Russian *Rosneft* for the supply of two million tons of crude petroleum. *Hindustan Petroleum* and *Bharat Petroleum* had also been debating such agreements.[221] At the fifth Eastern Economic Forum in 2019, the two leaders Modi and Putin agreed on the establishment of a so-called 'energy bridge' between Vladivostok and Chennai, which would focus on importing oil, gas and coal from the High North to South Asia.[222] This corresponds with India's 'Act East' policy, an extension of its previous 'Look East' approach. The two countries aim to increase mutual investments to US$15 billion by 2025.

While the Northern Sea Route can transport goods to East Asia in summer and to Europe (or even America) during winter months because of shifting ice coverage, travel time and distance for shipping destinations in India are the longest in Asia and thus do not seem preferable over conventional routes in neither season (see Figure 5).
Arctic shipping itself might thus not be sustainable for a majority of Indian firms. The country still possesses potential through its large share in professional seafarers, who are already crewing many ships that traverse the seven seas. The government plans to further promote these services internationally and for the northern passages specifically.
The Indian Navy (IN) also has experience with search and rescue as well as disaster relief. New Delhi furthermore pledges "linking the International North South Transport Corridor with the Unified Deep-Water System and its further extension to the Arctic. North-South connectivity will result in lowering shipping costs and overall development of the hinterland and of indigenous communities more than East-West connectivity."[223]

Branded by environmental protection and sustainability pledges, the Indian Arctic strategy also sees the downside of increased maritime traffic in the region. It therefore promotes that the country should further "participate in the environmental monitoring study to evaluate the predicted emissions of ships […] [and monitor] the impact on ambient air quality by Nitrogen Oxides (NOx) and Sulphur Oxides (SOx)"[224].

[221] See: Sukhanin, ibid.
[222] See: Sukhanin, ibid.
[223] Government of India, ibid.
[224] Government of India, ibid.

An alternative Indian investment possibility in Arctic infrastructure is the development of ports, airports and railway lines – for which the current draft strategy also pledges. It envisions the country to increasingly provide enhanced connectivity to the Arctic region, through both satellite and digital communications. This is said to help not only with civilian societal development but also the accessibility of Arctic resources, maritime traffic and mapping surveys in general.[225] New Delhi has understood the future need for safe storage spaces in cryospheric regions as well, although the document only mentions seed storage.[226]

As they are well known for their high-tech and green energy savviness, India strives to deepen diplomatic ties with Scandinavian countries. A special relationship already exists in the cooperation with Norway, which designated a governmental Indian strategy for 2030. New Delhi also recently signed into a research partnership with Sweden and aims to increase cooperation with the Baltic countries (*India-Nordic-Baltic Conclave*).

> "China has prioritized Eurasia through several projects as part of its Belt and Road Initiative. India seeks to establish alternative global supply chains in the region alongside key infrastructure projects that will link India with Eurasia as the country pursues a sustained free and rulebased global order."[227]

It is nevertheless noteworthy that Indian firms, in comparison to important Russian and Chinese (state) companies, are acting solely on a private basis out of profit orientation and risk aversion. Furthermore, India currently does not possess the financial means to draw Chinese investment levels when it comes to a possible 'debt trap diplomacy' in the Arctic from Beijing's side.

While New Delhi has managed to balance out China's financial influence, for example, in Sri Lanka, this scenario seems highly unlikely for places like Greenland. Many Indian financing opportunities of recent years, especially in the Russian energy sector, have happened out of political considerations and diplomatic goodwill rather than India's enthusiasm or Indian companies' competitiveness on the global market.[228]

[225] See: Government of India, ibid.
[226] See: Government of India, ibid.
[227] Chadha, Astha. 'India's Innovation-Driven Nordic-Baltic Engagement'. *The Diplomat*, 11.11.2020.
[228] See: Pareek, Nikhil. 'India in a Changing Arctic: An Appraisal'. In: *Ecocycles* 6:1. p. 4 seq.

3.3. Military Security & Geospatial Intelligence

Discussions about an 'Arctic Race' are often accompanied by the dangerous analogy of a 'New Cold War' in the High North. Here, the general geostrategic and confrontative ideological frameworks of the original Cold War are withheld for a catchy headline slogan. Such "purveyors of polar peril"[229] neglect successful arms control and confidence-building, especially by the two Arctic nuclear powers. Thus, the "silence on Arctic arms control owes more to convention than to conviction."[230]

Former Norwegian Chief of Defense, Sverre Diesen, formulated a concept of how Arctic conflict could actually look like:
He argued that large-scale interstate war would be highly unlikely as it lacked political usefulness in the region. Instead, it would be replaced by smaller campaigns about specific political issues which would limit force by a minimum of space, time and military strength. A short but sharp conflict engagement, following narrow tactical considerations, would be enough, while the adversaries remain in tune within a diplomatic framework.[231]

3.3.1. Russia

Since the end of the Cold War, the focus of Russian Arctic strategic forces has shifted towards securing territorial sovereignty over Moscow's exclusive economic zone. This includes protecting national economic interests in mineral and maritime resources, while prohibiting illegal exploitation, trapping and smuggling.[232]
However, against the background of renewed geopolitical tensions in the Russian neighbourhood and accelerating ideological-strategic confrontation with the 'West', old motives of enemy deterrence and power projection have returned to the Russian military agenda for the Arctic.

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[229] Griffiths, Franklyn. 'Arctic Security. The Indirect Approach'. In: Kraska, James (Ed.). *Arctic Security in an Age of Climate Change*. Cambridge: Cambridge University Press, 2011. p. 3.
[230] Griffiths, ibid., p. 5.
[231] See: Diesen, Sverre. 'Security and the Northern Region'. In: Gottemoeller, R.; Thamnes, R. (Eds.). *High North: High Stakes. Security, Energy, Transport, Environment*. Bergen: Fagbokforlaget, 2008.
[232] See: Koneyshev, Valery; Sergunin, Alexander. 'The Changing Role of Military Power in the Arctic'. In: Finger, Matthias; Heininen, Lassi (Eds.). *The Global Arctic Handbook*. Cham: Springer International Publishing, 2019. pp. 179 seq.

With most parts of the post-Soviet region increasingly contested by other geopolitical players, its northern area serves as the only place where Moscow can act relatively unobstructed and spin its important public narrative of 'Greatpowerness' (*Velikoderzhavnost*, великодержавность).[233] However, this does not necessarily make Russia a revisionist Arctic actor because it has so far adjoined to the region's neoliberal institutionalism and the expanded show of force has happened on its own legal grounds.

Russia's 2013 Arctic strategy labelled the region as a 'zone of peace' and stressed the need for multilateral cooperation between the Arctic states as well as an international framework. General policy focus shifted from the sole defense of Russian state borders towards the development of a holistic security regime in the region, inter alia, by protecting critical facilities and ensuring combat readiness. Threat perception has increasingly changed from internal to external dangers for national security. Russian means to project power in the Arctic have thus evolved towards geospatial monitoring and strategic deterrence.[234]

Russian official statements differ starkly in tone, dependent on whether Arctic cooperation, as a whole, or regional opponents are addressed:
President Vladimir Putin stated in 2016 that "*there is no place for geopolitical games military alliances, secret agreements and division of spheres of influence*"[235] and that "*in the Arctic region there is no potential for conflict*"[236].
In perspective with its main Arctic adversary, Putin meanwhile warned in 2013 that the "*United States has essentially launched now the second phase in its global missile defence system … and there is also the danger of militarisation in the Arctic*"[237]; and that there are "*submarines there and they carry missiles […] It only takes 15-16 minutes for U.S. missiles to reach Moscow from the Barents Sea. So should we give away the Arctic? We should on the contrary explore it.*"[238]

[233] See: Zandee et al., ibid., p. 59.
[234] See: Heininen; Everett; et al., ibid., pp. 86, 88.
[235] Quoted in: Martynova, Marina. 'EU, Russia and China Arctic Strategies: Comparative Analysis'. In: *45th International Scientific Conference on Economic and Social Development - Report*. p. 775.
[236] Quoted in: Martynova, ibid.
[237] Quoted in: Staun, ibid., p. 322.
[238] Quoted in: Anishchuk, Alexei. 'Russia needs Arctic presence to Guard against U.S. Threat: Putin'. *Reuters*, 03.12.2013.

In 2004, the Russian Federal Security Service established an Arctic Directorate with two new border guard stations at Franz Josef Land and Severnaya Zemlya. For the first time since the fall of the Soviet Union, strategic bombers patrolled the North Pole in 2007. Two years later, Russian nuclear-powered attack submarines sailed underneath the polar ice and fired long-range ballistic missiles.[239] In 2018, it was announced that Moscow would build a whole new military town for the fleet and airforce in the port of Tiksi.[240] Recent satellite images reveal that Russia is upgrading its northernmost air base in Nagurskoye, Franz Josef Land, to support year-round hosting of patrol aircrafts and strike fighters.[241]

From a military perspective, climate change can be viewed as both a curse and blessing for marine military operations in the Arctic because it extends their geographical surface reach but also further exposes underwater activities.[242]

"Russia has the most developed force for seabed warfare in the world. […] [Maritime] irregular capabilities provide Russia a hybrid toolkit useful across the range of military operations."[243] The Northern Fleet includes an "aircraft carrier, the world's only nuclear-powered guided missile cruiser and the largest destroyer and anti-submarine warfare ship units"[244]. Moscow's most modern submarines boast near deep-water invisibility and can be armed with torpedoes as well as cruise missiles in order to attack aircraft carriers and strike littoral targets.[245]

It also possesses the world's largest icebreaker fleet of thirty-six, with nine nuclear ones commissioned and three further militarised icebreakers planned until 2027. While they are primarily meant for civilian usage, icebreakers can also escort warships or guide submarines.

[239] See: Perry; Andersen, ibid., p. 63.
[240] See: Ministerstvo Oborony Rossiyskoy Federatsii. 'Komanduyushchiy SF prinyal uchastiye v torzhestvennom meropriyatii, posvyashchennom nachalu stroitel'stva novogo voyennogo gorodka v Yakutii' [The Commander of the Northern Fleet took part in solemn event, dedicated to the start of construction a new military town in Yakutia]. Accessed 02.01.2021.
[241] See: Trevithick, Joseph; Rogoway, Tyler. 'Image Shows Russia Extending Runway At Arctic Base, Could Support Fighter Jets, Bombers'. *The Drive*, 21.08.2020.
[242] See: Koneyshev; Sergunin, ibid., p. 176.
[243] Metrick; Hicks, ibid, p. 7.
[244] See: Sinha: 'The Arctic: An Antithesis', ibid., p. 37.
[245] See: Koneyshev; Sergunin, ibid., p. 174.

Russia aims to create anti-sabotage and anti-assault forces, which will be able to withstand hacker attacks, and to build an Arctic network of radar warning, air defense, coastal missile systems as well as electronic warfare technology.[246] This modern long-distance missile defense would allow marine vessels inside Russian sovereign territory in the Western Arctic to strike targets as far as Belgium.[247]
Moscow is also said to be developing a 24-meter nuclear-powered drone in the AZRF, which – carried by a submarine – could quietly sail above all the world oceans' surface and cause radioactive marine target explosions.[248]

However, perception and reality in Russian regional military doctrine differ: While Moscow continues to reactivate and upgrade its defense capabilities in the North Atlantic and Arctic Sea, Western powers have downgraded or abandoned multiple military bases in Iceland, Greenland and the Faroe Islands.[249]
War games and military tinkering in particular have bugged NATO's northern allies in recent years. Russian tactics focus on the vulnerable flank of the alliance along the Greenland-Iceland-UK-Norway defense gap. Swedish SAS passenger planes nearly crashed twice into closely approaching Russian fighter jets back in 2014. In March 2015, 33,000 Russian forces simulated a takeover of the Baltic sea area, by seizing, inter alia, Danish Bornholm, Finnish Åland and Swedish Gotland. They had already rehearsed capturing Bornholm in June 2014 when a 90,000 visitor-strong festival was happening on the island, which included all of Denmark's political leadership.[250]

A substantial threat to human and environmental security that comes along increased military activity in the High North and Russia's nuclear re-armament is meanwhile the real danger of disastrous incidents:
In 2011, a fully armoured Russian ballistic missiles submarine being repaired near Murmansk caught fire, as did another submarine sailing near the Norwegian border in

[246] See: Zandee et al., ibid., p. 15.
[247] See: Metrick, Andrew; Hicks, Kathleen. *Contested Seas: Maritime Domain Awareness in Northern Europe*. Washington D.C.: Center for Strategic and International Studies, 2018. p. 11.
[248] See: Nilsen, Thomas. 'Is this Russia's New Coastal Base for the 'Doomsday Nuke' Drones?. *The Barents Observer*, 26.01.2021.
[249] See: Østerud; Hønneland, ibid., p. 160 seq.
[250] See: [n.a.]. 'Russia Rehearsed 'Takeover' of Denmark'. *The Local*, 25.06.2015.

2019, killing all 14 crew members.[251] Only a few weeks later, two explosions, one in the air and one on the ground, rocked the Nyonoksa naval test site at the White Sea, where Moscow is said to research the development of new modern nuclear missiles and marine technology. The Russian Defense Ministry admitted three victims the same day, while the *Rosatom* agency recorded five dead scientists two days later, but only scattered information followed by the authorities afterwards. Local reports revealed an image reminiscent of the first stages of the Chernobyl catastrophe, including high levels of radiation and unprotected emergency personnel.[252]

3.3.2. China

China's Arctic policy highlights the need for peaceful settlement of disputes in the region as well as mutual recognition of other actors' sovereign rights. The region has become "strategically important in the Chinese psyche, particularly in terms of military deployment, concealment, deterrence, achieving the element of surprise, and a keen interest in keeping the Northern Sea Route open for military as well as commercial traffic."[253]

As American and Russian intercontinental ballistic missiles targeted at the People's Republic would have to overfly the Arctic, the region represents an important building block for the country's nuclear defense system and strategic areal space control.[254] However, both Washington as well as Moscow reject Chinese claims for its own share in the region's security infrastructure and have dismissed any plans to integrate Beijing into Arctic military discourse.[255]

To defend its energy supplies and other economic interests abroad, the People's Republic's military leadership has lately switched from mere coastal deterrence to a 'far sea' defense policy.[256] Legislation, passed in 2021, allows the Chinese coast guard to use weaponised force against foreign vessels in what Beijing perceives its domestic waters.

[251] See: Nilsen, ibid.
[252] See: Eckel, Mike. 'Norwegian Researchers Say Data May Point To Second Blast At Russian Test Site'. *Radio Free Europe*, 23.08.2019.
[253] Perry; Andersen, ibid., p. 157.
[254] See: Zandee et al., ibid, p. 33.
[255] See: Zandee et al., ibid., p. 45.
[256] See: Rainwater, ibid., p. 66.

The law meanwhile does not provide any definition of these internal waters or contiguous territorial zones, which is a contradiction to China's legal commitment to UNCLOS.[257] China's National Security Law, meanwhile, explicitly mentions peaceful exploration of the Arctic region, including its outer space and international seabed – thus underscoring Beijing's national 'interests in new territories' for energy and environmental security as well as the protection its population and assets. A 2018 paper by the Chinese First Institute of Oceanography warns of future confrontation with NATO forces in the Arctic and proposes to use military means to protect Chinese trade ships and Polar Silk Road infrastructure.[258]

Interestingly, the State Oceanic Administration is not only responsible for monitoring China's polar maritime activities but also in the Yellow, East and South China Seas where Beijing upholds multiple rivalling sovereignty claims.[259] Similar to Russia, China's actions elsewhere do not directly drive any malintent or aggressive revisionism in the Arctic, where Beijing is explicitly trying to show its commitment towards the international rule based order – although this terminology might have a different meaning for the Chinese leadership than for the majority of (Western) Arctic states.[260]

The Chinese navy possesses six nuclear-powered attack submarines, four ballistic submarines and fifty diesel attack submarines, but not winterised for the Arctic. Beijing also owns the world's largest non-nuclear icebreaker, called *Xuě Lóng* - *雪龙* ('Snow Dragon'). Its successor *Xuě Lóng 2* made its way to the North Pole in 2020. It was furthermore revealed in 2018 that China is planning to build a 30,000-ton nuclear-powered model, which so far only Russia possesses. This could also lead the way for future development of nuclear aircraft carriers.[261] In China's 2015-2016 Antarctica expedition a special polar aircraft named *Xuě Yīng* - *雪鹰 601* ('Snow Eagle 601') was tested too.[262] In 2018, Beijing announced its plans to build a designated airbase in Antarctica.[263]

[257] See: Kawashima, Shin. 'China's Worrying New Coast Guard Law'. *The Diplomat*, 17.03.2021.
[258] See: Havnes; Seland, ibid.
[259] See: Lackenbauer; et al.: 'China's Arctic Ambitions...', ibid., p. 41.
[260] See: Lackenbauer; et al.: 'China's Arctic Ambitions...', ibid., p. 37.
[261] See: Zandee et al., ibid., p. 33 seq.
[262] See: Lanteigne, ibid., p. 121.
[263] See: Tang, Didi. 'Beijing Prepares to Build its First Airbase in Antarctica'. *The Times*, 29.10.2018.

While this equipment is intended for research purposes, China's Arctic exploration has caused concern before: In 1999, Canadian local officials were surprised by a visit of the *Xuě Lóng* icebreaker in their Northwest Territories and allegedly also found weapons and ammunition aboard.[264]

NATO continues to repeatedly warn that "China is coming closer to us"[265]. As is the case with Western 'over-analysing' of Russian security approaches in the region, the Chinese assessment likely plays out in a middle ground as well. Beijing has to be aware that its Arctic activities are closely followed by strategically adverse countries, such as the United States or Japan, which are especially wary about any connections between research progress and military advantages.
Most of its preoccupations have revolved around the accumulation of knowledge, enhanced by the use of satellite surveillance.[266] Polar research has also been connected to China's expanding capabilities in deep-sea exploration and outer space missions. A new satellite, specifically designated to monitor Arctic shipping, is set to be launched into space by 2022, supporting Beijing's own satellite navigation system *BeiDou2*.[267]

Officially meant to strengthen the civilian marine navigability of the High North, a detailed understanding of oceanic conditions as well as weather patterns could also support military activity. The People's Republic has already been accused of secretly using its Arctic research facilities to build up quasi-military bases for space monitoring and intelligence accumulation, which could also be accessed by the People's Liberation Army (PLA). China is operating stations in Kiruna (Sweden), Kárhóll (Iceland), Ny-Ålesund (Svalbard) and Longyearbyen (Svalbard). There are also plans to open facilities in Sodankyla (Finland) and Nuuk (Greenland).[268]

[264] See: Lackenbauer; et al.: 'China's Arctic Ambitions...', ibid., p. 61 seq.
[265] Birchard, Rosie. 'NATO Chief: Melting Arctic Ice Could Heat Up Geopolitics'. *Deutsche Welle*, 22.03.2021.
[266] See: Havnes; Seland, ibid.
[267] See: Zhou, Laura. 'China Planning to Launch Satellite to Monitor Arctic Shipping Routes'. *South China Morning Post*, 10.12.2020.
[268] See: Robinson, Jana. 'Arctic Space Challenge for NATO Emerging from China's Economic and Financial Assertiveness'. In: *JAPCC Journal* 30. p 37.

Chinese advances towards Iceland in the aftermath of the Financial Crisis stoked Western fears that the island would become a "northern pearl"[269] to Beijing's 'string of pearls', with possible ports and airfields in the North Atlantic. Reykjavík, however, in 2016 agreed to reopen old American military facilities in Keflavík, which should prevent any open military installations by China.

The Finnish Defense Forces in 2018 blocked the Chinese attempt to buy a regional airport in Kemijärvi for research flights, as it is located in close proximity to a firing range.[270]

The Swedish Ministry of Defence's Research Agency warned in 2019 that Beijing could run a civilian and military double-use regime for the Kiruna Remote Sensing Satellite North Polar Ground Station with the PLA's involvement, which could harm Swedish national security.

In Greenland, a Hong Kong-based firm tried to acquire an old naval base but was blocked by Danish authorities; a satellite ground station funded by China is meanwhile already in operation.[271]

The office of the U.S. Secretary of Defense also sounded the alarm in 2019 that Beijing's civilian research "could support a strengthened, future Chinese military presence in the Arctic Ocean, potentially including deployment of submarines to the region"[272].

A 2020 academic report assessed that China could potentially misuse its involvement in the development of a 10,000 km Arctic underwater communication cable in order to "implement underwater surveillance capabilities […] [and] underwater acoustic sensing; together with sensors and underwater drones it would enable China to extend its Underwater Great Wall"[273].

However, only one move similar to Russia's 'Denmark Takeover' has thus far happened, when Beijing sent five PLA ships, accompanying Russian vessels, through the Bering Strait in 2015 without a notice to Washington, just as then-President Barack Obama was attending an Arctic conference in Alaska. Such action was repeated in 2017.[274]

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[269] Perry; Andersen, ibid., p. 156.
[270] See: Kopra, Sanna; Puranen, Matti. 'China's Arctic Ambitions Face Increasing Headwinds in Finland'. *The Diplomat*, 18.03.2021.
[271] See: Robinson, ibid., pp. 37 seq.
[272] Quoted in: Havnes; Seland, ibid.
[273] Jüris, Frank. *Handing over Infrastructure for China's Strategic Objectives: 'Arctic Connect' and the Digital Silk Road in the Arctic*. Tallinn: Estonian Foreign Policy Institute, 2020. p. 1.
[274] See: Lanteigne, ibid., p. 123.

3.3.3. India

In 2012, the Indian Minister of Defence explained that the "*possible melting of the polar ice caps will have tectonic consequences to our understanding of what maritime domains constitute 'navigable' oceans of the world* […] *there may be a need to reassess concepts like chokepoints and critical sea lines of communication*"[275].

India's perceptions of military security generally suffer from a "frontier paradox"[276]: As its domestic borders with Pakistan and China continue to be contested, the Indian army needs to focus its force to defend the motherland instead of being able to project strength outwards and propel the country to become a great power. Without this dilemma, New Delhi would certainly possess enough capabilities for further involvement in the global security landscape as it boasted the world's third-biggest military budget in 2020 (US$64.1 billion), behind the U.S. and China[277].

Indian officials have in the past emphasised the geostrategic importance of the Arctic for their country's geopolitical security: As regional changes affect global power distribution, emerging states like India should also be included in future political considerations. Some analysts have accused the Arctic littoral states of militarising the region "in pursuit of their narrow national interests"[278].

In post-Cold War fashion, New Delhi would prefer if the Arctic became a demilitarised and nuclear-free 'global commons', similar to Antarctica. Still, Indian authors also acknowledge the possibility of heightened 'great game' power contestation.[279] "Media commentators have adopted this rivalry frame as a dominant element in their narratives, envisaging Arctic affairs as another domain in which India must balance China's aggressive and growing geopolitical influence."[280]

[275] Quoted in: Lackenbauer: 'India and the Arctic', ibid., p. 43.
[276] Rej, Abhijnan. 'India's Frontier Paradox'. *The Diplomat*, 22.08.2020.
[277] See: International Institute for Strategic Studies. *The Military Balance 2021*. London: Routledge, 2021.
[278] Lackenbauer: 'India and the Arctic', ibid., p. 42.
[279] See: Lackenbauer: 'India and the Arctic', ibid., p. 24 seq., 28.
[280] Lackenbauer: 'India and the Arctic', ibid., p. 44.

In 2008, a team of India's navy headed on skiers to the North Pole, in order to be the first country to reach all 'three poles' of the earth.[281] In summer 2019, the guided missile stealth frigate *Tarkash* paid port visits to several Arctic states, such as Finland, Norway, Russia and Sweden.[282] Joint military exercises took place with the Russian Navy, for example, in Vladivostok in 2016.

The Indian Navy (IN) boasts particular experience in controlling lanes of communications in the Indian Ocean, all the way from South Africa to Australia, and warding off Chinese marine expansionism in the region. Though, with "reduced Chinese reliance on Southern straits, the IN will have to seek newer avenues of incorporating and formulating a role in the Arctic routes."[283]

Although equipped with the *Teg* frigate, the aircraft carrier *Vikramaditya* as well as the nuclear submarine *Chakra*, which have been purchased from Russia and were thus all tested in polar-like conditions, India's marine forces are generally not trained for winterised manoeuvres in the Arctic Sea. Most equipment has explicitly been transformed to work better in tropical waters.[284] The Indian government has, however, approved the acquisition of an ice-class polar vessel. After the border clashes with China in 2020, a second aircraft carrier and submarine as well as two drones were commissioned. There are also ongoing plans to build up to six new nuclear-powered attack submarines.[285]

In the realm of spatial intelligence, India launched its first satellite *Aryabhatta* back in 1975 via a Soviet *Soyuz* launch vehicle. Since then, its national space programme was focused on low-cost developments and innovation, industry participation as well as societal impact. For 2022, a joint mission with NASA is planned to launch another satellite, which will, inter alia, monitor influential developments in the Arctic.[286] Exchange in spatial security with the Quad alliance is expected to ramp up too.

[281] See: Bhat, Anil. 'Indian Navy Navigates to North Pole'. In: *International Aerospace*, March-April 2008. p. 19.
[282] See: Rao, Shishir. 'What Can India Bring to the Table as Great Power Competition Heats Up the Arctic?'. *The Diplomat*, 14.09.2020.
[283] See: Pareek, ibid., p. 6.
[284] See: Sinha, Uttam Kumar. 'The Arctic: Challenges, Prospects and Opportunities for India'. In: *Indian Foreign Affairs Journal* 8:1. p. 12 seq. and Sinha: 'India in the Arctic...', ibid., p. 122.
[285] See: Gupta, Shishir. 'Eye on China, India's Plan For 6 Nuclear-Powered Attack Submarines Back on Track'. *Hindustan Times*, 10.03.2021.
[286] See: Government of India, ibid.

Meanwhile, India is also inside a cooperation framework with Russia for navigation and outer space exploration.

In its 2021 draft policy, New Delhi stated that it aims to "expand remote sensing capability to the Arctic […], develop facilities for establishing services in the Arctic related to […] surveillance, mapping and sustainable management of marine resources. [And to] Engage with partners for establishing satellite ground stations in the Arctic […]"[287].

3.4. Tourism & Indigenous Inclusion

> "A lot of Arctic tourism is built around nostalgic ideas of frontier expeditions, creating curiosity for a sparsely or uninhabited and untamed environment, enriched by special treats such as Aurora Borealis, whale-watching, and other fruits of nature that professional tourism operators aspire to turn into safe and luxurious experiences."[288]

Untouched nature and the traditional cultures of indigenous communities add a feeling of exceptionalism to Arctic tourism. But – "Indigenous cultures, from Aleut, Yupik and Inuit to Saami and Nenets, Khanty, Evenk and Chukchi cultures […] are drawn on forcefully as an imaginary or real link to experiencing life near nature and with the handicraft skills needed to survive in these milieus."[289]

It must therefore be asked, to what extent tourism can be perceived as a neo-colonial threat to these indigenous communities. Instead of globalised forces following regional traditions, the local residents have to conversely adhere to modern Western-style patterns of work and time (the Saami culture, for example, has eight seasons instead of four, with different professional occupations in each one).

[287] Government of India, ibid.
[288] Veijola, Soile; Strauss-Mazzullo, Hannah. 'Tourism at the Crossroads of Contesting Paradigms of Arctic Development'. In: Finger, Matthias; Heininen, Lassi (Eds.). *The Global Arctic Handbook*. Cham: Springer International Publishing, 2019. p. 63.
[289] Veijola; Strauss-Mazzullo, ibid., p. 66.

So, while tourism can bring a significant increase in revenues and a variety of job opportunities (though temporary and low-paid) for northern communities, especially for women and younger people, it cannot sufficiently tackle structural inequalities and general societal disparities that already exist in the region. This puts local residents, especially younger generations, into a dilemma whether to choose a better-paying but unattractive position in oil/gas production and mining or a more attractive but low-paying and seasonal job in the tourism sector.[290]

After the decolonialisation wave of the 1960s and the easing of the Cold War in the 1970s, political activism within Arctic indigenous communities accelerated, thus challenging the persistent colonial and neoliberal imagery of underdevelopment and primitiveness of inhabitants in the High North.[291] Nowadays, many indigenous groups constitute a minority in the political territories they live in. Political recognition, apart from local participation, remains low.

These circumstances have increasingly led their organisations to act as international players, especially concerning important global topics such as climate change, while their community members view themselves as separate 'nations' within the Arctic 'homeland', independent of their actual home country's national borders. This is especially visible in the political agenda of the Saami, which live in Finland, Norway, Russia, and Sweden, but are working to be recognised as a singular nation.[292]

While industrial activity and increased traffic in the Arctic can be disruptive to the indigenous traditional economy, which includes hunting, fishing or whaling, the communities also cannot automatically be viewed as oppressed groups which are fully opposed to any future commercial investments and development.[293] "Global companies and national governments need to ensure the inclusive growth of local communities […]. This goes beyond revenue sharing to include respect for local decision-making platforms, economic aspirations and preservation of local languages and heritage."[294]

[290] See: Veijola; Strauss-Mazzullo, ibid., p. 69 seq.
[291] See: Dodds; Woon. 'Triumphant Geopolitics', ibid.
[292] See: Suvanto, ibid., pp. 34 seq.
[293] See: Global Agenda, ibid., p. 10.
[294] Global Agenda, ibid., p. 8.

Concerning future perspectives for sustainable development in the Arctic, indigenous knowledge, as a trusted person- and place-based people-to-people exchange, is particularly important. Their cultures had to deal with balanced environmental management for millennia, in order to avoid human risks through resource depletion, and are continuing to do so – now more than ever.[295]

Deriving from the globalising 'Arctic stakeholder' discourse, the indigenous communities of the High North are the most ancient and therefore most entitled actors. The indigenous communities represented as Permanent Participants in the Arctic Council are institutionally ranked on a higher level in Arctic governance than the observer states China and India.

3.4.1. Russia

Arctic tourism in the Russian Federation entails an adventurous 'pioneer' stance, experienced, for example, through a US$30,000 icebreaker cruise to the North Pole. Though, it is also more restricted through military areas along its coastal border zone, visa processes and a lack of infrastructure. Tourists mostly need to travel via icebreaker, helicopter or inflatable boats. Cruise tourism instead focuses on Greenland and Svalbard. In comparison to popular destinations, such as Scandinavia, Russia only attracts a low number of tourists per year – ca. 500.000 visitors or 2% of total Arctic tourism (in comparison to 8.8 million overnight stays in Iceland in 2016).[296]

The 2013 Russian Arctic agenda stressed the development of tourism in the region, desirably through sustainable means. The goal is to regulate tourist frameworks as well as to promote public-private partnerships and (inter-)national advertising, especially in the fields of culture, recreation and environment.[297]

Twenty-seven different ethnic indigenous groups are living in the Russian Arctic, totalling to about 200,000 people. Life expectancy in the region only amounts to fourty-nine years, eleven years under the national average, and indigenous unemployment is

[295] See: Kim; et al., ibid., pp. 40, and Gamble, Jim. 'The Future of Arctic Ocean Cooperation. Indigenous and NGO Perspectives'. In: Corell, Robert W.; et al. (Eds.). *The Arctic in World Affairs*. Seoul: Korea Maritime Institute, 2018. p. 156.
[296] See: Veijola; Strauss-Mazzullo, ibid., p. 66 seq., and Lasserre, ibid. p. 86.
[297] See: Heininen; Everett; et al., ibid., p. 89.

estimated to lay between 30–60%. Public outcries are institutionally punished, with one major indigenous political organisation being stripped of its legal registration after it had criticised the Russian government for human rights' violations.[298]

Russian Arctic policy documents discuss the situation of indigenous peoples and how their life situations can be improved concerning economic success, remote education as well as cultural access, with the latest strategy providing concrete measures to be implemented. A focus lies on the provision of healthcare services as well as 'entrepreneurial opportunities' and on means to reverse negative demographic trends. This is supposed to create a more balanced labour market and social guarantees in the AZRF and should help the region maintain its 'northern culture'.[299]
Measures must also include a reliable extension of cell phone and broadband connection in order to securely include remote regions that are currently only reachable via satellite phone.[300]

3.4.2. China

In a human dimension, the Chinese version of the Arctic includes both the development of Arctic indigenous communities as well as the safety of tourists.[301] Beijing acknowledges that "Arctic tourism is an emerging industry, and China is a source of tourists to the Arctic"[302]. It thus aims to motivate local states to strengthen their hosting capabilities as this would also open up further possibilities for Chinese investors and involve domestic travel agencies and airlines.

Iceland occupies a special place in Beijing's Arctic tourism cooperation. The number of Chinese tourists to the Scandinavian island nation has seen a steep increase over the last decade, growing up to 70% year-on-year. The Icelandic image of untouched Arctic nature also helps Reykjavík to promote specific exports to the People's Republic, such as glacier

[298] See: Sergunin, Alexander; Konyshev, Valery. 'Russia in Search of its Arctic Strategy: Between Hard and Soft Power?'. In: *The Polar Journal* 4:1. p. 74.
[299] See: Heininen; Everett; et al., ibid., pp. 86, 89, 91.
[300] See: Klimenko, Ekaterina. *The Geopolitics of a Changing Arctic*. Solna: SIPRI, 2019. p. 7.
[301] See: Heininen; Everett; et al., ibid. p. 224.
[302] State Council of the People's Republic of China, ibid.

water. Though, not all cooperation remains uncontroversial: A Chinese investor planned to purchase 300 km² of land for a luxury resort and an eco-golf course. In the end, the government intervened against the sale.[303]

Greenland hopes to profit from increased Chinese Arctic tourism in the future as well. One option is expanding capacities for cruise ships to dock, another one is air traffic. *China Communications Construction Company* showed interest to modernise airports in Nuuk, Ilulissat and Qaqortoq, which stoked fears in Denmark and the United States about a possible Greenlandic debt default and caused them to provide the financial means themselves instead.[304]

Another envisioned hub for Chinese Arctic tourism is Rovaniemi in Finland, which was already served via seven flight routes from China to Helsinki. Visitor numbers have risen by over 50% in recent years and Asian tourists are also spending more than double the amount of money that they used to prior.[305]

Although the Chinese strategy envisions Arctic tourism to be "low-carbon tourism, ecotourism, and responsible tourism"[306], it is rather likely that the long-term interests of both Chinese tourists and travel companies on the one side as well as (indigenous) inhabitants and local nature on the other will inevitably show signs of divide in the future.

In comparison to other Asian AC observer states, like Singapore, China has not reached out to indigenous representatives in the council in a meaningful way after its admission. As an observer, it has to adhere to the Nuuk criteria, which demand political and financial support for the indigenous Permanent Participants.

Still, Beijing's commitment has not exceeded the minimal rights that these groups possess on the respective national levels. Furthermore, Chinese business practices both in Canada and Russia have not shown any signs of indigenous inclusion in their project decision processes either. Some envisioned Arctic investment projects are frowned upon by local indigenous peoples, such as the 'Arctic Corridor' railway line which would run through

[303] See: Tonami, ibid., pp. 111 and 114.
[304] See: Koivurova; et al., ibid., p. 50.
[305] See: Tillman, ibid., p. 359 seq.
[306] State Council of the People's Republic of China, ibid.

Saami native lands.[307] Greenlandic ministers even received death threats because of their unwillingness to grant mining rights to companies with Chinese shares.[308]

This approach could partly be explained by the lack of political awareness on Beijing's side as there are officially no indigenous people on Chinese territory.[309] From their perspective, "indigeneity arises exclusively from the context of colonisation and conquest"[310].

3.4.3. India

India counts both tourism and indigenous inclusion under 'national capacity building' in its 2021 draft Arctic policy:

The strategy proposes to "encourage tourism and hospitality sectors in building specialised capacities and awareness to engage with Arctic enterprises"[311]. It ties this to the increasing purchasing power of India and how it can benefit underdeveloped communities outside of the country. For this, the Arctic is seen as "a potential area of growth", which could be further supported by environmentally sustainable marine tourism, via the Arctic Marine Tourism Project.[312] For India, tourism and sustainable development go hand in hand, inter alia, through providing healthcare services and technological solutions, such as telemedicine, robotics or nanotechnology, to the Arctic.

India's strategy characterises the country as providing 'substantial' expertise to address issues of human indigenous security as it can help to connect these regional communities and construct low-cost networks for food distribution and health.[313] It also wants to "undertake cultural and educational exchanges between the indigenous communities of the glacial regions of Himalayas and the Arctic."[314] This approach of shared indigenous

[307] See: Borshoff, ibid.
[308] See: Dodds; Halliburton, ibid.
[309] See: Koivurova; et al., ibid., pp. 54 seq.
[310] Koivurova; et al., ibid., p. 55.
[311] Government of India, ibid.
[312] See: Government of India, ibid.
[313] See: Government of India, ibid.
[314] Government of India, ibid.

knowledge ties into the United Nations' 2030 Sustainable Development Goals, which aim to develop resilient and sustainable human settlements.

Increased indigenous knowledge, especially in climate research, is said to benefit New Delhi's strategies on how to deal with the changing environment in its Himalayan 'polar' territories. It could also help with envisioning new sustainable policy measures or developing natural medicines.[315] Himalayan indigenous mountain communities are especially affected by climate change as they do not only depend on benign weather patterns in the inhospitable highlands for their human security and infrastructural connectivity but also on traditional lifestyles, such as the herding of migrating livestock throughout the year. They are additionally vital for India's defence of the Line of Actual Control with China, for example through the 'Tibetan Squad'.

Indian domestic discourse sees "Arctic activism as a form of idealistic, prestige politics for India, perpetuating longstanding polar aspirations originally developed for the Antarctic."[316] Also, India's commitment for indigenous communities has already paid off in the past, as its lobbying with the Arctic Council's Permanent Observers helped New Delhi to draw level with Beijing in its admission to the body.[317]

3.5. Climate Change & Polar Research

"In theory, climate change should push polar stakeholders to band together to craft collaborative agendas. Reality is different."[318]

While temperatures in the Arctic have varied over time, there exists significant warming that now happens three times faster than in the global average.[319] Spring and summer of 2019 were among the three warmest in the region since 1979, with average temperatures 3–4 degrees Celsius above average. Sea ice declined by 82,400 square kilometres annually between 1979 and 2019, accounting for a 40% decrease over the last fourty

[315] See: Government of India, ibid.
[316] Lackenbauer: 'India and the Arctic', ibid., p. 51.
[317] See: Lackenbauer: 'India and the Arctic', ibid., pp. 46 seq.
[318] Buchanan; Burke, ibid.
[319] See: O'Rourke; et al., ibid., p. 13.

years.[320] Once summer sea ice is gone, it is expected to not return in later years.[321] The "level of thaw predicted for 2080 was reached in 2012."[322] The Albedo loop phenomenon contributes to further melting as the darker water masses and land areas, formerly covered by ice, reflect more sunlight. Therefore, the Arctic itself becomes an active natural contributor to climate change.[323]

There exist various linkages, so-called 'teleconnections', between warming Arctic conditions and extreme events in mid-latitude continental zones – which again produce natural feedback loops. Nowadays, environmental security is directly interlinked with global geopolitical security. From a Human Security perspective, effects of climate change, such as oceanic acidification, threaten food and water security in the Arctic, which proves especially negative for traditional indigenous lifestyles. Health security is also on the verge due to increased food-related and waterborne diseases.[324]

Especially Asia is set to suffer a lot from advancing global warming:
Rich river deltas could suffer from saltwater exposure and dying glaciers, while littoral schools of fish could decline and migrate outwards due to changing ocean temperatures and tidal flow patterns.
At the same time, Asia's rivers transport the world's biggest waste into the Arctic Ocean. Many major Asian port cities, such as Shanghai, Singapore and Tokyo, will have to adjust and rebuild their shipping businesses too.[325] Rising sea levels of half a metre could cost the world's major port cities over US$28 trillion by the mid-21st century.[326]

[320] See: Klimenko: 'Geopolitics...', ibid., p. 3.
[321] See: Berardelli, Jeff. 'In just 15 Years, the Arctic Ocean May Be Ice-Free in Summer, Study Says'. *CBS News*, 12.08.2020.
[322] Suvanto, ibid., p. 46.
[323] See: Suvanto, ibid., pp. 47 seq.
[324] See: Klimenko: 'Geopolitics...', ibid., p. 5.
[325] See: Ho, Joshua H. 'The Arctic Meltdown and Its Implication for Ports and Shipping in Asia'. In: Kraska, James (Ed.). *Arctic Security in an Age of Climate Change*. Cambridge: Cambridge University Press, 2011. pp. 35 seq.
[326] See: [n.a.]. 'Sea Level Rise Could Cost Port Cities $28 Trillion', *CNN*, 23.11.2009.

3.5.1. Russia

The summer of 2020 saw a record-breaking heat wave in the Russian Arctic zone with temperatures up to 38 degrees Celsius. The accompanying flash floods destroyed villages and wildfires burned down country-size swaths of taiga forests, deeply dissolving the tundra permafrost.[327] In the whole of Russia, forest coverage of the size of Greece burned down, which led to a third more CO_2 being globally emitted than in the previous year.[328] Russian officials estimate that such continuing hazards could decrease the country's gross domestic product by 3% per year and that their infrastructural impact could cost Moscow nearly US$100 billion until 2050.[329] Thawing permafrost alone could create losses of US$2.3 billion annually.[330]

The early 1990s saw multiple new environmental agencies being introduced in the post-Soviet Russian Federation, though, a lot of bodies have since been merged together, and their institutional power cut in favour of the central administration. Soviet centralism had made it easier to enact policies in certain areas, but the USSR's heritage was most visible in nuclear waste and industrial pollution. Under the slogan '*Stop the Death Clouds!*', the Nordic countries' civil societies protested that Moscow should clean up its Western Arctic.[331]

Still, the human component of environmental security and the possible disastrous consequences of climate change remain largely underestimated in Russian public perception. Russia emits the fourth-most greenhouse gases worldwide, per capita even more than double the amount of China. The nationwide share of renewable energies meanwhile makes up less than 0.1%.

Local protests against polluting industries are disassembled by security forces and environmental activists brought in front of court on piracy charges. President Vladimir Putin publicly recognised the human-made origins of global warming only in 2019, while

[327] See: AP News. 'Temperature Hits 100 F Degrees in Arctic Russian Town'.
[328] See: Newlin, Cyrus. 'Climate Change Will Reshape Russia'. *Center for Strategic and International Studies*, 13.01.2021.
[329] Newlin, ibid.
[330] See: Gifford, Charlotte. 'On Thin Ice: Thawing Permafrost Dampens Russia's Economic Growth Prospects'. *World Finance*, 27.01.2020.
[331] See: Hønneland, ibid., p. 82 seq. and p. 99 seq.

later backpedalling on possible positive impacts of renewable energy. While Moscow has joined the Paris Climate Accords, the country's 30% emission reduction goal is referring back to the year 1990 – when it was still the Russian Soviet Federative Socialist Republic. This would enable Russia to actually pollute even more in the future.[332]

Back in 2008, the Arctic policy of Russia did not mention any ecological damage in the region, but it stressed environmentally friendly economic measures. The 2013 strategy then acknowledged damage and focused on developing technologies to avoid future harm. Though, only mentioning oil spills, none of the documents explicitly named any other major pollution factors.[333]

Within its wider Arctic region, Russia recently possessed 450 protected areas which made up around 16.2% of the overall territory.[334] A 2016 study assessed 47 marine protected areas in the Russian Arctic that could be established until 2030, accounting for a quarter of its maritime territory.[335] Concerning the geographical division of environmental protection, a clear distinction exists between economically less developed areas (for example, one third of Yakutia is protected) and further developed – oil and gas-rich – areas, such as the Yamalo-Nenets region (less than 10% protected).[336]

3.5.2. China

Due to worsening global warming in the next half century, it is estimated that Chinese rice, wheat and corn cultivation output could decrease by over 35%, while littoral floods could threaten up to twenty million inhabitants of Chinese coastal regions.[337] An "airpocalypse"[338] of poisonous smog levels in northern Chinese cities as well as snow chaos in its southern provinces have been attributed to changing snowfall patterns in Siberia.

[332] See: Newlin, ibid.
[333] See: Heininen; Everett; et al., ibid., pp. 87 seq.
[334] See: Zagorski. 'The Future…', ibid., p. 119.
[335] See: Kim; et al., ibid., p. 21.
[336] See: Zagorski. 'The Future...', ibid., p. 120.
[337] See: Chater, Andrew. 'Explaining Non-Arctic States in the Arctic Council'. In: *Strategic Analysis*, 40:3. p. 179.
[338] Koivurova; et al., ibid., p. 52.

At the same time, the People's Republic is the world's largest carbon dioxide emitter – responsible for around one third of all greenhouse gas pollution, as much as the U.S., EU and India combined. (South-East) Asia is furthermore accounting for between a quarter and nearly two thirds of various chemical depositions in the Arctic.[339]

The 2018 Arctic whitepaper recognises the double-edged sword that is climate change. While the country would admittedly profit from opening up resources and shipping routes, the extensive effects on the Arctic's environment and indigenous communities are viewed as well. Ecological resilience as well as cultural protection are thus to be promoted by "realizing harmonious coexistence between man and nature"[340].
The Chinese strategy aims to actively combat climate change in the Arctic while it calls on other countries to do their part too. In 2020, Xi Jinping announced that Beijing will work towards becoming carbon-neutral by 2060 and thus reducing the global temperature increase by 0.2–0.3C°. China's energy consumption peak is expected for circa 2030.[341]

"Scientific diplomacy is the most resilient and receptive approach to Arctic policy formation and to debunking the 'myth and misperception' of China's Arctic motivation"[342].
The Republic of China was a signatory state of the 1920 Svalbard Treaty which gives Beijing access to the international usage regime for the Norwegian-administered archipelago. From the 1980s onwards, Chinese scientists began to take part in international polar research projects in the Arctic and are now at their tenth expedition. In 2004, the Arctic Yellow River research station in Ny-Ålesund, Spitsbergen, was opened. In the Icelandic region of Kárhóll, the Polar Research Institute of China is jointly running an Aurora Observatory with the Icelandic Centre for Research since 2018. There are also plans for a joint Sino-Canadian High Arctic Research Station in Cambridge Bay, Nunavut.[343]

[339] See: Koivurova; et al., ibid., pp. 39 seq.
[340] State Council of the People's Republic of China, ibid.
[341] See: Tooze, Adam. 'Did Xi Just Save the World?'. *Foreign Policy*, 25.09.2020.
[342] Li, Xing; Peng, Bo. 'The Rise of China in the Emergence of a New Arctic Order'. In: Finger, Matthias; Heininen, Lassi (Eds.). *The Global Arctic Handbook*. Cham: Springer International Publishing, 2019. p. 209.
[343] See: Lanteigne, ibid., p. 121.

Beijing has generally profited from the Financial Crisis when it comes to its Arctic research budget and the necessity for other interested nations to cut their expenses to "famine"[344] levels. Together with the fact that Arctic exploration is eight times more expensive than the same undertakings in the south, this had made the People's Republic a viable partner for financing scientific activities in the High North.[345] It even accepted scientists from Taiwan to participate in its past Arctic expeditions.[346] China's priorities are however still largely focused on Antarctica, where around 80% of its annual polar research budget flows.[347]

Beijing aims at boosting its scientific output about the region and joining academic institutional networks, such as the University of the Arctic. It hosted both the Arctic Science Summit Week in 2005 as well as the International Polar Year in 2007/2008.[348] Chinese academia has seen by far the highest increase in output concerning Arctic science in recent years (+260% from 2006–2016), ranking in seventh place globally in 2016.[349]

The 2018 policy focuses Chinese polar research efforts in the Arctic on "Arctic geology, geography, ice and snow, hydrology, meteorology, sea ice, biology, ecology, geophysics and marine chemistry […] [and the] multi-level and multi-domain continuous observation of atmosphere, sea, sea ice, glaciers, soil, bio-ecological character and environmental quality"[350].

China has understood the importance of developing both new deep-sea extraction technology as well as renewable energy sources.[351] One such opportunity is Chinese-Icelandic cooperation on geothermal development. Deriving from recent intensive diplomatic exchange, Nordic firms are now training their Asian counterparts in this cutting-edge technology which can help reduce Chinese 'addiction' to dirty urban heating with coal. This 'Icelandic Model' between *Sino Petroleum Corp* and the *Arctic Green Energy Corporation* now covers over forty communities in the People's Republic.[352]

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[344] Lackenbauer; et al.: 'China's Arctic Ambitions...', ibid., p. 69.
[345] See: Koivurova; et al., ibid., p. 38.
[346] Jakobson; Peng, ibid., p. 10.
[347] Ping, Su; Lanteigne, Marc. 'China's Developing Arctic Policies: Myths and Misconceptions'. In: *JCIR* 3:1. p. 12.
[348] See: Li, ibid., p. 210.
[349] See: Havnes; Seland, ibid.
[350] State Council of the People's Republic of China, ibid.
[351] See: State Council of the People's Republic of China, ibid.
[352] See: Tillman, ibid., p. 350.

3.5.3. India

Climate change and the changing Arctic environment have been connected to unusually strong rainfall and severe dust winds in India. Melting Himalayan glaciers would harm Indian (and Pakistani) agriculture along Indus and Ganges, while rising sea levels would damage important Indian littoral areas (hosting 20% of India's population) and even more severely threaten India's lower lying neighbour states. Higher tides also endanger India's military alliance system in the Indian Ocean as the strategically important U.S./U.K. naval and air force base of Diego Garcia sits only around 1.3 metres above sea level.[353] A similar fate could happen to Indian facilities on the Andaman Islands which overlook the Malacca Strait.

India is meanwhile also the world's third largest emitter of carbon dioxide. Still, "in 2020, India has already reduced the national gross domestic product's emission intensity by 21% from the 2005 levels this year and is well on the path of reducing the emission intensity by 33%-35% by 2030"[354].

The 2013 government overview attested India "significant expertise"[355] concerning complex issues in Arctic research diplomacy, due to New Delhi's history in Antarctic cooperation. The 2021 policy draft focuses on the teleconnection between changes in the Arctic environment and (sub-)tropic monsoon patterns that affects national development and economic security.

Indian agriculture employs nearly two thirds of its population and receives seventy percent of yearly water during the monsoon season. The connected summer crop harvest accounts for 50% of Indian food yield and 23% of all Indian economic output. The melting the Himalayan glaciers furthermore contain the world's second largest freshwater reserves. The Indian policy also recognises the potential for future pandemics as melting permafrost could potentially release dormant bacteria and viruses.[356]

[353] See: Gadihoke, ibid., p. 8.
[354] Giri, Chaitanya. 'Delhi to the Arctic via Paris'. *Gateway House*, 03.12.2020.
[355] Ministry of External Affairs of the Republic of India, ibid.
[356] See: Government of India, ibid.

Indian Arctic research is focused on international cooperation in the Svalbard archipelago, which India can access via its signatory status to the 1920 treaty:
Its first expedition to the region happened in 2007. In July 2008, the 'Himadri' station was opened in Ny-Ålesund (Svalbard), where atmospheric, microbiological, glaciological as well as oceanographic studies are carried out. 2014 saw a multi-sensor moored observatory, called *IndArc*, being installed in Kongsfjorden. In 2016, India opened an atmospheric laboratory at Gruvebadet.[357]
Another future Indian research station could be hosted in Russia.[358]

New Delhi also emphasises academic research cooperation, for example, in the Asian Forum for Polar Sciences or the University of the Arctic framework. This ties into its activities in the Arctic Council, where Indian scientists participate in several specific sub-groups as well as designated forums. Nevertheless, the share of Indian scientists within local research projects as well as international academic publications remains rather low.

Indian future strategy envisions the acquisition of an icebreaker and the development of domestic ice-class ship-building facilities.[359] The country is also open to the potential in developing renewable energies on its domestic market, for example, through a cooperation with Iceland in the geothermal sector of the Indian Himalayas.[360] A memorandum for biodiversity was signed with Finland in 2020.[361]

A weak point of India's approach to both climate change and Arctic cooperation, however, is the sole focus on science diplomacy, as all decisions "are done in politics. They are not done by the scientific community; they are done by the lawmakers."[362]

[357] See: Ministry of External Affairs of the Republic of India, ibid.
[358] See: Rao, ibid.
[359] See: Government of India, ibid.
[360] See: Sinha: 'India in the Arctic...', ibid., p. 121.
[361] See: Giri, ibid.
[362] Ghosh, Sahana; Aggarwal, Mayank. 'India's Draft Arctic Policy Explores What the Two Regions Can Do for Each Other'. *The Wire*, 23.01.2021.

4. Common Goals and Possible Cooperation

Over the past decades, Arctic governance, as a multidimensional process of (neoliberal) institutionalist frameworks, was able to work continuously, even though the long-term outlook for individual countries involved remained uncertain.

Martin Smith defines three ideal types of strategic partnerships: In a *Pragmatic Partnership*, players collaborate on mutually beneficial issues, although with zero-sum reflections in the background. A *Strategic Partnership* is characterised by a mutual long-term win-win thinking between actors that trust each other. The *Normative Partnership* is based upon a shared set of values between partners that also consider internal and external thoughts on both sides.[363]

A common institutional framework encompassing all three analysed Arctic actors, apart from the Arctic Council, is the BRICS format between Brazil, Russia, India, China and South Africa. The five states have already shown shared interests in marine and polar research collaboration, expressed in memoranda on technological and environmental cooperation. The BRICS countries have a decisive geostrategic advantage as they border every world ocean and can all be considered maritime powers. While Brazil has shown some alertness towards Arctic issues, South Africa is trapped in a geographical 'tyranny of distance' and lacks financial resources for Arctic engagement.[364]

Another shared interest regime lies in enhanced global shipping capabilities that follow more diverse lane routes. The recent blockage of the Suez Canal has shown the vulnerability of Eurasian maritime connectivity relying on a single shipping passage: Around 12% of global trade, encompassing one million oil barrels and 8% of liquified natural gas, traverse the Egyptian strait daily. The stuck vessel halted various supply chains and cost the global economy US$9.6 billion each day or US$400 million per hour.[365]

[363] See: Røseth, Tom. 'Russia's China Policy in the Arctic'. In: *Strategic Analysis* 38:6. p. 842 seq.
[364] See: Lagutina, Maria; Leksyutina, Yana. 'BRICS Countries' Strategies in the Arctic and the Prospects for Consolidated BRICS Agenda in the Arctic'. In: *The Polar Journal* 9:1. pp. 46 seq.
[365] See: Russon, Mary-Ann. 'The Cost of the Suez Canal Blockage'. *BBC*, 29.03.2021.

Russia – China

Especially China would like to see an evolving strategic partnership with Russia in the Arctic, but their relations remain rather pragmatic, especially when it comes to differing values in territorial sovereignty and commercial commitment in the long run.

Russia still holds the diplomatic keys to China's Arctic engagement. Apart from commercial projects, Sino-Russian cooperation in the Arctic can particularly flourish in the field of polar science. In April 2019, a joint Arctic Engineering and Research Centre was opened between the Far Eastern Federal University and Harbin Polytechnic University which will focus on technological infrastructure for industrial development in polar conditions. Further consultations are happening between St. Petersburg State University and Ocean University of China in Qingdao.[366] In 2020, plans for a Chinese-Russian Arctic expedition to find the best routes for the NSR were unveiled.[367] A very practical example of Sino-Russian search and rescue cooperation happened in 2014, when *Xuě Lóng* managed to save the crew of the Russian research ship *Akademik Shokalskiy* which had been trapped in Antarctic ice.[368]

While NATO is becoming increasingly wary of Beijing's Arctic approaches, the main ideational conflict over security concerns in the region is still happening between the Western alliance and the Russian Federation. It has been stressed that China could possibly play a mediating role for dialogue between Arctic and non-Arctic states and this could also be true for lagging military talks, since Moscow is not participating in 'Western-dominated' governance bodies anymore.[369] Because Beijing has not been diplomatically involved in post-Crimean sanctions and is currently also not seeking any full-fledged alliance with Russia, this would provide a certain distinct position – neither fully neutral nor fully supporting the rivalling ideological stances of either side.

[366] See: Lagutina; Leksyutina, ibid., p. 56.
[367] See: O'Rourke; et al., ibid., p. 34.
[368] See: Contreras-Luna, Rafael. 'Russia, the Arctic and Northeast Asia: The Strategic Importance of the Far North'. In: *Central European Journal of International and Security Studies* 13:3. p. 115.
[369] See: Lanteigne, ibid., p. 125.

Russia – India

The Russo-Indian friendship has in the past been portrayed very normative and would seem much more strategic than Moscow's relationship with China. In the Arctic, though, New Delhi still brings too less to the table. It also continues to send mixed signals to Russia concerning its sovereignty policy values and long-term strategic interests in energy supplies against climate protection goals.

The Republic of India is largely viewed as a balancing power. "Indian diplomacy has to its credit few attributes like being non-hegemonic, non-prescriptive and non-intrusive. India has chosen not to be overly and overtly assertive in its dealings and statements, and there is an immense possibility to build on this benign and mellow approach as being friendly"[370] While India is taking part in Western-supported diplomacy formats and rejects Chinese hegemony in Asia, it did not follow Western sanctions against Russia.

New Delhi's diplomatic positioning is especially unique in that it is an important global partner for both Washington and Moscow. A 'strategic partnership' between both governments has been existing since the year 2000. Prime Minister Narendra Modi has in the past praised their "friendship of unmatched mutual confidence, trust and goodwill"[371] and also underlined the "high cooperative potential of Indian-Russian ties in the Arctic region"[372]

A common goal of Russia and India is the further exploration of the maritime domain. The two countries have already worked together to create an International Chart of Antarctic Waters in the past.[373] Shared interests also exist for the development of North-South infrastructure in Eurasia. Additionally, bilateral exchange has been happening mainly for nuclear technology and arms' trade.

[370] Pareek, ibid., p. 6.
[371] Quoted in: Sibal, Amb. 'Putting India Emphatically on Global Map'. *Vivekananda International Foundation*, 23.05.2015.
[372] Quoted in: Sukhanin, ibid.
[373] See: Government of India, ibid.

China – India

Last year saw openly hostile and violent actions between the two countries and both currently represent the farthest image of a partner to each other. Their relations are, however, still largely determined by external factors as well as their future economic performance and domestic political stability. Fundamental changes in these areas and enhanced Arctic cooperation could also bring back some pragmatism into the relationship.

As such, the financial effects of the COVID-19 pandemic are moving the two Asian neighbours closer together – even if not fully voluntarily. India has reopened domestic investment deals with China and is reengaging with Beijing-aligned Pakistan. "New Delhi realises the only country in the world with spare change is the one with whom it has been eyeball-to-eyeball for the last several months on the icy heights of Ladakh."[374]

Sino-Indian Arctic cooperation is already happening, for example, in the Asian Forum on Polar Science. The common narrative of the 'third pole' could bring together various Asian actors in the fight against climate change.[375] Some have proposed to create a "Himalayan Science Council"[376], based on the two hegemons' experiences in Arctic research diplomacy. However, most coordination incentives still largely come from the outside. Norway, in particular, signed memoranda with both China and India.

Pan-Asian Arctic research diplomacy also offers a possibility to settle certain lines of conflict that have built up between the world's two largest countries. Japan and South Korea managed to include Beijing in their efforts for a more aligned Asian approach towards the Arctic Council, which could possibly also involve other Asian non-Arctic states.[377] The recent relaxation after the Ladakh stand-off gives hopes for a slow normalisation of Beijing-New Delhi relations. Nevertheless, their difficult diplomatic relationship could complicate the process – only Singapore can currently boast good relations with all other Asian Arctic Council observers.

[374] Malhotra, Jyoti. 'India is Re-engaging with China and Pakistan — it's Another Pre-emptive Modi Strike'. *The Print*, 02.03.2021.
[375] See: Pareek, ibid., p. 6.
[376] Sinha: 'India in the Arctic...', ibid., p. 122.
[377] See: Lanteigne ibid., p. 126.

5. Diverging Interests and Possible Conflicts

Markowitz and Fariss define geopolitical competition as an interplay of relative power, geographic proximity as well as the level of shared interests. The more economically powerful and geographically close states are, while possessing incompatible interests, the more intense the possible contestation. The less threatening their national interests, the lower the level of competition. Rivalry is more likely to break out between autocracies themselves or democracies and autocracies if they compete over opposing zero-sum goods. It is explained that, with growing economic wealth in Asia, the competition to project geopolitical power is also likely to increasingly shift towards Asian actors – a fact that could constrain them to more interactive bargaining in the future.[378]
The main types of strategic confrontation thereby include *positional*, *spatial* and *ideological* rivalries, which can also develop under certain biases concerning the common culture or shared history between states.[379]

Oil prices are estimated to peak in the early 2030s latest, while the world should afterwards settle with 'lower forever' prices.[380] With China pledging to become carbon-neutral by 2060 and India under diplomatic pressure to follow suit, it will inevitably get lonely around Russia. An exit plan from fossil fuel dependency, such as the Saudi-Arabian 'Vision 2030' is missing in Moscow.
But "climate change will continue to compel change within Russia whether its leaders acknowledge the issue or not."[381]. Moscow thus remains torn between its natural and state 'resources': Russian state funding is highly dependent on the revenues of state energy companies. This creates a vicious circle of outside factors determining Russia's future domestic performance. Moscow's hopes for Arctic shipping could prove short-lived too, especially because Arctic-independent prices for freight or commodities are much more influential for future route decisions of companies.[382]

[378] See: Markowitz, Jonathan N., Fariss, Christopher J. 'Power, Proximity, and Democracy: Geopolitical Competition in the International System'. In: *Journal of Peace Research* 55:1. pp. 78–93.
[379] See: Pardesi, Manjeet. 'The Initiation of the Sino-Indian Rivalry'. In: *Asian Security*, 2018. p. 3.
[380] See: Bousso, Ron; Scaps, Karolin. 'Shell Braces for 'Lower Forever' Oil as Profits Soar'. *Reuters*, 27.07.2017.
[381] Newlin, ibid.
[382] See: Lasserre, ibid., p. 95.

China will meanwhile have to develop a clear stance towards regional sovereignty and bury its underlying wish for an Arctic *terra nullius* regime in international law if it wishes to enter into full and meaningful cooperation with all geopolitical parties involved.

The same is true for India's narrative about the unfairness of Arctic sovereignty and resource distribution. New Delhi also has to sort out its stance on hard and soft power in the Arctic: Its policy announcements hint in one direction, while its rivalry with China and domestic discourse involuntarily drags it into the other.

Russia – China

Commentators have rejected the notion of a growing Sino-Russian 'Arctic Axis'. Moscow sees Beijing as a promising business partner but not a like-minded geopolitical ally in the region. Their views are mainly clashing on a spatial level, though also concerning ideological state sovereignty. Russian positive perceptions of China have also fallen significantly over the last years. And in 2020 Moscow accused a Russian Arctic scientist to spy out its submarine sensor technology for the People's Republic.[383]
It was generally the Russian Federation who had blocked Chinese involvement in the Arctic Council for almost seven years. And even after admitting Beijing to partake in Arctic governance issues, "Russian Prime Minister Dmitry Medvedev quickly reminded China that 'Arctic states lay down the rules here'."[384]

While the Arctic already portrays a global paradox of carbon resource run and global warming, it is even more so in Russian domestic discourse and state ideology. Russia will keep on being torn between proving its nationalist resource autonomy against Western extraction technology sanctions and the need to further align its commercial interests with an overpowering China. While Russia is critical towards the Chinese bilateral approach to Arctic cooperation, it has often preferred this way of direct solution-seeking over multilateralist formats in the region itself.

[383] See: Buchanan, Elizabeth. 'There is No Arctic Axis'. *Foreign Policy*, 21.07.2020.
[384] Flake, Lincoln. 'Russia and China in the Arctic: A Team of Rivals'. In: *Strategic Analysis* 37:6. p.681.

The only logical entry point for Asian ships into the Arctic Ocean is the Bering Strait, which is split up into the maritime jurisdictions of its Russian and American 'gatekeepers'. Although the two states do not agree upon their maritime border in this strait, both the Russian Federation and the United States have nevertheless worked out a proposed common vessel traffic management system for this shipping passage.[385] And Moscow has already blocked Chinese vessels from traversing its 'domestic' waters in the past.[386]

China is knowingly allergic to such bilateral settlements – at least when it comes to its 'right' to freely sail all seven seas. The former instance is also strikingly similar to the constellation in the Strait of Malacca, where Malaysia and Indonesia claim joint national sovereignty. Beijing still has the weaker position in this ideational geo-economic conflict. But a bottleneck scenario in the Bering Strait, caused by increased traffic or U.S.-Russian protectionist blockade, could in the long run possibly lead to a 'New Suez Crisis'.

The Polar Silk Road will continue to rely heavily on the Northern Sea Route – at least for the next fifteen years. Its northern maritime branch is still designed to farther embrace Iceland and the Faroe Islands or even extend to Greenland and North America.[387] This could significantly drive away investments from Moscow once sufficient infrastructure will be developed. The landbound Eurasian 'New Silk Road' component is meanwhile even actively trying to decrease its geographical reliance on Russia: New routes, for example, through Iran or the Caucasus, are being developed.

And with Chinese investment projects in the Russian Far East developing much more successful than in the Arctic, this region becomes "increasingly an extension of the Chinese sphere of influence, in some sense China already *has* an Arctic coast."[388]

As "China is not likely to expand investments in the Arctic quickly, since they are looking at a 20-year timeline"[389], it remains a big question whether Beijing's commitment towards Russian Arctic projects will go beyond their first stages. It can, furthermore, not represent

[385] See: Zagorski. 'The Future..', ibid., p. 122.
[386] See: Guo, Ling; Wilson, Steven. 'China, Russia, and Arctic Geopolitics'. *The Diplomat*, 29.03.2020.
[387] See: Koivurova; et al., ibid., p. 47.
[388] Guo; Wilson, ibid.
[389] Kim; et al., ibid., p. 36.

a full alternative to Western technology as its firms lag around 14-15 years behind.[390] Chinese investors "are today more risk-averse and cost-conscious than just a decade ago, having learned lessons from projects in volatile and political unstable regions. While strategic considerations are central in China's overseas investment strategy, the costs and profits […] are equally important."[391]

The foreseeable risks deriving from advancing climate change and high access costs for Arctic drilling will likely not motivate Asian investors to further finance projects in the High North which present unknown outcomes. Unlike Moscow, Beijing's strategy will also focus on possible cooperation regarding clean energy as the Arctic "boasts an abundance of geothermal, wind, and other clean energy resources."[392]

Russia seems to be settled on East Asian support for its Northern Sea Route exploration and expansion. It meanwhile remains unclear whether this project can keep up raking in political support in China as the People's Republic develops a 'middle-class' identity and its domestic mass production chains are shifting towards more southern countries, like Vietnam. For any export destinations south of Hong Kong, the NSR cannot be considered advantageous in comparison to the Suez Channel route.[393]

It has also been pointed out that most cargo currently transported via this route presents temporary shipments that could easily be shipped in different directions or shifted onto trains and planes.[394] If the Chinese would continue their opportunistic long-term stance towards global transportation and infrastructure development, it would make more sense for them to start focusing on the Transpolar Passage.

[390] See: Weidacher Hsiung, ibid., p. 248.
[391] Weidacher Hsiung, ibid., p. 248.
[392] State Council of the People's Republic of China, ibid.
[393] See: Käpylä; Mikkola, ibid., p. 9.
[394] See: Moe, Arild. 'The Northern Sea Route: Smooth Sailing Ahead?'. In: *Strategic Analysis* 38:6. p. 788.

Russia – India

The close 'friendship' between Moscow and New Delhi has generally come into question due to increasing positional differences:

Russia recently cancelled their annual governmental summit for the first time in two decades. Reports suggested that India's alignment with the new Quad initiative could have been the reason. The Indian Foreign Minister attested the relations to be in their most difficult phase since the Cold War. His Russian counterpart criticised that "*India is currently an object of the Western countries' persistent, aggressive and devious policy as they are trying to engage it in anti-China games* […] *while at the same time the West is attempting to undermine our close partnership and privileged relations with India.*"[395]

India is meanwhile trying to promote a diplomatic trilateral between New Delhi, Moscow and Tokyo in order to both strengthen its position in the Indo-Pacific as well as progress with its 'Act East' policy, which extends into the Arctic. In the light of Russia rejecting any possible anti-Chinese frameworks, it remains questionable whether it would agree to cooperate in such a new dialogue format.[396]

> "Despite Indian involvement in Russian-backed Arctic projects, New Delhi does not share Moscow's utilitarian stance on the Arctic due to the former's potential ecological and climate concerns. Furthermore, inexpensive oil, which seems to be the new long-term reality, could make India more cautious about investing in expensive Arctic oil or LNG projects."[397]

While Indian commercial interests in the Russian Arctic are rising, the overall trade numbers between the two countries remain exceptionally low – beyond all governmental agreements over the years. The same considerations as for Chinese investors are also true for Indian companies, which are even more bound to the global market and domestic commercial performance.

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[395] Quoted in: Rajagopalan, Rajeswari. 'India-Russia Relations Face More Trouble'. *The Diplomat*, 31.12.2020.
[396] See: Basu, Nayanima. 'India, Japan in Talks with Russia to Create Trilateral & Push Modi's 'Act Far East' Policy. *The Print*, 28.01.2021.
[397] Sukhanin, ibid.

China – India

Many observers view the Sino-Indian relationship like this: "What is good for China is not good for India and what suits India is bad for China"[398]. Their interests are opposed in both positional and spatial categories.

Chinese (authoritarian) strategic thinking has been influenced by *wéiqí*, where the enemy gets pressured with unconventional means before any actual moves happen, in order to then surround and dominate them. Meanwhile, the (democratic) Indian perception of strategy derives, as much as Western thinking, from Chess, a zero-sum game where the opponent has to be (slowly) eliminated via conventionally accepted moves. While the former game is focused on overall spatial domination, the latter concerns thoughtful positioning.[399]
Historically, China used to perceive India as an imperial power, while New Delhi rejected the Chinese takeover of Tibet as a form of aggressive hegemonic expansionism. While it has been argued that Beijing is not seeing its Southern neighbour as an equal player, with which it would have to rival, last year's skirmishes and the subsequent de-escalation seem to have dismantled this image.[400]

Actual violent geopolitical rivalry has thus far only broken out at their shared 'Third Pole' – the Himalayas. As the Ladakh stand-off dragged on over months, Beijing was accused of unconventional measures, such as targeting Indian critical infrastructure, such as Mumbai's electricity power grid and port facilities, and hacking governmental servers. India's capabilities to counteract such hidden blows meanwhile remain doubtful.[401]

Their global resource competition also continues to affect possible rapprochement: In 2014, for example, Vietnam offered India the exploration of oil blocks in the South China Sea, which Beijing aimed to swiftly prevent.[402]

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[398] Lackenbauer: 'India and the Arctic', ibid., p. 52.
[399] See: Chakraborty, Santanu. 'China has Weiqi, India has Chess'. *OpIndia*, 21.06.2020.
[400] See: Pardesi, Manjeet. 'The Initiation of the Sino-Indian Rivalry'. In: *Asian Security*, 2018. p. 1.
[401] See: Rej, Abhijnan. 'China Targeted India's Power Grid, New Report Says'. *The Diplomat*, 01.03.2021.
[402] See: Xie, Kevin. 'Some BRICS in the Arctic'. In: *Harvard International Review*, Spring 2015. p. 62.

And the decades-old mistrust between both Asian powers hinders cooperation for a common cause, such as counterbalancing global warming and deepening mutual understanding about its effects on the Arctic or the Himalayan-Tibetan plateau. In the latter case – although the two countries are sharing thousands of glaciers – their scientists were not allowed to enter each other's territories for more detailed studies. The unclear border regime in the highlands is further complicating things.

China's behaviour in Asia also determines its future chances of Arctic cooperation. With Japan and South Korea wary about Beijing's marine show-offs, they could significantly influence common projects in Arctic infrastructure development. In those, the People's Republic has a place at the table because of the acceptance by the other actors, not because of its own acceptance for these perceived rivals.
And India would only be one step away, having already agreed with Seoul on a Comprehensive Economic Partnership Agreement which also includes maritime transport and sharing of maritime technologies; a free trade agreement is in the making.[403]

[403] See: Sinha: 'India in the Arctic...', ibid., p. 122.

Conclusion:
The Opening of the Arctic as an Opportunity for North-South Equality

> *"The Pliocene Earth had ice only at one end – in Antarctica – and […] sea levels were 30 to 50 feet (9 to 15 meters) higher around the globe than they are today. […] It has taken humans only 200 years to completely reverse the trajectory begun 50 million years ago […]. Coastal cities, agricultural breadbasket regions and water supplies for many communities all will be radically different if this planet returns to a Pliocene CO_2 world. This future is not inevitable"*[404].

The true 'Arctic Race' is thus a race against time and advancing global climate change. While a switch from 'dirty' coal to 'less dirty' gas could ease the pressure on economically progressing countries like China and India, global warming poses the moral question whether states have an institutional right for endless economic growth, even if its hurts humankind as a whole.

Sustainable future development "is not only about how to tackle resources— either too many or too few—but also how to resolve ethical questions"[405]. Then, the Arctic could very much serve as a future hub for combatting climate change.

It remains, however, in question whether the current state of institutional Arctic affairs can tackle this task. "Despite having a mandate for sustainable development, the Arctic Council simply doesn't have the resources or funding to enact social development policies"[406]. Taking the strategies of Arctic states and Arctic Council observers into the grand scheme, solution-oriented policies, concerning international cooperation or the human dimension of the Arctic, clearly lack behind problem-centred approaches.[407]

Arctic stability in the post-Cold War era was built upon both confidence and cooperation. The Arctic coastal states nevertheless continue to dominate Arctic geopolitics with their

[404] Brigham-Grette, Julie; Petsch. Steve. 'The Arctic Hasn't Been This Warm for 3 Million Years'. *The National Interest*, 01.10.2020

[405] Heininen; Everett; et al., ibid., p. 250.

[406] Exner-Pirot, Heather. 'New Directions for Governance in the Arctic Region'. In: Heininen, Lassi; Exner-Pirot, Heather; Plouffe, Joël (Eds.). *The Arctic Yearbook 2012*. Akureyri: Northern Research Forum, 2012. p. 241.

[407] See: Heininen; Everett; et al., ibid., p. 250.

state-sovereignty approach while the big questions of the future of the region cannot be solved without an inclusive international framework.[408]

The preceding analysis has shown that the 'Global Arctic' allows for cooperation independent from North-South and East-West dichotomies. The region neither represents a *terra nullius* regime, where the moves of international actors are irrational and unpredictable, nor has global consensus about its main political purpose taken place yet. As stakeholders are ramping up their policy efforts towards the Arctic, there exists a heightened need for more detailed, yet broadly framed, assessments of their mutual relations, which are increasingly happening outside of both the traditional institutional frameworks as well as established hard power diplomacy.
If a traditional state-centric view is combined with critical approaches towards the role of climate change as well as the indigenous perspective, a more comprehensive understanding of future developments can be achieved. Classical fields of geopolitical interests, such as resources and military, need to be combined with evolving areas that will gain more attraction in the future, such as tourism or shipping. Their implications for the growing theoretical and practical intertwining build the essence for a forward analysis of both regional and global Arctic affairs.

Russia as an old, China as a new and India as a rather unknown actor in Arctic geopolitics have proven to show different generational views towards the future matters of governance and cooperation in this increasingly globalising region:
Russia, with its urgent need to defend its northern frontier, seems to be stuck in a renewed Cold War mentality. Its sovereignty fears are especially visible in its approach towards Beijing. China's policy orientation, meanwhile, shows an evolvement out of the post-Cold War system that has made it a global power. India, finally, is caught between the lines of benign soft power and assertive hard power, which is particularly visible in its Arctic relationship with China.
Their common future cooperation will therefore largely depend on how each of the stakeholders views the international system and regional regime they are acting in.

[408] See: Heininen, ibid., p. 174.

Especially when it comes to competitive ambitions of the new players, some version of an internationalised 'Antarctic Model' regime might be needed for future governance. Advances made in critical academic research have to be applied to a more self-critical policy regime of the traditional players as well. "Relying on one lens to view strategic competition, in the polar regions particularly, is myopic and shortsighted."[409]

While polar research can serve as a common ground for cooperation, there must be a clear distinction between explorative and exploitive purposes.
Preventive measures have to be introduced as long as the Arctic is still zone of relative geopolitical calm. One such tool could be the introduction of separate supranational forum for both climate change as well as security in the Arctic.

This would meet the evident fact that the Arctic has made its way into global thinking and international strategy, where it is poised to remain for the future to come.

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[409] Buchanan; Burke, ibid.

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List of Appendices

Appendices

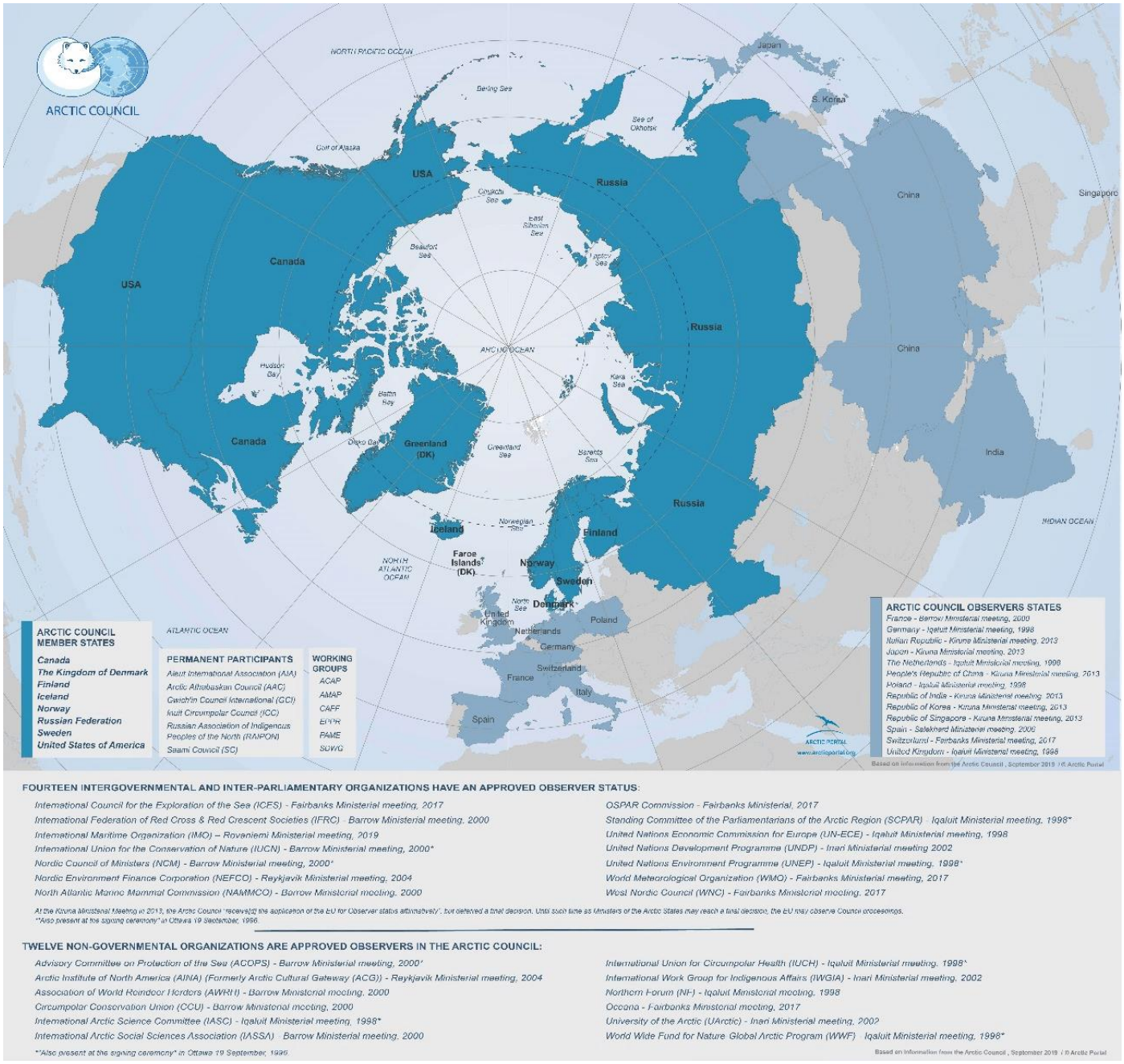

Figure 1: Arctic Council Members, Observer States and Observers (2019).

Maritime jurisdiction and boundaries in the Arctic region

- Internal waters
- Canada territorial sea and exclusive economic zone (EEZ)
- Potential Canada continental shelf beyond 200 M
- Denmark territorial sea and EEZ
- Denmark claimed continental shelf beyond 200 M
- Iceland territorial sea and EEZ
- Iceland claimed continental shelf beyond 200 M
- Norway territorial sea and EEZ / Fishery zone (Jan Mayen) / Fishery protection zone (Svalbard)
- Norway claimed continental shelf beyond 200 M
- Russia territorial sea and EEZ
- Russia claimed continental shelf beyond 200 M
- Norway-Russia Special Area
- USA territorial sea and EEZ
- Potential USA continental shelf beyond 200 M
- Overlapping Canada / USA EEZ
- Russia-USA Eastern Special Area
- Unclaimed or unclaimable continental shelf
- Straight baselines
- Agreed boundary
- Median line
- 350 M from baselines
- 100 M from 2500 m isobath (beyond 350 M from baselines)
- Svalbard treaty area
- Iceland-Norway joint zone
- Main 'Northwest Passage' shipping routes through Canada claimed internal waters

Explanatory notes and complementary information are available from the IBRU Centre for Borders Research: https://www.dur.ac.uk/ibru/resources/arctic/

Figure 2: Maritime Jurisdiction and Boundaries in the Arctic Region.

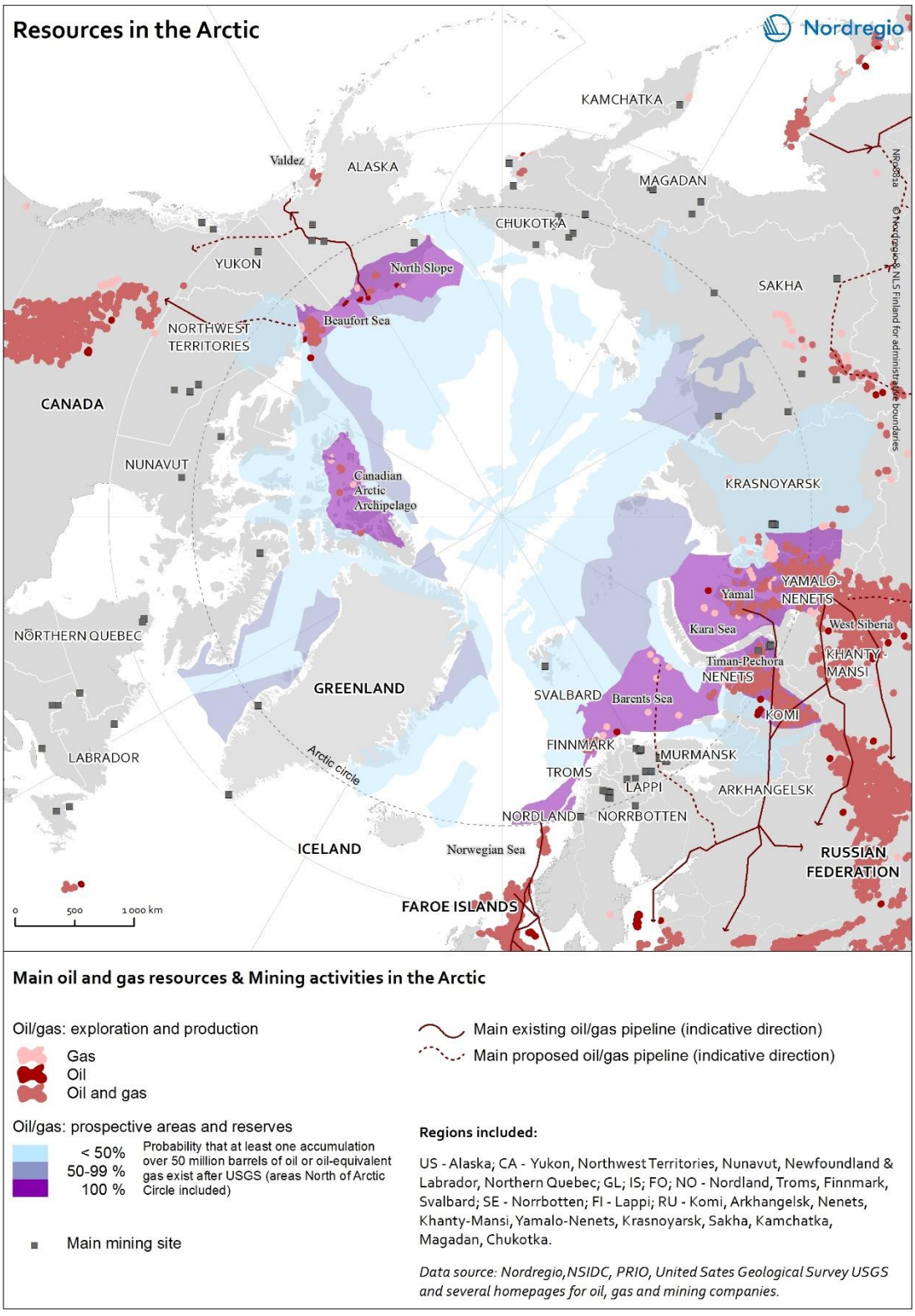

Figure 3: Main Oil and Gas Resources & Mining Activities in the Arctic.

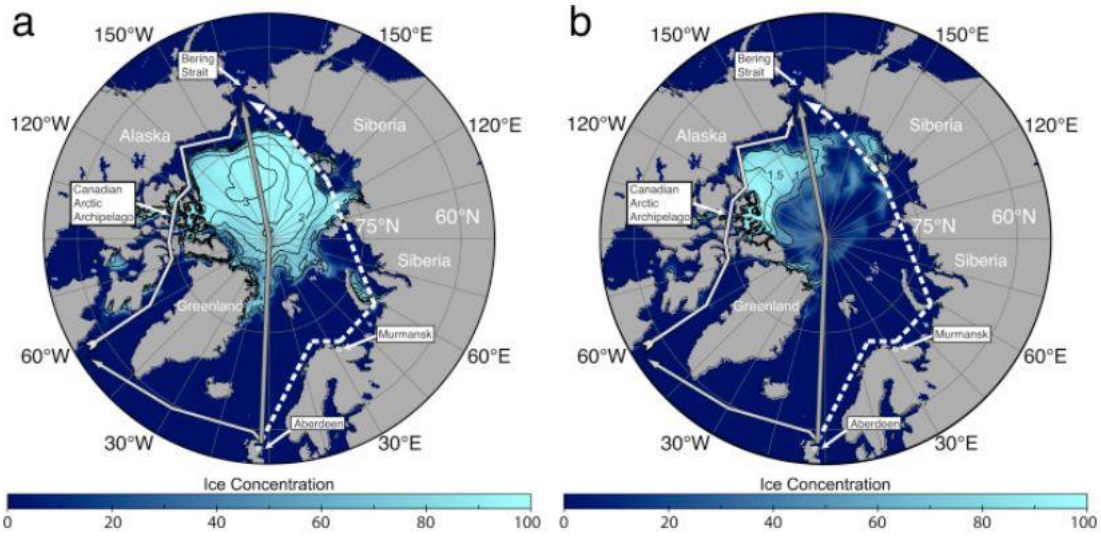

Figure 4: Arctic Shipping Routes and Sea Ice Concentration/Thickness in 2010–2019 (a) and 2030–2039 (b) during the Navigation Period (June–October).

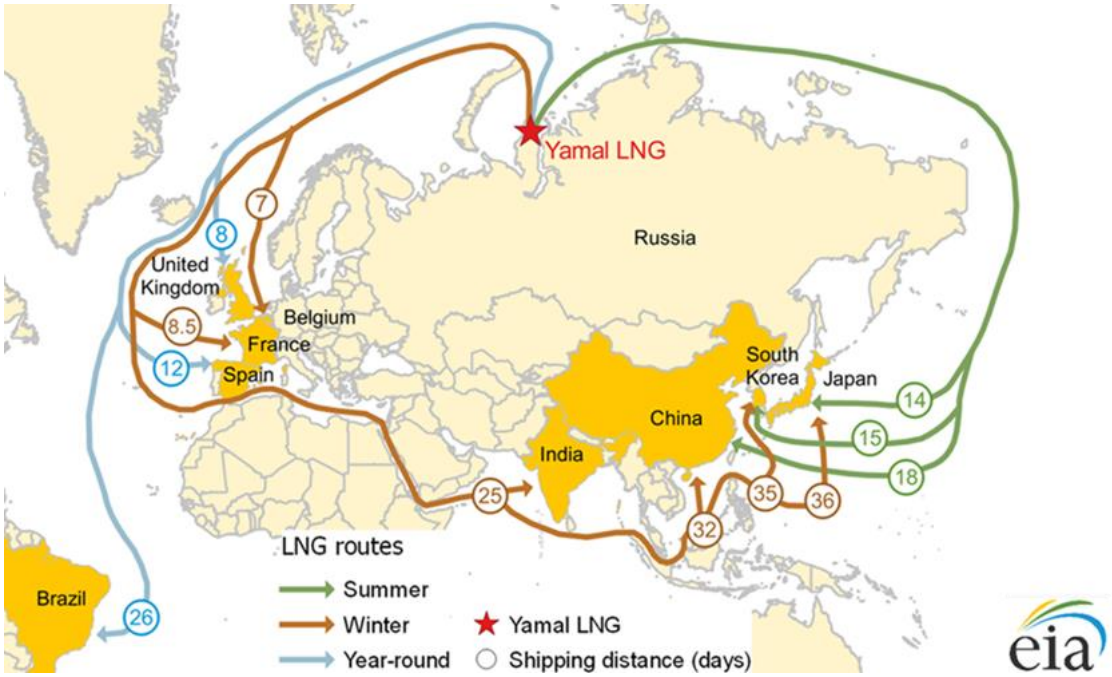

Figure 5: Possible Shipping Routes and Distances from the Yamal LNG Plant.