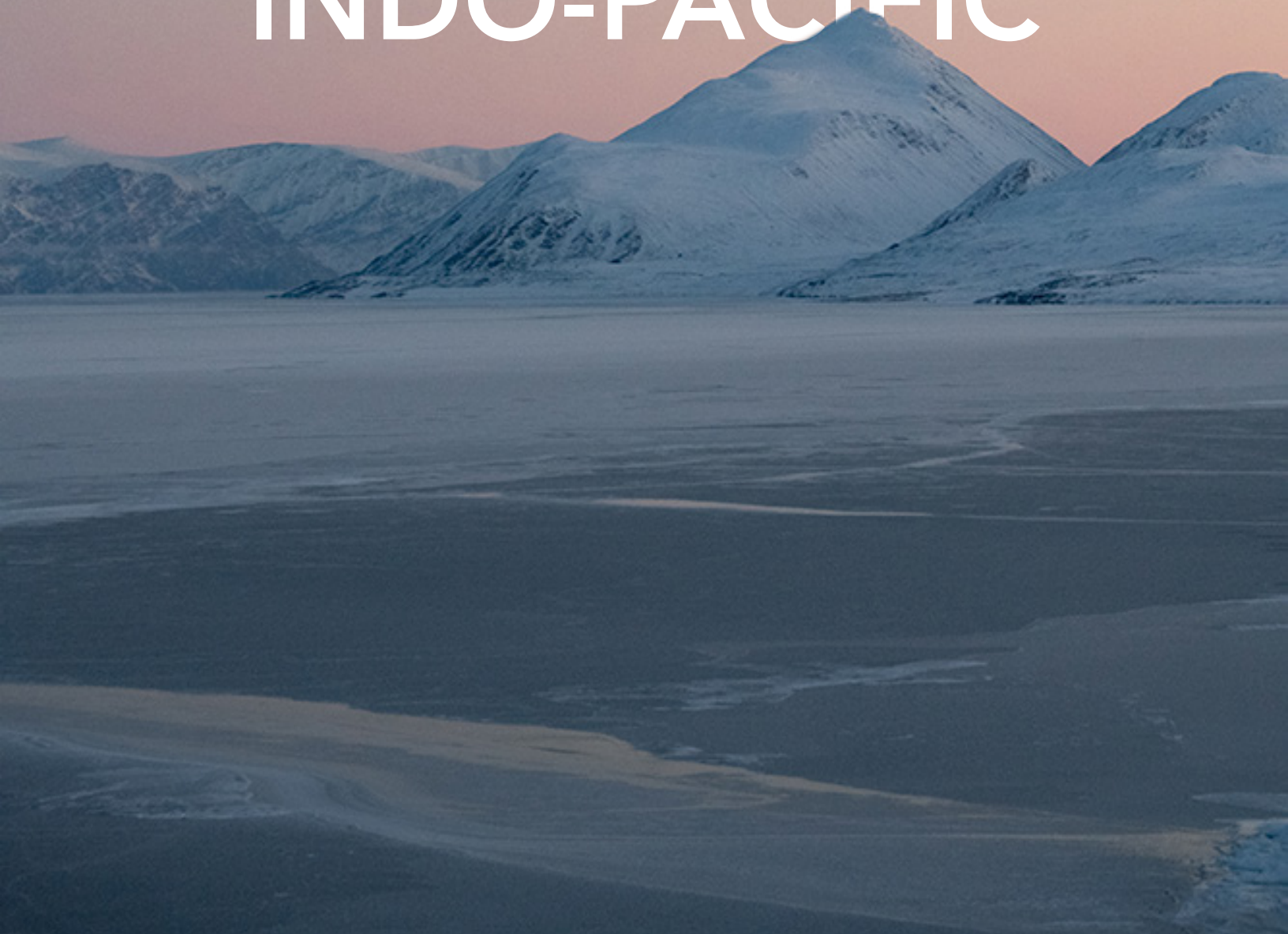




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A CANADIAN ARCTIC POLICY FOR THE INDO-PACIFIC



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COVER IMAGE

Eclipse Sound in Pond Inlet, Nunavut, Canada. | Photo Galit Rodan/Bloomberg via Getty Images

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A CANADIAN
ARCTIC POLICY FOR
THE INDO-PACIFIC

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About APF Canada

The Asia Pacific Foundation of Canada (APF Canada) is a not-for-profit organization focused on Canada's relations with Asia. Our mission is to be Canada's catalyst for engagement with Asia and Asia's bridge to Canada.

APF Canada is dedicated to strengthening ties between Canada and Asia with a focus on seven thematic areas.

Our research provides high-quality, relevant, and timely information, insights, and perspectives on Canada-Asia relations. Providing policy considerations and business intelligence for stakeholders across the Asia Pacific, our work includes [Reports](#), [Policy Briefs](#), [Case Studies](#), [Dispatches](#), [Digital Media](#), and a regular [Asia Watch](#) newsletter that together support these thematic areas.

APF Canada also works with business, government, and academic stakeholders to provide custom research, data, briefings and Asia Competency training for Canadian organizations. Consulting [services](#) are available by request. We would be pleased to work with you to meet your research and business intelligence needs.

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Une politique Arctique Canadienne pour l'indo pacifique

Dans sa lettre de mandat de 2021 à la ministre des Affaires étrangères, le premier ministre Justin Trudeau a présenté l'Arctique comme une région d'une importance stratégique pour le Canada et a appelé la ministre Mélanie Joly à approfondir les relations diplomatiques du pays afin de protéger ses intérêts régionaux¹. Parallèlement, le premier ministre a chargé la ministre Joly d'élaborer une stratégie pangouvernementale intégrant le commerce, le développement et la sécurité dans l'engagement du Canada en Asie. La lettre de mandat du premier ministre indiquait que la région indo-pacifique, comme pour l'Arctique, était d'importance stratégique pour le Canada.

Toutefois, cette lettre n'indiquait aucun lien direct entre les intérêts du Canada dans l'Arctique et ceux dans la région indo-pacifique. En effet, la lettre a sommairement négligé l'importance des acteurs indo-pacifiques dans l'approche du Canada à l'égard des affaires arctiques. Lorsque le premier ministre a suggéré une mesure susceptible d'améliorer la diplomatie du Canada en Arctique, il s'est référé au G7, à l'OTAN et aux pays « partageant les mêmes idées » – un euphémisme bien établi pour les démocraties libérales dans le discours politique occidental².

Bien que cette mesure soit conforme aux politiques historiques et contemporaines du Canada dans l'Arctique, l'incapacité du gouvernement du Canada à conceptualiser ses politiques dans l'Arctique et dans la région indo-pacifique comme faisant partie intégrante d'un seul et même ensemble de problèmes géopolitiques constitue un handicap stratégique. Plus



Diplomatie arctique : La ministre des Affaires étrangères du Canada, Chrystia Freeland (deuxième à droite) Le ministre des Affaires étrangères Sergueï Lavrov (deuxième à gauche), Le ministre finlandais des Affaires étrangères Timo Soini (à droite), Le ministre des Affaires étrangères du Danemark Anders Samuelsen (centre) et Le ministre des Affaires étrangères de l'Islande Gudlaugur Thor Thordarson (à gauche) prend la parole lors du sommet du Conseil de l'Arctique au Lappi Arena à Rovaniemi, Finlande, le 7 mai 2019. | Photo : Mandel Ngan/AFP via Getty Images

¹ <https://pm.gc.ca/en/mandate-letters/2021/12/16/minister-foreign-affairs-mandate-letter>

² <https://blogs.griffith.edu.au/asiainsights/like-minded-states-and-the-liberal-international-order/>

précisément, la dépendance presque singulière d'Ottawa à l'égard des relations, des activités et des institutions transatlantiques dans sa planification des politiques arctiques ne reflète pas adéquatement les tendances émergentes ou la dynamique du pouvoir de la région. Cette omission isole particulièrement Ottawa de l'émergence des affaires arctiques, principalement les intérêts, les activités, les capacités et les influences des pays d'Asie dans la région arctique, qui se développent plus rapidement et de façon disproportionnée que ceux de leurs homologues nord-américains et européens.

Afin d'appuyer une approche stratégique canadienne mieux intégrée, capable de promouvoir l'intérêt national du pays dans un environnement opérationnel de plus en plus complexe et parfois contradictoire, le présent énoncé de politique cerne les domaines où les occasions entre les affaires arctiques et indo-pacifiques du pays se chevauchent.

L'énoncé passe en revue les principaux acteurs de l'Asie dans l'Arctique – la Chine, le Japon, Singapour et la Corée du Sud – et souligne leurs objectifs et activités, ainsi que les institutions et les acteurs présents dans la région. L'énoncé présente ensuite des mesures politiques visant à assurer une meilleure intégration du Canada dans l'écosystème arctique émergent du bassin indo-pacifique et se réfère spécifiquement aux intérêts nationaux du pays dans la région, tels que définis dans les principaux documents de politiques canadiens. Grâce à cette approche, les auteurs de l'énoncé fournissent un nouveau cadre pour l'engagement canadien dans l'Arctique qui est plus complet, inclusif et favorable à l'engagement plus large du pays dans la région indo-pacifique.

Selon cette logique, cet énoncé de politique est organisé comme suit :

Dans la première partie, les auteurs donnent un aperçu historique et contemporain de l'engagement et des politiques du Canada dans la région circumpolaire, en tenant compte de tout changement dans les politiques et les intérêts nationaux du Canada dans la région arctique et en indiquant les domaines où les politiques contemporaines ne parviennent pas à relever les défis actuels de la région. Les auteurs démontrent en outre comment l'approche arctique du Canada a été et demeure principalement transatlantique, tant dans sa conception que dans son fonctionnement. Les auteurs présentent et analysent également les objectifs et les stratégies à long terme du Canada dans l'Arctique sous l'administration Trudeau.

Dans la deuxième partie, les auteurs examinent les priorités arctiques de la Chine, du Japon, de la Corée du Sud et de Singapour et déterminent l'engagement régional, bilatéral, trilatéral ou multilatéral de chacun dans la région circumpolaire. Les auteurs présentent ensuite les principaux acteurs gouvernementaux, universitaires, commerciaux et de recherche qui participent à l'élaboration du programme arctique pour chaque pays.

Dans la troisième partie, les auteurs indiquent les domaines où le Canada peut mobiliser proactivement les pays d'Asie en Arctique sur des sujets qui favorisent ses intérêts nationaux dans la région. Les auteurs concluent sur des recommandations permettant au Canada de faire progresser sa politique indo-pacifique grâce à la coopération avec les pays d'Asie en Arctique.

Au sujet de l'Ukraine

La Fondation Asie Pacifique du Canada (FAP Canada) a préparé cet énoncé de juin 2021 à mars 2022. Au moment de son achèvement, la Fédération de Russie venait d'envahir l'Ukraine, provoquant une crise humanitaire internationale. Au moment d'écrire ces lignes, les troupes russes sont toujours en Ukraine et avancent vers Kiev.

Alors que le théâtre arctique reste en marge de la guerre en Europe, les pays européens de l'Arctique ainsi que le Japon, la Corée du Sud et Singapour ont tous exprimé leur intention de cesser tout engagement de politique étrangère avec Moscou, y compris sur les affaires arctiques. Bien qu'il soit encore trop tôt pour bien comprendre les répercussions pour l'environnement géopolitique et sécuritaire de la région arctique, la suspension des liens dans l'Arctique avec la Russie pourrait transformer la région. Les tensions régionales et les conflits régionaux potentiels dans l'Arctique sont indéniablement plus élevés aujourd'hui qu'à tout autre moment depuis la guerre froide.

Bien que les auteurs croient que ce document d'orientation rende bien compte des priorités, des liens et des intérêts stratégiques fondamentaux du Canada en Arctique,

l'évolution de la situation en Ukraine et de la politique de sécurité russe pourrait nécessiter un réexamen des mesures politiques du pays dans la région. Les décideurs canadiens pourraient notamment juger nécessaire de reconsidérer la participation de la Russie au Conseil de l'Arctique ou de sanctionner l'activité économique russe dans la région. De telles mesures introduiraient dans l'approche du Canada en Arctique des tensions stratégiques que le présent énoncé de politique ne peut prévoir.

Toutefois, l'argument principal de l'énoncé demeure solide face à une nouvelle politique étrangère russe. En effet, la nécessité pour le Canada de travailler plus étroitement avec la Chine, le Japon, la Corée du Sud et Singapour est sans doute plus grande qu'auparavant, car ces pays ont une influence importante sur le développement en Arctique, notamment sur les questions de gouvernance, de coopération en matière de défense, de prévention des crises et de développement durable. Ottawa doit travailler avec ces pays d'Asie pour renforcer la position du Canada en Arctique et veiller à ce que la région demeure aussi stable que possible.

Hormis ces points, les auteurs ont choisi

de laisser la majeure partie de l'analyse concernant les politiques arctiques de la Russie en place, y compris les cas où d'autres pays de l'Arctique coopéreraient avec la Russie. Les auteurs ont choisi cette approche pour deux raisons. Premièrement, parce qu'il est impossible de prévoir comment la guerre en Ukraine affectera l'équilibre géopolitique en Arctique, si ce n'est de suggérer que les relations entre la Russie et les autres seront perturbées à court et à moyen terme.

Deuxièmement, tout décideur politique canadien devra comprendre les relations existantes avec la Russie pour élaborer une nouvelle approche stratégique dans la région qui exclut la Russie.

La FAP Canada condamne fermement l'invasion russe en Ukraine. Les lecteurs ne devraient pas assimiler la description de la politique étrangère russe en Arctique à l'acceptation de cette politique.

A Canadian Arctic Policy for the Indo-Pacific

In his 2021 mandate letter to the Minister of Foreign Affairs, Prime Minister Justin Trudeau identified the Arctic as an area of key strategic importance for Canada and called on Minister Mélanie Joly to deepen the country’s diplomatic relations as a means of securing its regional interests.¹ In parallel, the Prime Minister tasked Minister Joly to develop a whole-of-government strategy integrating trade, development, and security components for Canadian involvement in Asia. Like the Arctic, the Prime Minister’s mandate letter identified the Indo-Pacific as a region of strategic importance for Canada.

Notably absent from the letter, however, was any direct linkage between Canada’s interests in the Arctic and those in the Indo-Pacific. Indeed, the letter summarily ignored the importance of Indo-Pacific actors in Canada’s approach to Arctic affairs. Where the Prime Minister did suggest a potential means for greater Canadian Arctic diplomacy, he did so with reference to the G7, NATO, and “likeminded” states – a well-established euphemism for liberal democracies within Western policy discourse.²

While in line with Canada’s historical and contemporary Arctic policies, the Government of Canada’s failure to conceptualize its Arctic and Indo-Pacific policies as part and parcel of a singular geopolitical problem set is a strategic liability. More pointedly, Ottawa’s near singular reliance on Trans-Atlantic relations, activities, and institutions in its Arctic policy planning does not adequately reflect the region’s emerging trends or power dynamics. This oversight leaves



Arctic Diplomacy: Canada's Foreign Minister Chrystia Freeland (2nd, R) Russia's Foreign Minister Sergey Lavrov (2nd, L), Finland's Foreign Minister Timo Soini (R), Denmark's Foreign Minister Anders Samuelsen (C) and Iceland's Foreign Minister Gudlaugur Thor Thordarson (L) speak during the Arctic Council Summit at the Lappeenranta Arena in Rovaniemi, Finland on May 7, 2019. | Photo: Mandel Ngan/AFP via Getty Images

¹ <https://pm.gc.ca/en/mandate-letters/2021/12/16/minister-foreign-affairs-mandate-letter>

² <https://blogs.griffith.edu.au/asiainsights/like-minded-states-and-the-liberal-international-order/>

Ottawa particularly isolated from an emerging aspect of Arctic affairs, mainly Asian states' interests, activities, capabilities, and influences in the Arctic region, which are developing disproportionately faster than their North American and European counterparts.

To support a more integrated Canadian strategic approach, one capable of advancing the country's national interest across an increasingly complex and at times contradictory operational environment, this policy brief identifies areas of overlapping opportunity in the country's Arctic and Indo-Pacific affairs.

The brief surveys Asia's predominant Arctic actors – China, Japan, Singapore, and South Korea – and maps their Arctic objectives, activities, institutions, and actors. The brief then provides policy options for greater Canadian integration in the Indo-Pacific's emerging Arctic ecosystem with specific references to the country's own national interests in the region, as defined in key Canadian policy documents. Through this approach, the brief's authors provide a new framework for Canadian involvement in the Arctic that is more comprehensive, more inclusive, and more supportive of the country's broader engagement in the Indo-Pacific.

Operating on this logic, this policy brief is organized as follows:

In Part I, the authors provide a historical and contemporary overview of Canada's engagement and policy in the circumpolar region, accounting for changes in Canada's national interests and policies in the Arctic and identifying areas where contemporary policy fails to address the region's contemporary challenges. The authors further demonstrate how Canada's Arctic approach has been, and remains, primarily Trans-Atlantic in conception and operation. The authors also map out and analyze Canada's long-term Arctic objectives and strategies under the Trudeau administration.

In Part II, the authors switch focus to examine the Arctic priorities of China, Japan, South Korea, and Singapore and to identify each state's regional, bilateral, trilateral, or multilateral engagement in the circumpolar region. The authors subsequently map the primary governmental, academic, research, and commercial actors that participate in shaping each state's Arctic agenda.

In Part III, the authors identify areas where Canada can proactively engage Asian states in the Arctic on issues that support its national interests in the region. The authors conclude with recommendations for how Canada can advance its Indo-Pacific policy through co-operation with Asian states in the Arctic.

On Ukraine

The Asia Pacific Foundation of Canada (APF Canada) prepared this brief between June 2021 and March 2022. Toward the end of its completion, the Russian Federation invaded Ukraine, causing an international humanitarian crisis. At the time of writing, Russian troops remain in Ukraine and are advancing toward Kyiv.

While the Arctic theatre remains marginal to the war in Europe, the European Arctic states, Japan, South Korea, and Singapore have all expressed their intentions to cease all foreign policy engagement with Moscow, including on Arctic affairs. While it remains too early to fully understand the implications for the Arctic region's geopolitical and security environment, the suspension of Arctic ties with Russia has the potential to transform the region. The potential for regional tensions and possibly regional conflict in the Arctic are arguably higher now than at any time since the Cold War era.

While the authors believe this policy paper correctly captures Canada's fundamental Arctic priorities, ties, and strategic interest, developments in Ukraine and with Russian security policy may ultimately require reconsideration of aspects of the country's Arctic policy. In particular, Canadian policy-makers may find it necessary to reconsider Russia's involvement in the Arctic Council or to sanction Russian economic activity within the region. Such actions would introduce strategic tensions into Canada's approach to the Arctic that this policy brief cannot anticipate.

The brief's overarching argument, however, remains sound in the face of a new Russian foreign policy. Indeed, Canada's need to work more closely with China, Japan, South Korea, and Singapore is arguably greater than before, as these Asian states have significant influence on the Arctic's development, including on issues related to governance, defence co-operation, crisis avoidance and prevention, and sustainable development. Ottawa must work with these states to strengthen Canada's position in the Arctic and to ensure the region remains as stable as possible.

Aside from these points, the authors have chosen to leave much of the analysis around Russia's Arctic policies in place, including instances where other Arctic states co-operate with Russia. The authors chose this approach for two reasons. First, it is impossible to foresee how the war in Ukraine will affect Arctic geopolitics other than to suggest states' relations with Russia will experience a short- to medium-term disruption. Second, any Canadian policy-maker will require an understanding of previously existing relations involving Russia to develop a new strategic approach to the region – one that excludes Russia.

APF Canada resolutely condemns Russian aggression in Ukraine. Readers should not equate description of Russian foreign policy in the Arctic as acceptance of Russian foreign policy in general.

CANADA AND THE ARCTIC:

Trans-Atlantic Dependency

PART I

CANADA'S HISTORICAL APPROACH TO THE ARCTIC: Changing Motivations and Analytical Lenses

Canada has been an active Arctic state for at least 100 years, albeit to varying degrees of preoccupation and involvement. While Canada's approach to the region has evolved over four distinct periods – the pre-Cold War era, the Cold War era, the post-Cold War era, and the early 2000s – the country's focus and reliance on North American and Trans-Atlantic states and institutions for its diplomacy has been a distinct constant. Indeed, as demonstrated below, Canada remains primarily dependent on its relations with Finland, Iceland, Norway, Russia, Sweden, and the United States to execute its Arctic policy, whether bilateral or multilateral.

1. The Pre-Cold War Era

In the pre-Cold War era, the Inuit primarily drove Canada's Arctic engagement, as such engagement informally manifested. Inuit-led interaction with police and traders constituted Canada's North-South dialogue, while the Inuit's traditional economic activities drove Canadian expansion in the High North.³

During the Second World War, however, Canada became more involved in the Arctic at the federal level, principally working with the United States to develop wartime infrastructure, including the bilateral Alaska Highway and the Crimson Air Route.⁴ Once established, Ottawa sought to solidify its federal presence in the Arctic through the development and deployment of the Canadian Rangers, an Indigenous-led voluntary home defence force and sub-component of the Canadian Army Reserve. The Canadian Rangers became Canada's primary means to monitor Arctic security in 1947.⁵

³ "An Ancient Bond with the Land," *Canadian Museum of History*, <https://www.historymuseum.ca/cmhc/exhibitions/aborig/fp/fpz3a01e.html>; P. Whitney Lackenbauer, "Canada's Northern Strategies From Trudeau to Trudeau, 1970-2020," *Documents on Canadian Arctic Sovereignty and Security* 17, (2020): 23.

⁴ Ken Coates and William Morrison, *The Alaska Highway in World War II: The US Army of Occupation in Canada's Northwest* (Norman: University of Oklahoma Press, 1992); Robert V. Eno, "Crystal Two: The Origin of Iqaluit," *Arctic* 56, no.1, (March 2003): 63-75.

⁵ P. Whitney Lackenbauer, "The Great White North," *National Defense and the Canadian Armed Forces*, last modified December 21, 2021, <http://www.journal.forces.gc.ca/vo6/no4/north-nord-03-eng.asp>.

2. The Cold War Era (1947-1991)

Whereas Canada's first phase of Arctic affairs was limited in nature and confined to national territorial defence, the country's second phase of Arctic engagement was shaped by great power competition. More specifically, the Soviet Union and the United States' competing strategic interests, activities, and capabilities in the Arctic drove Canada to take a more proactive, and at times assertive, approach to the region.⁶

In the 1950s, for instance, Canada responded to Russia's securitization of the Arctic through co-operation with the United States on the development of the Distant Early Warning Line (DEW Line) and the joint North American Air Defence Command (NORAD). Partnership with Washington on the DEW Line and NORAD served as a force multiplier for Canada in the region while also strengthening the country's ties to the US-led, Western bloc of states. Concurrently, however, the United States' increased interest and presence in the Arctic challenged Canada's sovereignty, particularly its maritime sovereignty in the Northwest Passage (NWP). In 1969, for example, the American oil tanker *Manhattan* sailed through Canada's NWP, thereby triggering new debates in Canada about the nature of the country's Arctic posture and policy.⁷

In response to these challenges, the Pierre Trudeau administration adopted a new Arctic policy in 1970 – one predicated on the exclusion of outside actors and the protection and conservation of the Arctic's environment.⁸ More specifically, the Pierre Trudeau administration argued that foreign presences and commercial activities in the region were a threat to Indigenous rights, marine biodiversity, and environmental conservation.

3. From the Post-Cold War Era to the Early 2000s

Conceptually, the Pierre Trudeau government's 1970s policy marked a sea change in how Canada viewed the Arctic, from defence to environmental conservation and sustainable socio-economic development. This prioritization of Arctic affairs continued at pace throughout the 1980s, spurred on in particular by a national growth of Indigenous awareness.⁹ Across Canada, calls for Inuit cultural preservation and for the demilitarization of the North became

⁶ Benjamin Schaller, "The Forgotten Spirit of Gorbachev," *Arctic Yearbook*, <https://arcticyearbook.com/arctic-yearbook/2019/2019-commentaries/326-the-forgotten-spirit-of-gorbachev>.

⁷ Lackenbauer, "Canada's Northern Strategies," op. cit., vi.

⁸ Andrew Stuhl, *Unfreezing the Arctic: Science, Colonialism, and the Transformation of Inuit Lands* (Chicago: The University of Cambridge Press, 2016), 126.

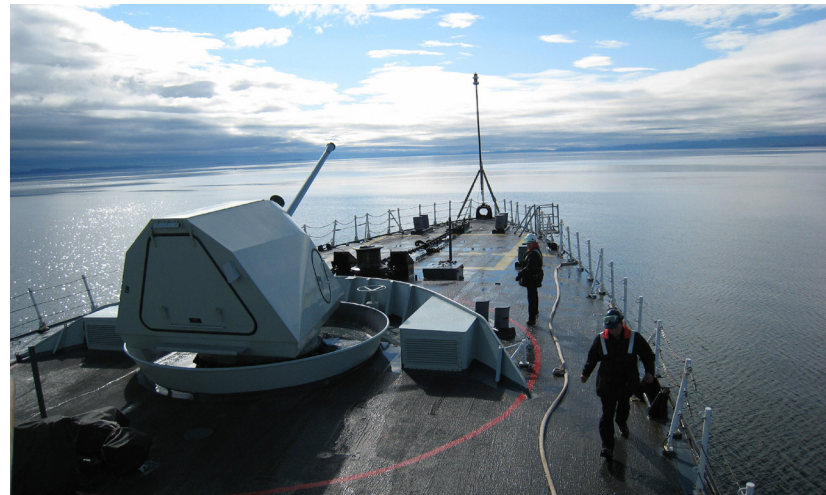
⁹ Hamer Foster et al., *Let Right Be Done: Aboriginal Title, the Calder Case and the Future of Indigenous Rights* (Vancouver: UBC Press, 2007).

increasingly prominent, leading Canadian policy-makers to advocate for a human-centric Arctic policy, albeit one that restated Canada's sovereign maritime claim in the NWP.¹⁰

Parallel to this reconceptualization of Arctic priorities, the Government of Canada (GoC) shifted its diplomatic strategy away from great power alignment toward multilateralism. Between 1990 and the early 2000s, for instance, the GoC strengthened Canadian participation in multilateral organizations and forums such as the Arctic Council that facilitated social, developmental, and environmental dialogues on Arctic issues.¹¹ The GoC also actively engaged in dialogues hosted by the International Arctic Science Committee throughout the period.¹²

4. The Harper Administration (2006-2015)

Under the Harper administration, Canada's Arctic priorities and perspectives once again shifted to reflect the region's changing geopolitics. With trans-Arctic shipping and resource exploration becoming more possible as a result of Arctic warming, in particular, the region's resource and material wealth increasingly drew the attention of Canadian and foreign firms. As the Harper administration understood economic sovereignty as a national security interest, it thereby viewed the Arctic as a strategic asset for Canada – one that required active development to fully realize.¹³ To support its Arctic vision, the Harper government published two consecutive policy documents, the 2009 *Canada's Northern Strategy: Our North, Our Heritage, Our Future*,¹⁴ and the 2010 *Statement on Canada's Arctic Foreign Policy*. These two policy statements articulated a top-down



On Patrol: Canada's HMCS Fredericton on Arctic manoeuvres in Frobisher Bay at the southern tip of Baffin Island, Canada. The Fredericton was taking part in a sovereignty exercise involving a Canadian submarine, Canadian Coast Guard vessel, fighter jets, as well as 800 soldiers, federal police, and Inuit rangers on August 9, 2007. | Photo: Michel Comte/AFP via Getty Images

¹⁰ Suzanne Lalonde, "The Debate Over the Legal Status of the Northwest Passage," *Senate of Canada*, October 17, 2008, https://sencanada.ca/content/sen/committee/421/ARCT/Briefs/SuzanneLalonde_Briefs_e.pdf.

¹¹ Government of Canada, "Canada and the Arctic Council," last modified February 18, 2021, https://www.international.gc.ca/world-monde/international_relations-relations_internationales/arctic_council-conseil_arctique/index.aspx?lang=eng.

¹² Malgorzata Smieszek, "25 Years of the International Arctic Science Committee (IASC)," *Arctic Yearbook*, 2015, <https://arcticyearbook.com/arctic-yearbook/2015/2015-briefing-notes/161-25-years-of-the-international-arctic-science-committee-iasc>.

¹³ Petra Dolata, "A New Canada in the Arctic? Arctic Policies under Harper," *Canadian Studies* 78, (2015): 132.

¹⁴ Government of Canada, "Canada's northern strategy: our north, our heritage, our future," last modified April 3, 2013, https://publications.gc.ca/collections/collection_2009/ainc-inac/R3-72-2008.pdf.

approach to Canada's Arctic policy that placed greater emphasis on regional border security and resource development.

5. Canada's Contemporary Arctic Policy: The Justin Trudeau Administration's Arctic Priorities and Policies

Building on the Harper government's approach, the Justin Trudeau administration published two new policy pieces outlining the liberal government's approach to Arctic affairs: the 2017 *Strong, Secure, Engaged* policy brief and the 2019 *Arctic and Northern Policy Framework*.¹⁵ These two policies remain Canada's predominant frameworks for Arctic defence and socio-economic development, respectively.

a. *Strong, Secure, Engaged: Canada's Hard Security Approach to the Arctic*

The 2017 *Strong, Secure, Engaged (SSE)* paper outlines Canada's current national defence plan, including aspects relevant to Canada's Arctic security policy. For example, the *SSE* identifies an enhanced Canadian presence in the Arctic as a national defence priority and outlines the Department of National Defence's means to achieve this strategic goal. Specifically, the *SSE* calls for increased investment in offshore patrol ships to enhance the Canadian Armed Forces' Arctic mobility and for additional technologies to re-connect Canada's Arctic air, land, sea, and space surveillance capacities.¹⁶ Acknowledging the rising international interest in the Arctic, the *SSE* also identifies Canada's close collaboration with its Arctic allies – particularly the United States – on surveillance as a force multiplier.¹⁷ To ensure advanced warning of potential security challenges, the *SSE* also calls for deeper Canadian collaboration with Norway and Denmark.¹⁸

b. *The Arctic and Northern Policy Framework – An Inuit-Centred Arctic*

Departing from the Harper administration's Northern Strategy Framework, which, as noted above, identified the Arctic's value in largely economic terms, the 2019 *Arctic and Northern Policy Framework (ANPF)* instead outlined an "Inuit-specific" approach to Arctic affairs prioritizing socio-economic development and Indigenous reconciliation.¹⁹ To support this

¹⁵ Government of Canada, "*Strong, Secure, Engaged*," last modified May 31, 2019, <http://dgpapp.forces.gc.ca/en/canada-defence-policy/docs/canada-defence-policy-report.pdf>; Government of Canada, "*Canada's Arctic and Northern Policy Framework*," last modified November 18, 2019, <https://www.rcaanc-cirnac.gc.ca/eng/1560523306861/1560523330587>.

¹⁶ Government of Canada, "*Strong*," op. cit., 80.

¹⁷ Ibid., 83.

¹⁸ Ibid., 90.

¹⁹ Peter Kikkert and P. Whitney Lackenbauer, "Canada's Arctic and Northern Policy Framework: A roadmap for the future?" (briefing note), 2019, 3, https://arcticyearbook.com/images/yearbook/2019/Briefing-Notes/9_AY2019_BN_Kikkert_Lackenbauer.pdf.

approach, the *ANPF* also outlined a devolution process by which the Trudeau administration delegated the central government's authority to Inuit governing bodies. The *ANPF*, as a result, reflects the joint priority-setting of the Arctic's Indigenous population and of the GoC, incorporating insights from the federal government, three territorial governments, three provincial governments, and over 25 Indigenous organizations.²⁰

With its emphasis on the well-being of the Northern Inuit population, the *ANPF* seeks to project Canada's domestic priorities into the international sphere. The framework consists of eight priorities, elaborated in detail below:

- **Ensuring the Arctic and northern Indigenous peoples in Canada are resilient and healthy:** This priority seeks to build strong people and communities by addressing issues including low life expectancy, erosion of Indigenous languages and culture, high poverty rates, income inequality, food insecurity, low education attainments, and inadequate health provisions in the High North. Based on these social problems, the *ANPF* proposes better health and education services, following strengthened local partnerships to bridge the existing social gaps;²¹
- **Strengthen infrastructure to close standard of living gaps with other regions of Canada:** This priority focuses on providing comprehensive infrastructure development for Canada's northern communities, including transport, energy, port, airport, and railroad facilities. At the local level, the GoC will finance development projects to address chronic problems such as insufficient housing and broadband network issues;²²
- **Ensure strong, sustainable, diversified, and inclusive local and regional economies:** This priority focuses on sustainability development across the Arctic region, achieved primarily through a shift in economic activity away from mining toward sustainable resource extraction. The GoC will provide additional support to assist small business development and promote traditional economic activities across the Arctic;²³
- **Ensure knowledge and understanding guides decision-making:** This priority emphasizes the importance of local and Indigenous involvement in decision-making and planning on science and research in the Arctic, prioritizing the incorporation of Indigenous knowledge and institutions into locally led research initiatives;²⁴

²⁰ Government of Canada, "Statement on Canada's Arctic Foreign Policy," last modified May 12, 2017, https://www.international.gc.ca/world-monde/assets/pdfs/canada_arctic_foreign_policy-eng.pdf.

²¹ Ibid.

²² Ibid.

²³ Ibid.

²⁴ Ibid.

- **Pursue reconciliation to support self-determination and to nurture mutually respectful relationships between Indigenous and non-Indigenous peoples:** This priority particularly focuses on leveraging the voice of Indigenous youth through implementing stable federally funded programming related to Indigenous land, language, and culture;²⁵
- **Ensure the Canadian Arctic and northern ecosystems are healthy and resilient:** This priority focuses on protecting and conserving the Arctic and northern ecosystems against pollution and climate change. To achieve this goal, the GoC will undertake activities including Indigenous-led conservation, implementation of robust mitigation plans, and emphasis on conservation economies;²⁶
- **Ensure the rules-based international order in the Arctic responds effectively to new challenges and opportunities:** This priority highlights Canada’s intention to contribute to and to enforce international rules and standards within the Arctic’s order. To achieve this goal, the GoC will promote collaboration in the Arctic through strengthening north-to-north co-operation, engage with multilateral organizations, and integrate the voices of the Indigenous participants; and²⁷
- **Ensure the Canadian Arctic and North and its people are safe, secure, and well-defended:** The *ANPF*’s final priority outlines how Canada will increase its regional presence and exercise its sovereignty rights to combat regional security challenges associated with climate change and increased commercial interests in the Arctic. To ensure safe maritime transportation and expanded search and rescue capacities, the GoC will leverage the presence of the Canadian Rangers, the Canadian Armed Forces, and the Canadian Coast Guard in the Arctic region.²⁸

To address this litany of policy aims, the Trudeau government has prioritized bilateralism and multilateralism in its Arctic policy approach. While the GoC has taken some incremental steps to diversify its Arctic relations toward the region’s “new” actors, including China, Japan, Singapore, and South Korea (described in detail below), its contemporary diplomatic approach remains almost entirely dependent on Trans-Atlantic bilateral ties and Trans-Atlantic Arctic institutions.

²⁵ Ibid.

²⁶ Ibid.

²⁷ Ibid.

²⁸ Ibid.

TRANS-ATLANTIC BILATERALISM

The GoC works primarily with Denmark, Iceland, Norway, Sweden, and Finland (the Nordic States), Russia, and the United States on bilateral issues related to its Arctic priorities, most notably socio-economic development, Indigenous affairs, environmental protection, and security and defence.

From this perspective, Canada's reliance on its Trans-Atlantic ties in its Arctic policy is rational in its functionality, particularly when one views such engagement from a historical perspective. For most of Canada's Arctic eras – outlined above – these “Arctic states” dominated the region's development and security affairs and constituted the region's predominant regimes. Indeed, all the eight Arctic states (of which Canada is one) remain important, influential regional actors within Canada's Arctic priority areas. While this policy document will demonstrate how the Trudeau administration's overdependency on its Trans-Atlantic ties is now a strategic vulnerability – particularly as Canada seeks to advance its national interests in the Indo-Pacific – the authors also recognize the importance of Canada's continued engagement with these traditional Arctic actors to the country's strategic regional position.

Canada and the five Nordic states – the Kingdom of Denmark (Greenland), Iceland, Norway, Sweden, and Finland – share overlapping Arctic priorities, including combating climate change, protecting the Arctic marine environment, and enhancing cross-cultural research collaboration. In addition, like Canada, most Nordic states have Arctic policy frameworks that specifically seek to advance the Indigenous populations' interests.²⁹

These shared interests and priorities provide a solid foundation for the GoC and its Nordic counterparts to co-operate on Arctic affairs. While a significant amount of such engagement occurs within multilateral institutions such as the United Nations (UN), the Organization for Security and Co-operation in Europe (OSCE), the International Maritime Organization (IMO), and the Arctic Council (AC) (outlined in detail below), Canada's bilateral and trilateral relations with the Nordic states are also robust.³⁰

Canada's closest Nordic partners are Norway and the Kingdom of Denmark, primarily with respect to environmental and border security issues. The three countries are UN Sustainable working group members, for instance, and have co-signed the 2008 Ilulissat Declaration on

²⁹ “Sami in Sweden,” *Sweden Sverige*, June 1, 2021, <https://sweden.se/life/people/sami-in-sweden>; Rauna Kuokkanen, “The Pursuit of Inuit Sovereignty in Greenland,” *Northern Public Affairs RSS*, July 2017, www.northernpublicaffairs.ca/index/volume-5-is-sue-2-innovations-in-community-health-and-wellness/the-pursuit-of-inuit-sovereignty-in-greenland/.

³⁰ Arctic Council, “Agreement on Enhancing International Arctic Scientific Cooperation,” May 11, 2017, <https://oaarchive.arctic-council.org/handle/11374/1916>.

Arctic Ocean conservation and resource protection.³¹ Further, the Trudeau administration is working to integrate both countries into its North Warning System: a US-Canada atmospheric air defence system covering North America’s polar region.³²

Economically, Canada has a strong partnership with Finland on mining and a robust bilateral trading agreement in place with Norway and Iceland.³³ Canada’s diplomatic relationship with Sweden is also noteworthy, particularly as Stockholm has provided Canberra scientific data in support of Canada’s continental shelf extension claim in the North Pole.³⁴

With Russia, Canada’s bilateralism is limited to shared Arctic interests as Ottawa largely suspended direct engagement with Moscow following the country’s annexation of Crimea in 2014.³⁵ With regard to economics, for instance, both countries seek to develop transnational gas pipelines in the Arctic, whereas both states oppose foreign encroachment in the region as a security and defence priority.³⁶

Indeed, Canada’s shared concern with Russia over Arctic maritime sovereignty remains a notable area when the two states’ interest merge to the extent of informal bilateral co-operation.³⁷ Both states’ policy frameworks emphasize dialogue and crisis management within the Arctic commons, for instance, suggesting the need for direct dialogue between Ottawa and Moscow on issues related to



U.S. Engagement: The Los Angeles-class submarine USS Annapolis (SSN 760) breaks through a metre of ice during Ice Exercise (ICEX) 2009 on March 21, 2009, in the Arctic Ocean. The U.S. Navy teamed up with the University of Washington Applied Physics Laboratory to train in the Arctic environment. | Photo: Tiffini M. Jones/U.S. Navy via Getty Images)

³¹ “The Ilulissat Declaration.” May 28, 2021, <https://arcticportal.org/images/stories/pdf/Ilulissat-declaration.pdf>.

³² P. Whitney Lackenbauer and Suzanne Lalonde ed., *Breaking the Ice Curtain? Russia, Canada, and Arctic Security in a Changing Circumpolar World* (Calgary: Canadian Global Affairs Institute, 2019).

³³ Government of Canada, “Statement,” op. cit., 14.

³⁴ Government of Canada, “Canada and Sweden conclude Arctic cooperation arrangement,” Global Affairs Canada (website), last modified December 11, 2015, <https://www.canada.ca/en/global-affairs/news/2015/12/canada-and-sweden-conclude-arctic-cooperation-arrangement.html?=&=&>.

³⁵ Danita Catherine Burke, *International Disputes and Cultural Ideas in the Canadian Arctic* (Denmark: Palgrave Macmillan, 2018): 133.

³⁶ Government of Canada, “Canadian LNG Projects,” last modified August 6, 2020, <https://www.nrcan.gc.ca/our-natural-resources/energy-sources-distribution/clean-fossil-fuels/natural-gas/canadian-lng-projects/5683>; Natalia Viakhireva, “The Russian and Canadian Approach to Extra-Regional Actors in the Arctic,” *Russian International Affairs Council*, July 11, 2019, <https://russiancouncil.ru/en/analytics-and-comments/analytics/the-russian-and-canadian-approach-to-extra-regional-actors-in-the-arctic/>.

³⁷ Ibid.

their respective defence postures and priorities.³⁸ While the Trudeau administration is clearly uninterested in pursuing closer bilateral ties with Russia on Arctic issues, Moscow remains an unavoidable strategic contemporary for Canada in the region.

Predictably, Canada's most willing partner in the Arctic remains the United States. The two countries have extensive collaboration in domains such as military, environmental protection, and research, and they actively co-operate and co-ordinate on Arctic issues through NATO and NORAD.³⁹ Further, Canada has included the United States (and Denmark) in the Canadian Forces Operation Nanook since 2010, an annual sovereignty operation in the High North.⁴⁰ The US-Canada Joint Statement on Environment, Climate Change, and Arctic Leadership in 2016 and the signed international agreement to prevent unregulated commercial fishing in the high sea in 2018 show the two countries' mutual goals of protecting the Arctic environment.⁴¹ As an example of joint research, the annual Fulbright Arctic Initiative funds Canadian and American policy-makers, scholars, and researchers tackling critical issues concerning the High North.⁴²

TRANS-ATLANTIC MULTILATERALISM

While Canada's bilateral Trans-Atlantic relations provides it the means to engage with each Arctic state on matters of shared strategic importance, the real core of the CoG's approach to the Arctic rests in Trans-Atlantic multilateralism and institutionalization. Indeed, while this brief treats Ottawa's Trans-Atlantic bilateral and multilateral relations as two equal parts of Canada's Arctic policy, the reality of Canada's Arctic engagement rests much more on multilateralism, with bilateralism often playing a supporting role.

Within Canada's multilateral approach to the region, the Arctic Council has a predominant position. Indeed, consisting of all eight Arctic states, six Inuit organizations, and 39 observers including non-Arctic states, NGOs, and interparliamentary organizations, the Arctic Council functions as a catalyst for Canada to enhance its broader multilateral collaboration.⁴³ The

³⁸ Gunhild Hoogensen Gjørsv et al., ed., *Routledge Handbook of Arctic Security* (London: Taylor & Francis Group, 2020).

³⁹ US Department of State, "US Relations With Canada," Bureau of Western Hemisphere Affairs (website), July 16, 2020, <https://www.state.gov/u-s-relations-with-canada/>.

⁴⁰ Government of Canada, "Statement," op. cit., 6.

⁴¹ Prime Minister of Canada Justin Trudeau, "US-Canada Joint Statement on Climate, Energy, and Arctic Leadership," March 10, 2016, <https://pm.gc.ca/en/news/statements/2016/03/10/us-canada-joint-statement-climate-energy-and-arctic-leadership>; Government of Canada, "International Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean," last modified June 25, 2021, <https://www.dfo-mpo.gc.ca/international/arctic-arctique-eng.htm>.

⁴² Fulbright Canada, "Canadian Scholars Arctic Initiative," accessed July 2, 2021, <https://www.fulbright.ca/programs/canadian-scholars/arctic-initiative>.

⁴³ Jon Rahbek-Clemmensen and Gry Thomsen, "How has Arctic coastal state cooperation affected the Arctic Council?" *Marine Policy* 122, (2020): 2.

Council's ministerial meetings, working groups, and expert groups, for example, function as working groups for a diverse set of Arctic actors including scientists, Indigenous populations, Arctic experts, and countries, thereby providing Ottawa with a single point of entry into a diverse set of Arctic relations and Arctic non-security-related affairs. Similarly, the Council's Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic (2011), Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic (2013), and Agreement on Enhancing International Arctic Scientific Cooperation (2017) provide Canada with the conceptual and institutional means to work with the Arctic member states on issues that contribute to the region's governance structure and multilateral order.

At present, Canada's policy priorities in the Arctic Council are environmental protection and Indigenous people's empowerment. Specifically, Canada leads Arctic Council working groups on the Arctic Monitoring and Assessment Programme, Protection of the Arctic Marine Environment, and Conservation of Arctic Flora and Fauna with its Trans-Atlantic partners.⁴⁴ In recent years, Canada has made a deliberate effort to steer the Arctic Council toward preventing oil pollution and reducing black carbon and methane emissions in the Arctic while promoting Indigenous involvement in the Arctic Council's Sustainable Development working group.⁴⁵

Another key institution for Canadian multilateral involvement in the Arctic is the Arctic Five (A5), a parallel institution to the Arctic Council that includes Canada, Denmark, Norway, Russia, and the United States.⁴⁶ Whereas the Arctic Council focuses on socio-economic development and environmental issues, the A5's functional focus is on hard security, primarily with respect to Trans-Atlantic interests in the region. Between 2010 and 2021, for instance, the GoC used the A5 as a forum to negotiate with Russia and Denmark on continental shelf delineation where the three countries' territorial claims overlapped.⁴⁷ Between 2015 and 2021, similarly, Canada used the A5 to negotiate an Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean with the A5 states as well as China, the European Union, Iceland, Japan, and South Korea.⁴⁸

Canada also works closely with United Nations entities, including the International Maritime Organization (IMO), the United Nations Environment Programme (UNEP), and the United Nations Development Programme (UNDP), on Arctic affairs such as shipping, search and

⁴⁴ The Arctic Council, *Senior Arctic Officials' Report to Ministers* (Rovaniemi, 2019), <https://oaarchive.arctic-council.org/handle/11374/2341>.

⁴⁵ Ibid.

⁴⁶ Rahbek-Clemmensen and Thomasen, *op. cit.*, 1.

⁴⁷ Ibid., 5.

⁴⁸ Robert W Corell et al., ed., *The Arctic in World Affairs: A North Pacific Dialogue on Arctic Futures* (Busan: Korea Maritime Institute, 2020), 127-138; Government of Canada, "International Agreement," *op. cit.*

rescue, ocean pollution, marine safety, and environmental protection. While Ottawa works with the UNEP and UNDP primarily through the Arctic Council – where both agencies have observer status – its work with the IMO is more direct. In 2017, for instance, Canada worked directly with the IMO to establish a Polar Code to formalize and co-ordinate international regulations for shipping operations and maritime environmental protection.⁴⁹

On hard security issues in the Arctic, Canada works closely with NATO, which includes all the principal Arctic states except Russia. From 2014 to 2021, for instance, Canada strengthened its ties with NATO by participating in the Norwegian Cold Response exercise and Trident Juncture – one of the most prominent NATO exercises in the Arctic region.⁵⁰ In 2019, Canada further invited non-NATO countries, including Sweden and Finland, to participate in Operation Nanook, a Canadian-led multilateral military exercise predicated on Arctic sovereignty.⁵¹ Interestingly, although Canada's *Arctic and Northern Policy Framework* portrays the Arctic as a low-tension region, Canada's recent engagement with NATO shows the country's willingness to adopt a hard security approach and use multilateral military interventions to counteract foreign threats in the Canadian Arctic.

c. Trans-Atlantic Dependency in Canada's Arctic Approach

As outlined above, Canada's past Arctic priorities have vacillated between security, resource exploitation, environmental protection, and Indigenous-led socio-economic development. Under the Trudeau administration, however, Canada's Arctic interests have expanded to include all these issue areas, a development in the GoC's foreign, domestic, and security policy direction indicative of the region's growing importance globally and to Canada.

To achieve its strategic end states in the region, the Trudeau government has built a network of state partners and institutions, drawing almost exclusively from the state's traditional North American and European partners. Bilaterally, as outlined above, the GoC works primarily with the Nordic states and the United States, while remaining strategically oriented toward Russia, the result of shared Arctic interests and postures. Multilaterally, Canada relies exclusively on Trans-Atlantic institutions including the Arctic Council, the Arctic Five, NATO, and the UN (to a lesser extent) to strengthen the region's governance institutions and to demonstrate Canadian leadership on setting key standards and normative prescriptions.

⁴⁹ The International Maritime Organization, *Polar Code: International Code for Ships Operating in Polar Waters*, 2017, <https://www.icttra.is/media/english/POLAR-CODE-TEXT-AS-ADOPTED.pdf>.

⁵⁰ John Higginbotham and Jennifer Spence, ed., "Canada's Arctic Agenda: Into the Vortex," (report), 2019, <https://www.cigionline.org/publications/canadas-arctic-agenda-vortex/>, 70.

⁵¹ Nazy Gocek, "NATO Up North: Operation Nanook-Nunalivut," *NATO Association of Canada*, May 7, 2019, <https://natoassociation.ca/nato-up-north-operation-nanook-nunalivut/>.

While Canada's prioritization of Trans-Atlantic relations made sound strategic sense during its early Arctic engagement phases, the Arctic's "internationalization" suggests Ottawa's Trans-Atlantic dependency is now more a strategic liability. Whereas the Arctic remained relatively closed to non-littoral states for much of the twentieth century, advances in technology and climate change have made the region more accessible to outsider powers, particularly those Asian states with Arctic interests. Indeed, as Part II of this brief outlines in detail, the growth in Asian actors has become a definitive trend in contemporary Arctic geopolitics, one that Ottawa has yet to engage with to a meaningful extent.

As Canada's Arctic interests expand in response to greater regional accessibility, so too must its strategic approach to the Arctic expand to accommodate this introduction of new actors outside its Trans-Atlantic comfort zone. Fortunately, the growth in Arctic awareness and activity among Asian states has led to a parallel growth in Asian-based actors, institutions, and dialogues that Canada can readily engage with to balance its Arctic approach. Done with proper understanding of the state and institutional dynamics inherent in Asian states' Arctic approaches, Canada can use such engagement to concurrently strengthen its strategic position in the Indo-Pacific, a key foreign and security policy priority of the Trudeau administration.

The necessary first step in formulating a more comprehensive strategic approach to including Asia's emerging Arctic actors and institutions is the concise and comprehensive mapping of their representatives and activities. Once mapped, it then becomes possible to articulate a national and subnational Canadian approach to engage based on state-led engagement and institutional partnership. Parts II and III of this brief undertake these analytical exercises, respectively.

| **Mapping Asian States'
Institutions, Actors, Interests,
and Activities in the Arctic**

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PART
PART

While it is wrong to suggest Asian states were inactive in the Arctic until recently, that they remained marginal actors in the region's affairs is clear. For much of the 20th century, for instance, the Arctic's littoral states – those Trans-Atlantic members of the Arctic Council – dominated Arctic affairs to the extent that their priorities and engagements defined the region's strategic environment. The result of proximity and material capability, states including Canada, Denmark, Norway, Iceland, Sweden, Russia, and the United States largely, if not entirely, determined the region's geopolitical, economic, and governance landscapes to any measurable degree.

In 2013, however, the region's dynamics skewed toward greater internationalization with the expanding of the Arctic Council to include China, Japan, South Korea, Singapore, and India as non-Arctic observer states.⁵² While falling short of full representation on the region's predominant multilateral institution, the Arctic states' acknowledgment of the Asian states interests and capabilities in the region amounted to a strategic sea change; a redirection of relations and a recalibration of state activity that fundamentally moved the region toward a global orientation.

Building on the momentum of Arctic Council induction, the new Asian observer states (with the exception of India) lost little time in expanding their Arctic presences through unilateral, bilateral, and multilateral engagement, much of which superseded Trans-Atlanticism with Asian regionalism. Indeed, a defining characteristic of the Arctic's post-2013 development is the establishment and expansion of official (Track 1), semi-official (Track 1.5), and civilian (Track 2) dialogue and co-operation mechanisms within Asia led by the non-Arctic Asian states. These developments have necessarily shifted the Arctic's strategic centre away from the region itself toward the Indo-Pacific, albeit only to the degree that Asia's new Arctic focus has resulted in new institutions, standards, and partnerships to balance their more traditional, well-established Trans-Atlantic counterparts.

Predictably, not all the original Arctic states have responded the same to Asia's growing centrality in Arctic affairs, with states like Russia embracing new actors such as China, Japan, and South Korea as convenient means to balance against North American and European states, many of which see Russia's interests and activities in the High North as a strategic challenge to the region's "liberal order." Others, such as Canada and the United States, have remained more circumspect in their engagement, preferring instead to strengthen their ties with and within the Arctic Council and Arctic Five as the principal means to ensure their strategic interests.

⁵² P. Whitney Lackenbauer and James Manicom, *Canada's Northern Strategy and East Asian Interests in the Arctic* (Waterloo: The Centre for International Governance Innovation, 2013), 11.

As the remaining section will demonstrate, however, it is no longer feasible for Canada to overlook the non-Arctic Asian actors in its strategic approach to the region, primarily as China, Japan, South Korea, and Singapore, in particular, have developed and are developing Arctic capacities and interests that have the potential to refine the region's strategic parameters. Just as important, however, are these states' unilateral, bilateral, and multilateral activities and institutions with the Asia Pacific, or Indo-Pacific, that are resulting in new Asian institutions, many of which already include other traditional Arctic actors like Norway and Sweden. Closer collaboration with these Asian states on Arctic issues, therefore, is in Ottawa's strategic interest as collaboration will help balance out Canada's one-sided, Trans-Atlantic approach to Arctic affairs and provide Canada with a more solid foundation to achieve its national interests in the Asian region. In Part III of this brief, the authors provide a framework for how Canada can achieve this strategic integration.

A necessary precondition of this strategic framework, however, is the clear articulation and categorization of the non-Arctic Asian states' actors, motivations, and activities within the region. Only by first identifying when, where, and how China, Japan, South Korea, and Singapore, engage in the Arctic is it then possible to identify the relational linkages and operational nodes Canada should prioritize and pursue in its strategic development. The authors provide a detailed account of these Asian states' Arctic policies throughout the remainder of Part II.

Japan

Japan's Arctic Priorities

Japan has a long history of Arctic engagement and was the first non-Arctic state to join the International Arctic Science Committee and to operate a national observation station in the Arctic.⁵³ In 2013, Japan also obtained its observer status in the Arctic Council.⁵⁴ With its strength in polar research and innovation, Japan is one of the more active non-Arctic states. Fuelled by rapid climate change, rising traffic in the Northern Sea Route, and increased interest in other non-Arctic states, Japan's national Arctic engagement has been especially active in

⁵³ A.B. Almazova-Ilyina et al., "National interests of Japan and its emerging Arctic policy," *Earth and Environmental Science* 539 (2020): 2.

⁵⁴ Ibid.

recent years. This proactive Arctic presence is particularly demonstrated through the country's evolving Arctic and Ocean Policy Framework.

The Basic Plan on Ocean Policy and Japan's Arctic Policy set the institutionalized framework for the nation's Arctic engagement and priorities. First enacted in 2007, Japan's Basic Plan on Ocean Policy functioned as the nation's preliminary Arctic framework before the fruition of a formal national Arctic plan.⁵⁵ In particular, the Second Basic Plan on Ocean Policy, published in April 2013, specifically highlighted the importance of Arctic research, international co-operation, and the study of the Arctic sea route.⁵⁶ On October 16, 2015, Tokyo established the nation's long-awaited Arctic Policy and condensed Japan's Arctic blueprint down to three priorities: (1) research and development; (2) international co-operation; and (3) sustainable use. Aligning and building on the country's three Arctic priorities, the Third Basic Plan on Ocean Policy further set the Arctic as Japan's primary ocean policy direction for the first time, in May 2018.⁵⁷

As of 2021, one can rationalize Japan's past Arctic engagement using the three priorities – science, diplomacy, and sustainable economic development – listed in the nation's Arctic Policy. First, Japan has strength and a deep-rooted history in scientific research and observation of the polar regions. The nation's robust research network, instruments, and infrastructure are also tools that subtly leverage the nation's influence in global polar policy decision-making. However, as a non-Arctic state, Japan understands the importance of cementing its relations with other Arctic actors, even with its strength in polar research. As a result, Japan has shown great commitment to the UN Sustainable Development Goals, the Paris Agreement, and other international binding documents to engage further with its bilateral, trilateral, and multilateral partners. Finally, as an island state reliant on energy resource imports and vulnerable to climate change, sustainable development is also critical to Japan's Arctic agenda. In particular, Tokyo sees sustainable shipping and Arctic resource development as critical to its future energy diversification.

Japan's Multidirectional Approach to Arctic Engagement

Japan engages with Arctic states, non-Arctic states, and critical intergovernmental organizations through research and economic collaboration to enhance and secure its future Arctic interests. Contextualizing Japan's multipronged Arctic foreign policy approach requires

⁵⁵ Japanese Government, *Basic Plan on Ocean Policy*.

⁵⁶ Japanese Government, *The Second Basic Plan on Ocean Policy*.

⁵⁷ Japanese Government, *The Third Basic Plan on Ocean Policy*.

an understanding of the nation's paradiplomatic, bilateral, trilateral, and multilateral ties in Arctic affairs, each of which are outlined below.

Paradiplomacy, used here to indicate a regional government's involvement in and/or direction of a country's international relations, is a distinctive characteristic of Japan's Arctic engagement, particularly with respect to the Hokkaidō Prefecture's regional government.⁵⁸

Indeed, Hokkaidō, Japan's northernmost island, plays an outsized role in Japan's Arctic engagement due to its geographic and economic linkages with other Arctic states. The Hokkaidō government uses its Tomakomai Port, for instance, to present itself as a decentralized material and ideological gateway to the Arctic. It has also leveraged this status for diplomatic and economic outreach to Arctic actors, including Russia, and for prefecture-level engagement in international Arctic development projects, such as the Finnish Cinia Arctic Connect telecom cable project and the Chinese COSCO Arctic shipping initiative.⁵⁹ The prefectural government similarly works directly with the Northern Forum and Arctic Council on Indigenous development and cultural preservation.⁶⁰



Asian Interests: A Japanese military vessel takes part in an exercise near the Russian town of Vladivostok on August 26, 2003. The U.S., Japan, and South Korea joined forces for the Arctic training exercises, deploying 75 ships, 20 aircraft, and 30,000 troops to the region. | Photo: Marina Shatilova/AFP via Getty Images

Bilaterally, Tokyo has limited working ties with all the traditional Arctic states. Tokyo works with Iceland and Norway on maritime governance and marine research collaboration, for instance, and with Denmark and Finland on resource development.⁶¹ Japan collaborates closely with Russia on energy security matters, most notably through the Japan-Russia Yamal liquefied natural gas (LNG) and Arctic LNG 2 projects.⁶² Tokyo partners almost exclusively with

⁵⁸ Martin Kossa et al., "East Asian subnational government involvement in the Arctic: a case for paradiplomacy?," *The Pacific Review* 34, no. 4 (2021): 666.

⁵⁹ Julie Babin, "Stretching the icecap: Japan's Engagement and Policy in the Arctic," PhD thesis, Laval University, 2021, 185; Kossa et al., op. cit., 674.

⁶⁰ Babin, op. cit., 233.

⁶¹ Babin, op. cit., 160; Ministry of Foreign Affairs of Japan, "Tripartite Meeting Between Japan, the Kingdom of Denmark and Greenland," May 2, 2014, https://www.mofa.go.jp/erp/we/dk/page22e_000444.html; Trude Petterson, "Japan, Finland agree to boost cooperation in the Arctic," *The Barents Observer*, 2016, <https://thebarentsobserver.com/ru/node/566>; Japan Oil, Gas, and Metals National Corporation, "Successful Award of Exploration Licenses offshore Greenland," December 24, 2013, https://www.jogmec.go.jp/english/news/release/news_10_000011.html.

⁶² Almazova-Ilyina et al., op. cit., 7.

the United States on hard security Arctic issues, leveraging the two states' alliance relations to ensure stability and security in the High North.

Multilaterally, Japan also works closely with the Arctic Council to promote science co-operation, foster sustainable development, and combat climate change. Japan is particularly active in the Council's Arctic Monitoring and Assessment Programme, Conservation of Arctic Flora and Fauna, and Protection of the Arctic Marine Environment working groups.⁶³ Tokyo also works closely with the International Maritime Organization and was instrumental in helping develop the 2017 Polar Code.⁶⁴

While such relations and activities provide Japan access to the Trans-Atlantic network of Arctic states, Tokyo's priority approach to Arctic affairs rests closer to home, particularly with respect to its Arctic-oriented engagement with China and South Korea. Tokyo, Beijing, and Seoul hold regularized high-level Arctic dialogues, for instance, on issues such as Arctic shipping routes, fisheries, research, and resource development. The three countries have also established the Asian Forum for Polar Sciences, the region's first multilateral organization aimed at fostering collaborative polar science research between Asian states.⁶⁵

Japan's Arctic Actors

Alongside its foreign policy approach, Japan has developed a robust set of state-sponsored and private-sector actors that are active in and supportive of the state's Arctic affairs. Indeed, while Japan's multidirectional engagement is an important part of its Arctic engagement, the true scope of its Arctic activities and interests only becomes clear through examination of its domestic Arctic supporting network. As outlined below, these domestic actors both shape and direct Japan's Arctic priorities and approaches.

KEY GOVERNMENTAL ACTORS FOR ARCTIC AFFAIRS

While Tokyo lacks a formal, centralized mechanism to direct its state approach to the Arctic, one does see a clear division of labour across its key ministries. Whereas Japan's Ministry of Foreign Affairs directs the nation's Arctic relations, for instance, its Ministry of Education, Culture, Sports, and Science and Ministry of Economy, Trade, and Industry promote its economic and scientific interests. Similarly, its Ministry of Defence manages its security portfolio in the region while its Ministry of Land, Infrastructure, Transport, and Tourism

⁶³ Ministry of Foreign Affairs of Japan, "Observer Report 2019-2021," *Arctic Council*, July 2021, <https://oaarchive.arctic-council.org/handle/11374/2724>.

⁶⁴ Babin, *op. cit.*, 67.

⁶⁵ Yeadong Kim and Jihoon Jeong, "The development of the Asian Forum for Polar Sciences (AFoPS)," *Polar Science* 9, (May 2015): 338-344.

ensures the safety and stability of its northern sea lanes through close co-ordination with the country’s Coast Guard. The following chart outlines these ministries’ responsibilities and past engagement efforts in greater detail.

Governmental Actors	Responsibility and Engagement in Arctic Affairs
<p>The Ministry of Foreign Affairs of Japan (MOFA)</p>	<p>MOFA deals with Arctic diplomacy. MOFA played a primary role in helping Japan obtain its Arctic Council observer status in 2013.⁶⁶</p>
<p>The Ministry of Education, Culture, Sports, Science and Technology (MEXT)</p>	<p>MEXT promotes Arctic scientific research and also manages various Arctic research institutions including JAMSTEC, NIPR, JCAR, and JAXA.⁶⁷ MEXT also established the Arctic Research Examination working group in 2010.⁶⁸</p>
<p>The Ministry of Economy, Trade, and Industry (METI)</p>	<p>METI is in charge of the business pillar of the Arctic affairs.⁶⁹ METI is closely linked with the Japan Oil, Gas, and Metals National Corporation,⁷⁰ which is a primary shareholder in Greenland’s petroleum exploitation (KANUMAS project).⁷¹ METI plays a critical part in cementing Japan-Russia business ties. In particular, it facilitated Japan’s investment in the Russia-based Arctic LNG 2 project in 2019.⁷²</p>
<p>The Ministry of Land, Infrastructure, Transport, and Tourism (MLIT)</p>	<p>MLIT shapes the nation’s ocean policy and explores the commercial viability of Arctic shipping using the Northern Sea Route (NSR).⁷³ MLIT also oversees Japan’s Coast Guard and the utilization of the Japanese icebreakers <i>Soya</i> and <i>Teshio</i>.⁷⁴</p>

⁶⁶ Leiv Lunde et al., eds., *Asian Countries and the Arctic Future* (Singapore: World Science Publishing, 2016), 176.

⁶⁷ National Museum of Nature and Science, “Ministry of Education, Culture, Sports, Science and Technology (MEXT) and Other Research Facilities,” <https://www.kahaku.go.jp/english/links/other/index.html>.

⁶⁸ Aki Tonami and Stewart Watters, “Japan’s Arctic Policy: The Sum of Many Parts,” *The Arctic Yearbook*, January 1, 2012, 96, https://arcticyearbook.com/images/yearbook/2012/Scholarly_Papers/4.Tonami_and_Watters.pdf.

⁶⁹ Lunde et al., op. cit., 179.

⁷⁰ Ministry of Economy, Trade, and Industry, “JOGMEC is to Make an Investment in a Project for Exploration for Geothermal Resources for the First Time,” July 17, 2015, https://www.meti.go.jp/english/press/2015/0727_02.html.

⁷¹ Japan Oil, Gas, and Metals National Corporation, “JOGMEC Provides Equity Financing for Petroleum Exploration Offshore Greenland,” February 29, 2012, <https://www.jogmec.go.jp/english/news/release/release0086.html>.

⁷² Takeo Kumagai and Eric Yep, “Japan eyes participating in Kamchatka LNG reloading terminal: official,” *S&P Global Platts*, September 30, 2020, <https://www.spglobal.com/platts/en/market-insights/latest-news/natural-gas/093020-japan-eyes-participating-in-kamchatka-lng-reloading-terminal-official>.

⁷³ Lunde et al., op. cit., 177.

⁷⁴ Tonami and Watters, op. cit., 95.

Governmental Actors	Responsibility and Engagement in Arctic Affairs
The Ministry of Defence (MOD)	MOD controls Japan’s Maritime Self-Defence Force, which is in charge of the icebreaker <i>Shirase</i> . ⁷⁵ In 2011, MOD also published a report chapter on the future order of the Arctic that highlights Arctic security issues. ⁷⁶

KEY RESEARCH INSTITUTIONS FOR ARCTIC AFFAIRS

To support its Arctic activities, Japan has established government-affiliated think tanks and research centres, many of which receive funding directly from and are affiliated with one of the abovementioned foreign ministries. While covering a range of Arctic issues, these institutes tend to overlap with their prioritization of research on Arctic resource development, port infrastructures, and polar navigation. Collectively, Japan’s public-private research centres provide the government with the most robust and extensive Track 1.5 capacity of all the Asian Arctic actors and enable Tokyo to participate in a wide range of Arctic dialogues in Asia, Europe, and North America.

Research Institutions	Responsibility and Engagement in Arctic Affairs
The National Institute of Polar Research (NIPR)	NIPR is an inter-university research institute that facilitates Arctic research among universities. ⁷⁷ NIPR focuses on the terrestrial level of Arctic research. ⁷⁸ The institute also established the Arctic Environment Research Center in 1990 ⁷⁹ and is one of the three representatives of the ArCS II project. ⁸⁰

The Japan Agency for Marine-Earth Science and Technology (JAMSTEC)

JAMSTEC has a history of Arctic research collaboration with the United States.⁸¹ JAMSTEC is engaged in more than 10 Arctic expeditions⁸² and is a representative of the ArCS II project.⁸³

⁷⁵ Ibid.

⁷⁶ Ibid., 96-97.

⁷⁷ National Institute of Polar Research, “About Our Institute,” <https://www.nipr.ac.jp/english/outline/summary/overview.html>.

⁷⁸ Lunde et al., op. cit., 173.

⁷⁹ National Institute of Polar Research, “Promoting close collaboration for Arctic studies by Japanese and international researchers,” https://www.nipr.ac.jp/english/collaborative_research/arctic.html.

⁸⁰ Arctic Challenge for Sustainability II, “Project Overview – About ArCS II,” <https://www.nipr.ac.jp/arcs2/e/about/>.

⁸¹ Lunde et al., op. cit., 173.

⁸² Ibid.

⁸³ Arctic Challenge for Sustainability II, op. cit.

Research Institutions	Responsibility and Engagement in Arctic Affairs
<p>The Ocean Policy Research Institute (OPRI)</p>	<p>OPRI was initially called the Ship and Ocean Foundation.⁸⁴ It is a private think tank but is now incorporated within the Sasakawa Peace Foundation.⁸⁵ OPRI has a close relationship with the shipping and manufacturing industries in Japan. The Institute also played a critical role in formulating the Basic Act on Ocean Policy in 2007⁸⁶ and the production of an Arctic proposal for the Japanese Government in 2012 that viewed Russia as an essential Arctic partner.⁸⁷</p>
<p>The Japan Institute of International Affairs (JIIA)</p>	<p>JIIA is a private, non-partisan think tank.⁸⁸ JIIA has deep ties with MOFA and specializes in foreign affairs and Arctic governance issues.⁸⁹ In 2012, the think tank initiated the Arctic Governance and Japan's Foreign Strategy project that was funded by MOFA.⁹⁰</p>
<p>The Japan Consortium for Arctic Environment Research (JCAR)</p>	<p>JCAR is monitored by the NIPR and MEXT.⁹¹ JCAR focuses on increasing Japan's capacities on environmental protection and human resource development in the Arctic.⁹² JCAR also organized and hosted the Arctic Science Summit Week and the International Symposium on Arctic Research.⁹³</p>
<p>Japan Aerospace Exploration Agency (JAXA)</p>	<p>JAXA uses space satellites to study the Arctic sea ice.⁹⁴ JAXA has collaborated with the University of Alaska and the International Arctic Research Center on Arctic-specific research.⁹⁵</p>

⁸⁴ Ocean Policy Research Institute, "About OPRI," <https://www.spf.org/en/opri/profile/>.

⁸⁵ Ibid.

⁸⁶ Fujio Ohnishi, "The Process of Formulating Japan's Arctic Policy: From Involvement to Engagement," *The Centre for International Governance Innovation* no.1 (November 2013): 3.

⁸⁷ Aki Tonami, "Future-Proofing Japan's Interests in the Arctic: Scientific Collaboration and a Search for Balance," *Asia Policy*, no. 18 (July 2014): 56.

⁸⁸ Ohnishi, op. cit., 4.

⁸⁹ Ibid.

⁹⁰ Ibid.

⁹¹ Hiroshi Miyaoka, "Promoting Close Collaboration for Arctic Studies by Japanese and International Researchers," National Institute of Polar Research, https://www.nipr.ac.jp/english/collaborative_research/arctic.html.

⁹² Ibid.

⁹³ Ibid.

⁹⁴ Sharing Earth Observation Resources, "GCOM (Global Change Observation Mission)," <https://earth.esa.int/web/eoportal/satellite-missions/gcom>.

⁹⁵ Linda Jakobson and Seong-Hyon Lee, "The North East Asian States' Interests in the Arctic and Possible Cooperation with the Kingdom of Denmark," *Stockholm International Peace Research Institute* (April 2013): 23.

KEY ACADEMIC INSTITUTIONS FOR ARCTIC AFFAIRS

Japanese universities also play an important role in the country’s Arctic affairs. Hokkaidō and Kobe Universities, in particular, play critical roles in promoting Japanese participation in and facilitation of global dialogues on Arctic issues. As with its public-private research centres, Japan’s universities are a strategic advantage for the state, particularly in comparison to other Asian states.

Academic Institutions	Arctic Engagement
Hokkaidō University	Hokkaidō University is one of the three representatives of the ArCS II project. ⁹⁶ The university is also the only Japanese member university in the University of the Arctic (UARctic). ⁹⁷ Its Arctic Research Center, Institute of Low-Temperature Science, and Slavic-Eurasian Research Center have all conducted Arctic-related research. ⁹⁸ Along with Niigata University, Hokkaidō University also established a human resources development platform to promote Japan-Russian economic co-operation. ⁹⁹
Kobe University	The Polar Cooperation Research Center (PCRC) at Kobe University is actively engaged in Arctic research. PCRC also hosts the annual Polar Law Symposium that encourages global discussions on Arctic affairs. ¹⁰⁰

KEY COMMERCIAL ACTORS FOR ARCTIC AFFAIRS

While Japanese companies express interest in the Arctic’s commercial potential, the state-affiliated Japan Oil, Gas, and Metals National Corporation is the only notable Japanese corporate actor in the Arctic at present. Two factors can justify the lack of engagement from private Japanese businesses in Arctic affairs: the high operating cost associated with many Arctic development projects and the ambiguous Japan-Russia relations. Yet, with the melting ice sheets and increased business opportunities in the North, Japanese commercial actors’ presence will likely increase in the Arctic in the foreseeable future.

⁹⁶ Ibid.

⁹⁷ UArctic, “Members List,” <https://www.uarctic.org/about-uarctic/members-list/>.

⁹⁸ UArctic, “Hokkaido University,” <https://www.uarctic.org/member-profiles/non-arctic/8533/hokkaido-university>.

⁹⁹ Hokkaido University, “Construction of a top down-type landmark research center,” <https://u4u.oaic.hokudai.ac.jp/en/landmark-top/>.

¹⁰⁰ Kobe University, “About Polar Cooperation Research Centre,” <https://www.research.kobe-u.ac.jp/gsics-pcrc/centre.html>.

Commercial Actors	Arctic Engagement
<p>Japan Oil, Gas, and Metals National Corporation (JOGMEC)</p>	<p>JOGMEC is a state-owned natural resource deposit and development company.¹⁰¹ It was formerly known as Japan National Oil Corporation and is considered a Japanese incorporated administrative agency.¹⁰² JOGMEC has collaborated with various Arctic states, including Greenland (e.g., KANUMUS),¹⁰³ the United States (e.g., recovery of methane hydrate energy resources),¹⁰⁴ and Russia (e.g., Arctic LNG 2) on Arctic resource development projects.¹⁰⁵</p>

South Korea

South Korea’s Arctic Priorities

In contrast to Japan, South Korea is a relative newcomer to Arctic affairs, having only prioritized the region through outreach and planning in the early 2000s.¹⁰⁶ Driven primarily by the region’s natural resources and maritime transport potential, however, Seoul has increased its Arctic activities over the past 20 years to become one of the most active non-Arctic states, comparable to Japan and China. Having obtained Arctic Council observer status in 2013, South Korea subsequently developed a comprehensive, whole-of-state approach to the Arctic through publication of its 2013 and 2018 Arctic Policy Master Plans and its 2018 Polar Vision 2050 white paper. South Korea’s Arctic policies and priorities – as articulated in these three key policy documents – are highlighted below.

The 2013 Arctic Policy Master Plan identifies Seoul’s Arctic priorities in terms of “one vision” and “three policy goals.”¹⁰⁷ Specifically, the 2013 Plan calls for South Korea to contribute “to

¹⁰¹ “Japan inks MOU for Alberta energy,” *Journal of Commerce*, November 24, 2021, <https://canada.constructconnect.com/joc/news/government/2021/11/japan-inks-mou-for-alberta-energy>.

¹⁰² Jakobson and Lee, op. cit., 22.

¹⁰³ Japan Oil, Gas, and Metals National Corporation, “Successful,” op. cit.

¹⁰⁴ Office of Fossil Energy and Carbon Management, “Data from Innovative Methane Hydrate Test on Alaska’s North Slope Now Available on NETL Website,” March 11, 2013, <https://www.energy.gov/fecm/articles/data-innovative-methane-hydrate-test-alaska-north-slope-now>.

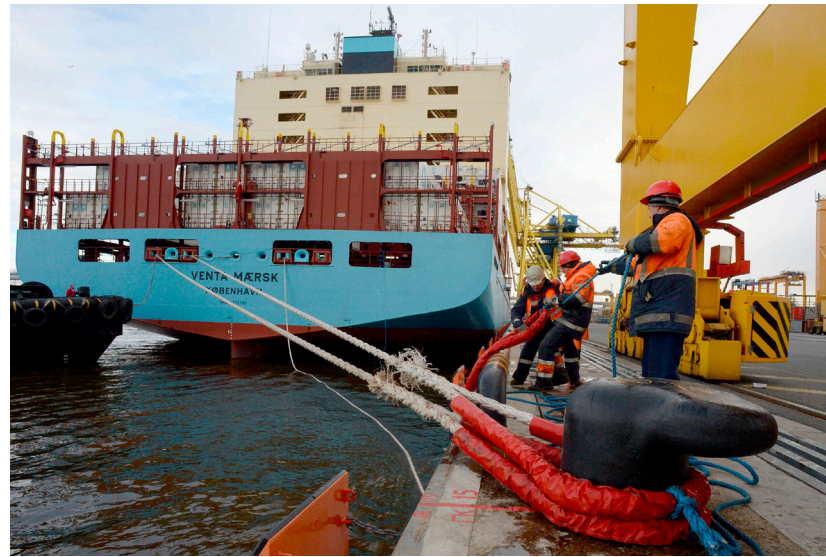
¹⁰⁵ Arctic Challenge for Sustainability II, op. cit.—

¹⁰⁶ Young Kil Park, “Arctic Prospects and Challenges From a Korean Perspective,” *The Centre for International Governance Innovation* no.3 (December 2013): 1.

¹⁰⁷ Eunji Kim and Anna Stenport, “South Korea’s Arctic policy: political motivations for 21st century global engagements,” *The Polar Journal* 11, no.1 (June 2021): 11-29.

[the] sustainable future of the Arctic” through Arctic partnership, scientific research, and business development.¹⁰⁸ The 2018 Plan built on its predecessor’s vision and policies to call for Seoul to pioneer and partner in shaping the Arctic’s future by becoming more active and responsible in its regional engagement with a specific eye toward sustainable development.¹⁰⁹ Concurrently, the 2018 Polar Vision 2050 expanded South Korea’s regional interests to include climate change, sustainable resource development, and Arctic Indigenous peoples’ socio-economic development.¹¹⁰ To operationalize its Arctic policies, South Korea has employed economic, geopolitical, and diplomatic means.

Economically, Seoul has leveraged its status as the world’s largest shipbuilder and a foreign trade-dependent country to strengthen its capacity in Arctic shipping and maritime navigation.¹¹¹ Some of South Korea’s largest industrial conglomerates (chaebols), including Samsung, Hyundai, and Daewoo, have prioritized construction of icebreakers, seeing the new technology as key to the country’s Arctic access and operations.¹¹² These same companies are prioritizing development of new Arctic shipping routes such as the NSR to shorten transport distances between Northeast Asia and Europe.¹¹³ South Korean firms are also active in Arctic resource development, particularly with respect to oil and gas, as Seoul sees Arctic resource exploitation as a critical means to reduce its dependency on energy supplies from the Middle East.¹¹⁴ With more than 60 percent of its oil imports coming from Saudi Arabia, Kuwait, and the United Arab Emirates



Arctic Collaboration: Maersk’s ice-class container vessel, Venta Maersk, docks at the port of Saint Petersburg on September 28, 2018. The Danish vessel was loaded with Russian fish and South Korean electronics and was the first container ship to navigate the Russian Arctic as the ice pack melts and recedes. | Photo: Olga Maltseva/ AFP via Getty Images

¹⁰⁸ Korea Maritime Institute et al., *Arctic Policy of the Republic of Korea*.

¹⁰⁹ Minsu Kim and Maksim L. Marchenkov, “The Republic of Korea and the Arctic region: from policy formulating to policy making.” *Arctic and North*, no.37 (2019): 63.

¹¹⁰ Ministry of Oceans and Fisheries, *2050 Polar Vision Statement*, <http://en.koreapolarportal.or.kr/intro/2050PolarVision.do?jse:sessionid=877264E315FAC2641EBC2022EAF8DAC3>.

¹¹¹ E.E Krasnozhenova et al., “The Arctic policy of the Republic of Korea,” *IOP Conference Series: Earth and Environmental Science* 625, (January 2021): 4; Kim and Marchenkov, op. cit., 59.

¹¹² Krasnozhenova et al., op. cit., 4.

¹¹³ Kim and Stenport, op. cit., 17.

¹¹⁴ Ibid.

alone, Seoul hopes the Arctic could supply up to 10 percent of its total hydrocarbon resource imports in the near future.¹¹⁵

In addition to economic development, South Korea also prioritizes scientific research in its Arctic approach, primarily with respect to climate change, marine research, ecology, hydrology, and geology research.¹¹⁶ Since its 2002 opening of the Dasan research station in Svalbard, Norway, in particular, South Korea has increased its Arctic research capabilities and presence, including the construction of its first icebreaker, the *Araon*, in 2009, its hosting of the 12th Arctic Science Summit Week in 2011, and its organization of an Arctic Science Fellowship Program in 2018.¹¹⁷

Importantly, South Korea sees itself as an emerging Arctic actor and is specifically seeking to transition from being an Arctic “observer” to a fully integrated Arctic “partner.”¹¹⁸ Indeed, South Korea’s most recent Arctic documents are notable for their reprioritization of Seoul’s Arctic priorities away from commercial development and toward Arctic co-operation on global challenges, such as environmental protection and Indigenous peoples’ socio-economic development.

South Korea’s Multidirectional Approach to Arctic Engagement

As with Japan, South Korea’s Arctic engagement relies heavily on bilateralism and multilateralism. Since 2013, for instance, Seoul has periodically worked with the United States on “environmental co-operation” in the Arctic and, since 2014, has undertaken research on permafrost, the lithosphere, and methane hydrate deposits in the Beaufort Sea with Canada’s permission. South Korea also actively participates in Arctic dialogue forums with the Nordic states, including the Arctic Circle Assembly in Iceland and the Arctic Frontiers organized by Norway.¹¹⁹ In addition, South Korea has consistent Arctic science co-operation with Greenland, having signed four memorandums of understanding (MoUs) covering polar research collaboration since 2012.¹²⁰

¹¹⁵ Ibid.

¹¹⁶ Korea Maritime Institute et al., op. cit.

¹¹⁷ Krasnozhenova et al., op. cit., 2; Hyun-Soo Kim et al., “Study on icebreaking performance of the Korea icebreaker ARAON in the arctic sea,” *International Journal of Naval Architecture and Ocean Engineering* 3, no.3 (September 2011): 208-215; Kim and Stenport, op. cit., 23; Republic of Korea, “Observer Reports 2019-2021,” *Arctic Council*, July, 2021, https://oaarchive.arctic-council.org/bitstream/handle/11374/2709/Arctic-Council-Observer-REPORT-2019-2021_KOREA.pdf?sequence=1&isAllowed=y.

¹¹⁸ Kim and Marchenkov, op. cit., 64.

¹¹⁹ Ibid., 62.

¹²⁰ Young Kil Park, op. cit., 4.

Of all its bilateral Arctic relations, South Korea's state and commercial engagement with Russia is arguably the most robust. For instance, South Korea and Russia signed an MoU on Arctic resource engagement in 2017, leading to substantial South Korean investment in Russia's Arctic LNG 2.¹²¹ The two states also work closely on Arctic shipping, holding high-level talks about the joint development of a shipping route from Petropavlovsk-Kamchatsky to Murmansk via the NSR, for instance.¹²² To support this partnership, South Korean firms, including Samsung, construct ice-class ships for and supply Arctic shuttle tankers to Russia.¹²³

In parallel to its bilateral partnerships, Korea is actively contributing to Arctic affairs through intergovernmental organizations like the Arctic Council and the United Nations and advancing Arctic governance through its support of the Paris Agreement and the UN Sustainable Development Goals.¹²⁴ Within the Arctic Council, for instance, Seoul supports several working groups: the Arctic Monitoring and Assessment Programme; the Conservation of Arctic Flora and Fauna (CAFF); Emergency Prevention, Preparedness and Response (EPPR); the Protection of the Arctic Marine Environment (PAME); and Sustainable Development (SDWG).¹²⁵

Within Asia, South Korea works with Japan and China, primarily through trilateral dialogue mechanisms. South Korea is an active member of the Forum for Polar Science, for instance, and inaugurated the Korea-Japan-China Trilateral High-Level Dialogue on the Arctic in 2016, which has since become an annual multilateral event.¹²⁶ Such engagement is limited, however, by ongoing economic rivalry between the three states on the privileges and usage of the NSR. Tension between South Korea and China has specifically escalated in recent years due to South Korea's ambiguous stance regarding the territorial disputes in the South China Sea and Seoul's perception of Chinese support for North Korea.

South Korea's Arctic Actors

KEY GOVERNMENTAL ACTORS FOR ARCTIC AFFAIRS

South Korea's Ministry of Oceans and Fisheries is the country's lead agency on Arctic affairs, reflecting Seoul's prioritization of shipping and Arctic navigation in its regional approach.

¹²¹ The Maritime Executive, "South Korea Explores Container Shipping on Russia's North Sea Route," November 9, 2021, <https://www.maritime-executive.com/article/south-korea-explores-container-shipping-on-russia-s-north-sea-route>; Krasnozhenova et al., op. cit., 3.

¹²² Krasnozhenova et al., op. cit., 4.

¹²³ Jakobson and Lee, op. cit., 34.

¹²⁴ Republic of Korea, "Republic of Korea's Commitment on the Sustainable Development of the Arctic," *12th Ministerial Meeting of the Arctic Council*, May 20, 2021, https://oaarchive.arctic-council.org/bitstream/handle/11374/2682/MMIS12_2021_REYKJA-VIK_Observer-Statement_State_Republic-of-Korea.pdf?sequence=1&isAllowed=y.

¹²⁵ Republic of Korea, "Observer Reports 2019-2021," op. cit.

¹²⁶ Republic of Korea, "Observer Reports 2016," *Arctic Council*, November, 2016, https://oaarchive.arctic-council.org/bitstream/handle/11374/1862/EDOCs-4020-v1-2016-11-29_Republic_of_Korea_Observer_activity_report.PDF?sequence=1&isAllowed=y.

Indeed, South Korea’s maritime-sector bureaucracies and its maritime-adjacent municipalities have been closely involved in shaping the country’s Arctic policy since the early 2000s. Officials from the port city of Busan, for instance, are actively involved in South Korean Arctic affairs, particularly with respect to fishing and shipping.¹²⁷ In addition to these lead actors, at least five other ministries play important roles in South Korea’s Arctic affairs, as outlined below.

Governmental Actors	Responsibility and Engagement in Arctic Affairs
Ministry of Oceans and Fisheries (MOF)	The MOF specializes in issues related to the Arctic maritime environment, port development, and fisheries. ¹²⁸ The ministry takes the lead in forming the country’s Arctic policy master plan and co-operates with other relevant ministries. ¹²⁹ The ministry is also in charge of funding and is responsible for the Korean Polar Research Institute’s major in-house and ministry-commissioned projects. ¹³⁰ South Korea’s icebreaker <i>Araon</i> is under MOF’s responsibility. ¹³¹
Ministry of Science, ICT and Future Planning (MSIP)	The MSIP partakes in the nation’s polar research. The ministry has supported projects such as “Circum-Arctic Permafrost Environment Change Monitoring and Future Prediction Techniques” and “Changes in Environment and Coastal Geomorphology of Svalbard Fjord.” ¹³²
Ministry of Environment (MOE)	The MOE contributes to South Korea’s Arctic ecology research and environmental protection. NIE and NIER, two research institutions closely affiliated and funded by the MOE, are particularly engaged in the Arctic Council’s migratory birds ¹³³ and enhanced black carbon and methane emission reductions groups. ¹³⁴

¹²⁷ Over the Circle, “Talking Arctic Affairs in Busan,” August 12, 2018, <https://overthecircle.com/2018/08/12/talking-arctic-affairs-in-busan/>.

¹²⁸ Ministry of Oceans and Fisheries, “About MOF,” <https://www.mof.go.kr/en/page.do?menuIdx=1469>.

¹²⁹ Young Kil Park, op. cit., 5.

¹³⁰ “Co-operation in Arctic Science-Challenges And Joint Actions,” *The 2nd Arctic Science Ministerial*, October 26, 2018, 108.

¹³¹ Jean de Pomereu, “Korea’s Polar Ambitions,” *Sciences Poles*, September 30, 2010, <http://www.sciencepoles.org/interview/koreas-polar-ambitions>.

¹³² “Co-operation in Arctic Science,” op. cit., 108.

¹³³ Republic of Korea, “Observer Reports 2019-2021,” op. cit.

¹³⁴ Republic of Korea, “National Report by the Republic of Korea: Enhanced Black Carbon and Methane Emissions Reductions,” *Arctic Council*, 2017, https://oarchive.arctic-council.org/bitstream/handle/11374/2441/EGBCM2_2017_National-Report-Observ-er-States-Republic-of-Korea.pdf?sequence=6&isAllowed=y.

Governmental Actors	Responsibility and Engagement in Arctic Affairs
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<p>Ministry of Trade, Industry and Energy (MOTIE)</p>	<p>The MOTIE is involved with Arctic resource development, investment, and energy supply.¹³⁵ The MOTIE was the nation’s signatory to an MoU with Greenland on joint geological surveys, resource development, and scientific exchange.¹³⁶ In addition, the MOTIE and Natural Resources Canada also share an MoU on Cooperation in Innovation and Energy Technologies.¹³⁷</p>
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<p>Ministry of Foreign Affairs (MOFA)</p>	<p>The MOFA contributes to South Korea’s Arctic diplomacy with foreign states and intergovernmental organizations. The ministry represents South Korea in Arctic regional forums and facilitated the nation obtaining its observer status in the Arctic Council.¹³⁸ In 2020, the MOFA further established the “Arctic Club in Korea,”¹³⁹ an informal forum that aims to enhance Arctic collaboration between South Korea and Arctic states.</p>
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<p>Korea Meteorological Administration (KMA)</p>	<p>KMA funded several independent Arctic climate research projects.¹⁴⁰ The ministry monitors changing Arctic temperatures and air masses¹⁴¹ to pinpoint their effects on South Korea’s meteorology.</p>
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¹³⁵ Jakobson and Lee, op. cit., 30.

¹³⁶ Brendan O’Donnell et al., eds., *Arctic Summer College Yearbook: An Interdisciplinary Look into Arctic Sustainable Development* (Cham: Springer, 2017), 78.

¹³⁷ Government of Canada, “Memorandum of Understanding Between Canada and the Republic of Korea on Cooperation in Innovation and Energy Technologies,” March 2, 2016, <https://www.canada.ca/en/natural-resources-canada/news/2016/03/memorandum-of-understanding-between-canada-and-the-republic-of-korea-on-cooperation-in-innovation-and-energy-technologies.html>.

¹³⁸ Jakobson and Lee, op. cit., 30.

¹³⁹ Ministry of Foreign Affairs, “Ministry of Foreign Affairs Forms Arctic Club in Korea with Embassies in ROK,” January 22, 2020, https://www.mofa.go.kr/eng/brd/m_5676/view.do?seq=320942&srchFr=&srchTo=&srchWord=&srchTp=&multi_itm_seq=0&itm_seq_1=0&itm_seq_2=0&company_cd=&company_nm=.

¹⁴⁰ Hyun Min Sung et al., “Climate Change Projection in the Twenty-First Century Simulated by NIMS-KMA CMIP6 Model Based on New GHGs Concentration Pathways,” *Asia-Pacific Journal of Atmospheric Sciences* 34, no.8 (April 2021).

¹⁴¹ Yonhap, “Cold wave alerts issued for most of S. Korea,” *The Korea Herald*, October 16, 2021, <http://www.koreaherald.com/view.php?ud=20211016000060>.

KEY RESEARCH INSTITUTIONS FOR ARCTIC AFFAIRS

South Korea’s research institutions play critical roles in shaping the nation’s Arctic relations, particularly the Korean Polar Research Institute and the Korea Maritime Institute, which drive its Arctic research co-operation and facilitate its Arctic diplomacy. In addition, the Korea Research Institute of Ships and Ocean Engineering is South Korea’s leading institution for Arctic shipping and maritime technology development. All three institutions are closely aligned with South Korea’s central government, with intergovernmental organizations such as the Arctic Council, and with the nation’s leading academic institutions.

Research Institutions	Responsibility and Engagement in Arctic Affairs
<p>Korea Maritime Institute (KMI)</p>	<p>KMI is a policy research institute that the South Korean government sponsors through the Office of Government Policy Coordination.¹⁴² KMI facilitates the state’s policy development in the maritime and fisheries sectors.¹⁴³ KMI is mainly engaged with UArctic, the Arctic Council,¹⁴⁴ and the North Pacific Arctic Conference (NPAC).¹⁴⁵ Since 2015, KMI has co-hosted the Korea Arctic Academy with UArctic.¹⁴⁶ This academic exchange project facilitates Arctic education for students from Korea and Arctic countries. KMI actively partakes in the Arctic Council’s PAME working group and expert group meetings.¹⁴⁷ In particular, KMI is one of the co-leads on “Strengthening observer engagement with PAME’s shipping-related activities” and was also involved in the “Arctic Indigenous Marine Use Mapping” project.¹⁴⁸ Finally, since 2011, KMI has been hosting the NPAC with the East-West Center.¹⁴⁹</p>

¹⁴² Jakobson and Lee, *op. cit.*, 31.

¹⁴³ *Ibid.*

¹⁴⁴ Republic of Korea, “Observer Reports 2019-2021,” *op. cit.*

¹⁴⁵ Republic of Korea, “Observer Reports 2016,” *op. cit.*

¹⁴⁶ *Ibid.*

¹⁴⁷ Republic of Korea, “Observer Reports 2019-2021,” *op. cit.*

¹⁴⁸ *Ibid.*

¹⁴⁹ Republic of Korea, “Observer Reports 2016,” *op. cit.*

Korea Polar Research Institute (KOPRI)

KOPRI is mainly in charge of South Korea's Arctic scientific research related to climate, atmosphere, oceanology, geology, and ecology.¹⁵⁰ As the institution is closely affiliated with the Ministry of Education, Science and Technology (the preceding agency of the MSIP), KOPRI doesn't cover any Arctic strategic or security issues.¹⁵¹ The institute has one Arctic polar research base called the Dasan station in Svalbard, Norway.¹⁵² In addition, South Korea's Arctic expeditions and research icebreaker, the *Araon*, falls under the responsibility of KOPRI.¹⁵³

Since its establishment in 1978,¹⁵⁴ KOPRI has closely collaborated with numerous domestic and foreign institutions to advance South Korea's Arctic agenda; some of these institutions include the Arctic Council, UArctic, and the International Arctic Science Committee (IASC). In particular, for the Arctic Council, KOPRI has actively participated in the Arctic Monitoring and Assessment Programme working group meetings and workshops.¹⁵⁵ Since joining UArctic in 2016, KOPRI has also facilitated the delivery of the Arctic Science Fellowship program.¹⁵⁶ KOPRI has developed a close partnership with the IASC since its participation in 2002 and has served as the Chair of the Pacific Arctic Group, a subset of the IASC.¹⁵⁷

¹⁵⁰ Krasnozhenova et al., op. cit., 2.

¹⁵¹ Jakobson and Lee, op. cit., 31.

¹⁵² Krasnozhenova et al., op. cit., 2.

¹⁵³ Travis Larson, "Greener operations for the Korea Polar Research Institute's icebreaking research vessel," June 10, 2021, *Wärtsilä*, <https://www.wartsila.com/insights/article/greener-operations-for-the-korea-polar-research-institute-s-icebreaking-research-vessel>.

¹⁵⁴ KOPRI, "History of KOPRI," <https://eng.kopri.re.kr/eng/html/intro/0103.html>.

¹⁵⁵ Republic of Korea, "Observer Reports 2019-2021," op. cit.

¹⁵⁶ UArctic, "Apply for KOPRI Arctic Science Fellowship Program 2019," January 21, 2019, <https://www.uarctic.org/news/2019/1/apply-for-kopri-arctic-science-fellowship-program-2019/>.

¹⁵⁷ Republic of Korea, "Observer Reports 2016," op. cit.

Research Institutions	Responsibility and Engagement in Arctic Affairs
<p>Korea Research Institute of Ships and Ocean Engineering (KRISO)</p>	<p>KRISO is a government-funded research institute that specializes in shipbuilding and maritime engineering.¹⁵⁸ KRISO is an affiliate of the Korea Institute of Ocean Science and Technology.¹⁵⁹ Akin to KMI and KOPRI, KRISO also actively contributes to the Arctic Council’s EPPR working group.¹⁶⁰ In particular, KRISO aims to partake in the Arctic Council’s project on “New low-sulfur fuels, fate and behaviour in cold water conditions.”¹⁶¹ In addition, KRISO also houses the Regional Activity Center to support the UN Environment Programme’s Northwest Pacific Action Plan,¹⁶² specifically to prevent and respond to Arctic oil spills.</p>
<p>Korea Institute of Geoscience and Mineral Resources (KIGAM)</p>	<p>KIGAM is a state-funded geoscience research organization.¹⁶³ In 2014, the institution collaborated with the Geological Survey of Canada to discuss the exploration of oil and gas resources in the Arctic.¹⁶⁴ KIGAM also facilitated the 2019 Arctic Partnership Week in Busan.¹⁶⁵</p>
<p>Korea Hydrographic and Oceanographic Agency (KHOA)</p>	<p>KHOA is a research body under the MOF.¹⁶⁶ KHOA facilitates South Korea’s Arctic hydrographic knowledge and maritime research.¹⁶⁷</p>
<p>Busan Development Institute (BDI)</p>	<p>BDI plays a critical role in paradiplomacy. The institute focuses on maritime projects that would facilitate Busan becoming a super port city¹⁶⁸ – a major hub for Arctic logistics, information, and tourism in Asia.</p>

¹⁵⁸ KRISO, “Overview,” <https://www.kriso.re.kr/menu.es?mid=a20102000000>.

¹⁵⁹ Ibid.

¹⁶⁰ Republic of Korea, “Observer Reports 2019-2021,” op. cit.

¹⁶¹ Ibid.

¹⁶² Republic of Korea, “Observer Reports 2016,” op. cit.

¹⁶³ KIGAM, “About KIGAM,” <https://www.kigam.re.kr/menu.es?mid=a20501000000>.

¹⁶⁴ KIGAM “KIGAM, with have a meeting with GSC for the joint exploration of the Arctic Circle,” September 23, 2014, https://www.kigam.re.kr/board.es?mid=a20401000000&bid=0032&act=view&list_no=44197&tag=&nPage=10.

¹⁶⁵ UArctic, “UArctic Students participate in Korean Arctic Partnership Week, Busan,” December 6, 2016, <https://www.uarctic.org/news/2016/12/uarctic-students-participate-in-korean-arctic-partnership-week-busan/>.

¹⁶⁶ Jakobson and Lee, op. cit., 31.

¹⁶⁷ Ibid.

¹⁶⁸ Mac Net, “Busan Development Institute,” http://www.macnetkorea.com/sub/eng_sub.aspx?s_code=0503750000.

Research Institutions	Responsibility and Engagement in Arctic Affairs
National Institute of Ecology (NIE)	NIE is a subsidiary research institution of the MOE. ¹⁶⁹ NIE adds value to South Korea’s Arctic ecology research. NIE is closely engaged with the Arctic Council’s CAFF working group. ¹⁷⁰ In particular, NIE assists the working group in conducting research on the breeding patterns, migratory routes, and conservation of Arctic migratory birds. ¹⁷¹
National Institute of Environmental Research (NIER)	NIER is an affiliated research institution under the MOE ¹⁷² and carries out research related to the environment, climate, and air quality. NIER took part in meetings and contributed research to the Arctic Council’s Expert Group on Black Carbon and Methane. ¹⁷³

KEY ACADEMIC INSTITUTIONS FOR ARCTIC AFFAIRS

In contrast to Japan, South Korean universities do not directly influence the country’s Arctic policy. In general, South Korea’s academic institutions lack adequate funding, human capital, and knowledge to affect the country’s Arctic policy. Three South Korean universities do, however, have committed Arctic research programs – each with a different specialization – that are worth highlighting in a survey of the country’s Arctic actors.

Academic Institutions	Arctic Engagement
Youngsan University Institute	The Institute of Arctic Logistics in Youngsan University specializes in conducting research on the Arctic shipping route and maritime logistics. ¹⁷⁴ The university facilitated the Korean Arctic Partnership Week in Busan in 2021, with an emphasis on the theme of Arctic shipping infrastructure. ¹⁷⁵

¹⁶⁹ Keun Namboong et al., eds., *Public Administration and Policy in Korea* (New York: Routledge, 2018), 238.

¹⁷⁰ Republic of Korea, “Observer Reports 2019-2021,” op. cit.

¹⁷¹ CAFF, “AMBI Steering Group,” <https://www.caff.is/seabirds-cbird/576-caff-webb/caff-is/strategies/arctic-migratory-birds-initiative-ambi>.

¹⁷² Namboong et al., op. cit., 238.

¹⁷³ Republic of Korea, “Observer Reports 2016,” op. cit.

¹⁷⁴ Institute of Arctic Logistics, “Introduction,” <http://arctic.yosu.ac.kr/ial/sub/introduction.php>.

¹⁷⁵ Sungwon Hong, “Seminar Info- Arctic Shipping Infrastructure: Key Issues and Prospects,” *The 10th International Arctic Shipping Seminar*, <http://arcticshippingseminar.kr/en/sub/information.php>.

Academic Institutions	Arctic Engagement
Pai Chai University	Pai Chai University's Korea-Siberia Center conducts research related to Siberia's economy, culture, and ecological environment. ¹⁷⁶ The Center also plays a critical role in bridging the Arctic ties between Korea and Russia. ¹⁷⁷
Hankuk University of Foreign Studies	Hankuk University of Foreign Studies is a private university. ¹⁷⁸ Staff from the university have published research and facilitated conferences relevant to Arctic economic development, diplomatic relations (e.g., Korea-Russia bilateral relations), ¹⁷⁹ and geopolitical issues. ¹⁸⁰

KEY COMMERCIAL ACTORS FOR ARCTIC AFFAIRS

Unlike other non-Arctic states, South Korea's conglomerates (chaebols) have extraordinary influence over the state's economy and politics. As of 2021, South Korea's lucrative shipbuilding and maritime technology development are dominated by the country's "big three" mega-conglomerates: Hyundai, Samsung, and Daewoo.¹⁸¹ These powerful commercial actors have established Arctic commercial ties on LNG development, shipping, and maritime technology development with Arctic state countries, including Norway, the United States, and Russia.

Commercial Actors	Arctic Engagement
Hyundai Glovis Co. Ltd	Hyundai Glovis is a South Korean logistics company specializing in Arctic shipping. Hyundai Glovis carried out the nation's first cargo shipping via the NSR in 2013. ¹⁸² In the same year, Swedish tanker company Stena Bulk also collaborated with Hyundai Glovis to explore the potential of Arctic sea routes. ¹⁸³

¹⁷⁶ Irkutsk State University, "Russia and Korea: a View from Siberia," October 26, 2020, <http://old.isu.ru/en/news/newsitem.html?action=show&id=8565>.

¹⁷⁷ Pai Chai University, "Research Institutes," <http://www.pcu.ac.kr/english/sub03/sub0307.html>.

¹⁷⁸ UniRank, "Hankuk University of Foreign Studies," <https://www.4icu.org/reviews/3014.htm>.

¹⁷⁹ Institute of Russian Studies, "Conferences," http://www.rus.or.kr/en/scholarship/conference_world_his.asp.

¹⁸⁰ Corell et al., op. cit., xiv.

¹⁸¹ Jung-hwan Hwang, "Korea's big 3 shipbuilders aim to hike newbuilding prices," *The Korea Economic Daily*, August 2, 2021, <https://www.kedglobal.com/newsView/ked202108020003>.

¹⁸² Kim and Stenport, op. cit., 20.

¹⁸³ Rob Almeida, "Stena Bulk and Hyundai Glovis to Collaborate in Arctic Shipping," *gCaptain*, September 12, 2013, <https://gcaptain.com/stena-bulk-hyundai-glovis-collaborate/>.

Commercial Actors	Arctic Engagement
<p>Korean Gas Corporation (KOGAS)</p>	<p>KOGAS is a state-run natural gas supplier and a critical global LNG importer.¹⁸⁴ KOGAS has close Arctic engagement with Russia and Canada on resource development. In 2011, KOGAS executives attempted to commercialize Canada’s Arctic gas reserves by building a gas-processing facility in the Northwest Territories.¹⁸⁵ In the same year, KOGAS tried to engage in West Cutbank and Horn River’s mining fuel development in BC.¹⁸⁶ In 2018, KOGAS also expressed interest in participating in Russia’s Novatek Arctic LNG 2 project.¹⁸⁷</p>
<p>Hyundai Heavy Industries (HHI)</p>	<p>HHI is the largest shipbuilding company in the world.¹⁸⁸ HHI has close Arctic engagement with Norway. In particular, the company won a \$1.6B deal in 2010 to construct Arctic vessels for the Goliat Field in the Barents Sea.¹⁸⁹ This contract holds significance as Goliat is Norway’s first offshore oil development project in the Arctic region.¹⁹⁰</p>
<p>Samsung Heavy Industries (SHI)</p>	<p>SHI is one of the “big three” shipbuilders in South Korea. SHI specializes in the construction of icebreakers, shuttle tankers, and LNG carriers.¹⁹¹ SHI recently secured a \$2.6B contract to assist the Russian Zvezda Shipyard construct LNG carriers for Russia’s Arctic LNG 2 project.¹⁹² Based on the contract, Russia ordered seven icebreaking shuttle tankers and six icebreaking LNG carriers from SHI.¹⁹³</p>

¹⁸⁴ Jessica Jaganathan, “UPDATE 1-South Korea’s KOGAS asks for LNG cargo delays as demand tanks – sources,” *Reuters*, April 8, 2020, <https://www.reuters.com/article/southkorea-lng-imports-idUSL4N2BW2N1>.

¹⁸⁵ Mia Bennett, “South Korea’s growing role in Arctic economic development,” *Cryopolitics*, April 20, 2011, <https://www.cryopolitics.com/2011/04/20/south-koreas-growing-role-in-arctic-economic-development/>.

¹⁸⁶ Young Kil Park, op. cit., 3.

¹⁸⁷ Bne IntelliNews, “Novatek Closes Arctic LNG-2 Deal with Chinese and Japanese Investors,” *The Moscow Times*, July 23, 2019, <https://www.themoscowtimes.com/2019/07/23/novatek-closes-arctic-lng-2-deal-with-chinese-and-japanese-investors-a66531>.

¹⁸⁸ “Hyundai Heavy Industries,” *The Journal of Commerce Online*, <https://www.joc.com/maritime-news/ships-shipbuilding/hyundai-heavy-industries>.

¹⁸⁹ “Hyundai Heavy picked for \$1.16 billion Goliat vessel,” *Business Recorder*, February 9, 2010, <https://www.brecorder.com/news/3729052/hyundai-heavy-picked-for-116-billion-goliat-vessel-201002091018785>.

¹⁹⁰ “First Subsea completes work on Norway’s first Barents Sea FPSO,” *Offshore Energy*, August 11, 2015, <https://www.offshore-energy.biz/first-subsea-completes-work-on-norways-first-barents-sea-fpso/>.

¹⁹¹ Samsung Heavy Industries, “Overview,” March 19, 2021, https://www.samsungshi.com/eng/company/info_overview.aspx.

¹⁹² Gwang-Sup Song and Soo-min Lee, “Samsung Heavy eyes another \$2.6 bn mega-order in Russia’s Arctic LNG2 project,” *Pulse*, September 24, 2021, <https://m.pulsenews.co.kr/view.php?year=2021&no=881464>.

¹⁹³ *Ibid.*

Commercial Actors	Arctic Engagement
Daewoo Shipbuilding & Marine Engineering (DSME)	DSME is one of the “big three” shipbuilders in South Korea. DSME was a pioneer in designing an Arc7 ice-class gas carrier for LNG transport in the NSR. ¹⁹⁴ Like SHI, DSME also has close Arctic engagement with Russia, particularly with Sovcomflot, the state’s largest shipping company. In 2013, Sovcomflot and DSME signed an MoU to enhance shipbuilding capacities and infrastructure in the southern part of Primorsky Krai, Russia. ¹⁹⁵ In 2016, the two companies further enhanced their co-operation through the joint construction of the Zvezda Shipyard. ¹⁹⁶

China

China’s Arctic Priorities

China stands apart from other non-Arctic states due to its self-proclaimed identification as a “near-Arctic state” and its disproportionate allocation of national resources to Arctic exploration, exploitation, research, and development.¹⁹⁷ Having identified the development of a Polar Silk Road as a foreign policy priority in a 2018 white paper on the Arctic, China’s Arctic priorities are scientific research, Arctic governance, economic development, and the development of a polar shipping route.¹⁹⁸ Notably, China has mobilized national resources to achieve engagement on each of its priority areas to good effect. Indeed, Beijing is now arguably one of the Arctic’s most influential actors and is well positioned to expand its influence even further in the short to medium term.¹⁹⁹

China has leveraged its interest in and support of science research in the Arctic to participate in and to establish new communities of interest in which it plays a central role. As early as 1996, for instance, China joined the International Arctic Science Committee – an Arctic

¹⁹⁴ Krasnozhenova et al., op. cit., 4.

¹⁹⁵ “Russians and DSME sign yard MOU,” *Offshore Engineering*, November 15, 2013, <https://www.oedigital.com/news/457235-russians-and-dsme-sign-yard-mou>.

¹⁹⁶ “Construction of Zvezda Shipbuilding Complex,” *Far Eastern Shipbuilding and Shiprepair Center*, <http://dcss.ru/en/projects/construction-of-zvezda-shipbuilding-complex/>.

¹⁹⁷ Corell et al., op. cit., 245.

¹⁹⁸ *Ibid.*, 146.

¹⁹⁹ Lassi Heininen et al., *Arctic Policies and Strategies – Analysis, Synthesis, and Trends* (Austria: International Institute for Applied System Analysis, 2020): 219.

Council-related non-government agency – and as a result established diplomatic ties with all eight Arctic states before becoming an official non-Arctic member of the Council in 2013.²⁰⁰ Similarly, in 2004 and 2005, China established the Arctic Yellow River Station in Ny-Ålesund, Spitsbergen, Norway, and initiated the State Oceanic Administration-led Pacific Arctic Group within the Arctic Science Summit Week to enhance scientific collaboration in the Indo-Pacific region.²⁰¹ Beijing has also used its icebreaker, the *Xue Long*, to foster research collaboration in the Arctic and to strengthen its own research architecture in the region. Since 1984, China has sent the icebreaker (the world’s largest) on more than 20 Arctic expeditions, many of which were joint operations.²⁰²

China has leveraged its scientific research ties to further advance its role in establishing and maintaining Arctic governance. Indeed, Beijing has prioritized the maintenance and development of Arctic governance in its overall policy approach to the region. To this end, China primarily works to enforce the Arctic region’s existing governance institutions in line with the Charter of the United Nations, the Spitsbergen Treaty, the Paris Agreement, and the United Nations Convention on the Law of the Sea (UNCLOS). In addition to consolidating these existing international agreements, China also aims to project its presence through leading climate science-related projects in the Arctic.

In parallel, Beijing is working to expand China’s economic footprint in the Arctic, particularly with respect to the region’s research development. Chinese state-owned shipping, mining, and energy companies have funded infrastructure construction and resource development projects in various Arctic states, while Chinese companies have both made and attempted to make investments in Canadian, Alaskan, and Norwegian oil and gas sectors. China is particularly involved in economic co-operation with Russia and Denmark, having invested heavily in Russia’s Arctic LNG 2 and Northern Greenland’s Citronen Zinc-Lead projects.²⁰³

As with both Japan and South Korea, however, China’s Arctic “Holy Grail” is unquestionably the development of an all-season Arctic shipping route – one that could significantly reduce transport times between China and Europe while reducing China’s reliance on Indo-Pacific sea lanes of communication for its trade and energy needs. To meet this strategic objective, China is particularly focused on the commercialization and development of Russia’s NSR,

²⁰⁰ Linda Jakobson and Jingchao Peng, “China’s Arctic Aspirations,” *Stockholm International Peace Research Institute* no.34 (November 2012): 10.

²⁰¹ Heinen et al., op. cit., 223; Jakobson and Peng, op. cit., 10.

²⁰² Myron H. Nordquist and Ronánn Long, *Marine Biodiversity of Areas Beyond National Jurisdiction* (Leiden: Brill, 2021): 314.

²⁰³ Corell et al., op. cit., 248; Patrik Stig Andersson et al., “Chinese Mining in Greenland: Arctic Access or Access to Minerals?” *The Arctic Yearbook*, October 15, 2018, https://arcticyearbook.com/images/yearbook/2018/China-and-the-Arctic/7_AY2018_Andersson.pdf.

through which China can link its northern ports to Europe, thereby minimizing transit time, lowering shipping costs, and neutralizing non-traditional security threats, such as piracy.²⁰⁴ Indeed, while all-season use of the NSR remains uneconomical at the time of writing, the Chinese state-owned offshore shipping company COSCO has periodically used the route since 2013.²⁰⁵ To ensure COSCO's ability to transit throughout the NSR, Beijing routinely cites the UNCLOS provisions around freedom of navigation in coastal states' exclusive economic zones – a reading of international maritime law that contradicts its own stated policies in the South China Sea.

China's Multidirectional Approach to Arctic Engagement

While China is clearly an ambitious Arctic actor, it remains relatively circumspect in its approach to Arctic relations, seeking partnership for engagement, for instance, rather than undertaking unilateral action within the region. Within its bilateral relations, Russia is arguably China's most important partner, although Beijing has also established extensive relations with the Nordic states and trilateral relations with South Korea and Japan.

China engages with Russia across multidisciplinary fields, including infrastructure development, energy projects, NSR shipping, tourism, and scientific research. Highlights in Sino-Russo Arctic co-operation relations include the 2013 Yamal LNG project, the 2018 Polar Silk Road project, and the 2019 Arctic LNG 2 project.²⁰⁶ Beijing and Moscow have also launched an Arctic research program between the Chinese Pilot National Laboratory for Marine Science and Technology and the Shirshov Institute of Oceanology of the Russian Academy of Sciences,



It Takes a Village: A general view of the port of Sabetta on the Kara Sea shore line on the Yamal Peninsula in the Arctic Circle in a photograph taken on April 16, 2015. The Yamal LNG project at the nearby Yuzhno-Tambeyskoye gas field is a joint Russia, France, China venture. | Photo: Kirill Kudryavtsev/AFP via Getty Images

²⁰⁴ Corell et al., op. cit., 12.

²⁰⁵ Jakobson and Peng, op. cit., 7; Corell et al., op. cit., 23.

²⁰⁶ Yun Sun, "The Intricacy of China's Arctic Policy," *Stimson*, August 27, 2018, 4, <http://stimson.org/wp-content/files/file-attachments/Stimson%20-%20The%20Intricacy%20of%20China's%20Arctic%20Policy%20-%20Yun%20Sun.pdf>; Corell et al., op. cit., 248.

two of China's and Russia's most prestigious maritime research institutions.²⁰⁷ With China's increasing reliance on Russia to ensure its access to the NSR, and with the two states' shared view of the United States as an aggressor state, China and Russia's Arctic ties will likely strengthen in the foreseeable future and could potentially serve as an important counter-point to Trans-Atlantic dominance in the Arctic.

In addition to Russia, China has also deepened its collaboration with the Nordic countries, particularly on joint Arctic resource development and scientific research. China works closely with Finland, for example, on scientific co-operation in Arctic marine industry and geology research, and on construction of China's icebreaker, the *Xue Long 2*.²⁰⁸ In further demonstration of Sino-Finnish ties, Beijing and Helsinki established a joint research centre for Arctic space observation in Sodankylä, Lapland, in 2018.²⁰⁹ China has similarly developed a substantive resource development collaboration with Greenland to explore mining, metals, and minerals.²¹⁰ And in 2018, China opened the joint Aurora Observatory with Iceland, furthering a bilateral relationship with Reykjavík that is heavily research-based.²¹¹

Within Asia, as noted above, China's Arctic diplomacy rests primarily on trilateralism with South Korea and Japan, within which Beijing has taken the lead to facilitate the Pacific Arctic Group and the Arctic Science Summit Week.²¹² In a similar proactive manner, China also hosted the Third Trilateral High-Level Dialogue on the Arctic in Shanghai on June 8, 2018.²¹³ Within this broader trilateral framework, Beijing prioritizes its bilateral ties with South Korea – going so far as to sign the distinctly bilateral MoU on Polar Science and Technology Cooperation in 2008.²¹⁴ Despite their shared interests in Arctic economic, resource, and governance development, China remains fundamentally wary of Japan as an Arctic partner, understanding that Tokyo's security alliance with the United States makes it biased against Chinese interests in the region.²¹⁵

²⁰⁷ Nordquist and Long, op. cit., 325.

²⁰⁸ Malte Humpert, "China reveals details of a newly designed heavy icebreaker," *Arctic Today*, December 17, 2019, <https://www.arctictoday.com/china-reveals-details-of-a-newly-designed-heavy-icebreaker/>.

²⁰⁹ Nordquist and Long, op. cit., 324.

²¹⁰ Sun, op. cit., 11.

²¹¹ Heininen et al., op. cit., 221; Nordquist and Long, op. cit., 324.

²¹² Jakobson and Peng, op. cit., 10.

²¹³ Corell et al., op. cit., 355.

²¹⁴ Reinhard Biedermann, "The Polar Silk Road: China's Multilevel Arctic Strategy to Globalize the Far North," *Contemporary Chinese Political Economy and Strategic Relations: An International Journal* 6, no.2 (September 2020): 603.

²¹⁵ Gabriel Dominguez and Kosuke Takahashi, "Chinese, Russian Navies Conclude First Joint Patrols in Western Pacific," *Janes*, October 27, 2021, <https://www.janes.com/defence-news/news-detail/chinese-russian-navies-conclude-first-joint-patrols-in-western-pacific>.

In addition to its bilateral ties, China works with intergovernmental organizations and forums, including the International Arctic Science Committee, the International Maritime Organization, UArctic, and the Arctic Council, to address issues within the region’s commons, such as climate change and ecology preservation. China is particularly involved with the Arctic Council, contributing to its working groups, task forces, and expert groups. Specifically, Chinese Arctic experts have contributed to working groups and programs such as the Arctic Contaminants Action Program, Arctic Monitoring and Assessment Programme, CAFF, EPPR, PAME, SDWG, and the SOA-based Marine Mechanism.²¹⁶

China’s Arctic Actors

KEY GOVERNMENTAL ACTORS FOR ARCTIC AFFAIRS

China has a large, complicated, and decentralized bureaucratic ecosystem for its Arctic affairs. Indeed, while the State Council provides funding for China’s polar activities, at present more than 15 governmental agencies and China’s People’s Liberation Army work independently and collaboratively to fulfil the country’s centralized foreign policy agenda.²¹⁷

Governmental Actors	Responsibility and Engagement in Arctic Affairs
<p>The State Oceanic Administration (SOA)</p>	<p>The SOA is a second-tier agency that reports directly to the Ministry of Land and Resources.²¹⁸ SOA used to be the primary governmental agency that led China’s Arctic affairs. However, the administration was eliminated in 2018 and was later integrated into the portfolio of the Ministry of Natural Resources.²¹⁹ The SOA heads the Chinese Advisory Committee for Polar Research, which consists of experts from 13 Chinese ministries to co-ordinate on Arctic affairs.²²⁰</p> <p>SOA previously covered China’s maritime activities, which consisted of shaping the nation’s ocean-related policy and contributing to the formation of international polar maritime regulations.²²¹ On the side, SOA also funded polar research projects related to Arctic climate, geology, minerology, and maritime ecology.²²²</p>

²¹⁶ The People’s Republic of China, “Observer Report 2020,” *Arctic Council*, June 2021, https://oaarchive.arctic-council.org/bitstream/handle/11374/2717/SAOXIS2_Arctic-Council-Observer-REPORT-2019-2021_CHINA.pdf?sequence=1&isAllowed=y.

²¹⁷ *Ibid.*, 1.

²¹⁸ Jakobson and Lee, *op. cit.*, 5.

²¹⁹ Sun, *op. cit.*, 6.

²²⁰ Jakobson and Peng, *op. cit.*, 3.

²²¹ Jakobson and Lee, *op. cit.*, 5.

²²² “Co-operation in Arctic Science,” *op. cit.*, 92.

Governmental Actors	Responsibility and Engagement in Arctic Affairs
<p>Chinese Arctic and Antarctic Administration (CAAA)</p>	<p>CAAA is a Director-General level agency under the SOA.²²³ The Administration is in charge of forming the nation’s polar policy and strategic blueprint.²²⁴ At the same time, it is also responsible for managing the state’s key polar affairs and Arctic expeditions.²²⁵ Currently, the CAAA is the most involved and authoritative Chinese agency in charge of Arctic affairs.</p> <p>Despite upholding a wide range of Arctic responsibilities, CAAA only employs approximately 40 staff members.²²⁶ The administration consists of six divisions: (1) The General Affairs Division; (2) The Policy Planning Division; (3) The Expedition Affairs Division; (4) The Science and Technology Development Division; (5) The International Affairs Division; and (6) The Human Resources Division.²²⁷ In particular, the International Affairs Division is in charge of facilitating China’s bilateral and multilateral co-operation on Arctic affairs.²²⁸</p>
<p>China Maritime Surveillance (CMS)</p>	<p>CMS serves as SOA’s maritime law enforcement agency.²²⁹ CMS’s responsibilities include conducting maritime patrol around disputed waters surrounding China.²³⁰</p>
<p>National Development and Reform Commission (NDRC)</p>	<p>NDRC focuses on the economic aspects of China’s Arctic affairs. The commission has contributed to shaping the nation’s Arctic policy related to shipping, resource development, and tourism.²³¹</p>
<p>The Ministry of Transport (MOT)</p>	<p>MOT is responsible for enhancing China’s policy and capacity related to Arctic shipping routes, maritime communication, and polar commercial trades.²³² The ministry also regulates China’s domestic and international shipping industry, while administering the nation’s shipping routes and ports.²³³</p>

²²³ Sun, op. cit., 5.

²²⁴ Ibid.

²²⁵ Ibid.

²²⁶ Jakobson and Peng, op. cit., 3.

²²⁷ Sun, op. cit., 5-6.

²²⁸ Ibid., 6.

²²⁹ Jakobson and Peng, op. cit., 3.

²³⁰ Ibid.

²³¹ Sun, op. cit., 9.

²³² Ibid., 10.

²³³ Jakobson and Lee, op. cit., 6.

Governmental Actors	Responsibility and Engagement in Arctic Affairs
<p>The Ministry of Science and Technology (MOST)</p>	<p>MOST is a second-tier State Council agency²³⁴ that facilitates China’s Arctic agenda using science diplomacy. MOST focuses on enhancing the nation’s Arctic science, research, and technology infrastructure.²³⁵ The ministry specifically provides financial funds for Arctic research related to Arctic satellites, climate change, a maritime ice-atmospheric study, and a polar data-sharing system.²³⁶</p>
<p>The Ministry of Environmental Protection (MEP)</p>	<p>MEP enhances China’s Arctic collaboration with foreign countries in the fields of climate change and environmental protection.²³⁷ In 2017, MEP specifically drafted the “Belt and Road Ecological and Environmental Cooperation Plan” to highlight the eco-friendly aspects of China’s Maritime Belt and Road Initiative.²³⁸</p>
<p>The Ministry of Foreign Affairs (MFA)</p>	<p>MFA focuses on the diplomatic and political aspect of the nation’s Arctic matters. MFA advocates for China’s Arctic interests in bilateral, multilateral, and intergovernmental platforms.²³⁹ The ministry’s Department of Treaty and Law also prepares the nation’s official statements on the Arctic and coordinates China’s representatives at Arctic Council ministerial meetings.²⁴⁰</p>
<p>Ministry of Industry and Information Technology (MIIT)</p>	<p>MIIT is involved in polar telecommunications and satellite projects.²⁴¹ In 2017, MIIT engaged with Arctic stakeholders from Russia, Finland, Norway, and Japan to construct a fibre-optic cable link project across the Arctic Circle.²⁴²</p>

²³⁴ Jakobson and Peng, op. cit., 4.

²³⁵ Sun, op. cit., 8.

²³⁶ “Co-operation in Arctic Science,” op. cit., 92.

²³⁷ Jakobson and Peng, op. cit., 4.

²³⁸ Ministry of Ecology and Environment of the People’s Republic of China, *The Belt and Road Ecological and Environmental Cooperation Plan*, June 28, 2017.

²³⁹ Sun, op. cit., 9.

²⁴⁰ Jakobson and Peng, op. cit., 4.

²⁴¹ Sun, op. cit., 8.

²⁴² Zhenqi Xie, “China’s 10,000-km fiber cable to reach the warming Arctic,” *CGTV*, December 14, 2017, <https://news.cgtn.com/news/7949444d32637a6333566d54/index.html>.

Governmental Actors	Responsibility and Engagement in Arctic Affairs
Chinese Meteorological Administration (CMA)	CMA monitors Arctic climate and meteorological changes. ²⁴³ In 2021, the administration funded the development of FengYun-3, China's latest polar-orbiting meteorological satellite. ²⁴⁴
State Bureau of Mapping and Surveying	The State Bureau of Mapping and Surveying focuses on polar mapping. ²⁴⁵ In 2019, the Bureau facilitated the state's BeiDou satellite navigation system, which advanced China's shipping navigation capacity for both commercial and military purposes. ²⁴⁶
People's Liberation Army (PLA)	PLA addresses geo-security threats in the polar shipping routes. ²⁴⁷
Ministry of Finance (MOF)	The MOF is in charge of the budgetary and administration aspects of polar issues. As a ministry-level entity, the National Development and Reform Commission specifically approves funding for construction of the state's Arctic icebreakers and facilities. ²⁴⁸
Ministry of Education (MOE)	The MOE funds and promotes inter-university research on Arctic issues related to ecology, oceanography, geology, glaciology, climatology, engineering technology, and socio-politics. ²⁴⁹
Ministry of Agriculture (MOA)	MOA promotes China's presence in Arctic fishing affairs. ²⁵⁰

²⁴³ "Atmospher Sci & Global Chg Research Highlights," *Pacific Northwest National Laboratory*, October 2013, <https://www.pnnl.gov/science/highlights/highlight.asp?id=1498>.

²⁴⁴ "FY-3 (FengYun-3) 2nd Generation Polar Orbiting Meteorological Satellite Series," *Sharing Earth Observation Resources*, <https://directory.eoportal.org/web/eoportal/satellite-missions/content/-/article/fy-3>.

²⁴⁵ Sun, op. cit., 9.

²⁴⁶ Anne-Marie Brady, *China as a Rising Polar Power: What it Means for Canada*, *True North in Canadian Public Policy*, (December 2019): 5.

²⁴⁷ Sun, op. cit., 9.

²⁴⁸ Jakobson and Lee, op. cit., 6.

²⁴⁹ "Co-operation in Arctic Science," op. cit., 92.

²⁵⁰ Sun, op. cit., 10.

Governmental Actors	Responsibility and Engagement in Arctic Affairs
<p>Ministry of Commerce (MOC)</p>	<p>MOC focuses on fostering China’s commercial partnership in the Arctic. The ministry facilitated the state’s recent Arctic collaboration with the Russian Ministry of Economic Development on the joint development of shipping routes, resources, tourism, and infrastructure in the High North.²⁵¹</p>

KEY RESEARCH INSTITUTIONS FOR ARCTIC AFFAIRS

China’s primary Arctic research institutions are affiliated with and fund-dependent on different Chinese ministries. They are, as a result, less open to research sharing and collaboration than their non-Arctic Asian states’ counterparts. Opportunity for Track 1.5 or Track 2 engagement with China’s Arctic research institutions is currently limited. Indeed, much of China’s non-academic research collaboration takes place at the Track 1, or official government level.

Research Institutions	Responsibility and Engagement in Arctic Affairs
<p>Polar Research Institute of China (PRIC)</p>	<p>PRIC serves as China’s principal research institution and consists of over 120 employees.²⁵² The institution is responsible for conducting the state’s scientific research and polar expeditions.²⁵³ In addition, PRIC also manages China’s Yellow River Station in the Arctic and functions as an information centre for the state’s research in the High North.²⁵⁴ Furthermore, the country’s polar research vessel, <i>Xue Long</i>, falls under the responsibility of PRIC.²⁵⁵</p>

²⁵¹ Ibid., 10.

²⁵² Jakobson and Peng, op. cit., 5.

²⁵³ Sun, op. cit., 7.

²⁵⁴ Ibid.

²⁵⁵ Lawson Brigham, “China’s Polar Ships and Future Operations,” *The Arctic Yearbook*, 2018, <https://arcticyearbook.com/arctic-yearbook/2018/2018-commentaries/294-china-s-polar-ships-and-future-operations>.

Research Institutions	Responsibility and Engagement in Arctic Affairs
<p>Shanghai Institute of International Studies (SIIS)</p>	<p>SIIS has actively published numerous Arctic-focused research on Chinese Arctic and maritime policies. In 2011, the institute also established the Center for Maritime and Polar Studies.²⁵⁶ The institute promotes China’s academic Arctic engagement with different Arctic states. It also has an active presence in multilateral forums, such as the Arctic Circle Forum.²⁵⁷ The vice-president of SIIS, Yang Jian, specializes in Arctic governance and China’s regional strategy in polar affairs.²⁵⁸</p>
<p>The China Institute for Marine Affairs (CIMA)</p>	<p>CIMA functions as an internal research centre of SOA.²⁵⁹ The institute specializes in the legal aspects of China’s maritime policy legislation and economic interests in the Arctic.²⁶⁰</p>
<p>The Chinese Academy of Science (CAS)</p>	<p>CAS is China’s leading academic research institution that specializes in topics such as remote sensing satellites, atmospheric science, and ice coverage forecasting.²⁶¹ In particular, the Institute of Aerophysics, the Institute of Geographic Sciences and Natural Resources, and the Institute of Oceanology have conducted research relevant to the Arctic environment and climate.²⁶²</p>
<p>China-Nordic Arctic Research Center (CNARC)</p>	<p>CNARC was established in 2013 under the joint effort of four Chinese and six Nordic institutions.²⁶³ CNARC’s primary aim is to facilitate Arctic engagement between China and the Nordic states. It has conducted Arctic research ranging from resource development, shipping, economic co-operation, and Arctic governance.²⁶⁴ An annual Arctic symposium is further conducted by CNARC to enhance the collaboration between China and the Nordic states.²⁶⁵</p>

²⁵⁶ China-Nordic Arctic Research Center, “Shanghai Institutes for International Studies,” <https://www.cnarc.info/members/18-shanghai-institutes-for-international-studies>.

²⁵⁷ UArctic, “Arctic Circle Forum in China in May 2019,” January 14, 2019, <https://www.uarctic.org/news/2019/1/arctic-circle-forum-in-china-in-may-2019/>.

²⁵⁸ Arctic Frontiers, “Yang Jian,” <https://www.arcticfrontiers.com/speaker/yang-jian/>.

²⁵⁹ Jakobson and Peng, op. cit., 5.

²⁶⁰ Ibid.

²⁶¹ Sun, op. cit., 8.

²⁶² Jakobson and Peng, op. cit., 6.

²⁶³ Corell et al., op. cit., 254.

²⁶⁴ Nordquist and Long, op. cit., 326.

²⁶⁵ China-Nordic Arctic Research Center, “Symposia,” <https://www.cnarc.info/symposia>.

KEY ACADEMIC INSTITUTIONS FOR ARCTIC AFFAIRS

As with China’s Arctic research institutions, the country’s academic institutions rely heavily on government funding and are, accordingly, less open to international collaboration than their Asian or Trans-Atlantic counterparts. That said, a few Chinese universities – particularly those located in China’s coastal or port cities, such as Dalian and Heilongjiang – do engage globally on Arctic research, albeit selectively. Notably, Shanghai-based universities such as Fudan University, Tongji University, and Shanghai University of Political Science and Law have become China’s leading institutions on international Arctic research engagement in recent years.

Academic Institutions	Arctic Engagement
Ocean University of China (OUC)	OUC focuses on research related to Arctic oceanography and fisheries. ²⁶⁶ In 2010, the university’s school of Law and Political Science further founded the Research Institute of Polar Law and Politics. ²⁶⁷ To enhance the institution’s Arctic research, the university also hosted the nation’s leading Arctic experts, including Liu Huirong, and Guo Peiqing. ²⁶⁸
Dalian Maritime University	Dalian Maritime University conducted research related to Arctic shipping and logistics. ²⁶⁹ The university’s Shipping Development Academy also established the Arctic Shipping Affairs Research Center in 2010. ²⁷⁰
Tongji University (The International Polar and Maritime Studies Center)	Various academics from Tongji University are engaged in the Arctic Council’s working groups, including EPPR, PAME, and SDWG. ²⁷¹

KEY COMMERCIAL ACTORS FOR ARCTIC AFFAIRS

China’s state-owned enterprises and state-affiliated companies are central actors in the country’s Arctic affairs, particularly with respect to the Polar Silk Road’s development. COSCO, for instance, plays a critical role in China’s Arctic LNG transport and shipbuilding and ensures the state’s navigation security and logistical capacity in Arctic shipping. The China National

²⁶⁶ Jakobson and Peng, *op. cit.*, 6.

²⁶⁷ *Ibid.*

²⁶⁸ *Ibid.*

²⁶⁹ *Ibid.*

²⁷⁰ *Ibid.*

²⁷¹ The People’s Republic of China, *op. cit.*

Petroleum Corporation and the China National Offshore Oil Corporation also work to secure Chinese interests related to natural resource exploration and energy security in the Arctic, often working with Russian firms in the process.

Commercial Actors	Arctic Engagement
<p>Hunchun Chuangli Haiyun Logistics Company</p>	<p>In 2008, Hunchun Chuangli Haiyun Logistics Company leased North Korea’s Rajin Port for 10 years.²⁷² At the time, Rajin Port was deemed as a potential Arctic hub, while the lease also granted China access to the Sea of Japan for the first time since 1938.²⁷³ In 2011, the company’s parent company, Dalian Chuangli Group, extended the lease for Rajin Port for 50 years.²⁷⁴ This leasing agreement is considered to be one of China’s most significant Arctic shipping development.</p>
<p>China National Petroleum Corporation (CNPC)</p>	<p>CNPC is the country’s first state-owned resource company to enter the Arctic energy equity market.²⁷⁵ In the past decade, CNPC fostered close Arctic energy co-operation with Russia. In 2010, CNPC secured agreements with Russia’s Sovcomflot Group on the transportation of hydrocarbons.²⁷⁶ In 2013, CNPC further purchased a 20 percent stock in Russia’s Novatek Yamal LNG project.²⁷⁷ Currently, CNPC is also involved in Russia’s latest Arctic LNG 2 project.²⁷⁸</p>
<p>China Ocean Shipping Company (COSCO)</p>	<p>COSCO is the nation’s leading shipping company and has been actively running transit voyages in the NSR.²⁷⁹ To enhance its Arctic shipping capacity, the company purchased three ice-class, multi-purpose cargo ships in 2018.²⁸⁰ In the same year, COSCO completed eight transit voyages through the NSR.²⁸¹</p>

²⁷² Jakobson and Peng, op. cit., 7-8.

²⁷³ Ibid.

²⁷⁴ Ibid.

²⁷⁵ Sun, op. cit., 10.

²⁷⁶ Jakobson and Peng, op. cit., 9.

²⁷⁷ Sun, op. cit., 10.

²⁷⁸ Malte Humpert, “China Acquires 20 Percent Stake in Novatek’s Latest Arctic LNG Project,” *High North News*, April 29, 2019, <https://www.highnorthnews.com/en/china-acquires-20-percent-stake-novateks-latest-arctic-lng-project>.

²⁷⁹ Corell et al., op. cit., 248.

²⁸⁰ Sun, op. cit., 13.

²⁸¹ Corell et al., op. cit., 248.

Commercial Actors	Arctic Engagement
<p>China National Oil and Gas Exploration and Development Company Limited (CNOCD)</p>	<p>CNOCD is a subsidiary of CNPC.²⁸² The company also has an interest in Russia’s Arctic LNG 2 project.²⁸³</p>
<p>China National Offshore Oil Corporation (CNOOC)</p>	<p>CNOOC acquired a 10 percent participation interest in Russia’s Arctic LNG 2 project.²⁸⁴ The company also previously secured a US\$1.5B deal for the Yamal LNG project.²⁸⁵ The company’s oilfield service subsidiary, China Oilfield Services Limited, has conducted drilling, geophysical survey, and marine support projects in the Arctic.²⁸⁶</p>
<p>China Poly Group Corporation</p>	<p>China Poly Group is a state-owned company²⁸⁷ that facilitates infrastructure development projects that enhance Arctic connectivity. In particular, the company signed a railway construction project with Russia’s Interregional JSC Belkomur to link Central Russia to Arkhangelsk, in the Arctic.²⁸⁸ The company also invested in Russia’s Murmansk, a transportation project within the Arctic Circle.²⁸⁹</p>
<p>China Petroleum & Chemical Corporation (Sinopec)</p>	<p>Sinopec partakes in Arctic LNG development projects. The company had previously tried to secure an Arctic LNG deal with an Alaskan company under Trump’s administration.²⁹⁰ The company also participated in Russia’s Yamal LNG project.²⁹¹</p>
<p>Jiangxi Zhongrun Mining</p>	<p>Jingxi Zhongrun Mining focuses on mining exploration for gold, copper, and metals in southern Greenland and northwestern Svalbard, Norway.²⁹²</p>

²⁸² Ibid.

²⁸³ Ibid.

²⁸⁴ Ibid., 247.

²⁸⁵ Sun, op. cit., 11.

²⁸⁶ Ibid.

²⁸⁷ Corell et al., op. cit., 247.

²⁸⁸ Ibid.

²⁸⁹ Ibid.

²⁹⁰ Sun, op. cit., 11.

²⁹¹ Ibid.

²⁹² Ibid.

Commercial Actors	Arctic Engagement
Guangzhou Shipyard International	China's Guangzhou Shipyard International built <i>Audax</i> and <i>Pugnax</i> , two polar-class, heavy lifting deck carriers for the Yamal LNG Project in 2016. ²⁹³
Jiangnan Shipyard	The company was contracted by the Chinese government to build the nation's second polar research vessel, <i>Xue Long 2</i> , in 2019. ²⁹⁴

Singapore

Singapore's Arctic Priorities

Since gaining its observer status in 2013, Singapore has been a proactive contributor to the Arctic Council through dialogue, in workshops, and in international forums, despite not having a fully articulated Arctic policy as of 2022. Aware that its legitimacy as an Arctic actor rests on its contributions to shared regional challenges – not on its geographic proximity and/or material capacity – Singapore has specifically worked through the Council to address climate change, to promote Arctic governance, and to pursue opportunities for sustainable development.²⁹⁵

First among Singapore's Arctic priorities is climate change, as the state is particularly vulnerable to rising sea levels resulting from Arctic melting.²⁹⁶ Indeed, while the state lacks a comprehensive Arctic plan, Singapore does view glacial melting as a risk input to its domestic flood planning – one that the state's leadership considered when investing \$100B in flood prevention in 2020.²⁹⁷ From Singapore's perspective, then, working to mitigate climate change in the Arctic is both a critical means to deepen its role in Arctic affairs and a necessary

²⁹³ Ibid., 13.

²⁹⁴ Ibid.

²⁹⁵ The Straits Times, "Full speech: Five core principles of Singapore's foreign policy," July 17, 2017, <https://www.straitstimes.com/singapore/five-core-principles-of-singapores-foreign-policy>.

²⁹⁶ Ian Storey, "The Arctic Novice: Singapore and the High North," *Asia Policy* 18, (July 2014): 66.

²⁹⁷ Desmond Ng, "Why Singapore is heating up twice as fast as the rest of the world," *CNA*, January 13, 2019, <https://www.channelnewsasia.com/cnainsider/singapore-hot-weather-urban-heat-effect-temperature-humidity-906231>; Robin Hicks, "How will low-lying Singapore's built environment survive rising seas?," *Eco-business*, September 30, 2019, <https://www.eco-business.com/news/how-will-low-lying-singapores-built-environment-survive-rising-seas/>.

proactive measure to ensure the country's long-term climate security, particularly with respect to rising sea levels.

As a maritime-dependent nation, Singapore also views Arctic governance, maritime law, and maritime security as central to its national interests, understanding that any legal or regulatory developments within the region could reverberate back to Asia. Singapore's leadership is particularly interested in understanding how Arctic states like Canada, Russia, and China apply UNCLOS to the Arctic's maritime domain as any deviation to its application could have far-reaching effects for the state's security in

the South China Sea. Similarly, Singapore is determined to maintain involvement in the NSR's development as an all-season route through the Arctic between East Asia and Europe. This would have a significant impact on the state's economic viability and political status as one of the most – if not the most – important port states in the Indo-Pacific.²⁹⁸ Indeed, Singaporean firms look at the NSR's development as a commercial opportunity for shipbuilding, ship reporting, oil rig construction, renewable energy development, and offshore engineering, as well as a potential challenge to the country's maritime port industry.²⁹⁹

Singapore's Multidirectional Approach to Arctic Engagement

While Singapore enjoys stable bilateral relations with all Arctic countries, its ties with Russia are noteworthy for their mutual benefit and their breadth and depth. Whereas Moscow needs Singapore's expertise in maritime technology, drilling platform construction, and offshore operations, Singapore requires Russia's help to leverage its maritime technologies' production and to track NSR developments closely. Diplomatically, Singapore remains one of the few



Missile Defence: A serviceman stands near a Russian Bastion mobile coastal defence missile system on the island of Alexandra Land, part of the Franz Josef Land archipelago in the Arctic Circle, on May 17, 2021. | Photo: Maxime Popov/AFP via Getty Images

²⁹⁸ Julian Turner, "Destination Singapore: behind the rise of the world's top shipping centre," *Ship-Technology*, October 24, 2019, <https://www.ship-technology.com/features/why-is-singapore-port-so-successful/>; Keppel, "Keppel FELS Completes Two Jack Up Rigs for Transocean," *Offshore Energy*, February 4, 2013, <https://www.offshore-energy.biz/keppel-fels-completes-two-jack-up-rigs-for-transocean/>.

²⁹⁹ *Ibid.*, 69.

developed nations that has not imposed sanctions on Russia and the two states' Ministries of Foreign Affairs maintain regular communication to co-ordinate their Arctic collaboration.³⁰⁰

In addition, Singapore maintains close Arctic partnership with Norway on education, research, and development, with the National University of Singapore and the University of Tromsø having signed a 2017 MoU on co-hosting Arctic seminars.³⁰¹ Diplomatically, Singapore's Minister of State for Foreign Affairs joined the 13th Arctic Frontiers Conference in Tromsø, Norway, in 2019, and in 2020 the two states agreed to establish more than 30 agreements at the inter-university and research institution levels to enable closer research and dialogue on maritime, climate, technological, and sustainable development issues in the Arctic.³⁰²

Multilaterally, Singapore works with the Arctic Council's working groups on CAFF, PAME, and EPPR on implementation, monitoring, and enforcement.³⁰³ For example, Singapore's National Parks Board closely monitors the issue of Arctic migratory birds for CAFF, helps mitigate oil spills for PAME, and co-ordinates Arctic search and rescue services for the EPPR.³⁰⁴ Singapore also works closely with the International Maritime Organization on maritime law, international maritime policy, and facilitating maritime co-operation in the Arctic.³⁰⁵

Singapore's Arctic Actors

KEY GOVERNMENTAL ACTORS FOR ARCTIC AFFAIRS

Singapore's Ministry of Foreign Affairs, the Maritime and Port Authority, and the National Parks Board are the country's primary agencies for Arctic affairs. Working closely together, the three ministries effectively manage Singapore's Arctic diplomacy, economic outreach, and conservation efforts, respectively.

³⁰⁰ Singapore Ministry of Foreign Affairs, "Special Envoy for Arctic Affairs Sam Tan's Participation in the Russia-Singapore Arctic Dialogue," December 17, 2021, <https://www.mfa.gov.sg/Newsroom/Press-Statements-Transcripts-and-Photos/2021/12/20211217-Russia-Singapore-Arctic-Dialogue>.

³⁰¹ National University of Singapore, "NU-UIT Joint Seminar and MoU Ceremony," October 2, 2017, <https://esi.nus.edu.sg/esi-highlights/news-item/2017/10/02/nus-uit-joint-seminar-and-mou-ceremony>.

³⁰² Singapore Ministry of Foreign Affairs, "MFA Press Statement: Visit by Minister of State, Ministry of Foreign Affairs and Ministry of Social and Family Development, Sam Tan to Tromsø, Norway, for the 13th Arctic Frontiers Conference," January 2, 2019, https://www.mfa.gov.sg/Newsroom/Press-Statements-Transcripts-and-Photos/2019/01/22012019_MOS-Visit-to-13th-Arctic-Frontiers-Conference; Royal Norwegian Embassy in Singapore, "What happens in the Arctic does not stay in the Arctic," January 28, 2020, <https://www.norway.no/en/singapore/norway-singapore/news-events/news2/what-happens-in-the-arctic-does-not-stay-in-the-arctic/>.

³⁰³ Republic of Singapore, "Observer Report 2019-2021," *Arctic Council*, June 2021, https://oaarchive.arctic-council.org/bitstream/handle/11374/2711/SAOXI2_Arctic-Council-Observer-REPORT-2019-2021_SINGAPORE.pdf?sequence=1&isAllowed=y.

³⁰⁴ Ibid.

³⁰⁵ Stewart Watters and Aki Tonami, "Singapore: An Emerging Arctic Actor," *Arctic Yearbook*, 2012, https://arcticyearbook.com/images/yearbook/2012/Scholarly_Papers/5.Tonami_and_Watters_Singapore.pdf.

Governmental Actors	Responsibility and Engagement in Arctic Affairs
<p>Ministry of Foreign Affairs (MFA)</p>	<p>MFA is a crucial driver for Singapore’s Arctic affairs and oversees the nation’s Arctic partnerships. In 2012, MFA appointed a special envoy for Arctic affairs and subsequently facilitated Singapore securing observer status in the Arctic Council.³⁰⁶ Singapore’s active presence in international events, including the Arctic Frontiers and Arctic Circle Assemblies, are also co-ordinated by the MFA.³⁰⁷</p>
<p>Agency for Science and Technology and Research (A*STAR)</p>	<p>A*STAR falls under the responsibility of the Ministry of Trade and Industry of Singapore.³⁰⁸ A*STAR collaborates with universities and Keppel Corporation to develop offshore and marine equipment for ConocoPhillips.³⁰⁹</p>
<p>Maritime and Port Authority of Singapore (MPA)</p>	<p>MPA regulates and develops strategies to ensure Singapore’s position as a global maritime knowledge hub.³¹⁰ MPA focuses primarily on the development of international maritime law while monitoring the Arctic ocean and shipping route. MPA has continuously contributed to the Arctic Council’s PAME and EPPR working groups.³¹¹ MPA also attended the 3rd Arctic Shipping Best Practices Information Forum in June 2019.³¹²</p>
<p>The National Parks Board (NParks)</p>	<p>NParks is regulated by the Ministry of National Development.³¹³ NParks is responsible for engaging in the biodiversity aspects of Arctic issues. NParks monitors the Arctic migratory birds issue, as Singapore is a key transit point for birds flying from the Arctic to Australia.³¹⁴</p>

³⁰⁶ Ibid., 105.

³⁰⁷ Ministry of Trade and Industry Singapore, “MTI Family,” <https://www.mti.gov.sg/About-Us/MTI-Family>.

³⁰⁸ Watters and Tonami, op. cit., 109.

³⁰⁹ Ibid., 109.

³¹⁰ Ibid., 108.

³¹¹ Republic of Singapore, op. cit.

³¹² Ibid.

³¹³ National Parks, “Mission and History,” January 4, 2022, <https://www.nparks.gov.sg/about-us/mission-and-history>.

³¹⁴ Audrey Tan, “Some migratory birds stopping over in Singapore travelled across the Himalayas, study finds,” *The Straits Times*, December 11, 2020, <https://www.straitstimes.com/singapore/some-migratory-birds-stopping-over-in-singapore-travelled-across-the-himalayas-study-finds>.

Governmental Actors	Responsibility and Engagement in Arctic Affairs
<p>Ministry of Sustainability and the Environment (MSE)</p>	<p>MSE works to project Singapore’s push for a green economy and sustainable development in the Arctic. MSE contributes to the Arctic Council’s PAME and SDWG working groups.³¹⁵ The ministry also oversees the Centre for Climate Research Singapore (CCRS). Dr. Erland Källén, the director of CCRS, has published multiple papers assessing the Arctic climate and the mechanisms for enhanced Arctic warming. Currently, CCRS aims to contribute to Arctic scientific discourse by pinpointing the relation between Arctic sea-level change and its implications on Southeast Asian countries.³¹⁶</p>

KEY ACADEMIC INSTITUTIONS FOR ARCTIC AFFAIRS

Singapore is also home to a number of world-class academic institutes with committed Arctic research and study programs, all of which are deeply integrated into regional and global academic and research networks dealing with Arctic affairs. Principal among these institutions are the National University of Singapore and Nanyang Technical University, both of which facilitate Arctic discussions between students, academics, researchers, government officials, and business professionals within Singapore and abroad.³¹⁷

³¹⁵ Republic of Singapore, op. cit.

³¹⁶ Denise Tan, “Southeast Asia will be hardest hit by melting ice; governments urged to speed up change,” *Eco-Business*, July 22, 2019, <https://www.eco-business.com/news/southeast-asia-will-be-hardest-hit-by-melting-ice-governments-urged-to-speed-up-change/>.

³¹⁷ UArctic, “Postgraduate scholarships in Singapore for Arctic indigenous students,” May 22, 2015, <https://www.uarctic.org/news/2015/5/postgraduate-scholarships-in-singapore-for-arctic-indigenous-students/>.

Academic Institutions	Arctic Engagement
<p>National University of Singapore (NUS): Energy Studies Institute, Centre for International Law, Centre for Maritime Studies, Tropical Marine Science Institute, Centre for Offshore Research and Engineering, Keppel-NUS Corporate Laboratory, Department of Geography</p>	<p>Different NUS departments cover a wide range of Arctic research, including shipping governance, Arctic international law, Arctic remote energy development, and climate change. In particular, its Energy Studies Institute and the Centre of International Law specialize in Arctic energy and law, respectively. The Energy Studies Institute, in particular, has a strong affiliation with the Ministry of Trade and Industry and the Ministry of Foreign Affairs.³¹⁸ Between 2019 and 2021, the institute conducted a workshop on “Sustainable Energy Development in the Arctic: Collaboration on the Arctic Renewable Energy Atlas (AREA).”³¹⁹ The institute also facilitated a youth seminar to promote more Arctic awareness.³²⁰</p>
<p>Nanyang Technological University (NTU): Asian School of the Environment</p>	<p>NTU faculty researchers attended Arctic Council’s PAME and SDWG’s plenary meetings in 2020.³²¹</p>

KEY COMMERCIAL ACTORS FOR ARCTIC AFFAIRS

Major Singaporean Arctic commercial participants are either state-owned or have close ties with the government. Consequently, Singapore’s Arctic commercial engagement revolves around the marine industry, which has strong credentials in shipbuilding, repair, and offshore engineering.

³¹⁸ National University of Singapore, “Management Board” <https://esi.nus.edu.sg/about-us/management-board>.

³¹⁹ Republic of Singapore, op. cit.

³²⁰ Ibid.

³²¹ Ibid.

Commercial Actors	Arctic Engagement
<p>Keppel Offshore and Marine (Keppel O&M)</p>	<p>Keppel O&M is a private company that has a strong affiliation with the state.³²² It is an engineering company specialized in designing offshore and marine equipment.³²³ Keppel Singmarine, which was integrated as a part of Keppel O&M, has previously constructed seven ice-class vessels, including two icebreakers for Lukoil, a Russian energy company in the mid-2000s.³²⁴ Keppel Singmarine also had previous commercial deals with major Arctic oil projects for its ice-capable jack-up rigs.³²⁵ The company is currently collaborating with NUS to enhance Singapore’s Arctic drilling capacity.³²⁶</p>
<p>Sembcorp Marine</p>	<p>Sembcorp Marine is a private engineering company that has close ties to state institutions. The company specializes in the construction of rigs, floaters, offshore platforms, and specialized vessels.³²⁷ In 2018, the company’s subsidiary LMG Marine secured its first polar expedition cruise ship design contract with Brodosplit Shipyard of Croatia.³²⁸</p>
<p>GIC Private Limited (GIC)</p>	<p>GIC is a state-owned investment firm.³²⁹ GIC recently invested \$240M into the Arctic Green Energy Corporation’s expansion plans, to ramp up its capability in geothermal energy.³³⁰</p>

³²² Watters and Tonami, *op. cit.*, 109.

³²³ *Ibid.*

³²⁴ Storey, *op. cit.*, 69.

³²⁵ *Ibid.*

³²⁶ Keppel Offshore and Marine, “Record delivery of 21 rigs,” *Offshore Marine*, (December 2013): 20.

³²⁷ Sembcorp Marine, “Key Capabilities,” <https://www.sembmarine.com/key-capabilities/rigs-floaters>.

³²⁸ Sembcorp Marine, “Sembcorp Marine Subsidiary LMG Marine Scores First Polar Expedition Cruise Ship Design Contract,” June 12, 2018, <https://www.sembmarine.com/stock-exchange-announcements/sembcorp-marine-subsidiary-lmg-marine-scores-first-polar-expedition-cruise-ship-design-contract>.

³²⁹ International Forum of Sovereign Wealth Funds, “GIC Private Limited,” <https://www.ifswf.org/member-profiles/government-singapore-investment-corporation>.

³³⁰ Reuters, “Singapore’s GIC invests \$240 mln in Arctic Green Energy,” July 26, 2021, <https://www.reuters.com/business/sustainable-business/singapores-gic-invests-240-mln-arctic-green-energy-2021-07-26/>.

| **Developing an Arctic Approach
to Strengthen Canada's
Indo-Pacific Relations**

III
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There are multiple areas where Canada can deepen its engagement with China, Japan, South Korea, and Singapore to advance its foreign policy priorities in the Arctic and to integrate itself more fully into Asia’s regional multilateral architecture. The tables beginning on [page 71](#) of the Conclusion and Policy Recommendations section of this report provide a blueprint for Canadian engagement with China, Japan, South Korea, and Singapore across different issue areas and between different state, state-affiliated, and non-state actors. Concurrently, the supplementary tables identify which Canadian actors are best situated to represent Canadian interests across the matrix of Asian activities and actors.

Realizing Arctic Partnerships

While Canada would necessarily have to increase the resources it allocates to its Arctic foreign policy to realize the full potential of the bilateral and multilateral engagement opportunities outlined above, there is little question that the country’s regional strategic posture would benefit as a result. Indeed, as Canada’s policy priorities expand in the Arctic, Ottawa will likely find that partnership with the Asian Arctic states is critical to achieving its objectives, whether defined in socio-economic development or security terms. Further, as the region’s geopolitics become more fraught with great power competition between China and the United States, or Russia and the European Arctic states (particularly in a post-Ukraine strategic environment), Canada will also find it beneficial to increase its presence in Asian strategic dialogues and working groups on the Arctic, if only to ensure its foreign policy efforts include both Trans-Atlantic and Trans-Pacific components. Indeed, the need for greater Canadian engagement with the Asian states in the Arctic will necessarily grow in tandem with those same states’ growing regional influence, which is outpacing their European and North American counterparts.

In addition, closer co-ordination with China, Japan, South Korea, and Singapore on Arctic issues carries with it the added strategic value of deepening Canadian involvement in Indo-Pacific affairs. Indeed, as outlined above, a necessary corollary to co-operation with the Asian Arctic states is greater Canadian enmeshment in Indo-Pacific-based dialogue mechanisms and working groups, both at the bilateral and multilateral levels. Canadian co-operation with Asian states on Arctic affairs would, therefore, give it far more direct access to the region’s predominant economic and security actors than it could otherwise achieve through a standalone Indo-Pacific strategy, particularly one that treats Canada’s Arctic affairs in isolation from its Indo-Pacific relations.

From this perspective, Canadian policy-makers and strategic planners would benefit from the development of a “two oceans” strategy integrating Canada’s Arctic relations with its approach to the Asia Pacific, or Indo-Pacific. Canada’s integration of the Arctic region into its Indo-Pacific

policy, in particular, would result in the following strategic advancements and/or advantages in the Arctic.

First, Canada could strengthen global Arctic governance by supporting the Asian states' activities and interests in the region and co-operating with them on issues of strategic importance for Canada. At the multilateral level, Canada could achieve this by supporting greater Asian state involvement with the Arctic Council and by ensuring greater representation of Asian viewpoints on matters touching Arctic governance. At the bilateral level, Canada could expand its direct ties with China, Japan, South Korea, and Singapore on matters of shared strategic interest, such as environmental protection and resource development, and work with each country to ensure their activities align with regional norms around transparency, inclusivity, and sustainability. In each instance, Canada could work with the Asian states to ensure their activities are in line with the region's existing normative and institutional governance frameworks.

Second, Canada could work with the Asian states to strengthen regional stability, particularly in light of developments around the Russian invasion of Ukraine. At present, Arctic security is disproportionately focused on Trans-Atlantic institutions like NORAD and NATO, meaning the Arctic is poised for greater instability as Western allies and partners co-operate to isolate and pressure Moscow over Russian aggression in Europe. Closer co-ordination with China, Japan, South Korea, and Singapore on Arctic defence dialogue, particularly on dialogue around crisis and conflict prevention, would contribute to a more inclusive security architecture in the region – one made all the more effective as all the Asian states share the strategic aim of regional stability. Security dialogue with China, in particular, could contribute to regional stability as Beijing arguably has the greatest ability to influence Russia's foreign and security policy and could help lead efforts toward Arctic stability.

Third, Canada could co-operate with the Arctic states to realize more fully the Arctic region's economic potential around shipping and trade, in particular. As much of the Arctic's economic potential lies in the trade routes around Russia's northern territorial waters and exclusive economic zones, Canada, as well as the United States and European Arctic states, will need the support of China, Japan, South Korea, and Singapore to ensure the region remains open to trade. As with matters of defence, these Asian actors are arguably better positioned to ensure Russia remains open to Arctic access and engagement and that it remains in Moscow's economic interests that the region remain stable.

Strengthening Asian Ties

As Canada deepens its co-operation with China, Japan, South Korea, and Singapore in the Arctic, it should leverage its ties to advance its own strategic agenda in the Indo-Pacific.

Indeed, where Canada can provide these Asian states a degree of legitimacy in the Arctic, it should insist on reciprocity of access and influence in the Indo-Pacific. More specifically, Canada should employ this reciprocal engagement strategy to decrease its strategic vulnerability with China – linking its support for Chinese activity in the Arctic to Beijing’s foreign policy behaviour toward Canada – and to increase its strategic value within Northeast and Southeast Asia. While such an increase in influence will naturally flow from Canada’s involvement in dialogue around Arctic standards and regulations – many of which have implications for Asia’s regional order – Ottawa should not shy away from making direct linkages between the Asian states’ Arctic priorities and its Indo-Pacific goals. In so doing, Canadian policy-makers better position Canada in Asia to be an active, influential actor – one capable of managing interregional issues to advance its region-specific aims.

First, Canada should seek to integrate itself into Northeast Asian trilateral dialogue mechanisms, building on its multilateral engagement with China, Japan, and South Korea in the Arctic to work with all three states on matters related to economic integration and crisis management. While Northeast Asian trilateralism remains underdeveloped and subject to regional and global geopolitical developments, Canada should seek out specific issue areas where Beijing, Seoul, and Tokyo do engage regularly, such as environmental protection and sustainable development, and regional dialogue mechanisms, such as the Greater Tumen Initiative, to project its regional influence. Just as China, Japan, and South Korea see the Arctic as a global region in which they have interests, so, too, should Canada insist its participation in Northeast Asia is an expression of its global foreign and economic policy.

Second, Canada should make its support for Singapore’s Arctic activities and involvement conditional on its support for Canadian involvement in Southeast Asian institutions, particularly the ASEAN Defence Ministers’ Meeting Plus and the East Asia Summit, that Ottawa has expressed interest in joining. While Singapore, alone, cannot guarantee Canadian membership, it can positively influence other ASEAN member states to support Canadian involvement. Further, Canada should leverage its support for Singapore in the Arctic to raise awareness within the country of Canadian foreign and security priorities in the region. Canada could accomplish this through Track 1.5 and Track 2 dialogues such as the Council for Security Cooperation in the Indo-Pacific, where it specifically ties its engagement with Asian states in the Arctic to its defence priorities in Asia.

Third, Canada should directly link discussion of Indo-Pacific governance, economic development, strategic co-operation, and competition to its relations with and support for China, Japan, South Korea, and Singapore in the Arctic. In forums such as the ASEAN Regional Forum, for example, Canada should consistently and clearly reference issues such as maritime security; cybersecurity; data security; global commons management; and illegal, unregulated,

and unreported fishing as both Asian and Arctic issues in need of regional and trans-regional standards and regulations, consistent with the international rule of law. In linking Asian and Arctic affairs, Canada can better demonstrate its value as a global strategic actor to a set of regional states naturally cynical of the country's strategic resolve.

Fourth, and lastly, Canada should leverage its support for and co-operation with China in the Arctic to insulate itself from Chinese coercion and to demonstrate its value as a strategic partner for Beijing. Ottawa should further make its ongoing support conditional on other aspects of its bilateral relations, such as trade, science, and technology and people-to-people ties, and it should communicate such conditionality clearly to Beijing from the outset. An approach of this type is likely to succeed as China's interests in the Arctic are growing exponentially and Canada's geographic proximity provides it with the potential to spoil Chinese regional aims. Indeed, Canada's Arctic status gives it a particularly effective negotiating tool in Canada-China relations – one that gains in strategic value the more Ottawa demonstrates to Beijing its willingness to engage on its own national security terms, regardless of the current state of US-China relations.

While certainly a good place to start, it would be foolhardy of Canadian policy-makers to see the above opportunities for engagement and strategic outcomes of such engagement as an exhaustive list. If policy-makers should draw one lesson from this brief, it is the fact that Canadian interests in the Arctic have changed, and will continue to change over time, often in response to new national priorities but just as often in response to the region's changing geopolitical environment.

To this end, the best Canadian policy-makers can do to ensure Canada's long-term engagement in the Arctic is to pursue a diplomatic and commercial track predicated on bilateral, multilateral, and multi-regional engagement. Whereas Canadian policy-makers have correctly relied on this approach in the past, they have done so with a singular focus on North America and Europe. While this geographic and geostrategic direction made sense for much of the 20th century, it is no longer sufficient to secure Canadian national interests. While it is premature to suggest Asian states will dominate the next century of Arctic affairs, their growing influence over the region's institutions, resources, and governance structures in proportion to their overall growth in global status is all but certain.

Conclusion and Policy Recommendations

Arctic affairs, being closely tied to Canadian identity and sovereignty, have remained a top national priority for Canada under the transition of different governmental administrations. Yet the nation's emphasis on security, territory, and population-oriented Arctic strategy policies continues to reflect an exclusionary foreign policy approach. In particular, Canada's existing *Arctic and Northern Policy Framework* and defence policy only cover the nation's Arctic engagement with its traditional Arctic state allies and intergovernmental organizations. The benefits, opportunities, and threats brought on by Asian non-Arctic newcomers have been reduced to security and geopolitical risks posed by China, through a narrow Arctic sovereignty lens.

In an era of increasing competition between great powers and global political instability, Canada's Arctic approach of enhancing collaboration with its traditional Arctic allies is not enough. Instead, Canada must develop foresight-based strategies that can create new, constructive international engagement, project national interests, and leverage Canada's global leadership role in the High North. To do so, Canada must deviate from a "conflict or co-operation" binary toward a focus on how the nation can best work with all actors to strengthen its capacity to ensure peace, stability, and development in the High North.

As evidenced in Part II of this report, Asian non-Arctic states, including Japan, China, Singapore, and South Korea, have long established a complex web of networks, infrastructure, and human capital in the Arctic. The following recommendations pinpoint how Canada can best re-insert itself in this network of Arctic "newcomers," while upholding its national interests.

Japan

Ongoing & Upcoming Japanese Arctic Engagement	Relevant Canadian Arctic Engagement	Recommendations
INTER-STATE AND NATIONAL LEVEL ARCTIC ENGAGEMENT		
<p>Arctic Challenge for Sustainability II Project (ArCS II): 2021-2025</p> <p>The ArCS II is a national Arctic flagship project monitored by three institutions: the Japan Agency for Marine-Earth Science and Technology (JAMSTEC), the Hokkaido University, and the National Institute of Polar Research (NIPR). ArCS II promotes advanced and interdisciplinary research in the circumpolar regions, specifically related to environmental change, climate prediction, social changes, and Arctic governance.</p> <p>ArCS II focuses on strengthening Japan’s Arctic research capacity through building an international human network. International research exchanges, overseas fellowship programs, and calls for complementary research projects are facilitated by the ArCS II project. Some of ArCS II’s notable research accomplishments include:</p> <ul style="list-style-type: none"> • NIPR and JAMSTEC have fostered close Arctic collaboration with research centres in different Arctic states.³³¹ • Norway: Ny-Ålesund NIPR Observatory, UNIS University Centre in Svalbard; • Finland: Pallas-Sodankylä Global Atmosphere Watch (GAW) Station; • Russia: Ice Base Cape Baranova, Spasskaya Pad Scientific Forest Station; 	<p>Polar Knowledge Canada (POLAR)</p> <p>POLAR is Canada’s leading federal organization responsible for advancing Canada’s research capacity, presence, and international engagement in the circumpolar regions.</p> <p>POLAR manages the Canadian High Arctic Research Station (CHARS) in Cambridge Bay, Nunavut, and organized the pan-northern science and technology program. In addition, POLAR also funds projects, awards, grants, and scholarships to support Canadian scholars, universities, and private institutions to engage in Arctic dialogues and research.</p> <p>Independent researchers, academic institutions, and private institutions receive annual funding through POLAR, usually through its Northern Science Technology and Polar Knowledge Application programs. Between 2017-2019, POLAR funded the Arctic project a total of \$8,680,188. [1] Thus, in comparison to Japan’s industry-academic-government lead ArCS II project – which provides five-year-long Arctic research support in interdisciplinary fields – Canadian-based industries and academic institutions lack the same degree of support, flexibility, and funding to conduct relevant Arctic research.</p> <p>Link: https://www.canada.ca/en/polar-knowledge.html</p>	<ul style="list-style-type: none"> • Polar Knowledge Canada should enhance industry-academic-government collaboration on Arctic affairs. This includes facilitating platforms and meeting opportunities for all three parties to partake in Arctic dialogues. • Canadian think tanks and academic institutions should partake in ArCS II’s research programs to leverage Canada’s research capacity in the Arctic. • POLAR should offer funding to support national programs that are working to strengthen capacity and to facilitate international exchange, co-funding, and collaboration in the High North.

³³¹ “Arctic Challenge for Sustainability II: Towards a New Horizon of Arctic Research,” Arctic Challenge for Sustainability, 14, https://www.nipr.ac.jp/arcs2/e/wordpress/wp-content/themes/arcs2/assets/pdf/ArCS2_E_web_2021R2.pdf.

Ongoing & Upcoming Japanese Arctic Engagement	Relevant Canadian Arctic Engagement	Recommendations
<ul style="list-style-type: none"> • United States: University of Alaska Fairbanks, Poker Flat Research Range (PFRR) super site; • Canada: Canadian High Arctic Research Station (CHARS), Centre d'études Nordiques; and • Denmark/Greenland: Greenland Institute of Natural Resources (GINR), Qaanaaq-Siorapaluk Research Base. <p>• Hokkaidō University organized a series of Arctic workshops (e.g., UArctic's Multilevel Governance and Interregional Cooperation Online Workshop) that promote dialogue between international Arctic experts and academics.</p> <p>In 2018, Hokkaidō University signed an MoU on Academic Exchange with AAU Arctic and the Aalborg University Denmark to enhance Arctic research exchange between the two states.³³²</p> <p>https://www.nipr.ac.jp/arcs2/e/</p>		

ARCTIC ACADEMIC AND RESEARCH ENGAGEMENT

Arctic Data Archive System (ADS)

The ADS is administered by the NIPR and the Polar Environment Data Science Center. This open source offers observational and model simulation datasets for Arctic and Antarctica research. The archive collects and offers meteorological, snow, permafrost, hydrological, glacier, vegetation, sea ice, paleoclimate, text, and marine observation data on the Arctic.

Link: <https://ads.nipr.ac.jp/>

Polar Data Catalogue (PDC)

The PDC is a Canadian open-access archive that offers polar data and metadata. Similar to Japan's ADS, the archive offers data related to climate, sea ice and permafrost, wildlife and vegetation, and social and health indicators for Inuit peoples in the High North. The site is managed mainly by the University of Waterloo.

- PDC should enhance existing metadata interoperability and sharing protocols with Japanese data centres.
- Possible expansion of metadata sharing should strengthen tracking of projects and research licensing in northern communities.
- Canadian scientists should contact NIPR (ads-info@nipr.ac.jp) and register their Arctic data to enhance the existing Arctic monitoring data network.

³³² Aalborg University, "Memorandum of Understanding- Hokkaido University," April 16, 2018, <https://www.arctic.aau.dk/news/news/memorandum-of-understanding---hokkaido-university.cid355469>.

Ongoing & Upcoming Japanese Arctic Engagement	Relevant Canadian Arctic Engagement	Recommendations
<p>Re-Inventing Japan Project</p> <p>The Ministry of Education, Culture, Sports, Science and Technology (MEXT) funds Hokkaidō University’s Re-Inventing Japan Project. This project promotes Arctic research collaboration with Far East universities in Russia, through inter-university exchange projects. The East Russia-Japan Expert Education Program and Human Resource Development Platform for Japan-Russia Economic Cooperation and Personnel Exchange fall under this project.</p>	<p>PDC shares Arctic data with the NIPR, the US’s National Snow and Ice Data Center, and other foreign governmental research centres to facilitate public access to more comprehensive Arctic metadata records.³³³</p> <p>Link: https://www.polardata.ca/</p> <p>North2North Student Exchange Program</p> <p>North2North Student Exchange is organized by the University of the Arctic. Students typically from Arctic states are offered a grant to undertake 3 to 10 months of undergraduate and graduate level studies at another UArctic institution. The exchange program offers courses that can specifically enrich students’ understanding of the Circumpolar North.</p> <p>Although Canada is an Arctic nation, there is a lack of long-term Arctic-specific academic or research exchange programs between Canada and other states. The only relevant programming was the Canada-Iceland Arctic Research Program, which ran in 2018.</p>	<ul style="list-style-type: none"> • Akin to Japan, the Government of Canada should fund more Arctic research exchange programs, to establish links between Canada, the Arctic states, and the Asian non-Arctic states. • As evidenced by the Kakehashi Project, Canada and Japan already have a history of robust academic and cultural exchange. The Government of Canada should enhance the existing academic ties and implement more Arctic-specific exchange opportunities for students in Canada’s northern communities and Japan’s Hokkaidō Prefecture. • Canadian research and academic institutions should implement more annual Arctic science and governance forums and symposiums to enhance Canada’s Arctic influence, research output, and public outreach. • Both event organizers should make recordings of the events accessible on digital platforms, in consideration of the travel restrictions caused by the COVID-19 pandemic. • The Government of Canada should offer funds to cover the travel costs for Canadian academics, research institutions, and Arctic scientists to attend the forum in Tokyo.
<p>Symposium on Polar Science</p> <p>The NIPR organizes an annual symposium to ensure international co-operation and dialogue on polar science.</p>	<p>2022 Arctic Arts Summit</p> <p>The Canada Council for the Arts and the Government of Yukon will co-host the third Arctic Art Summit in Yukon from June 27 to 29, 2022. The Summit aims to facilitate arts and cultural dialogues between the eight Arctic states and the Arctic Indigenous populations.</p>	

³³³ Dana L. Church et al, “The Polar Data Catalogue: A Vehicle for Collaboration, Northern Community Partnerships, & Policy-Making,” *The Arctic Yearbook* 2016, 202, <https://ccin.ca/home/sites/default/files/publication/PDC%20-%20A%20Vehicle%20for%20Collaboration.pdf>.

Ongoing & Upcoming Japanese Arctic Engagement	Relevant Canadian Arctic Engagement	Recommendations
<p>International Conference on Arctic Engineering and Science</p> <p>The conference will take place in Tokyo, Japan from February 25 to 26, 2023. Most recent innovations, trends, challenges, and solutions identified in the fields of Arctic engineering and science will be covered in this meeting.</p>	<p>21st Annual Arctic Energy and Resource Symposium</p> <p>The annual symposium explores issues of sustainable resources and infrastructure development in the High North. The Symposium will take place in Calgary, Alberta from March 30 to 31, 2022.</p>	
<p>Arctic Circle Japan Forum</p> <p>The Sasakawa Peace Foundation is helping the Arctic Council to organize the upcoming Tokyo Forum in 2023. A wide range of Arctic issues in fields including geopolitics, economics, oceans, climate, and technology will be covered in this forum.</p>		
<p>ARCTIC RESOURCES, COMMERCIAL, AND INFRASTRUCTURE ENGAGEMENT</p>		
<p>Arctic Subsea Fibre Cable</p> <p>Japan's ARTERIA Networks Corporation signed an MoU to co-develop a submarine fibre-optic cable with Finland's Cinia Ltd.³³⁴ The 14,000-kilometre subsea cable aims to connect Europe with East Asia via the Northwest Passage.</p>	<p>A landing in the Canadian Arctic is expected to be developed for the same Arctic fibre-optic cable project.³³⁵ True North Global Networks – a North American company – is currently under negotiation with the Government of Canada, local governments, and Indigenous organizations to develop the landing. The project is expected to strengthen Nunavut's connectivity to the south and eliminate local residents' dependence on unreliable satellite.</p>	<ul style="list-style-type: none"> • The governments of Canada, Denmark, the United States, and Japan should initiate ongoing meetings with Indigenous and territorial partners. These project-specific dialogues should facilitate standardized protocols being made to manage the construction of the fibre cable, in consideration of the project's potential commercial, environmental, and social impacts.

³³⁴ Cinia Press Release, "Cinia and ARTERIA Sign MOU For Far North Fiber," February 16, 2022, <https://subtelforum.com/cinia-and-arteria-sign-mou-for-far-north-fiber/>.

³³⁵ True North Global Networks, "Far North Digital/True North Global Networks Sign MoU with Cinia for Pan-Arctic Fibre Cable," December 21, 2021, <https://www.newswire.ca/news-releases/far-north-digital-true-north-global-networks-sign-mou-with-cinia-for-pan-arctic-fibre-cable-872306791.html>.

Ongoing & Upcoming Japanese Arctic Engagement	Relevant Canadian Arctic Engagement	Recommendations
<p>Arctic LNG 2 Project</p> <p>Although this is a Russian-led LNG project, the Japan Bank for International Cooperation, and the Japan Oil, Gas, and Metals National Corporation are involved in funding the project.</p>	<p>On December 20, 2016, the Government of Canada has imposed a five-year moratorium on offshore drilling in Arctic waters.</p>	<ul style="list-style-type: none"> • The Government of Japan recognizes securing a stable supply of natural gas to Japan as one of its most crucial policy priorities. As Canada's High North has the capacity to operate LNG projects, both the Government of Canada and the territorial government should consider Japanese companies as a potential source of funding.

GENERAL RECOMMENDATION

Canada should enhance more research and scientific ties with Japan in the fields of sustainable resource exploration and utilization of marine resources in the Arctic. In comparison to the other Asian non-Arctic states, Japan already has a well-developed network of academic and research institutions focusing on Arctic affairs. While Canada aims to create a conservation economy in the Arctic, it is also the Japanese government's goal to ensure environmental security in the region. Thus, Canada should promote more research roundtables, Arctic fellowships, academic conferences, and inter-university exchange projects with Japanese academic and research institutions to enhance the Arctic research capacities of both states.

In addition, Canada should strengthen its existing Arctic security collaboration efforts with Japan. Evident in Canada and Japan's recently expanded security co-operation in the Indo-Pacific region, a like-minded military collaboration between the two NATO allies can be further extended to the circumpolar regions. Canada and Japan are both keen on strengthening the process of international rule-making in the Arctic. The two states should ensure greater military interoperability and data sharing to combat issues including illegal, unregulated, and unreported fishing, Russian remilitarization, and increased Chinese maritime presence in the High North.

China

Ongoing & Upcoming Chinese Arctic Engagement	Relevant Canadian Arctic Engagement	Recommendations
INTER-STATE AND NATIONAL LEVEL ARCTIC ENGAGEMENT		
<p>UN Biodiversity Conference (COP-15)</p> <p>Phase two of COP-15 is scheduled to take place from April 25 to May 8, 2022, in Kunming, China. This conference will be China’s first major UN meeting since the nation last hosted the World Conferences on Women, in 1995.³³⁶</p> <p>Although the conference does not cover any Arctic-specific topics, interrelated climate issues including ecological destruction, habitat protection, and land conservation will be covered.</p> <p>It is also important to note that, in comparison to other non-Arctic states, China commonly establishes its Arctic collaboration efforts and dialogue through high-level talks. In particular, Chinese top-level bureaucrats (e.g., the vice-president, premier, foreign minister, etc.) have visited Arctic states other than the United States and Russia 33 times over the past two decades. Thus, the UN Biodiversity Conference will be a critical meeting for Canada to re-establish Arctic engagement with China.</p>		<ul style="list-style-type: none"> • The Government of Canada should use this conference as a platform to co-operate with China on climate issues. • As both countries recognize the need to transition to a clean-growth economy, the two states should engage in high-level talks to pinpoint tangible steps to combat climate change. • As both the Canadian and Chinese governments have attached great importance to the conservation of migratory birds and their habitat, the two states should enhance relevant dialogue and research sharing through the Arctic Council’s Arctic Migratory Birds Initiative. • A made-in-Canada Arctic fleet is more prone to delays and higher costs. Especially as Arctic states such as Russia already own heavy icebreakers, Canada should consider China as an alternative offshore channel to procure its icebreaker.
<p>Migratory Birds Sanctuaries along the Coast of the Yellow Sea</p> <p>The sanctuary protects and manages Arctic birds migrating along the East Asian-Australasian Flyway. The sanctuary is also a part of UNESCO’s World Heritage List.</p>	<p>Qaqsauqtuuq Migratory Bird Sanctuary (MBS)</p> <p>Established by the Environment and Climate Change Canada’s Wildlife Service in 1957, MBS is a critical stopover for Arctic nesting shorebirds, during their southbound migration.³³⁷</p>	

³³⁶ Bloomberg News, “China Gets a Chance to Showcase Global Climate Leadership,” October 9, 2021, <https://www.bloomberg.com/news/articles/2021-10-09/global-biodiversity-summit-puts-china-in-spotlight>.

³³⁷ Environment and Climate Change Canada, 2020 *Qaqsauqtuuq Migratory Bird Sanctuary Management Plan*, 43.

Ongoing & Upcoming Chinese Arctic Engagement	Relevant Canadian Arctic Engagement	Recommendations
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Construction of a Nuclear-Powered Icebreaker

China’s Ministry of Transport has announced its plans to build the country’s first nuclear-powered icebreaker, as a part of the nation’s Polar Silk Road project. The icebreaker is estimated to be completed in 2025.

Liberal Government’s Heavy Icebreaker Plan

The Liberal government is projecting to spend \$7.25B to build two icebreakers,³³⁸ to strengthen the Canadian Coast Guard’s Arctic operations capacity. The two icebreakers are estimated to be completed by 2031. The vessels are expected to be constructed by domestic shipyards.

ARCTIC ACADEMIC AND RESEARCH ENGAGEMENT

China-Nordic Arctic Cooperation Symposium

This annual Symposium is organized by the China and Nordic Arctic Research Center to facilitate Arctic social science research exchange between Chinese and Nordic universities, research institutes, think tanks, and organizations.

Although Canada actively engages in Arctic co-operation through multilateral channels, such as the International Maritime Organization and the Arctic Council, the country has not previously organized any bilateral-specific Arctic forums with either Arctic states or Asian non-Arctic states.

- Arctic affairs should be an area of co-operation for both China and Canada. While Canada can strengthen solidarity with traditional allies (e.g., the United States) on geo-security matters, it should still retain a degree of autonomy to cement diplomatic ties with China in the fields of Arctic environment and research collaboration.

China-Russia Arctic Forum

The inter-state Arctic forum is co-hosted by the Ocean University of China and St. Petersburg State University. Founded in 2012, the forum offers a platform to enhance academic dialogue, research co-operation, commercial investment, and policy discussions between China and Russia.

³³⁸ Murray Brewster, “Budget officer estimates Liberals’ heavy icebreaker plan will cost \$7.25B,” CBC, December 16, 2021, <https://www.cbc.ca/news/politics/heavy-ice-breakers-pbo-cost-1.6287985>.

Ongoing & Upcoming Chinese Arctic Engagement	Relevant Canadian Arctic Engagement	Recommendations
ARCTIC RESOURCES, COMMERCIAL, AND INFRASTRUCTURE ENGAGEMENT		
<p>Polar Silk Road</p> <p>As a part of the country’s Belt and Road Initiative, China projects to develop a maritime trade route that can interconnect the Arctic, Pacific, and Atlantic oceans. The Polar Silk Road is expected to start from Dalian, China, and end in Rotterdam, Netherlands, while linking various other countries in Asia and Europe.</p>	<p>Northwest Passage</p> <p>Canada’s Northwest Passage possesses the potential of becoming an Arctic shipping route in the near future. Yet there remains scrutiny on different countries’ attitudes toward Canada’s claim to sovereignty over the Northwest Passage.</p>	<ul style="list-style-type: none"> • As shown in Part II, both China and Canada have a legally strategic interest in respecting international law, such as UNCLOS. The two states should continue to engage via intergovernmental organizations such as the Arctic Council and multilateral Arctic forums to enhance rules-based international order in Arctic waters.
<p>Other Chinese Resource and Infrastructure Investment in the Arctic</p> <p>Chinese state-owned companies have invested heavily in energy, infrastructure, and trans-oceanic trade routes development projects. The following consist of some of China’s ongoing and past investment attempts in the Arctic Circle.</p> <ul style="list-style-type: none"> • Russia: Chinese Zhejiang Energy acquired a 10% stake in Russian Novatek’s Arctic LNG 2 project (ongoing); • United States: In 2017, Alaska’s governor Bill Walker attempted to cement a \$43B LNG pipeline development deal with Sinopec (scrapped); • Finland: The Kouvola-Xi’an freight train railroad was established in 2017, facilitating trade between China and other Nordic countries (completed); • Iceland: In 2013, China National Offshore Oil Cooperation and Eykon, an Iceland-based energy company, signed an agreement on joint-oil exploration project in the Arctic (scrapped in 2018); and • Greenland: CCP actors attempted to develop numerous airports and a former US military base (scrapped). 	<p>Deepwater Port in Qikiqtarjuaq, Nunavut</p> <p>Transport Canada funded \$40M to develop a port in Qikiqtarjuaq, which will prompt the development of Nunavut’s offshore fishing industry. The port is located along the main route of the Northwest Passage, which also strengthens the nation’s maritime trade network. The port is expected to be complete around September 2022.</p>	<ul style="list-style-type: none"> • At the national level, the Government of Canada should improve its maritime monitoring and navigating capacity to encourage compliance. This includes investing more in enhancing the nation’s existing hydrographic surveying software, icebreaking services, ice-reporting co-ordination, and other infrastructure support. • The Government of Canada should continue to promote more federally funded infrastructure projects in the High North. One of the primary goals for these Canadian-funded projects should be to improve the co-ordination and co-development capacity with Northern governments and Indigenous land-claim organizations. • As for Canada’s long-term strategic plan to close the northern infrastructure gaps, the Government of Canada should establish comprehensive regulations with residents of the circumpolar regions to ensure a more secure and sustainable North. Once robust Arctic-specific investment protocol guidelines are established, Canada should open the door to more foreign investments to ensure the development of transportation, energy, infrastructure, and telecommunications in the High North.

GENERAL RECOMMENDATION

Canada should re-establish Arctic dialogue with China by developing northern infrastructure, shipping, mining, and fisheries. Although Canada should remain vigilant of the security and safety threats carried by Chinese investments, Chinese capital has been a critical source of funding that has prompted the key LNG projects in Nordic states and Russia to flourish. Rather than projecting the ongoing Sino-Canadian tension to the

circumpolar regions, Canada should instead establish robust regional and federal regulatory bodies and laws to protect the nation's interests. Especially as the High North was framed as a "low-tension" region in both states' Arctic policies, re-establishing Arctic dialogue between the two countries could potentially minimize current diplomatic tensions.

Singapore

Ongoing & Upcoming Singaporean Arctic Engagement	Relevant Canadian Arctic Engagement	Recommendations
INTER-STATE AND NATIONAL LEVEL ARCTIC ENGAGEMENT		
<p>High-Level Dialogue Between Singapore and Arctic States</p> <p>Singapore has shown a strong preference to engage directly with Arctic states via both bilateral and multilateral engagements. In particular, Singapore's Special Envoy for Arctic affairs, Sam Tan, has actively participated in high-level bilateral talks with bureaucrats from Arctic nations. Bilaterally, Mr. Tan engaged with Russia via the Russia-Singapore Dialogue in 2021. In the same year, Mr. Tan also delivered a keynote speech at the Norway-Singapore Arctic Hybrid Conference in Singapore.</p>	<p>US-Canada Arctic Dialogue</p> <p>Canada held several high-level Arctic dialogues with the United States in the past. The most recent one was a half-day dialogue on December 16, 2021. In particular, the US's Assistant Secretary of State for Western Hemisphere Affairs and Canada's Assistant Deputy Minister for Europe, Arctic, Middle East, and Maghreb at Global Affairs Canada jointly covered the two states' Arctic agendas concerning geo-security, climate change, international co-operation, and sustainable economic development issues in the High North.</p>	<ul style="list-style-type: none"> • Canada and Singapore's bilateral Arctic dialogues mainly occurred in 2013, when Singapore first obtained its observer status in the Arctic Council. The Government of Canada should promote and resume bilateral exchanges on Arctic affairs with Singapore's senior bureaucrats through hosting Canada-led Arctic conferences, symposiums, and meetings.

Ongoing & Upcoming Singaporean Arctic Engagement	Relevant Canadian Arctic Engagement	Recommendations
ARCTIC ACADEMIC AND RESEARCH ENGAGEMENT		
<p>Arctic Research</p> <p>Researchers at the Energy Studies Institute, National University of Singapore, have organized innovative educational programs, seminars, and workshops to educate Singaporean youth on energy security in the Arctic. These grassroots mobilization events aim to bridge sustainable energy solutions between the circumpolar regions and Asian coastal states.</p> <p>In sum, Singaporean academic and research institutions are particularly interested in Arctic research related to maritime affairs and sustainable resource development.</p>	<p>Canada currently lacks Arctic-specific education programs that mobilize and educate Canadian youth on energy security and sustainable development in the High North.</p>	<ul style="list-style-type: none"> The Government of Canada should consider establishing a joint Arctic research centre with Singapore to further enhance the two states' scientific and academic co-operation in Arctic energy, shipping, and sustainable resource development.
ARCTIC RESOURCES, COMMERCIAL, AND INFRASTRUCTURE ENGAGEMENT		
<p>Arctic Maritime Affairs</p> <p>Singapore is keen to secure its prime position in the current global shipping network and is closely monitoring the development of the Arctic shipping routes. The country also possesses considerable expertise in shipbuilding and offshore rig construction.</p>	<p>Deepwater Port in Qikiqtarjuaq, Nunavut</p> <p>Transport Canada funded \$40M to develop a port in Qikiqtarjuaq, which will prompt the development of Nunavut's offshore fishing industry. The port is located along the main route of the Northwest Passage, which also strengthens the nation's maritime trade network. The port is expected to be complete around September 2022.</p>	<ul style="list-style-type: none"> The Government of Canada should enhance scientific and economic co-operation with Singapore on Arctic affairs, specifically in fields such as port development and vessel construction.

GENERAL RECOMMENDATION

Canada should explore ways to build on the Canada-Singapore Infrastructure MoU to enhance the development of cutting-edge maritime and low-carbon energy technologies for the Arctic regions. Akin to Canada's Arctic priorities, the Singapore Green Plan 2030 demonstrates the nation's support for the sustainable development of the Arctic. In addition, Singapore has

also built strong credentials in constructing sustainable energy storage, carbon capture, and abatement technologies. Canada should collaborate with Singapore on relevant sustainable infrastructure initiatives to enhance resource productivity in the High North and the circumpolar communities' resilience to climate change.

South Korea

Ongoing & Upcoming Korean Arctic Engagement	Relevant Canadian Arctic Engagement	Recommendations
INTER-STATE AND NATIONAL LEVEL ARCTIC ENGAGEMENT		
<p>Polar Activities Promotion Act</p> <p>South Korea enacted the Polar Activities Promotion Act in 2021. The Act facilitates South Korea's engagement with international Arctic actors to promote activities that enhance sustainability in the Arctic.</p>		
ARCTIC ACADEMIC AND RESEARCH ENGAGEMENT		
<p>International Symposium on Polar Science</p> <p>Since 1988, the Korea Polar Research Institute (KOPRI) has been organizing an annual symposium to encourage scientists around the globe to share their research relevant to the Arctic.</p>	<p>Polar Continental Shelf Program (PCSP)</p> <p>PCSP is a federally funded program that provides Arctic research logistic and planning support. The program is mainly accessible to Canadian academic, research, and federal institutions conducting scientific research in Canada's North.</p> <p>Link: https://www.nrcan.gc.ca/science-and-data/science-and-research/arctic-science/polar-continental-shelf-program/10003</p>	<ul style="list-style-type: none"> • The Government of Canada should offer travel funds and research grants to support Canadian Arctic researchers and scientists' presence in international Arctic events. South Korea's International Symposium on Polar Science and its annual Arctic Partnership Week are two great platforms to disseminate Canadian Arctic experts' research results. • Canadian think tanks should implement Arctic-specific funds, fellowship, and research programs that are accessible to early-career international researchers, to facilitate Arctic research dialogue between Canadian and foreign researchers. • The Government of Canada should fund nationwide Arctic-specific workshops, research projects, and exchange programs dedicated to educating the young generation, to ensure greater youth mobilization on Arctic affairs.
<p>Asian Polar Science Fellowship Program</p> <p>Organized by KOPRI, the fellowship program invites early-career researchers from Arctic states to partake in the Field Research Program or the Institute Visiting Program in South Korea. Selected candidates are funded to conduct Arctic-relevant research in co-operation with KOPRI scientists.</p> <p>Link: https://www.kopri.re.kr/eng/html/comm/04030401.html</p>		

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<p>Asian Polar Science Fellowship Program</p> <p>Organized by KOPRI, the fellowship program invites early-career researchers from Arctic states to partake in the Field Research Program or the Institute Visiting Program in South Korea. Selected candidates are funded to conduct Arctic-relevant research in co-operation with KOPRI scientists.</p> <p>Link: https://www.kopri.re.kr/eng/html/comm/04030401.html</p>		<ul style="list-style-type: none"> • To cultivate more public awareness and human capacity related to Arctic affairs, Canadian educational institutions should offer Arctic-relevant online courses that are either free of charge or transferrable as high school or university credits. • A made-in-Canada Arctic fleet is more prone to delays and higher costs. Especially as Arctic states such as Russia already own heavy icebreakers, Canada should consider South Korea as an alternative offshore channel to procure its icebreaker.
<p>Arctic Youth Research Group (21C Dasan Junior)</p> <p>This research program provides opportunities for Korean elementary and high school students to gain lab and field work experience in Arctic stations in foreign countries.</p> <p>Link: https://www.kopri.re.kr/eng/html/comm/04030101.html</p>		
<p>North Pacific Arctic Conference</p> <p>Organized by the East-West Center and the Korea Maritime Institute (KMI), the conference invites early-career researchers, policy-makers, and practitioners to discuss contemporary issues affecting the Arctic.</p>		

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<p>Korea Arctic Academy Online Course</p> <p>The online program is organized by UArctic and the KMI. A wide selection of months-long courses is offered to international audiences to spread awareness and enhance knowledge related to Arctic policy, science, society, and industry.</p> <p>Link: https://koreapolarportal.or.kr/kaa/kaaIntroduce.do</p>	<p>ArcticNet</p> <p>Established by the Centres of Excellence of Canada, ArcticNet funds, supports, and brings together both Canadian and international Arctic experts and research teams to conduct climate, environmental, and social-economic research in the High North. ArcticNet further organizes the Annual Scientific Meeting to foster a strong Arctic research network. It's North by North program further facilitates northern research led by communities in the circumpolar regions. In addition, the website also contains a free webinar training series to spread awareness and knowledge on Arctic affairs.</p> <p>Link: https://arcticnet.ulaval.ca/about-us/</p>	
<p>New Korean Resource Exploration Vessel</p> <p>South Korean shipbuilder Hanjin Heavy Industries and Construction Co. will build a new seismic research vessel (Tamhae III) for the Korea Institute of Geoscience and Mineral Resources.³³⁹ The new research vessel will be equipped with advanced gas and oil exploration equipment using 3-D and 4-D technology. The vessel is expected to be completed by 2024.</p>	<p>Liberal Government's Heavy Icebreaker Plan</p> <p>The Liberal government is projecting to spend \$7.25B to build two icebreakers,³⁴⁰ to strengthen the Canadian Coast Guard's Arctic operations capacity. The two icebreakers are estimated to be completed by 2031. The two vessels are expected to be constructed by domestic shipyards.</p>	

³³⁹ <http://www.koreaherald.com/view.php?ud=20210128000418>

³⁴⁰ <https://www.cbc.ca/news/politics/heavy-ice-breakers-pbo-cost-1.6287985>

Ongoing & Upcoming Korean Arctic Engagement	Relevant Canadian Arctic Engagement	Recommendations
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Arctic Resources, Commercial, and Infrastructure Engagement

Arctic LNG 2 Project

South Korean shipbuilder Daewoo Shipbuilding & Marine Engineering is constructing six LNG carriers for the Russian LNG project.³⁴¹ The construction is estimated to be completed by the end of 2023.

A lack of capacity in Canadian shipyards has made it difficult for Canada to construct cost-efficient Arctic research and patrol vessels on time.

- Akin to how Norway maintains its position as a global shipping power while being a major importer of South Korea-made vessels, Canada should consider buying existing shipping designs and parts from pioneer ship building suppliers like South Korea’s “big three” shipbuilders (KSOE, Daewoo, and Samsung) to reduce costs and time.

GENERAL RECOMMENDATION

Canada should enhance its Arctic bilateral ties with South Korea in research, shipping, and maritime affairs. South Korean think tanks and academic institutions have developed well-organized exchange programs, online courses, fellowships, and research symposiums dedicated to enhancing Arctic awareness for people from diverse backgrounds. Canada should aim to increase the scope of its Arctic co-operation with South Korea on higher education, primarily by expanding the two states’ joint Arctic research projects and academic exchange programs. In addition, Canada should embrace South Korea’s expertise in shipbuilding by considering South

Korea as a potential reliable and low-cost producer for its Arctic ship-related products. In particular, South Korea’s “big three” shipbuilding companies are undertaking joint research with Norway on autonomous navigation ships, the automation of oil prospecting ships, and the use of eco-friendly paint for ships. Building on the signed 2016 Agreement for Science, Technology, and Innovation Cooperation between Canada and South Korea, the Government of Canada should implement relevant joint research projects on shipping with South Korea to enhance Canada’s maritime navigation and research capacity in the High North.

³⁴¹ <https://www.russia-briefing.com/news/south-korea-s-daewoo-win-us-374-million-russian-arctic-ocean-transshipment-tenders-for-northern-sea-passage-icebreaking-barges.html/>

The Four Asian States' Shared Arctic Engagement

Shared Arctic Engagement Between Japan, China, Singapore, and South Korea	General Recommendations
Arctic Council <ul style="list-style-type: none">• Working groups, task forces, and expert groups	<ul style="list-style-type: none">• Canada should continue to engage with all four Asian non-Arctic states through these multilateral platforms to ensure co-operative and rules-based governance of the Arctic.
Arctic Frontiers	
Arctic Circle Assembly and Forum	
International Arctic Science Committee	
International Maritime Organization	
Shared Arctic Engagement Between Japan, China, and South Korea	
University of the Arctic	
Asian Forum for Polar Sciences	
Northern Sustainable Development Forum	
Trilateral High-Level Dialogue on the Arctic	

