Introduction

From Last Frontier to First Frontier: The Arctic and World Order

Kristina Spohr and Daniel S. Hamilton

As goes the Arctic, so goes the world.
—Inuk leader Sheila-Watt Cloutier[1]

The Arctic has been described as the world's "last frontier"—the final place on earth where states have staked claims to untapped territories, maritime boundaries, and natural resources. It was called the "last white dot on the map" because for centuries it was remote, inaccessible, largely untouched and of little overarching importance to global affairs. The Arctic was last then because so little was at stake.[2]

Today, however, the Arctic may become our first frontier—the first place on earth where state and non-state actors are being driven to devise new governance approaches for a world of more diffuse power, sharper geopolitical competition, and deepening interdependencies between nature and humanity. The Arctic is now often the first, not the last, space that comes to mind when one thinks of climate change, resource exploitation, and novel global connections. Attributes of what may prove to be a new world order could begin to take shape there. The Arctic is now first because so much is at stake.[3]

A space of often-bitter cold, the Arctic is the fastest-warming place on earth.[4] As the region's ice-scape becomes a sea-scape, some see geophysical calamity. Others glimpse new economic vistas. Across one of the bleakest and most fragile landscapes in the world, the race is on for gas, oil, minerals and fish and to control the emerging shipping routes of the High North. As a consequence, the Arctic is becoming the front line between geo-economic competition and environmental degradation.

What happens in the Arctic doesn't stay in the Arctic. Because the region is at the forefront of climate change, it is the world's climate "messenger."[5] The accelerating loss of Arctic sea ice, the collapse of the Greenland ice-sheet, the greening of the Arctic, and disruptive changes

to the planet's thermohaline system have potentially significant consequences for the world's weather, marine ecosystems, coastal water quality and nutrient cycling, the trajectory and force of the Gulf Stream and the North Atlantic Current, the relative accessibility of mineral and biological riches, and the lives and livelihoods of both local communities and those far away. Changes in the Arctic could affect threatened and endangered species and could result in migration of fish stocks to new waters. Moreover, Arctic changes are not only affecting climate all around the world, those changes are rippling back to further worsen the Arctic climate.[6]

The Arctic's frontier status reflects, of course, the simple fact that nobody owns it. Unlike Antarctica—regulated since 1959 by the Antarctic Treaty, which established the continent as a scientific preserve and banned military activity—the polar region of the north, specifically the Central Arctic Ocean, is one of the least governed places on earth. There are more rules even in outer space.[7] That has led to tensions and disputes, but has also helped to generate innovative approaches to unconventional challenges that could offer lessons for other regions.

Traditionally, the Arctic has been a region where some big powers act small and some small powers act big. Norway, for example, has been an Arctic Big Power. So too has Canada, a country of great geographic expanse but modest global influence. The United States, in contrast, is a global superpower that traditionally has acted as an Arctic Small Power: the region has rarely gained priority attention in Washington. As the Arctic opens up, these roles are all in flux as Arctic and non-Arctic states all jockey for position. As great power competition intensifies, the region is becoming a testing ground for the world's new geopolitics. Great power rivalry risks transforming the Arctic from a region of cooperation and low tensions to one of contention and rising tensions. The Arctic could present a litmus test not just for humanity's fight to safeguard planetary health but also of how ongoing shifts in world order play out.[8]

From Unknown Unknown to Zone of Peace

A century ago, the High North was still the unknown unknown—an epic adventure playground for explorers such as Fridtjof Nansen and

Roald Amundsen, home to Indigenous Inuit hunter-fishermen from Greenland to Alaska, and nomadic reindeer herders in Lapland and Siberia. After 1945, however, these icy backwaters gained strategic importance as a front line in the Cold War.

The initial arming of the region began as the United States and the Soviet Union each developed strategic bombers and then ballistic missiles, capable of delivering nuclear weapons across the North Pole. In the process the empty lands started to be developed. The U.S. and Canadian militaries established a string of high-tech radar stations from Alaska to Newfoundland. Bases in Greenland, Iceland and Norway hosted U.S. and other NATO forces. Air- and sea-launched cruise missiles were deployed and tested in the West's polar territories. Meanwhile, the USSR conducted over a hundred underground nuclear tests at its so-called North Test Site on the Novaya Zemlya archipelago. Then, from the 1960s, the often-ice-covered Arctic seas became the main operational arena for nuclear-powered attack submarines. Dangerous cat-and-mouse games ensued. This was a "virtual war,"[9] one that was as much high-tech as it was high-risk in which the two players regularly "met," always with the threat of nuclear Armageddon lurking should the game get out of hand. Significantly, by the mid 1980s, 60 percent of the Soviet Union's submarine-based strategic nuclear forces were based or operated in the vicinity of the Kola Peninsula, very close to Norway and the North Atlantic.[10]

Despite the greater tension, small-scale forms of cooperation broke new ground. Some even included the Cold War rivals. In 1956, the Nordic Saami Council (*Sámiráđđi*) was established to promote the rights of Sámi people in Finland, Norway, and Sweden, setting a precedent for formalized Indigenous cross-border collaboration in the North. In 1973, five Arctic Ocean coastal states, Canada, Denmark, Norway, the Soviet Union, and the United States, signed the Agreement on the Conservation of Polar Bears, which was not only among the first multilateral cooperative arrangements during the Cold War, but has since been furthered by several management agreements between the United States and Canadian Indigenous governments, and by the agreement on the conservation and management of the Alaska-Chukotka polar bear population signed by the United States and Russia in 2000.[11] In 1975, Norway and the Soviet Union signed the first in a series of bilateral agreements that formed the basis of the Bar-

ents Sea fisheries regime.[12] In 1977, the Inuit Circumpolar Conference (later Council) was founded to represent the Inuit of Canada, Alaska, Greenland, and—since 1989—of the now former Soviet Union, laying the ground for what would become one of the most innovative features of circumpolar collaboration, the high-level engagement of Indigenous representatives in the Arctic Council.[13]

As the Cold War faded, Arctic cooperation grew exponentially, spurred in part by Mikhail Gorbachev's 1987 "Arctic zone of peace" speech in Murmansk. A flurry of collaborative bodies were formed, including the International Arctic Science Committee, the Council of the Baltic Sea States, and the Barents Euro-Arctic Region.[14] In 1991 the eight countries with terrain above the Arctic Circle—Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden, and the United States—got together with representatives of Indigenous peoples and signed the Arctic Environmental Protection Strategy. Considering the turbulent history of the region, this agreement on a common Arctic Action Plan was unprecedented. Five years later, this arrangement, originally focused on an environmental agenda, grew into the Arctic Council—a unique forum of state actors and Indigenous peoples to promote co-operative governance in the region while emphatically not engaging with military issues.[15]

These developments went hand in hand with a wider transnational phenomenon: domestic moves towards political devolution away from capitals in Alaska, Canada and the Nordic countries, and with growing recognition and assertion of Indigenous rights and strengthened representation of native peoples nationally and regionally. Many of those peoples now saw a real chance to be heard, and to invest their energies into mechanisms designed to address specific Arctic issues and to convey a sense of the significance of these concerns to the world at large.

By the time the new millennium dawned, the region that after 1945 had been a testing area for missiles and nuclear weapons had become a proving ground for more cooperative approaches, not only among states but between state and non-state actors as well. The Arctic came to be seen by some as an exemplary "territory of dialogue"[16] that reflected a more human and humane approach to international affairs than the antagonistic power politics that had played out there before and during the era of bipolarity.

The emerging architecture of collaboration was marked by a strong focus on Arctic-specific issues. As Oran Young has noted, it gave structure to "the idea of the Arctic as a distinctive region with a policy agenda of its own,"[17] one that could be insulated from global political dynamics. Such efforts proved difficult, however, as global environmental changes and processes of globalization began to intrude. Relatively harmonious circumpolar cooperation also developed during this period in part because of the relatively benign political environment of post-Cold War international order. Today, as power has diffused, Great Power competition has returned, and as the mutual interplay between Arctic and global issues has accelerated and become quite palpable, the question now is whether the region can continue its pioneering role, this time with regard to governance arrangements that can effectively manage both competition and cooperation as well as conservation and extraction efforts.

The Arctic Regime

We can begin to answer this question by understanding Arctic governance as a "regime," which Stephen D. Krasner defines as a set of explicit or implicit "principles, norms, rules, and decision-making procedures around which actors' expectations converge in a given area of international relations."[18] The Arctic regime consists of a web of numerous formal and informal institutions and mechanisms, many of them innovative, each with differing levels of membership, participation, and rules of engagement, through which state and non-state actors seek to work together and to manage areas of friction.

The issues facing this vast region are complex: no single institutional framework would be able to accommodate the diverse interests of Arctic and non-Arctic stakeholders and the many challenges they face. That is why the Arctic regime is not a single comprehensive and integrated structure covering the whole gamut of the region's policy agenda. It has evolved organically into a mosaic of specific hard and soft law measures and often cross-cutting formal and informal arrangements at local, state, sub-regional and regional levels.[19]

Over the past quarter century, the Arctic Council has emerged as the hub of the networks that together comprise the Arctic regime.

Its founding document is not a treaty but the Ottawa Declaration of September 19, 1996. The Arctic Council's membership consists of the eight Arctic states (Canada, Greenland/Denmark, Finland, Iceland, Norway, Russia, Sweden, and the United States). All decisions of the Arctic Council and its subsidiary bodies are by consensus of the eight Arctic states. The Council has a two-year chairmanship that rotates among the eight member states. A standing Arctic Council Secretariat was established in Tromsø, Norway, in 2013. Thematic areas of work addressed by the Council include environment and climate, biodiversity, oceans, Arctic peoples, agreements on joint scientific research as well as on collaborative efforts to counter marine oil pollution and facilitate search and rescue missions in the air and at sea. The Ottawa Declaration states explicitly that the Arctic Council "should not deal with matters related to military security."[20]

In addition to the eight member states, six organizations representing Arctic Indigenous peoples have status as Permanent Participants. This has been an innovative and largely unprecedented arrangement; Permanent Participants must be fully consulted by Arctic Council member states before decisions are taken. These innovations have helped to make the Council an important mechanism for increasing the prominence of the concerns of the Arctic's Indigenous peoples.[21]

The Arctic Council and its rotating presidencies offer avenues for Arctic actors to devise practical cooperation on an array of specific issues, and either to work out common principles, general norms, specific rules and agreed procedures, or to understand better their differences.[22] It has helped to build continuity and confidence in efforts to address circumpolar issues. The Council, through its task forces, has served as forum and catalyst for a number of legally-binding circumpolar agreements, such as the Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic, and an agreement on enhancing international scientific cooperation in the region.[23] They have also spun off a number of independent specialized satellite bodies that are intended to complement the Council's work. These include the Arctic Coast Guard Forum, the Arctic Economic Council, the Arctic Offshore Regulators Forum.[24]

Moreover, the Arctic Council's work has resulted in what Piotr Graczyk and Timo Koivurova have called "probably the most signifi-

cant accomplishment in Arctic environmental cooperation: a substantial expansion of our knowledge about the Arctic environment, including natural and anthropogenic processes."[25] It has also enabled the identification of major risks to the inhabitants of the region and the forms of responses for addressing those risks. The Council has provided critical input into negotiations and the implementation of international conventions, such as the Stockholm Convention on Persistent Organic Pollutants and the Minamata Convention on Mercury.[26]

Another key element of the Arctic governance regime is the United Nations Convention on the Law of the Sea (UNCLOS), which sets forth a comprehensive regime of law and order in the world's oceans, including the Arctic Ocean. The UNCLOS, which came into force in 1994, regulates the 200-nautical-mile national economic zones offshore within which a nation has exclusive rights to fish the waters and tap the minerals under the sea bed. Beyond this limit, states with Arctic coastlines are not permitted to fish or drill. Yet a nation can lobby for a zone of up to 350 nautical miles from the shore, or even more—if it can prove the existence of an underwater formation that is an extension of its dry land mass. Such claims are decided by the UN Commission on the Limits of the Continental Shelf, established under the UNCLOS.[27]

The five Arctic littoral states (Canada, Denmark/Greenland, Norway, Russia and the United States) reaffirmed in the 2008 Ilulissat Declaration that the Arctic would be governed by the UNCLOS, thereby effectively ringfencing for themselves the strongest rights over the region on issues such as delineation of the outer limits of the continental shelf, the prevention of marine environment (including currently ice-covered areas), freedom of navigation, marine scientific research and other issues of the seas. Nevertheless, even then there were deviating readings of international law among the Arctic Five, pertaining to shelf claims and to ownership of waterways. These are issues we address later.

The Arctic Council has also become a central node for a larger solar system of orbiting bodies involving non-Arctic actors. As the Arctic has risen on the global agenda, more countries have sought to assert their stake in Arctic issues, with some even looking for entry to the Council. The United Kingdom, for instance, has designated itself "the Arctic's nearest neighbour," though it is not clear if there is substance

behind the rhetoric. Not to be outdone, China calls itself a "near-Arctic" nation, even though its northernmost point is about 900 miles south of the Arctic Circle. In response, the eight founding states have over the past two decades conceded observer status to 13 non-Arctic states, 14 intergovernmental and interparliamentary organizations, and 12 non-governmental organizations, making for a total of 39 observer states and organizations today.[28]

This intermeshing of interests among Arctic and non-Arctic actors has demonstrated some successes. For instance, in 2017, the five nations with Arctic coastlines—Canada, Greenland (Denmark), Norway, Russia and the United States, together with China, Japan, South Korea, Iceland and the European Union (EU), agreed to ban for 16 years unregulated fishing in newly ice-free international waters of the high Arctic—an area equivalent in size to the Mediterranean—or until scientists are able to analyze the ecology of the quickly-thawing ocean and put into place a plan for sustainable fishing. This deal still has to be signed and ratified, which is no easy task. But as Malgorzata Smieszek notes, the negotiations are a major step in conservation efforts and another example of what diplomats call "Arctic exceptionalism," meaning a willingness by big and small powers alike to set aside some of their geopolitical differences for the sake of common interests.[29]

The Arctic regime is underpinned by additional interactive mechanisms that promote transparency of intention and action, facilitate cooperative connections, and anticipate, prevent and manage differences. These mechanisms include but go beyond formal state-centric institutions. They comprise, for instance, interactions through the University of the Arctic (a cooperative network, consisting of higher education institutions and other organizations based in the circumpolar region) and the track-two-diplomacy offered by the Arctic Circle Assembly. They include connections and exchange of good practice with other sub-regional organizations such as the Barents Euro-Arctic Council and the Council of Baltic Sea States.[30]

A regime's effectiveness, of course, depends both on the degree to which its welter of institutions and networks, organizations, governments, and international bodies can act as a "catalyst for cooperation" leading to shared principles, procedures, rules, and norms, and how well it can give life to those commitments, as participant actors en-

gage together and with others.[31] In this regard, the Arctic regime can register some notable successes, even as it continues to grapple with continuing issues of contention, gaps in capacities, and asymmetries of power and interdependence. While achievements do not always match aspirations, the Arctic region is arguably better off because the ever-evolving regime has given greater voice to the concerns of Arctic Indigenous peoples, produced influential scientific assessments, provided a platform for negotiations on the first legally-binding circumpolar agreements, and promoted peace in a region that had served as one of the main theatres of the Cold War.[32] The Arctic regime, as it has crystallized in the post-Cold War era, has demonstrated that non-treaty-based mechanisms and frameworks can sometimes offer more innovative means of governance than formalized, state-centric arrangements. Such flexible, informal modes of collaboration may prove even more useful in addressing governance challenges in the face of the kinds of rapid, complex and potentially disruptive challenges that both Arctic and non-Arctic states and societies may be facing in the future.[33]

Current Challenges

Despite some notable successes, the Arctic regime is subjected to continuous review and frequent critique. Some argue that today's world of diffused power, higher geopolitical tensions, and more alarming geophysical changes will test the limits of the Arctic Council and its orbiting networks of state and non-state actors.[34] Those tensions were on display at the May 2019 Arctic Council ministerial meeting in Rovaniemi, Finland, when U.S. Secretary of State Mike Pompeo sharply warned Russia and China against "aggressive" actions in the Arctic, while resisting a diplomatic push by other countries in the region to avert the worst effects of climate change. "This is America's moment to stand up as an Arctic nation," he proclaimed. "The region has become an arena of global power and competition." Pompeo sent a clear warning shot across Beijing's bow by challenging its self-conception as a "near-Arctic" state: "There are only Arctic States and Non-Arctic States. No third category exists, and claiming otherwise entitles China to exactly nothing."[35]

By describing the rapidly warming region as a land of "opportunity and abundance," Pompeo cited its untapped reserves of oil, gas, ura-

nium, gold, fish, and rare earth minerals. Melting sea ice, he said, is opening up new shipping routes. "We're entering a new age of strategic engagement in the Arctic, complete with new threats to Arctic interests and its real estate." What Pompeo chose to largely omit was any reference to protecting the fragile ecosystem of the Arctic for the sake of the global climate and to the continued need for constructive diplomacy to this end. Many observers and diplomats from Northern Europe were shocked by the U.S. demarche, because the Arctic Council's mandate is supposed to have nothing to do with security issues, and because Pompeo brought into the discussion outside problems and actors, including China.[36] Most offensive of all, Pompeo blocked a joint Arctic Council Declaration on Climate Change, thereby not only going against the Council's ideals but fundamentally hampering its functioning as a model for intergovernmental cooperation. In response, Finnish Foreign Minister Timo Soini stressed that most Council members had welcomed the Paris Climate Agreement and "noted with concern" the findings of a United Nations scientific panel, which warned of worsening food shortages and wildfires as soon as 2040 without drastic transformation of the world economy.[37]

Power Politics and Climate Change

The media seems captivated by what reporters are hyping as a "scramble" for the Arctic, led by Russia and China. Moscow and Beijing are perceived to have joined forces, vying for geostrategic and economic advantages as the melting of the polar sea ice and the thawing of the tundra are turning the Arctic Ocean and North Siberian landmass into spaces of opportunity—with expanding fishing grounds, newly accessible untapped sources of oil, gas, and minerals and opening waterways, all believed to create increased commerce and shipping along unprecedented new optimal navigation routes. In view of this "race" for natural and material riches, some have sounded alarm over Russia's military developments in its northern regions—the European and Far Eastern Russian Arctic terrains from Kola to Kamchatka. Others look suspiciously to China's expansion of influence in circumpolar nations, from investments in Arctic scientific, infrastructure and hydrocarbon projects to the Beijing's growing maritime presence in the region.[38]

Sino-Russian rapprochement is undoubtedly real, even if it must be noted that Russian and Chinese national interests do significantly de-

viate, in the Arctic and elsewhere. Moscow and Beijing have thrown down the gauntlet to Washington—as they seek to push the world's "unipole" and "sole superpower" from its pedestal in their own pursuit of recognition as equals in a "polycentric," "post-West world." With talk of a "liberal order" having outlived itself and becoming "obsolete" (Putin) or with expressions of the desire to become the leading global power (Xi), Russian and Chinese leaders have not merely spelled out their ambitions. What's more, their moves reflect a real shift in the global correlation of forces that is already under way.

At the same time, scientists have found ways to be heard in the public sphere, warning with increasing urgency of Arctic indicators for planetary climate tipping points—geophysical and climatological developments causing cascading domino effects that bring about long-term changes to current ecosystems and human activity. These climate effects are likely to be global in scope with significant consequences also for the world of politics and governance.

The first transformative change is happening on land. The second is taking place on the ice and open ocean—all because the Arctic now warms at double the rate of the global average. And the massive shrinkage of old Arctic sea ice over the past 40 summers from 8 to 4 million km^2 means that there is more heat-absorbing open water and 40 percent less reflective ice. Worse, each fall in the Laptev Sea the winter sea ice forms later and each spring there is now much younger and therefore thinner and weaker Arctic ice, which in turn melts faster and puts the region's ecosystems in danger, amplifying regional warming in the polar North.

This has several wider implications: increased and irreversible thawing of the Arctic permafrost, which releases ever larger quantities of carbon dioxide and methane into the atmosphere; and large-scale insect disturbances and an increase in wildfires, leading to a dieback of North American boreal forests and the European and Siberian taiga. Those forests now may be releasing more carbon then they absorb. Equally, the accelerating melt of the Greenland ice sheet, which is exposing the surface to ever-warmer air, could mean that at a rate of 1.5°C of global warming the sheet is doomed by 2030, bringing with it a dangerous rise in sea levels.

This is not just a regional problem. Such deeply interconnected regional transformations are believed to have planetary-scale impacts. Rising Arctic temperatures and the ensuing ice melt is driving fresh water into the seas, which could be a contributing factor to a recent 15 percent slowdown of the Atlantic Meridional Overturning Circulation (AMOC), the ocean currents driving salt and heat from the tropics and responsible for the relative warmth of the Northern Hemisphere. A further slowdown of the AMOC could destabilize the West African monsoon, triggering drought in Africa's Sahel region. It could dry the Amazon, disrupt the East Asian monsoon and cause heat to build up in the Southern Ocean, which could then quicken the pace and scale of Antarctic ice loss, releasing more ice shelves and floes into the seas.[39]

While this existential threat is hard to measure, model, and grasp, scholars, policymakers and local inhabitants alike are feverishly engaged in trying to make sense of the implications and potential consequences of "Arctic change" for local livelihoods and for regional and global dynamics of power and climate. All are undertaking cost-benefit analyses—with governments weighing their national interests against the interests of all humanity.

Shelf Claims and Control of Waterways

In 2008, the U.S. Geological Survey estimated that the Arctic holds 13 percent of the world's undiscovered oil, and 30 percent of its natural gas. Over 70 percent "of the mean undiscovered oil resources is estimated to occur in five provinces: Arctic Alaska, Amerasia Basin, East Greenland Rift Basins, East Barents Basins, and West Greenland-East Canada." Similarly, over 70 percent "of the undiscovered natural gas is estimated to occur in three provinces: the West Siberian Basin, the East Barents Basins, and Arctic Alaska." The value of these resources is worth about $18 trillion in today's prices, roughly equivalent to the entire U.S. economy in 2017.[40]

The analysis of petroleum resources was widely misinterpreted to reflect offshore reserves, as Arild Moe points out in his chapter in this volume. But as it created the perception of a huge untapped potential that was becoming more accessible because of the ice melt, competition soon began to heat up—less so over what are extremely difficult and costly Arctic offshore oil-related investments and projects than over

questions of territory and ownership.[41] Russia, Canada, Norway and Greenland have all set their sights on the Lomonosov Ridge—an underwater mountain chain that stretches for 1,240 miles almost directly across the center of the Arctic Ocean and through the North Pole. Under and around this formation lies nearly a quarter of the Earth's remaining fossil fuel resources.

Russia was first to enter the race, with its bold initial claim in 2001 on the North Pole and an area amounting to half of the Arctic Ocean, some 1.325 million km^2 of international seabed under the icesheet and with them future waters and their fishing stocks. Refined claims to the UNCLOS followed.[42]

Thanks to Russia, the idea that the melting Central Arctic Ocean and its seabed might be divvied up had been planted in the minds of the Arctic littoral states, and so Denmark (Greenland) and Canada each followed suit. On December 14, 2014, Copenhagen claimed an area of 895,000 km^2 extending from Greenland past the North Pole to the limits of the Russian Exclusive Economic Zone. On May 23, 2019, Ottawa filed its submission for 1.2 million km^2 of seabed, subsoil and seas stretching through the Canada Basin into the U.S. Alaskan shelf—by relying on the Lomonosov Ridge as an extension of Canada's Arctic archipelago.[43] All these territorial claims remain unresolved.

Equally important, as Suzanne Lalonde, Alexander N. Vylegzhanin and J. Ashley Roach explain in this volume, the legal status of various waterways is also in dispute. Canada considers the Northwest Passage to be part of its internal waters under the UNCLOS. The United States and most maritime nations, however, believe those waters to be an international strait with foreign vessels thus having the right of "transit passage." In their view, Canada would have the right to enact fishing and environmental regulation, and fiscal and smuggling laws, as well as laws intended for the safety of shipping, but not the right to close the passage.[44]

Like Canada, Russia considers portions of the Northern Sea Route—the navigational routes running through waters within Russia's Arctic EEZ east from Novaya Zemlya to the Bering Straits—that is the Kara, Vilkitskiy, and Sannikov Straits, as internal waters. But while Russia argues its position on the basis of historical agreements between Russia and England, Canada underlines the aspect of shared sovereignty,

namely that the "Canadian" Northwest Passage is considered also to be part of Inuit Nunangat, indeed, their "Arctic homeland."[45]

As all the Arctic players—large and small—and their Indigenous peoples maneuver for position and their exact stake in the region—land, seabed, and waters—equally exogenous powers are pressing onto the scene. Ever since the ascent of Xi Jinping to the Chinese Communist Party leadership in 2013, China wants to have a say in the region. So do Japan, South Korea and Singapore in the Far East[46] as well as Britain and Germany in Europe.[47] All are crowding in as they look north. No one wants to miss out, whatever the issue—be it science, resources, shipping or security.

National and Indigenous Interests in the Arctic

The Arctic was long described as an area of low security tensions, with favorable conditions for international cooperation, but the dramatic climate transformation and rapidly shifting geostrategic realities of the past decade have meant new challenges and changed preconditions for all powers of the circumpolar North. As a result, all actors are now updating their Arctic policies for the 2020s and beyond.[48]

But why do some Arctic countries prioritize the Arctic more than others? How do the global big powers and the mid-sized or small countries each assert themselves in Arctic policies? How does the Nordic regime (focused on peace and cooperation, prosperity and sustainability) interact with the impact of exogenous powers on intra-Arctic affairs and the regional power equilibrium? And what is the relationship between state actors and Indigenous representation? Here, some middling states have acted big—particularly Canada, Norway and Denmark (Greenland)[49]—setting instructive examples against which to compare the conduct of the great powers: America, Russia and China.

For Canada, a neighbor and NATO ally of the United States, and during the Cold War effectively America's junior partner in the North (spanning from the Beaufort Sea to Baffin Bay), things have changed since 1991, as this relatively small political "actor" has emancipated itself at the circumpolar top table through the Arctic Council in particular. Two cornerstones of its Arctic Strategy stand out. The first is a readiness to exercise national sovereignty, especially over resource development, rooted in a deeply engrained and romanticized narrative

of how Canada's national identify is so deeply intertwined with its historical relationship to the North. Second, the Harper administration (2011-2015) made a high priority of retaining a maritime presence in the Arctic, after Canadian defense officials in the early 2000s had begun to reexamine Canadian capabilities in the Arctic due to the changing security and environmental situation in the region. Ottawa's fresh focus and military commitment to the Canadian Arctic was shown through opening of an Arctic Training Center in Resolute Bay, Nunavut, in 2013—a year-round training base for Arctic operations which above all else increases the military's ability to respond to emergency operations in the Arctic.[50]

Since Justin Trudeau became Prime Minister in 2015, Ottawa frames its role in the north as a global leader of climate research and a "responsible steward" of the Arctic. Canada has also positioned itself alongside Russia as one of two indispensable Arctic nations. In 2015, Foreign Minister Dion dubbed Moscow an "unavoidable partner" with which closer bilateral cooperation in the Arctic ought to be sought as a matter of national interest, despite major political tensions. Dion spelled it out in 2016: "Almost 50% of the North is Russian, and 25% is Canadian. Between us, we control 75% of the North. To sever the links with Russia, our neighbour, serves the interest of no one."[51]

The Trudeau administration has furthermore sought to balance the concerns of all Northern stake holders, incorporating the Indigenous community into decision-making processes. After all, "as the ice melts, the debate of the sovereign rights of the Arctic nations heats up."[52]

Generally, Canada's Arctic and Northern Policy Framework in its 2019 incarnation stressed the significance of the so-called "rules-based international order" in the Arctic which responds effectively to new opportunities, but also challenges—such as posed by a brazen China with its persistent interest in the NSR and Canadian natural resources.[53] Thus, Ottawa stated that Canada's Arctic policy will be conducted through international engagement. Meanwhile, the focus at home is on achieving "strong, sustainable, diversified and inclusive local and regional economies," fostering a healthy and resilient ecosystem and continuing to work towards "reconciliation" with the first nations.[54]

The Canadian Inuit believe the Canadian government must do more. They want recognition of "Indigenous Knowledge as an extensive sys-

tem of scientific data" that, they stress, must be integrated as a central component of policy and decision-making around Arctic environmental efforts, as well as the health and community prosperity of Inuit Nunaat. Moreover, there is a sense that Inuit participation generally must not merely be secured, but increased in national environmental, economic and defense strategies and international diplomacy. As the Inuit Circumpolar Council (ICC) points out, the government "must understand that Inuit use and occupy Inuit Nunaat—their homeland, that Inuit are the stewards of the land, and, given appropriate infrastructure, are the principal players in Canada's Arctic sovereignty and security."[55]

Questions of Arctic identity, security, and economics are equally if not more acute for Norway and Greenland.[56] For Oslo, the Arctic has long been a foreign (and defense) policy priority. "We play a leading role in international diplomacy in the Arctic and we cooperate closely with other countries and organisations on how best to develop the region." Norway's "High North Strategy" is one "between geopolitics and social [and economic] development."[57]

Half of Norway's territory (land and waters) is north of the Arctic Circle, from the city of Bodø to Svalbard, and it is here that the country is on the frontline with Russia—with tensions for the past century flowing and ebbing. Since 1949, NATO has formed an indispensable pillar of Norwegian security, and the Alliance in turn benefits from Norway's active contributions to it. No one anticipates direct threats to Norway in the short term. The most serious concern is so- called "horizontal escalation" of a crisis triggered elsewhere on the fringes of Europe, rapidly growing into a wider conflict that threatens Norwegian waters, airspace and territory. In this regard all eyes are on the Kremlin, for there is a sense that Russia has been demonstrating hostile intent with its continued build-up of Arctic military capabilities that threaten the ability of Norway and its allies to operate armed forces, secure critical infrastructure and waterways, protect civilian populations, and come to each other's assistance.

Specifically, improvements to Russia's Northern Fleet, including surface vessels and submarines armed with modern cruise missiles, pose an increased threat to NATO operations in the Norwegian Sea, to undersea internet cables and to sea lines of communication essential to reinforcing Norway from North America or Europe. And since the

High North holds strategic importance to Russia's Bastion Defense in the Barents Sea and Arctic Ocean, NATO feels it must plan for possible future operations in an increasingly contested environment. What's more, the collapse of the Intermediate-Range Nuclear Forces Treaty in 2019 has brought an increased threat from new medium-range ballistic missiles, requiring Norwegian and allied defense planners to adjust to novel threats to the homeland and region.

Norway, though small in size, is undoubtedly "punching above its weight" when it comes to security; it does so thanks to high-tech capabilities and its ability to engage all of society in a "total defense" effort. Despite these perceived strengths of its military capabilities, the country still faces pressing challenges. Not only does Oslo need to enhance the readiness and resilience of Norwegian forces to deter aggression, it has to manage the consequences of an increasingly complex international (Arctic) environment and the climate challenge, too.[58]

Given Norway's geographic location—it is intimately connected to the sea, with long coastlines on the Atlantic and Arctic oceans—maritime resources have always formed the basis of its national economy and defined the very identity of its northern coastal communities. Significantly, 80 percent of ship traffic in the Arctic takes place in waters under Norwegian jurisdiction, much of it related to oil and gas exploration and production as well as to fisheries. Now that the sea ice is melting, Norwegian businesses and industries are also seeking to take advantage of emerging opportunities—albeit they postulate in a safe and environmentally sound way.[59]

Here it must be noted that Norway does not actually use much of the hydrocarbons it pumps out from under the seafloor. Instead, it exports the oil and gas while using the income to provide free health care and education and to save for the future. As a result, despite the fact that its wealth is generated largely by oil and gas, Oslo likes to promote a reputation for environmental leadership. Therein lies a paradox, for global warming caused by carbon pollution from fossil fuels produced by Norway (and other countries) is harming also the Indigenous at home, some 50-60,000 Sámi people.[60] Across the region of Troms og Finnmark, the Sámi are fighting "sustainable development and economic growth" policies that they see as being disruptive to local reindeer-herding operations. These include obvious areas such as the

expansion of mines, railroads, and logging, but also wind farms, which are believed to be disturbing grazing habits and disrupting reindeer migration through habitat fragmentation. And while being presented by European governments generally as a climate solution paving the way for sustainable future, the Sámi consider them as programs of "green colonialism" due to their destructive effects on their ways of life. In short, relations between Sámi and the Oslo government are tenuous, raising questions of adequate representation and sovereignty over Sápmi, the Sámis' ancient lands spanning from the Kola Peninsula via Finland, Sweden to Norway.[61]

Similar to the issues of political participation and self-determination at stake in Arctic Europe between the Nordic capitals and the Sámi, the ICC (representing Inuit from Alaska, Canada, Greenland, and Chukotka) and the governments of the United States, Canada, Denmark and Russia disagree whether the rightful meaning of 'sovereignty' is either a fundamental "binary concept" (internal/external, national/global, legal/factual, formal/material, abstract/territorial) or increasingly, in these globalized times, a "contested concept" in flux.[62]

Greenland is situated between those two opposite views, as a state-in-the-making with almost 90 percent of its population of 56,000 being Inuit. On the one hand, their self-government is part of the transnational Inuit community; on the other hand, Greenlanders yearn for independent statehood from Denmark. In this striving, the ongoing development of more foreign policy sovereignty is an important factor in the enhancement of Greenland's international status and in its ability to attract external investments. Yet, the latter combined with more political emancipation also raises the problem of novel dependencies; alongside economic and political opportunities lurk new dangers to ecology and cultural heritage but also to the budding polity. Put another way, protecting the environment and traditional livelihood and rapid industrial development (in part facilitated by rising temperatures) are potentially mutually exclusive goals.[63]

To be sure, with greater navigability of Arctic waters because of thawing sea-ice and with raised expectation for easier access to its rich mineral deposits as the Greenland ice sheet is dissolving ever faster,[64] Greenland's strategic importance has grown. Thus, its voice will be heard. But exogenous actors such as China in particular are pushing

onto the scene—increasingly aggressively looking to realize ambitious infrastructure and mining projects (in exchange for supporting the local wilderness tourism industry) as Beijing seeks to expand is global influence under its Silk Roads strategy—also in the Arctic. China's growing engagement with Greenland (as well as Iceland, Norway and Finland) may have a broader security dimension, given their relevance for U.S. global policy and NATO defense strategy. As a result, in fall 2019, Denmark—keen to remain a player at the top table in the North—has now made Greenland its number one priority on its national security agenda.[65]

Nowhere is the complexity of the interplay of climate change and geopolitical power games, of national interests and of the interests of Indigenous people more palpable than in Greenland. Largely overlooked as a frozen wasteland and zone of peace since the Cold War ended, Nuuk is rapidly being forced into playing it big, moving to center stage, all the while Copenhagen is looking to consolidate its strategic cooperation with Washington.[66]

This has not been easy given the erratic nature of the Trump administration. In April 2020, news of an American offer to the self-governing territory of $12 million in financial support and the slated re-opening of the U.S. consulate in Nuuk sparked outrage among many politicians in Copenhagen, coming barely a year after the Danish and Greenlandic governments rebuffed U.S. president Donald Trump's awkward expression of interest in buying Greenland. And while Greenlanders appear delighted at the most recent U.S. overtures, stating that "our work on building a constructive relationship with the United States is [proving] fruitful," the Trump administration left doubt that strategic calculations were behind its "provision of assistance:" to counter, as a Senior U.S. State Department official put it, Russia's "military build-up in the Arctic" and Chinese efforts to "winkle their way" into Greenland.[67]

Since the Cold War, the United States has been the least active and least assertive of the littoral Arctic nations and has lacked a clear, comprehensive and consistent Arctic strategy for much of the post-Soviet era. U.S. administrations have not treated the Arctic region as a U.S. national security priority on par with Europe, Asia and the Middle East, nor did they pursue comprehensive or well-resourced policies towards the region. In fact, U.S. officials actively sought to keep Rus-

sian-U.S. frictions out of the Arctic. However, since Moscow annexed Ukraine's Crimean peninsula in 2014 and launched a proxy war in eastern Ukraine, Western governments have suspended most dialogue with the Russian military.

Today, the Arctic, peripheral to U.S. security policy for almost three decades, has returned to the forefront of American politics, though not entirely in its own right. Alaska appeared in the news because the Trump administration promoted its off- and onshore hydrocarbon agenda as well as pledging drilling lease sales for gold and copper mining, not because it was worried about the UN's declaration of a climate emergency. Energy needs (and the energy lobby) and mining riches, not global warming, are the push factors why the White House is looking North.[68] Indeed, America remains the odd state out when it comes to Arctic governance, still not having ratified the UNCLOS and pulling out of the 2015 Paris Climate Agreement.

The Pentagon's April 2019 Arctic Strategy commits the Department of Defense to work with allies and partners to counter unwarranted Russian and Chinese territorial claims and maintain free and open access to the region. This reactive position in the Arctic is a sign that the United States has begun to consider how to project force in the North in the context of great power competition. The Coast Guard now plans to add six new polar ice-cutters for Arctic and Antarctic missions, in addition to its current two.[69] It has also announced that it will conduct freedom-of-navigation operations in the Arctic to contest Russian claims that the NSR is an internal rather than an international body of water. Furthermore, the U.S. Navy has relaunched its Second Fleet in the North Atlantic and expanded exercises in the Arctic Ocean, while the U.S. Air Force's July 2020 Comprehensive Strategy is premised on exercise vigilance that "recognizes the immense geostrategic consequence of the region and its critical role for protecting the homeland and projecting global power," all to be underpinned by a combat-credible force.[70]

For all this recent activity and bombastic rhetoric, the United States—together with Canada, and the Nordic countries—has continued to work with Russia on a range of issues in the Arctic, including search and rescue (SAR) under the May 2011 Arctic Council agreement on Arctic SAR, and creating a scheme for managing two-way shipping

traffic through the Bering Strait and Bering Sea in 2018. Some observers see possibilities for further U.S.-Russian coaction in the Arctic.

It is undeniable, however, that Putin's Russia has played it both ways—engaging in cooperative diplomacy in the Arctic Council and over territorial questions via the UN Law of the Seas, while constantly seeking to assert itself on the global stage.[71] Putin's long-term strategy has been to rebuild Russia's international position since its humiliating crash at the end of the Cold War. Over the past decade, having restored political and economic stability at home, Putin has been testing the West—exploiting opportunities in Ukraine (Crimea and Donbas) and Syria.

The Arctic is a keystone of that policy, because only here—as Putin said in December 2017—is there real scope for territorial expansion and resource acquisition. This builds on and deepens the main asset of Russia's unbalanced economy—its continued heavy reliance on the extraction and export of raw materials, especially oil and gas—which no modern leader of the country has been able to change.

The natural resources in Russia's Arctic region already account for a fifth of the country's GDP. The oil and gas under the North Pole offer the prospect of huge additional wealth but it will take time, money and technology to exploit, not to mention much international haggling. Somewhat easier pickings may be in the offing thanks to the thawing northern rim of Siberia—14,000 miles of coastline from Murmansk to the Bering Strait—both on land and in Russia's territorial waters. De-icing opens up new opportunities for mining—from hydrocarbons to lithium—and shipping, but the melting of permafrost also harbors the problems of collapsing infrastructure, oil spills and toxic leaks, as the costly accidents at Norilsk and in Kamchatka in 2020 revealed.[72]

Russia has complemented its economic activities with an Arctic security policy, involving bases and ice-breakers. In December 2014, Moscow announced that it intended to station military units all along its Arctic coast, and began pouring money into airfields, ports, radar stations and barracks. The new infrastructure includes two huge complexes: the Northern Shamrock on Kotelny Island and the Arctic Trefoil on Franz Josef Land, 620 miles from the North Pole. Taken together, Russia's six biggest Arctic bases in the High North will be home to about a thousand soldiers serving there for up to 18 months

at a time in constant snow, permanently sub-zero temperatures from October until June, and no daylight for nearly half the year. Moscow is now concentrating on making airfields accessible year-round. Under Gorbachev and Yeltsin, "our Arctic border areas were stripped bare," Pavel Makarevich, a member of the Russian Geographical Society, proclaimed. "Now they are being restored."[73]

No other country has militarized its Arctic North to anything like this extent. And none can match Russia's 40-strong ice-breaker fleet, which is used to clear channels for military and civilian use. Three nuclear-powered ice-breakers, including the world's largest, are now under construction to complement the six already in operation. Russia is also giving its naval warships an ice-breaking capacity. By 2021 the Northern Fleet, based near Murmansk, is due to get two ice-capable corvettes, armed with cruise missiles.[74]

The scale of Russia's endeavor becomes clearer when one considers that the next countries on the ice-breaker list currently are Finland (eight vessels), Canada (seven), Sweden (four), China (three) and then the United States (two).[75] We are not talking about Cold War-era militarization, when the Soviets packed much more firepower in the Arctic and were geared to wage nuclear war with the United States. Arctic bases were staging posts for long-range bombers to fly to the United States. Now, in an era when a slow-motion battle for the Arctic's energy reserves is unfolding, Russia is creating a permanent and nimble conventional military presence in small packets that are highly mobile and capable of rapid reaction. Furthermore, having tested its hypersonic Kinzhal air-launched ballistic missiles in the Arctic in 2019 with the quiet threat to regionally deploy them, Russia has in 2020 begun preparations to resume testing of nuclear cruise missiles on Novaya Zemlya, all the while, according to U.S. Coast Guard Commandant Admiral Paul Zukunft, "building ice-capable combatants" that can launch cruise missiles with ranges "as far south as Miami, Florida."[76]

The scale of Russia's Arctic ambitions is not in doubt. In March 2015, Moscow conducted the largest full-scale readiness exercise in the Arctic since the collapse of the USSR. It deployed 45,000 soldiers, 3,360 vehicles, 110 aircraft, 41 naval vessels and 15 submarines, according to the Russian Ministry of Defense. On Navy Day, July 30, 2017, Russia made a point of showing off its naval might across the world, from Tar-

tus in Syria to Sebastopol and Vladivostok, and, above all, in the Baltic waters of St. Petersburg under Putin's approving eye. Up to a point, Putin's naval show that day represented a Potemkin village, for Russia's 2018 defense budget of $61.4 billion was small compared to America's spending of $649 billion, and even China's $250 billion.[77] Yet it would be an error to write off the resurgent Russian fleet as mere bluff and bluster. In fact, in July 2017, Russia and China held their first common naval drills, called Joint Sea 2017, in Baltic waters, bringing the Chinese uncomfortably close to one of the most turbulent fault lines in East-West relations; and once again, China was an active participant in a 2018 exercise, the massive Vostok 2018 maneuvers (throughout Siberia and all the way to the Pacific), officially with some 300,000 Russian service members. Both countries' growing focus on the North became evident when—it seems by chance—the crew of a U.S. Coast Guard cutter found the Chinese and Russian navies conducting a joint exercise simulating a potential small-scale military encounter in the Bering Strait in the summer of 2020.[78]

Perceptions matter as much as crude power projection. In this vein, the Kremlin regularly releases pictures of President Putin in snow gear, of ice-breakers in the Arctic Ocean, and of troops training in white fatigues, brandishing assault rifles as they zip along on sleighs pulled by reindeer. And now that Russia's military forces can move with agility to deliver precise and deadly strikes, they are far more useful. Such forces need not be enormous. If cleverly deployed, even a small military hand can deliver a big blow with success—as Russia did in Ukraine and Syria, outmaneuvering the West. Through its new presence and military build-up, Russia can also deny others access to polar terrain—just as China has managed to do in the East and South China seas. And it does so under the pretext that as "the Arctic region has become a zone where geopolitical, geo-strategic and economic interests of the world's leading powers are colliding," Russia must be able to counter what it sees as the U.S. challenge to its control of its "Arctic zone," especially at the economically and strategically significant NSR's entry points, the Bering Strait and the Barents Sea.[79]

Still, to realize the kaleidoscope of its Arctic ambitions, Russia has to crack the Potemkin problem. It still lacks the necessary technology and finance to open up the new Arctic, onshore and offshore. Deep-sea ports and supply stations need to be built along the Northern Sea

Route, as well long-distance railway lines, motorways and undersea fiber-optic data cable networks. Because of U.S. and EU sanctions since 2014, Russia cannot rely primarily on investment from the West. That is why it has begun to turn to China for money and markets.[80]

To President Xi Jinping, Russia's Arctic ambitions present an opportunity for China to use its economic might to increase its global influence. Xi, like Putin, sees the Arctic as a crucial element of the country's geopolitical vision. Now that the People's Republic is no longer an introspective state, but one that has "grown rich and become strong," as Xi declared in his December 2017 New Year's Eve speech, it intends not only to become "a great modern socialist country" but the "keeper of international order." America's long-time abstention from Arctic power politics seemed then to be offering the PRC an unexpected gift.[81]

The scale of Xi's vision is remarkable. In 2013 China embarked on the "One Belt, One Road" initiative, the most expensive foreign infrastructure plan in history. It is a two-pronged development strategy, encompassing the "Silk Road Economic Belt" and the "21st Century Maritime Silk Road," which together map out a highly integrated set of land-based and maritime economic corridors linking thousands of miles of markets from Asia to western Europe. Late in 2017 Xi called for close Sino-Russian co-operation on the Northern Sea Route in order to realize what he called a "Silk Road on Ice." Although cast in terms of mutual benefit, the Belt and Road Initiative (BRI) is a means to strengthen China's influence and security along its strategically important periphery.[82]

By making the infrastructure plan an integral part of its constitution and announcing that by 2050 China would be a "leading global power," Xi has shown long-term thinking on a grand scale. He has done so by arousing genuine excitement about the future—so different in tone from the small-minded negativism about lost greatness that emanates from Trump. Indeed, this is the kind of visionary leadership that Washington has not shown since the early Cold War era, when it set out to rebuild western Europe. And once the BRI reaches its predicted spending of $1 trillion, it will amount to almost eight times the value in real terms of America's Marshall Plan.[83]

Xi's grand global vision is combined with shrewd diplomatic tactics. His string of state visits in May 2017 to Finland, Alaska and Iceland was

no coincidence: Finland was just about to take over the rotating chairmanship of the Arctic Council from the United States, to be followed by Iceland two years later. In Iceland—situated at the crossroads of the transatlantic shipping lanes and the gateway to the Arctic Ocean—China had used the opportunity of the global financial recession to push a free trade agreement, concluded in 2013. The new Chinese embassy in Reykjavik is the biggest in the country.

Xi's visit to Finland was a chance for him to shore up support in the EU, China's biggest trading partner. When lobbying for Chinese financial involvement in the creation of new shipping and transport corridors such as Rovaniemi-Kirkenes railway line and the Helsinki-Tallinn tunnel, he had his eye also on penetrating Eastern and Central European markets as part of the glittering BRI silk-road web.

Furthermore, China is working with Russia and Nordic partners to build the shortest data cable connection between Europe and Asia: a 10,000 km trans-Arctic telecom cable from Finland via Kirkenes in Norway and the Kola Peninsula in Russia. Another intersection of this is planned with a cable for the Bering Strait, from Chukotka to Alaska. The Finnish project, called "Arctic Connect," plans to deliver faster and more reliable digital communications between Europe, Russia and Asia through a submarine communication cable, built by Huawei Marine, on the seabed along the Northern Sea Route (NSR). The $1.2 billion, 13,800 km cable is expected to be finished between 2022-2023. It will be owned by an international consortium, also including Russian and Japanese companies.[84]

Finland, home to the European Center of Excellence for Countering Hybrid Threats, hopes to turn itself into a node of digital communication in the netflow world through this interconnection and attendant investment in Finnish data centers. With Arctic Connect, Finland wants to improve regional connectivity while providing the necessary infrastructure. It is an attractive destination due to its geopolitical location between East and West and history of neutrality are believed to make Finland the "Switzerland of data," but also because of its reliable energy and internet infrastructure, access to green energy and cold climate-related reduction of cooling cost, reduced energy tax for data centers, transparent legislation and skilled workforce. Arctic Connect is believed to benefit the Finnish economy with €1.38 billion and over

a decade generate over a thousand jobs annually. This is not pie in the sky; Google, for example, has already invested almost €2 billion in a data center in Hamina.[85]

China is interested within the framework of the "Digital Silk Road" in building transcontinental and cross-border data cables that would bypass data cables and as such would be better shielded from outside actors. It must be noted, that for all the excitement, there are no illusions in Finland and the EU at large, that Chinese (and Russian) offensive intelligence gathering capabilities are likely to increase. After all, the Chinese companies contracted to build the project, including Huawei, are obliged by PRC law to collaborate with intelligence services. In addition, the construction of Arctic Connect will enable China to implement underwater surveillance capabilities it has been developing through military-civilian fusion in the South and East China Seas.[86]

Beijing unveiled its systematic Arctic strategy with a grand white paper on the "Polar Silk Road" on January 26, 2018. The paper openly challenges the dominant position in the region of the Arctic Eight or the inner Five. China declared that it was time for Arctic countries to respect "the rights and freedom of non-Arctic States to carry out activities in this region in accordance with the law." Since "the governance of the Arctic requires the participation and contribution of all stakeholders," China said it would move to "advance Arctic-related cooperation under the Belt and Road Initiative"—a potentially hegemonic claim of its own, as we also see with its digital network activities.[87]

The Arctic is thus definitely heating up, physically as well as politically, raising a multitude of questions at all levels as to the region's future in terms of its resource management and governance.

Understanding the Present, Exploring the Future

To look further into the plethora of "Arctic issues," and to understand the various networks underpinning the Arctic "regime," we invited policy practitioners, environmental and political scientists, historians, lawyers, and energy experts, from Arctic and non-Arctic states, from Anchorage to Adelaide, to take stock of present-day circumstances in the North. We asked them to explore the changes underway in the earth system, climate and ecology, in culture and society as well

as in the spheres of politics and economics, law and security. We also encouraged each to look ahead, to consider where the Arctic may be headed, and how the relationship between the Arctic regime and world order may evolve, over the next 20 years as the planet literally heats up.

In his lead essay, Oran R. Young examines the recent course of Arctic international relations as well as likely future developments in this realm through an account of the narratives that have guided the actions of key players over the past three decades. During the 1990s and into the 2000s, the Arctic zone of peace narrative dominated the landscape of Arctic policymaking. The period since the late 2000s has witnessed the rise of competing perspectives on matters of Arctic policy, including narratives highlighting the global climate emergency, energy from the North, and Arctic power politics. Though the Arctic zone of peace narrative remains alive in the thinking of many, these competing perspectives have become increasingly influential. Young argues that the interplay among the four narratives will play a central role in shaping the future of policymaking regarding Arctic issues. One likely scenario is a disaggregation of the Arctic policy agenda, with the Arctic Council continuing to rely on the Arctic zone of peace narrative to address a range of Arctic-specific issues, while major actors (including non-Arctic states) turn to other narratives as they deal with issues featuring close connections between the Arctic and the broader global order.

Henry P. Huntington shows how collaboration on conservation measures across the Arctic space have been effective and offer promise for the future. He also charts continuing dangers from pollutants, plastics, and the potential for industrial accidents, in addition to rapid warming and loss of sea ice. The Arctic is also susceptible, like any other region of the world, to the effects of many small actions, each seemingly justifiable on its own, but collectively causing greater and greater environmental damage. While current modes of Arctic cooperation may avert major disasters, Huntington cautions that they are not adequate to the environmental and biodiversity challenges we face without a new vision for the Arctic aimed at what we as a society want to see, not just what we want to avoid. What the Arctic looks like in 2040 and beyond, he argues, will depend on the choices we make today, globally, regionally, and locally. Protecting the status quo may seem the easier path, but in the long run leads to a diminished Arctic. We should aim higher.

Inuuteq Holm Olsen makes a powerful case that those who call the Arctic home must have a say when it comes to discussions and decisions that affect them. He warns that more and more actors, many of them on the outskirts of the region, are seeking to determine Arctic affairs even though there is no consensus on what it even means to be Arctic, who belongs to the Arctic and to whom the Arctic belongs. "Nihil de nobis, sine nobis," he writes: Nothing About Us, Without Us.

Victoria Herrmann uses the frame of tipping points to model governance options for a resilient Arctic order in a climate-changed world. After taking stock of current Arctic tipping points, she imagines a future shift of the world order and evolving Arctic regime governance models that would adequately address those and additional tipping points, and that could support Arctic residents to be resilient in a new normal by decentralizing power and buttressing paradiplomacy efforts. She offers a number of ways to tip the current state of Arctic affairs into a future scenario of Arctic governance that is resilient, inclusive, and just.

Any discussion of Arctic futures must address changing dynamics among resource exploitation, new transportation possibilities, and security considerations. Arild Moe reviews various reasons—geography, cost and global markets—why predictions about a resource race in the Arctic have not yet come to pass. He then explores the more dynamic and diverse conditions in various Arctic sub-regions. These considerations are particularly relevant to the evolving relationship between Russia and China when it comes to exploiting the region's natural resources. Russia stands out with the largest resource base and a petroleum dependent economy. The authorities have strongly advocated and supported Arctic petroleum development. While Russia's ambitious Arctic offshore strategy has stalled, mainly because of Western sanctions, its development of huge liquified natural gas projects onshore has been successful. China has become an indispensable partner in that business, although it has not yet been willing to take high risks offshore.

Lawson W. Brigham takes a closer look at governance and economic considerations related to global shipping as the loss of Arctic sea ice provides for greater marine access throughout the region and potentially longer seasons of marine navigation. He argues that these opportunities will continue to be subject to practical and significant constraints, such as the lack of major population (and consumer) centers in

the Arctic. In addition, governance of the Arctic Ocean is framed by the UNCLOS, and recent Arctic-state treaties on search and rescue, and oil spill preparedness and response, and new International Maritime Organization regulations for ships sailing in Arctic waters (the Polar Code) that provide for enhanced marine safety and environmental protection will all frame and shape future shipping possibilities. Levels of large ship traffic in a future Arctic Ocean will be primarily driven by the pace and extent of natural resource development; ships on destinational voyages (bulk carriers, tankers, and LNG carriers) will carry resources out of the Arctic to global markets. This is the dominant shipping along Russia's Northern Sea Route (NSR) today and will likely be in the foreseeable future. New niche market opportunities may plausibly evolve for summer, trans-Arctic navigation, but Brigham concludes that the future of Arctic marine operations and shipping remains as complex and highly uncertain as ever, despite the emergence of a bluer, ice-free Arctic Ocean in summer.

Mia M. Bennett and her co-authors glimpse the future to offer an additional perspective on the issue by looking more closely at the Transpolar Sea Route (TSR), which would represent a third Arctic shipping route in addition to the Northern Sea Route and Northwest Passage. They address the latest estimates of the TSR's opening, various scenarios for its commercial and logistical development; TSR geopolitics, and the environmental and socioeconomic consequences of transpolar shipping for people in communities along the TSR's entrances. They contend that even though climate change is proceeding rapidly, there is still time to prepare for the emergence of a new Arctic shipping corridor.

Arctic resource exploitation of course raises the question of current geopolitical conditions and the defense postures and strategic capabilities of the actors in the circumpolar North. As Ernie Regehr points out, Russia—as the biggest actor with by far the longest Arctic coastline—is undeniably at the center of the region's changing military landscape. Given the importance of its own Arctic resource base, the potential it sees for the NSR, the need to protect its Arctic sea-based deterrent, and sovereignty and border concerns along its newly-accessible Arctic Ocean frontiers, Moscow's accelerated military preparations in the recent past respond in large measure to public safety, national security, and strategic deterrence imperatives.

The question persists whether those expanding military capabilities warrant a heightened threat assessment by Russia's Arctic neighbors. To be sure, North America and northern European face serious security challenges related to Russia, but these are not primarily driven by competing interests intrinsic to the Arctic. The absence of deeply-rooted Arctic-specific conflicts, according to Regehr, means that there is the possibility of effectively addressing Arctic security objectives on their own merits. And while Arctic security concerns are currently rising—not least due to other external pressures—there are initiatives and policies available to reduce tensions and to protect the region from becoming unduly exposed to the mounting geostrategic competition outside of the region. Full Arctic isolation from global dynamics is clearly not possible, but in the now-familiar language of pandemics, there are political and military behavioral changes that could help flatten the Arctic tension curve and keep it at levels that diplomacy can continue to manage.

J. Ashley Roach offers a primer on the important relationship between freedom of the seas and the Arctic regime. He includes four helpful appendices on 1) the legal regime of the Arctic Ocean, 2) straits used for international navigation in the Arctic Ocean, 3) maritime boundaries in the Arctic Ocean, and 4) extended continental shelves in the Arctic Ocean. Providing U.S. and Canadian views on the importance of freedom of the seas, he argues that those freedoms are threatened by China, Iran and Russia, despite their respective commitments to UNCLOS rules. He then offers perspectives on a future Arctic Ocean in 2040.

Alexander N. Vylegzhanin traces, from a Russian perspective, the evolution of Arctic law since the 1825 Anglo-Russian Boundary Convention and the 1867 Russia-U.S. Convention Ceding Alaska, which went far to determine the status of the northern polar spaces. He then explains how modern treaty rules of international law, including the UNCLOS, regulate relations among states regarding activities across the world ocean. He warns that the relatively stable legal order that has characterized the Arctic could be undermined if political rivalry between the United States and Russia (or between other Arctic states) in other regions prevails, and each involves non-Arctic allies in Arctic military activities.

As regards the North West Passage (NWP), Suzanne Lalonde stresses how for over fifty years, and while remaining premier partners in the Arctic, Canada and the United States tried to manage what they acknowledged was a significant disagreement over this waterways' status. Despite their stark "difference and disappointment," to quote President John F. Kennedy, Canada and the United States have been enjoying a long history of respectful collaboration in the Arctic. This pragmatic approach—agreeing to disagree and getting on with the business of resolving issues of mutual interest and concern—is arguably more important than ever as the Arctic region bears the brunt of climate change. Lalonde explores two major developments linked to climate change with a profound impact on the NWP debate: increased access to and foreign interest in Canada's Arctic waters and the strengthened voice of Canada's Indigenous Peoples.

Nengye Liu applies a theoretical framework regarding power, order and international law to the Arctic, arguing that this explains the root of Western anxieties regarding China's rise in the Arctic. The chapter also discusses driving forces of the current development of international law in the Arctic. To imagine a desirable future for the Arctic, it suggests that China should adopt an Arctic Policy 2.0 with concrete plan to strike a delicate balance between economic development and environmental protection.

Lassi Heininen looks at prospects for Arctic relations through the prism of the COVID-19 pandemic shock. He cautions that some leaders could use the pandemic as an excuse to turn to authoritarian solutions to their respective health, political and economic problems, and to offer those solutions as models for others to emulate. He argues that this would be a disaster for the region, which has moved successfully from military tension to high geopolitical stability, even as it faces rapid environmental degradation and climate change. By going beyond the "hegemony game" the Arctic states can work to achieve their aim of maintaining "peace, stability and constructive cooperation." He suggests that if the Arctic stakeholders can follow through on their commitments to climate change mitigation and global environmental security, rely on scientific recommendations, and apply high ethical principles to resilient solutions to resource utilization, the global Arctic will offer lessons to learn.

Picking up on this theme, P. Whitney Lackenbauer and Ryan Dean recount how scholars have developed and mobilized various formulations of "Arctic exceptionalism," suggesting that either different norms or rules are or should be followed in the circumpolar north to build and promote a peaceable regime, or that the region is exempt from "normal" drivers of international affairs. They broaden this aperture by examining and parsing contemporary articulations of this regional concept. Some critics argue that conventional concepts of Arctic exceptionalism perpetuate naïve, utopian faith in regional cooperation that cannot override global strategic competition, while simultaneously advancing arguments that Arctic states must undertake extraordinary responses to protect their sovereignty and provide security in the Arctic because the region is exceptionally vulnerable. While Arctic exceptionalism was originally used to advance the cause of peace across the region, Lackenbauer and Dean illustrate how Arctic exceptionalist logic is also used to support narratives that portend conflict and thus call for extraordinary action to defend the Arctic as a region apart. Rather than taking the dominant definition and employment of "Arctic exceptionalism" as *the* (singular) "proper" articulation of the concept, they point to several "Arctic exceptionalisms" at play in recent debates about the so-called Arctic regime and its place in the broader world order.

Andreas Østhagen seeks to bring clarity to the confusing multitude of actors and layers of engagement in Arctic (geo)politics. He unpacks the notion of Arctic "geopolitics" by teasing out the different, at times contradictory, dynamics at play in the North along three "levels" of inter-state relations: the international system, the regional (Arctic) level, and bilateral relations. By labelling these three levels as "good," "bad," and "ugly," he showcases how the idea of conflict in the Arctic persists, and why this does not necessarily counter the reality of regional cooperation and stability.

As this book shows, one of the emerging questions of security in the Arctic has been how to address the growing strategic concerns of non-Arctic states. Despite the established view among Arctic governments that local security rests primarily within their purview, some non-Arctic states are now pressing to be included in current and future Arctic security dialogue, especially as the region opens up to greater economic activity. Among the factors driving this phenomenon are concerns from non-Arctic states about spillover of Arctic threats into

their milieus, the desire to obtain 'club goods' in the form of accepted legitimacy as Arctic stakeholders, and the need to be heard in future areas of Arctic governance. One non-Arctic state, China, is widely seen as 'forcing' the debate about the role of non-Arctic governments in the circumpolar north, but other states outside of the region are also presenting their own views on Arctic security and potential threats, while at the same time seeking status as participants in Arctic security discourses. Marc Lanteigne argues that there is now a need for Arctic states to better address the security concerns of non-Arctic actors as the region continues to become internationalized in environmental, economic and military security.

The Slow-Moving Pandemic and the Future of the Arctic

As of this writing, we are in the midst of a global health crisis that has shaken the whole of humanity, caused a tragic number of deaths, and led to economic hardship and social upheaval not seen in many generations. Its effects are rippling across the globe. Yet global warming has not stopped because of COVID-19. In fact, climate change could be considered as a slower-moving pandemic, with differing yet equally or even more disastrous effects: cascading natural disasters, freakish weather events, and loss of wildlife and habitats, all generating climate refugees and mass migratory movements likely to shake polities and provoke conflict.

In many ways, the Arctic is humanity's canary in the coal mine—an early warning sign of the extremes this slow-moving pandemic can cause, the place where the implications of the recent UN declaration of a planetary "climate emergency" are most palpable.[88] Partly for these reasons, the Arctic has also become a focal point for intensifying geostrategic tensions, a space where political and economic interests collide with ecological and cultural sensitivities.

Insofar as the Arctic Eight and regional Indigenous people have continued to cooperate in the Arctic Council and have acted within the wider international regime based on universal norms and principles, the Arctic remains an exceptional region—one that has sought to insulate itself from global powerplays and tensions. At the same time, it is an arena where all powers are watching their backs: each is seeking to

shore up its Arctic status and its stakes in a region where mineral riches and maritime passages await to be exploited politically, militarily and legally. The rhetoric of nationalism and conflict threatens to squeeze Indigenous voices and the language of peace and collaboration.

With global environmental and political change entwined, we are thus confronted with a double-edged reality, a paradox of enticing opportunities and incalculable riches that might be exploited for short-term gain, and of appalling long-term dangers that irreversible natural destruction may bring. As we glimpse the future of the Anthropocene—the horizon of 2040—complex questions abound, pertaining to peace and war, life and death.

It remains to be seen how far the Arctic regime can adapt to new expressions of nationalism, whether resource extraction can really proceed in a sustainable manner, and whether the Arctic as a zone of peace and collaboration can survive the changing global political dynamics that encroach on it. The essays in this volume offer important perspectives on the issues at stake and the processes under way.

Notes

1. Cited in "Sheila Watt-Clothier, Honorary Doctorate," 2006, University of Winnipeg, https://www.uwinnipeg.ca/awards-distinctions/honorary-doctorate/cloutier.html.

2. See Kristina Spohr, "The Race to Conquer the Arctic—The World's Final Frontier," *New Statesman*, March 12, 2018, https://www.newstatesman.com/2018/03/race-conquer-arctic-world-s-final-frontier.

3. See Ibid.; Vincent-Gregor Schulze, "The Shadow of the Future: The Demand for an Arctic Regime," *Geopolitics and Security*, March 16, 2017, https://polarconnection.org/arctic-future-regime/; Malgorzata Smieszek, "Informal International Regimes. A Case Study of the Arctic Council," Academic dissertation, University of Lapland, December 11, 2019, https://lauda.ulapland.fi/bitstream/handle/10024/64024/Smieszek.Malgorzata9.12..pdf?sequence=1&isAllowed=y.

4. Arctic Monitoring and Assessment Programme, *Snow*, *Water*, *Ice and Permafost in the Arctic* (Oslo, 2017).

5. D.P. Stone, *The Changing Arctic Environment: The Arctic Messenger* (New York: Cambridge University Press, 2015).

6. See "Changes in the Arctic: Background and Issues for Congress," Congressional Research Service, September 10, 2020, https://fas.org/sgp/crs/misc/R41153.pdf; Smieszek, op. cit.; Oran R. Young, "Arctic Tipping Points: Governance in Turbulent Times," *Ambio* 41 (2012), pp. 75-84; M. Carson and G. Peterson, eds., for the Arctic Council, *Arctic Resilience Report* (Stockholm: Stockholm Environment Institute and Stockholm Resilience Centre, 2016); M. Sommerkorn and S.J. Hassol, eds., *Arctic Climate Feedbacks: Global Implications* (Oslo: WWF International Arctic Programme, 2009).

7. Spohr, op. cit.; P. Oppenheimer and B. Israel, "The Arctic Region," in R. Martella and B. Grosko, eds., *International Environmental Law: The Practitioner's Guide to the Laws of the Planet* (Washington, DC: American Bar Association, 2014), pp. 933-62.

8. Young, op. cit.; Spohr, op. cit; Congressional Research Service, op. cit.; Smieszek, op. cit.; Joshua Tallis, "As 'Arctic Exceptionalism' Melts Away, the US Isn't Sure What It Wants Next," *Defense One*, Jan. 22, 2020; Timo Koivurova, "How US Policy Threatens Existing Arctic Governance," *Arctic Today*, Jan. 17, 2020; Melody Schreiber, "As the Arctic Changes, International Cooperation May Be Put to the Test," *Arctic Today*, July 25, 2018; Stephanie Pezard, Abbie Tingstad, and Alexandria Hall, "The Future of Arctic Cooperation in a Changing Strategic Environment," *RAND Europe* (PE-268RC), 2018.

9. Gary E. Weir, "Virtual War in the Ice Jungle: 'We don't know how to do this'," *Journal of Strategic Studies* 28, 2 (2005), pp. 411-27, https://doi.org/10.1080/01402390500088635.

10. Spohr, op. cit.

11. Smieszek, op. cit.; Oppenheimer and Israel, op. cit.; M. Byers, *International Law and the Arctic* (Cambridge: Cambridge University Press, 2013); M. Durfee and R.L. Johnstone, *Arctic Governance in a Changing World* (London: Rowman & Littlefeld, 2019).

12. Smieszek, op. cit.; O.S. Stokke, *Disaggregating International Regimes. A New Approach to Evaluation and Comparison* (Cambridge/London: MIT Press, 2012).

13. See Young, op. cit.; E.C.H. Keskitalo, *Negotiating the Arctic: The Construction of an International Region* (New York: Routledge, 2004); J. English, *Ice and Water. Politics, Peoples, and the Arctic Council* (Toronto: Penguin Group, 2013); E. Wilson Rowe, *Arctic Governance: Power in Cross-Border Cooperation* (Manchester: Manchester University Press, 2018).

14. See Smieszek, op. cit.; O.S. Stokke and G. Hønneland, eds., *International Cooperation and Arctic Governance: Regime Effectiveness and Northern Region Building* (London: Routledge, 2007); O. Rogne, V. Rachold, L. Hacquebord and R. Corell, *IASC after 25 Years: Special Issue of the IASC Bulletin*, http://iasc25.iasc.info.

15. Arctic Council, "The Arctic Council: A Backgrounder," updated September 13, 2018, https://arctic-council.org/index.php/en/about-us.

16. Juha Käpylä and Harri Mikkola, "On Arctic Exceptionalism," *FIIA Working Paper* No. 85, April 2015, p. 5, https://www.files.ethz.ch/isn/189844/wp85.pdf; Sergey Lavrov quoted in *ITAR-TASS* https://tass.com/russia/755311; see also Sam LaGrone, "Russian Foreign Minister: No Need for NATO in the Arctic," *USNI*, Oct. 22, 2014

17. Young, op. cit.

18. Stephen D. Krasner, "Structural Causes and Regime consequences: Regimes as Intervening Variables," *International Organization* 36, 2 (1982), pp. 185-205, https://www.jstor.org/stable/2706520; Idem, ed., *International Regimes* (Ithaca, NY: Cornell University Press, 1983).

19. Shulze, op. cit.; Smieszek, op. cit.

20. Piotr Graczyk and Timo Koivurova, "The Arctic Council," in L. C. Jensen and G. Hønneland, eds., *Handbook of the Politics of the Arctic* (Cheltenham: Edward Elgar, 2015), pp. 298-327; Paula Kankaanpää and Oran R. Young, "The Effectiveness of the Arctic Council," *Polar Research* 31 (2012), pp. 1-14,

https://doi.org/10.3402/polar.v31i0.17176; Keskitalo, op. cit.; Congressional Research Service, op. cit.

21. See T. Koivurova and L. Heinämäki, "The Participation of Indigenous Peoples in International Norm-making in the Arctic," *Polar Record* 42, 221 (2006), pp. 101-9, ; N. Sellheim, "The Arctic Council and the Advancement of Indigenous Rights," in N. Sellheim, Y. V. Zaika, and I. Kelman, eds., *Arctic Triumph. Northern Innovation and Persistence* (Cham: Springer Switzerland Publishing, 2019), pp. 105-25.

22. Young, op. cit., Craczyk & Koivurova, op. cit.

23. Smieszek, op. cit.

24. E. J. Molenaar, "Governance of Arctic Shipping. Balancing Rights and Interests of Arctic States and User States," in R. C. Beckman, T. Henriksen, K. D. Kraabel, E. J. Molenaar, and J. A. Roach, eds., *Governance of Arctic Shipping: Balancing Rights and Interests of Arctic States and User States* (Boston: Brill Nijhof, 2017), pp. 24-67; Smieszek, op. cit.

25. Graczyk & Koivurova, op. cit.

26. D.L. Downie and T. Fenge, eds., *Northern Lights against POPs: Combating Toxic Threats in the Arctic* (Montreal/Kingston: McGill-Queen's University Press, 2003); Smieszek, op. cit.

27. See Congressional Research Service, op. cit.

28. For a review of these groups, see Smiezek, op. cit.

29. Smieszek, op. cit.

30. Schulze, op. cit.; By this means, diplomatic misunderstandings or (violent) conflicts are avertible through a current stream of reliable information among all regime actors, and institutionalized by a system of repeat consultations.

31. Schulze, op. cit.

32. Smieszek, op. cit.

33. Ibid.

34. See, for example, Timo Koivurova, "How US Policy Threatens Existing Arctic Governance," *Arctic Today*, January 17, 2020; Melody Schreiber, "As the Arctic Changes, International Cooperation May Be Put to the Test," *Arctic Today*, July 25, 2018; Stephanie Pezard, Abbie Tingstad, and Alexandria Hall, *The Future of Arctic Cooperation in a Changing Strategic Environment*, RAND Europe (PE-268RC), 2018.

35. "Looking North: Sharpening America's Arctic Focus," Speech by Michael R. Pompeo, Secretary of State, Rovaniemi, Finland, May 6, 2019, https://www.state.gov/looking-north-sharpening-americas-arctic-focus/.

36. China's growing interest in the region has to be analyzed in the context of its aggressive behavior in maritime affairs elsewhere, namely in the South China Sea and its over-fishing activities in species rich waters such as those right on the edge of the Galápagos marine reserve. See "South China Sea: What's China's Plan for its 'Great Wall of Sand'?" *BBC*, July 14, 2020, https://www.bbc.co.uk/news/world-asia-53344449; Morgan Otragus, US DoS Spokesperson, "China's Empty Promises in the South China Sea," September 27, 2020, https://www.state.gov/chinas-empty-promises-in-the-south-china-sea/; Dan Collyns, "Chinese Fishing Armada Plundered Waters around Galápagos, Data Shows," *The Guardian*, September 17, 2020, https://www.theguardian.com/environment/2020/sep/17/chinese-fishing-armada-plundered-waters-around-galapagos-data-shows; Yuri Garcia, "Ecuador Says Some Chinese Vessels near Galapagos Have Cut Communications Systems," *Reuters*, August 18, 2020, https://uk.reuters.com/article/us-ecuador-environment-china/ecuador-says-some-chinese-vessels-near-galapagos-have-cut-communications-systems-idUKKCN25E2XI.

37. Somini Sengupta, United States Rattles Arctic Talks With a Sharp Warning to China and Russia," *New York Times*, May 6, 2019, https://www.nytimes.com/2019/05/06/climate/pompeo-arctic-china-russia.html; Sengupta, "U.S. Pressure Blocks Declaration on Climate Change at Arctic Talks," *New York Times*, May 7, 2019, https://www.nytimes.com/2019/05/07/climate/us-arctic-climate-change.html; Richard Milne, "US Provokes Fury after Blocking Arctic Council Statement," *Financial Times*, May 7, 2019, https://www.ft.com/content/f879ff9a-70ab-11e9-bf5c-6eeb837566c5; Coral Davenport, "Major Climate Report Describes a Strong Risk of Crisis as Early as 2040," *New York Times*, October 7, 2018, https://www.nytimes.com/2018/10/07/climate/ipcc-climate-report-2040.html.

38. See also the chapters by Andreas Østhagen, Ernie Regehr, Mia Bennett, et al., Marc Lanteigne, and Nengye Liu in this volume.

39. Timothy M. Lenton et al., "Climate Tipping Points –Too Risky to Bet Against," *Nature*, November 27, 2019 (correction April 9, 2020), https://www.nature.com/articles/d41586-019-03595-0; Stephen Leahy," Climate Change Driving Entire Planet to Dangerous 'Tipping Point'," *National Geographic*, November 27, 2019, https://www.nationalgeographic.com/science/2019/11/earth-tipping-point/; NASA, "The Study of Earth as an Integrated System," https://climate.nasa.gov/nasa_science/science/; "More Bad News for the Arctic: The Laptev Sea Hasn't Frozen," *The Economist*, October 28, 2020, https://www.economist.com/graphic-detail/2020/10/28/more-bad-news-for-the-arctic-the-laptev-sea-hasnt-frozen; Flora Graham, "Alarming Delay in the

Annual Freeze of Arctic Sea Ice," *Nature*, October 23, 2020, https://www.nature.com/articles/d41586-020-03010-z.

40. USGS Arctic Oil and Gas Report, Estimates of Undiscovered Oil and Gas North of the Arctic Circle, U.S. Geological Survey Fact Sheet (July 2008); Raul Pedrozo, "Arctic Climate Change and U.S. Accession to the United Nations Convention on the Law of the Sea ," *International Law Studies* 89 (2013), pp. 757-75, esp. pp. 763-4; https://digital-commons.usnwc.edu/cgi/viewcontent.cgi?article=1021&context=ils. See also, Spohr, op. cit.

41. See Arild Moe's chapter in this volume. Cf. Moe, "China's Exaggerated Arctic Interests," *Reconnecting Asia*, April 18, 2017, https://reconnectingasia.csis.org/analysis/entries/chinas-exaggerated-arctic-interests/.

42. "Russia Gathers More Data for its North Pole Bid," *The Maritime Executive*, October 27, 2019, https://maritime-executive.com/article/russia-gathers-more-data-for-its-north-pole-bid. Submission by the Russian Federation (2001-2009), https://www.un.org/Depts/los/clcs_new/submissions_files/submission_rus.htm. Cf. Russian Federation, 2001-2019, https://www.un.org/Depts/los/legislationandtreaties/statefiles/rus.htm.

43. See Submissions, through the Secretary-General of the United Nations, to the Commission on the Limits of the Continental Shelf, pursuant to article 76, paragraph 8, of the United Nations Convention on the Law of the Sea of 10 December 1982, updated October 16, 2020, https://www.un.org/Depts/los/clcs_new/commission_submissions.htm. Cf. Jeffrey J. Smith , "Reach for the Top: Canada's 2019 Extended Continental Shelf Claim in the Arctic," *Asia-Pacific Journal of Ocean Law and Policy* 4, 2 (2019), pp. 246-52, https://doi.org/10.1163/24519391-00402008.

44. The environmental regulations allowed under the UNCLOS are not as robust as those allowed if the Northwest Passage is part of Canada's internal waters.

45. "Inuit and Canada Share Northwest Passage Sovereignty—ICC Canada President," May 2019, https://www.inuitcircumpolar.com/press-releases/inuit-and-canada-share-northwest-passage-sovereignty-icc-canada-president/; Jane George, "Canadian Inuit challenge U.S. Stance on Northwest Passage," *Nunatsiaq News*, May 9, 2019, https://nunatsiaq.com/stories/article/canadian-inuit-challenge-u-s-stance-on-northwest-passage/.

46. Aki Tonami, "The Arctic Policy of China and Japan: Multi-layered Economic and Strategic Motivations," *The Polar Journal* 4,1 (2014), pp. 105-26, https://doi.org/10.1080/2154896X.2014.913931; Ian Storey, "The Arctic Novice: Singapore and the High North," *Asia Policy* 18 (July 2014), pp. 66-72, https://www.jstor.org/stable/24905278; Hyun Jun Kim, "Success in Heading

North? South Korea's Master Plan for Arctic Policy," *Marine Policy* 61 (Nov. 2015), pp. 264-72, https://doi.org/10.1016/j.marpol.2015.08.002.

47. HM Government, *Beyond the Ice: UK Policy towards the Arctic*, FCO 2018, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/697251/beyond-the-ice-uk-policy-towards-the-arctic.pdf; see also Dan Sabbagh, "China May Pose Threat to UK as Northern Sea Route Clears, Says Navy Chief," *The Guardian*, October 8, 2020, https://www.theguardian.com/uk-news/2020/oct/08/china-strategic-threat-to-uk-as-northern-sea-route-clears-says-royal-navy-chief. The Federal Government, *Germany's Arctic Policy Guidelines Assuming Responsibility, Creating Trust, Shaping the Future*, August 2019, https://www.auswaertiges-amt.de/blob/2240002/eb0b681be9415118ca87bc8e215c0cf4/arktisleitlinien-data.pdf; Davina Basse, "Germany: A New (non-)Arctic Power?," *Arctic Yearbook* 2019, https://arcticyearbook.com/images/yearbook/2019/Scholarly-Papers/17_AY2019_Basse.pdf.

48. For a list and timeline of updated Arctic strategies, see Hilde-Gun Bye, "Sweden Launches New Arctic Strategy," *High North News*, October 2, 2020, https://www.highnorthnews.com/en/sweden-launches-new-arctic-strategy.

49. But there are other actors too: the small Nordic states of Finland and Sweden, without access to the Northern seas, who see themselves on the forefront of environmental policies and socially and economically sustainable development, plus in the Finnish case, of digital connectivity in the Arctic space; and Iceland, which fancies itself as a potential shipping hub for the NWP and TSR, while keen to protect its fishing industries. In addition, non-Arctic European and Asian states push into the North, as geopolitics and geoeconomics are shifting. Thus, the subtheme of interaction of the Nordic regime (focused on peace and cooperation, prosperity and sustainability) with the impact of exogenous powers on intra-Arctic affairs and the regional power equilibrium is a central area of investigation.

50. Whitney Lackenbauer and Rob Huebert, "Premier Partners: Canada, the United States and Arctic Security," *Canadian Foreign Policy Journal* 20, 3 (2014), pp. 320-333, https://doi.org/10.1080/11926422.2014.977313.

51. Dion quoted in NATO STRATCOM COE, *Arctic Narratives and Political Values: Russia, China and Canada in the High North*, Riga, September 2018, p. 11, https://www.stratcomcoe.org/canadas-arctic-strategy.

52. The Canadian Government 2017 as quoted in Ibid., p. 9.

53. "Canada Needs an Arctic Defence Strategy as Russia, China Eye the North," *Global News*, September 25, 2020, https://www.sootoday.com/global-news/commentary-canada-needs-an-arctic-defence-strategy-as-russia-china-eye-the-north-2741803; Vipal Monga, "China's Move to Buy Arctic

Gold Mine Draws Fire in Canada," *Wall Street Journal*, July 26, 2020, https://www.wsj.com/articles/chinas-move-to-buy-arctic-gold-mine-draws-fire-in-canada-11595764801; Jessica Shadian, Erica Wallis, "When It Comes to Canada-China Relations, It Is Time to Look North," *Policy Options Politiques*, July 7, 2020, https://policyoptions.irpp.org/magazines/july-2020/when-it-comes-to-canada-china-relations-it-is-time-to-look-north/. Cf. P. Whitney Lackenbauer and Adam Lajeunesse, "Chinese Mining Interests and the Arctic," in D. A. Berry, N. Bowles, and H. Jones, eds., *Governing the North American Arctic: Sovereignty, Security, and Institutions* (London: Palgrave Macmillan, 2016), pp. 74-99.

54. See Government of Canada, *Arctic and Northern Policy Framework International chapter*, October 22, 2019, https://www.rcaanc-cirnac.gc.ca/eng/1562867415721/1562867459588. Note that, as regards the Inuit, the document speaks of supporting first nation "self-determination," and revitalizing and strengthening the cultures of "Arctic and Northern Indigenous peoples, including their languages and knowledge systems."

55. *Submission of the Inuit Circumpolar Council Canada to the Special Senate Committee on the Arctic Regarding the Arctic Policy Framework and International Priorities*, March 2019, https://sencanada.ca/content/sen/committee/421/ARCT/Briefs/InuitCircumpolarCouncilCanada_e.pdf.

56. Cf. Andreas Østhagen, Gregory Levi Sharp and Paal Sigurd Hilde, "At Opposite Poles: Canada's and Norway's Approaches to security in the Arctic," *The Polar Journal* 8, 1 (2018), pp. 163-81, https://doi.org/10.1080/2154896X.2018.1468625. See also Ken S. Coates and Carin Holroyd, "Europe's North: The Arctic Policies of Sweden, Norway, and Finland," in idem, eds., *The Palgrave Handbook of Arctic Policy and Politics* (London: Palgrave, 2020), pp. 283-303.

57. On Norway's High North Strategy, see https://www.regjeringen.no/en/topics/high-north/id1154/. Cf. Norwegian MFA, *Norway's Arctic Policy*, 10/2014, https://www.loc.gov/law/help/indigenous-heritage/norway.phphttps://www.regjeringen.no/globalassets/departementene/ud/vedlegg/nord/nordkloden_en.pdf.

58. James Black, Stephen J. Flanagan, Gene Germanovich, Ruth Harris, David Ochmanek, Marina Favaro, Katerina Galai, and Emily Ryen Gloinson, *Enhancing Deterrence and Defence on NATO's Northern Flank: Allied Perspectives on Strategic Options for Norway* (Santa Monica, CA: RAND Corporation, 2020), https://www.rand.org/pubs/research_reports/RR4381.html. See also Stephen J. Flanagan and James Black, "Norway's Allies Share Their Views on the Country's New Defense Plan," *Defense News*, April 16, 2020, https://www.defensenews.com/opinion/commentary/2020/04/16/allies-share-views-on-enhancing-defense-of-norway-and-the-high-north/. See also Peter Bakkemo

Danilov, "The Security Situation in Northern Norway is Significantly Different from That in the South," *High North News*, October 23, 2020, https://www.highnorthnews.com/en/security-situation-northern-norway-significantly-different-south.

59. Kåre Storvik, "The Future is in the North," *Offshore Engineer*, January 13, 2020, https://www.oedigital.com/news/474542-the-future-is-in-the-north.

60. Altogether, some 100,000 Sámi live in Northern Europe—the majority of which are in North Norway. Library of Congress, Legal Report by Elin Hofverberg, "Protection of Indigenous Heritage: Norway," March 2019, https://www.loc.gov/law/help/indigenous-heritage/norway.phphttps://www.loc.gov/law/help/indigenous-heritage/norway.php.

61. Amy Martin, "The Arctic's Sámi People Push For a Sustainable Norway," *The World*, November 5, 2018, https://www.pri.org/stories/2018-11-05/arctics-s-mi-people-look-sustainable-norway.

62. Christian Volk, "The Problem of Sovereignty in Globalized Times," *Law, Culture and the Humanities* (Feb. 2019), https://doi.org/10.1177/1743872119828010; Hent Kalmo and Quentin Skinner, eds., *Sovereignty in Fragments - The Past, Present and Future of a Contested Concept* (Cambridge, Cambridge University Press, 2010); Hannes Gerhardt, Philip E. Steinberg, Jeremy Tasch, Sandra J. Fabiano and Rob Shields, "Contested Sovereignty in a Changing Arctic," *Annals of the Association of American Geographers* 100, 4 [Climate Change] (Oct. 2010), pp. 992-1002. Cf. Corine Wood-Donnelly, *Contested Sovereignty in a Changing Arctic 1494-2013*, PhD Dissertation, Brunel University, 2014.

63. Marc Jacobsen, Greenland's Arctic Advantage: Articulations, Acts and appearances of Sovereignty Games," *Cooperation and Conflict* 55, 2 (2020), pp. 170-192, https://doi.org/10.1177/0010836719882476.

64. China has expressed interest in Greenland's deposits of uranian, thorium, earth oxide, zinc, lead, nickel, copper, and molybdenum as well as valuable deposits of ruby, sapphires, gold, silver and platinum. Bjorn Schionning, "As the Ice Melts, Greenland Considers Its Future," *BBC*, January 9, 2020, https://www.bbc.co.uk/news/business-51014148; "All Eyes on the Arctic: US, China and Russia Race to Control Far North," *Euronews/AP*, July 23, 2020, https://www.euronews.com/2020/07/23/all-eyes-on-the-arctic-us-china-and-russia-race-to-control-far-north.

65. See Laurence Peter, "Danes See Greenland Security Risk amid Arctic Tensions," *BBC*, November 29, 2019, https://www.bbc.co.uk/news/world-europe-50598898. Cf. Kingdom of Denmark Strategy for the Arctic 2011 - 2020

https://naalakkersuisut.gl/en/Naalakkersuisut/Departments/Udenrigsanliggende/Kongerigets-Arktiske-Strategi.

66. Jacob Gronholt-Pedersen, "As the Arctic's Attractions Mount, Greenland is a Security Black Hole, "*Reuters*, October 20, 2020, https://www.reuters.com/article/us-climate-change-greenland-security-ins-idUSKBN2750J6.

67. Katrina Manson and Richard Mine, "US Financial Aid for Greenland Sparks Outrage in Denmark," April 23, 2020, https://www.ft.com/content/6d5e20cd-8af5-484d-9fb2-249cd83eeea8.

68. United Nations, "The Climate Crisis—A Race We Can Win, " https://www.un.org/en/un75/climate-crisis-race-we-can-win; UN SG António Guterres " Remarks at 2019 Climate Action Summit," September 23, 2019, https://www.un.org/sg/en/content/sg/speeches/2019-09-23/remarks-2019-climate-action-summit. Alec Luhn, "Freezing Cold War: Militaries Move in as Arctic Ice Retreats—Photo Essay," *The Guardian*, October 16, 2020, https://www.theguardian.com/environment/2020/oct/16/arctic-ice-retreats-climate-us-russian-canadian-chinese-military.

69. See Sen. Roger Wicker and Sen. Dan Sullivan, "Polar Icebreakers Are Key to America's National Interest," *Defense News*, October 20, 2020, https://www.defensenews.com/opinion/commentary/2020/10/19/polar-icebreakers-are-key-to-americas-national-interest/.

70. Larry Luxner, "As Arctic Warms Up, US Air Force Launches Department's First Strategy for Confronting Threats," *New Atlanticist*, July 22, 2020, https://www.atlanticcouncil.org/blogs/new-atlanticist/as-arctic-warms-up-us-air-force-launches-departments-first-strategy-for-confronting/; C. Todd Lopez, Air Force Reveals Cold Facts on New Arctic Strategy," *DoD News*, July 21, 2020, https://www.defense.gov/Explore/News/Article/Article/2281961/air-force-reveals-cold-facts-on-new-arctic-strategy/; Secretary of the Air Force Public Affairs, "Department of the Air Force introduces Arctic Strategy," July 21, 2020, https://www.af.mil/News/Article-Display/Article/2281305/department-of-the-air-force-introduces-arctic-strategy/. See also Richard Weitz, "US Policy Towards the Arctic: Adapting to a Changing Environment," October 24, 2019, https://icds.ee/en/us-policy-towards-the-arctic-adapting-to-a-changing-environment/.

71. In 2009, in the government's National Security Strategy 2020 it was proclaimed that to transform Russia into a "world power" was a national interest and strategic priority. See http://interkomitet.com/foreign-policy/basic-documents/russia-s-national-security-strategy-to-2020/. Cf. Marlene Laruelle, *Russia's Arctic Strategies and the Future of the Far North* (London: Routledge, 2013), chapters 1 and 6.

72. AFP, "Russian Rocket Fuel Leak Likely Cause of Marine Animal Deaths," *The Guardian*, October 5, 2020, https://www.theguardian.com/world/2020/oct/05/marine-poisoning-in-kamchatka-russia-may-be-rocket-fuel-leak; "95% of Marine Life on Sea Floor Killed in Kamchatka Eco-Disaster, Scientists Say," *The Moscow Times*, October 8, 2020, https://www.themoscowtimes.com/2020/10/06/95-of-marine-life-on-sea-floor-killed-in-kamchatka-eco-disaster-scientists-say-a71672.

73. Andrew Osborn, "Putin's Russia in Biggest Arctic Military Push since Soviet Fall," *Reuters*, January 30, 2017, https://www.reuters.com/article/us-russia-arctic-insight-idUSKBN15E0W0.

74. "Shipbuilders to Deliver Two Mmissile Corvettes to Russian Navy," *TASS*, August 25, 2002, https://tass.com/defense/1193533; "Russian Navy Project 21631 Buyan-M Class Corvette Zelyony Dol Arrives at Northern Fleet Base," *Navy Recognition*, August 22, 2020, https://www.navyrecognition.com/index.php/news/defence-news/2020/august/8880-russian-navy-project-21631-buyan-m-class-corvette-zelyony-dol-arrives-at-northern-fleet-base.html.

75. Franz-Stefan Gady, "Russia Launches New Nuclear-Powered Icebreaker," *The Diplomat*, May 27, 2019, https://thediplomat.com/2019/05/russia-launches-new-nuclear-powered-icebreaker/; USCG Office of Waterways and Ocean Policy, "Major Icebreakers of the World," 2017, https://www.dco.uscg.mil/Portals/9/DCO%20Documents/Office%20of%20Waterways%20and%20Ocean%20Policy/20170501%20major%20icebreaker%20chart.pdf?ver=2017-06-08-091723-907. Cf. Paul C. Avey, "The Icebreaker Gap Doesn't Mean America is Losing in the Arctic," *War on the Rocks*, November 28, 2919, https://warontherocks.com/2019/11/the-icebreaker-gap-doesnt-mean-america-is-losing-in-the-arctic/.

76. Thomas Nilsen, "Russia's Top General Indirectly Confirms Arctic Deployment of the Unstoppable Kinzhal Missile," *The Barents Observer*, December 19, 2019, https://thebarentsobserver.com/en/security/2019/12/russias-top-general-indirectly-confirms-arctic-deployment-unstoppable-missile; Zachary Cohen, "Satellite Images Indicate Russia is Preparing to Resume Testing its Nuclear-powered Cruise Missile," *CNN*, October 20, 2020, https://edition.cnn.com/2020/10/20/politics/russia-nuclear-powered-cruise-missile-test-satellite-images/index.html; J. M. Doyle, "Cruise Missiles in the Arctic Seen as Another Outcome of Great Power Competition," S*eapower*, September 10, 2020, https://seapowermagazine.org/cruise-missiles-in-the-arctic-seen-as-another-outcome-of-great-power-competition/.

77. Spohr, op. cit.; Holly Ellyatt, "Russia Drops Out of Top 5 Global Military Spenders While US and China Up the Ante," *CNBC*, April 29, *2019*,

https://www.cnbc.com/2019/04/29/russia-drops-out-of-top-5-global-military-spenders.html.

78. It is noteworthy, that, with the clear intention of setting geopolitical signals, joint Sino-Russian sea maneuvers began in 2012. Michael Paul, "Partnership on the High Seas: China and Russia's Joint Naval Manoeuvres," *SWP Comment*, no. 26, June 2019, https://www.swp-berlin.org/fileadmin/contents/products/comments/2019C26_pau.pdf. Sergey Sukhankin, "The Northeastern Dimension of Russia's 'Ocean Shield 2020' Naval Exercises," *Eurasia Daily Monitor* 17, 125, September 11, 2020 (Part 1), https://jamestown.org/program/the-northeastern-dimension-of-russias-ocean-shield-2020-naval-exercises-part-one/; Ibid., *Eurasia Daily Monitor* 17, 127, September 15, 2020 (Part 2), https://jamestown.org/program/the-northeastern-dimension-of-russias-ocean-shield-2020-naval-exercises-part-two/. Spohr, op. cit.

79. Sukhankin, op. cit.

80. Spohr, op. cit.

81. "Other Developing Nations Can Adopt China's Growth Model: President Xi Jinping," *The Economic Times* (India), October 18, 2017, https://economictimes.indiatimes.com/news/international/world-news/other-developing-nations-can-adopt-chinas-growth-model-president-xi-jinping/articleshow/61134034.cms; Mengjie, "President Xi Delivers New Year Speech Vowing Resolute Reform in 2018," *Xinhuanet*, December 31, 2017, http://www.xinhuanet.com/english/2017-12/31/c_136863397.htm.

82. Spohr, op. cit. See also Marc Lanteigne, "The Twists and Turns of the Polar Silk Road," *Over the Circle*, March 15, 2020, https://overthecircle.com/2020/03/15/the-twists-and-turns-of-the-polar-silk-road/.

83. Ryan Hass and John L. Thornton, "The Trajectory of Chinese Foreign Policy: From Reactive Assertiveness to Opportunistic Activism," *Brookings Institution* 3/2018, p. 7, https://www.brookings.edu/wp-content/uploads/2018/03/fp_20171104_hass_the_trajectory_of_chinese_foreign_policy.pdf.

84. Thomas Nilsen, "Major Step Towards a Europe-Asia Arctic Cable Link," *The Barents Observer*, June 6, 2019, https://thebarentsobserver.com/en/industry-and-energy/2019/06/mou-signed-set-arctic-telecom-cable-company; Frank Jüris, "Handing Over Infrastructure for China's Strategic Objectives: 'Arctic Connect' and the Digital Silk Road in the Arctic," *SINOPSIS*, March 7, 2020, https://sinopsis.cz/en/arctic-digital-silk-road/#fn4.

85. Jüriis, op. cit.

86. Ibid.; and Clayton Cheyney, "China's Digital Silk Road: Strategic Technological Competition and Exporting Political Illiberalism," *ISSUES & INSIGHTS* 19—Working Paper #8, Pacific Forum, July 2019, https://web.

archive.org/web/20200226180229/https://www.pacforum.org/sites/default/files/issuesinsights_Vol19%20WP8FINAL.pdf.

87. The State Council Information Office of the People's Republic of China, *China's Arctic Policy*. January 2018 (First Edition), http://english.www.gov.cn/archive/white_paper/2018/01/26/content_281476026660336.htm. Cf. Mariia Kobzeva, "China's Arctic Policy: Present and Future," *The Polar Journal* 9, 1 (2019), pp. 94-112, https://doi.org/10.1080/2154896X.2019.1618558; Martin Kossa, "China's Arctic Engagement: Domestic Actors and Foreign Policy," *Global Change, Peace & Security* 32, 1 (2020), pp. 19-38, https://doi.org/10.1080/14781158.2019.1648406; Idem, Marina Lomaeva and Juha Saunavaara, "East Asian Subnational Government Involvement in the Arctic: A Case for Paradiplomacy?," *The Pacific Review* (2020), https://doi.org/10.1080/09512748.2020.1729843.

88. Adam Vaughan, "How the Coronavirus Has Impacted Climate Change—For Good and Bad," *New Scientist*, October 14, 2020, https://www.newscientist.com/article/mg24833040-900-how-the-coronavirus-has-impacted-climate-change-for-good-and-bad/#ixzz6cZFZ9XB4; Bill Gates, "COVID-19 Is Awful: Climate Change Could Be Worse," *Gates Notes*, August 4, 2020, https://www.gatesnotes.com/Energy/Climate-and-COVID-19.