U.S. COAST GUARD ACADEMY
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No Time for the Cold Shoulder: How Supporting the Antarctic Treaty System Promotes US National Interests[1]

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Image: The Coast Guard Cutter Polar Star (WAGB-10) and crew create a navigable channel through the frozen Ross Sea off of Antarctica, Jan. 16, 2017. The 399-foot icebreaker is the Coast Guard's only operational heavy icebreaker capable of conducting Antarctic icebreaking operations. (U.S. Coast Guard photo by Chief Petty Officer David Mosley)

Abstract/Executive Summary:

The Antarctic Treaty System (ATS) is a group of international agreements governing the Antarctic region.[2] The original document – known as the Antarctic Treaty (AT) – was signed at the height of the Cold War, tabling ongoing militarization and competition in the interest of scientific exploration and cooperation. Since the AT has entered into force, its parties have agreed upon several other protocols governing specific aspects of activity in the Antarctic region, largely related to natural resource management and preservation. Throughout its existence, the ATS has prioritized peace, cooperation, scientific investigation, and the protection of unique landscapes and biodiversity in Antarctica. In so doing, the ATS continues to promote American interests. Yet, several contemporary challenges have emerged that challenge the ongoing success of this treaty system.

This paper will address these developments and assess the continuing value of the ATS in promoting American interests. To accomplish this, we first provide relevant historical context regarding the Antarctic region and the creation of the ATS. Next, we briefly outline the key actors and forums of activity within the ATS today. Then, we describe several emerging trends that challenge the success of the current regime. In particular, technological advancements and the intrusion of geopolitics into the ATS threaten the system's historical strengths and isolation from global competition. Finally, we outline how the ATS actively advances US geopolitical, economic, security, and scientific interests in the face of

[1] This paper is submitted in partial fulfillment of the requirements for the degree of Master of Public Affairs in the Watson Institute for International and Public Affairs at Brown University.

[2] Throughout this paper, we will use the acronym "ATS" to refer to the broad system of international treaties and institutions that help govern the Antarctic region. The acronym "AT," on the other hand, refers specifically to the Antarctic Treaty that was originally signed in 1959 and entered into force in 1961.

these challenges. Ultimately, we conclude that, given the persistent role of the ATS in supporting such national interests, it is vital that the United States remains dedicated to supporting and upholding the regime.

Background: The Antarctic Region and the Origins of the ATS

Antarctica is the southernmost continent on the globe and boasts a terrestrial area of 5,500,000 square miles, approximately equivalent to the size of Europe.[i] Although first sighted in 1820, exploration of the region and land itself did not officially begin until the late 1800s to early 1900s.[ii] As news of the discovery spread, an international interest was sparked, producing what has become a long history of research and scientific investigation on the continent and surrounding seas. After numerous disagreements over territorial claims, countries began to recognize the need for a solution to ensure Antarctica would continue to be a place of peace, research, and scientific discovery.[iii]

Image: Signing of the Antarctic Treaty on December 1, 1959 by the U.S. Representative, Ambassador Herman Phleger, at the Diplomatic Conference in Washington D.C. (Ambassador Herman Phleger)

On December 1, 1959, twelve nations convened in Washington, D.C. to draft and sign the Antarctic Treaty (AT).[3] Among them were seven states–Argentina, Australia, Chile, France, New Zealand, Norway and the United Kingdom–[iv]proclaiming sovereignty over portions of the continent, with the United States and USSR both declaring their right to future claims.[4] The AT was designed to promote peace, scientific research, and international cooperation in Antarctica through consensus-based decision-making, with all military and nuclear activity expressly prohibited.[v] The treaty extends to all areas south of 60°S latitude, encompassing the Antarctic and Southern Oceans, ice shelves and islands. Seizing the diplomatic window opened by the International Geophysical Year of 1957-1958 (IGY) – a global

[3] The twelve original signatories of the AT are as follows: Argentina, Australia, Belgium, Chile, France, Japan, New Zealand, Norway, South Africa, the United Kingdom, the United States, and the USSR.

[4] Throughout this paper, we differentiate between the USSR and Russia temporally. Nevertheless, Russia continues to maintain the same 'potential-claimant' status initiated by the USSR.

collaborative effort to produce a deeper understanding of the earth and its geophysical processes – territorial claims and Cold War tensions were frozen by the AT. Instead, nations promoted the mutually beneficial norms of scientific cooperation and non-militarization in Antarctica.[vi]

Since the AT was first signed, the ATS has expanded to include various new agreements. Signed in 1959, the Convention for the Conservation of Antarctic Seals (CCAS) aims to regulate the commercial harvest of seals to protect the Antarctic seal population from overexploitation. It also promotes conservation, scientific research and habitat protection, ensuring that the seal population remains plentiful in recognition of its vital role in the Antarctic ecosystem. Similarly, in 1980, the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) was adopted. This addition safeguards the marine ecosystem in the Southern Ocean by regulating commercial fishing to prevent overexploitation, especially in the krill population. Perhaps the largest addition to the ATS since the entry into force of the AT, and the most recent, is the Protocol on Environmental Protection.[5] This protocol was signed in 1991 and entered into force in 1998. In Article 2, it designates Antarctica as a "natural reserve, devoted to peace and science" by banning all activities relating to mineral resources (except for scientific research) and sets forth basic principles relating to human activities. Together with the AT, these provisions form the regime known as the ATS. Beyond the addition of the various conventions and protocols that make the ATS what it is today, its core principles remain relatively unchanged, namely a consensus-based process of deliberation requiring all consultative parties to agree before action is taken or decisions are made under the ATS.

The ATS Today

The ATS continues to preserve the Antarctic region as a place of peace and cooperative scientific exploration. This is partly due to the unique structure of the treaty system itself, as well as the addition of bodies and protocols to ensure environmental protection and peace.

Structure of the ATS

The ATS is a unique model of international cooperation which has ensured the preservation of peace in Antarctica. Key principles of this treaty system include ensuring peace on the continent and surrounding areas, dedication to scientific freedom, and prohibiting the use of nuclear weapons and waste. As mentioned, to guarantee peaceful use of Antarctica, all military activities–including weapons testing and establishing military bases–are strictly prohibited, and consensus-based decision-making is required. This distinct structure prioritizes the Antarctic region's wellbeing over countries' individual interests, as parties are required to unanimously agree on decisions prior to them being implemented. Although sometimes slow to reach decisions, consensus-based decision-making ensures that all regime actions reflect the shared interests of all consultative parties, rather than benefiting factions or the majority. This aspect of the ATS fosters equal standing among all consultative parties, reinforcing long-term cooperation in the continent. To further promote the ideal of peace, existing territorial claims are frozen by the AT, and no additional claims can be made. By banning new claims, the treaty sidelined a major source of conflict, guaranteeing that no entity can assert sovereignty in the continent.

Another important aspect of the ATS is its distinctive system of inspections. To ensure provisions of the AT are observed, parties are required to inform others of their activities in Antarctica. Moreover, parties are encouraged to undertake inspections of other parties' facilities under Article VII of the treaty, ensuring widespread compliance with treaty obligations.[vii] An example of Article VII in action occurred in 2020 when Australia conducted inspections of six Antarctic Stations from various countries, including China, Germany, the Russian Federation, Belarus, and the Republic of Korea. The inspection of the

[5] The Protocol on Environmental Protection was signed in Madrid, Spain. Consequently, it is also commonly referred to as the "Madrid Protocol."

Russian station was the first on-ground inspection since 1983.[viii] This transparency mechanism builds trust and mutual accountability, tying in the component of enforcement. The United States is the most frequent exerciser of this right, which is a key component of how the AT supports its interests in the region.[ix]

The ATS is also supported by a permanent secretariat, located in Buenos Aires, Argentina. Their primary mission is to assist Antarctic Treaty Consultative Meetings (ATCMs), with a rotating host every year, and the Committee for Environmental Protection (CEP) in performing their functions, ensuring that all activities are consistent with the principles laid out in the ATS.[x] Lastly, a major component of the ATS is its adaptability and its ability to create additional agreements, protocols, and meetings without requiring renegotiation of the original treaty. This has allowed for various new agreements to be added, described in further detail below, which adapt the ATS to changing global conditions and contemporary challenges to the Antarctic region. In the event of a dispute between parties, Article XI of the AT directs them to consult amongst themselves to settle on the means of peaceful resolution, but stipulates that if not resolved, the issue shall be referred to the International Court of Justice.[xi] The only instance of International Court of Justice involvement occurred in 2010, when Australia moved to initiate litigation over Japanese whaling within the waters of Australia's Exclusive Economic Zone (EEZ) along their Antarctic territory claim,[xii] but the case carefully avoided overlap with ATS jurisdiction, instead resolving the matter on the basis of the International Convention for the Regulation of Whaling.[xiii]

Types of Parties

Since the treaty has entered into force, the AT has expanded to include 58 countries under its stipulation that any member of the United Nations may become a signatory.[xiv] Of those signatories, 29 enjoy "consultative status" on the basis of conducting significant scientific research or being an original party to the treaty. This status allows these parties to participate in the decision-making process, chair meetings, and make proposals for consideration at the ATCM–[xv]an annual meeting of ATS parties to exchange information, consult on common interest relating to Antarctica, and formulate recommendations to their respective governments regarding the furtherance of the principles and objectives of the Treaty.[xvi] Although 29 additional countries are signatories the AT, they have not yet achieved consultative status. To attain this status, a country must first accede to the treaty and then demonstrate a sustained commitment to Antarctica Research by conducting significant scientific activities there, including establishing research stations, organizing scientific expeditions, or contributing to collaborative international research.[xvii] Only the nations that meet these criteria, and are admitted by current members, are eligible to participate in the decision-making process of the ATS. This tiered system of participation and status shapes how decisions are made under the ATS. To facilitate these conversations, the ATS relies on formal mechanisms for open dialogue and communication

The ATCM acts as the primary forum for deliberation and coordination under the treaty system.[xviii] It brings together representatives from consultative parties, non-consultative parties, and a range of various other observers. Key observers include the Scientific Committee on Antarctic Research (SCAR), the Council of Managers of National Antarctic Programs (COMNAP), and CCAMLR, all of which provide additional insight on the state of and research on Antarctica. Additional parties invited include organizations such as the Antarctic and Southern Ocean Coalition (ASOC) and the International Association of Antarctica Tour Operators (IAATO). These expert-led groups provide invaluable perspectives on environmental protection and tourism that allow for well-informed and multi-dimensional decisions to be made within the ATS. Similarly,[xix] members of CCAMLR convene annually to consult about scientific findings and determine the best uses of marine living resources.[6] These meetings are instrumental to ensure that decisions regarding marine life are grounded in scientific findings securing the

[6] CCAMLR members are not necessarily parties to the AT. For instance, Namibia and the European Union are members of CCAMLR, but are not parties to the AT.

longevity of these resources. In addition to the ATCM, consultative parties may also convene occasionally at Special Antarctic Treaty Consultative Meetings and Meetings of Experts to address more specific subjects. While non-consultative parties are not entitled to the aforementioned privileges in doctrine, they are constantly invited and welcomed to participate at the ATCMs and related forums in practice.

External Bodies

Within the ATS, there are a number of external bodies that assist the consultative parties in treaty forums, including SCAR, COMNAP, CEP, and IAATO. Created in 1958, SCAR is tasked with coordinating and developing high-quality scientific research by providing objective and independent scientific advice to the Antarctic Treaty Consultative Meetings.[xx] In identifying emerging issues in the Antarctic and Southern Ocean region and bringing them to the attention of policy makers, SCAR ensures that policy decisions are rooted in valid scientific research[xxi]. COMNAP, established in 1988, facilitates, exchanges logistic information, encourages cooperation, and develops advice to the treaty parties through the heads of each of the national Antarctic operating agencies. Their membership currently represents almost 100 percent of all the scientific activity in Antarctica. Similarly, in 1991, the CEP was established by the Protocol on Environmental Protection to promote environmental protection in the region[xxii]. This committee meets concurrently with the ATCM to address matters relating to environmental protection and management and to provide advice. Their main functions include assessing the effectiveness of environmental measures, updating or strengthening regulations, implementing impact assessments, and attempting to minimize environmental harm of Antarctic activities. IAATO was established by private tourism companies in 1991 in response to the signing of the Environmental Protocol, designed to manage tourism in and around Antarctica.[xxiii] IAATO accordingly maintains the "Ship Scheduler," which determines the frequency and timing of trips to the continent and, if applicable, landings for tourism purposes, along with other organizational purposes.[xxiv] All current commercial tour operators are registered with IAATO and adhere to their protocols, although membership in IAATO is voluntary. Furthermore, IAATO holds the status of an Expert Organization at ATCM meetings, engaging in lobbying with consultative parties. IAATO is unique in its capacity as an expert organization that represents the priorities of private commercial operations; it is expected that the organization will be put to the test in years to come as tourism continues to expand, prompting a regulatory response by the ATS. With the uptick of tour exhibitions in the region, members decided to establish rigorous standards that go beyond what was already outlined in the AT treaty and provide the framework and dedication to continue the protection of the Antarctic environment.[xxv]

Along with these four bodies, conservation organizations and external scientists also play a role in the success of the ATS. Groups such as the International Union for the Conservation of Nature, the United Nations Environment Program and ASOC are frequently invited to ATCMs where they present and testify as experts on specific subject matter. Bodies with technical expertise relevant to the Treaty discussions also participate, including the International Hydrographic Organization, the World Meteorological Organization, and the Intergovernmental Oceanographic Commission.

ATS Challenges Today

Despite the overall success of the ATS in maintaining successful and enduring collective governance through consensus-based decision-making for more than a half-century, it does face challenges to that success today. These can be grouped into four key issue areas: the effects of new technology, consensus-based decision-making, compatibility with other international regulations, and the intrusion of geopolitics into collective governance. In particular, recent prioritization of individual national interests over collective governance has stalled key progress and consensus-building practices within the ATS, with action within the forum increasingly contingent on dynamics outside of the forum. Each of these issue areas are analyzed in order to best understand their implications on the ATS and

sustained American membership, interplay with US interests, and in what capacity those interests may be challenged.

New Technology

Image: Tourist enjoying Antarctic scenery and wildlife viewing during a tourism excursion. (William Muntean, Former Senior Advisor for Antarctica, United States Department of State)

Technology has improved markedly since the introduction of the ATS in 1961. Innovation has entailed a wide range of advances which make both scientific bases and the continent as a whole more accessible, both physically and remotely. These include internet connectivity with satellites, autonomous underwater vehicles, fuel cells, more efficient solid-state batteries, and bioprospecting equipment like portable DNA analysis kits.[xxvi] Additionally, photography and virtual access to the continent create an increase in perceived accessibility, facilitating broader awareness among stakeholders interested in the activities occurring in Antarctica. Although these improvements have undoubtedly increased the quality of scientific research being conducted in the region and contributed to groundbreaking findings, new technology has also vastly increased physical access to the frozen continent.

As seen in Figure 1, this has been exemplified by the explosion of Antarctic tourism since the 1990s, which has been consistently tracked throughout the history of the ATS. The highest number of tourists visiting Antarctica was recorded in the summer season of 2023-2024, with 123,000 individuals visiting the continent,[xxvii] up from the pre-Covid pandemic high of 75,000 in the 2019-2020 season.[xxviii] The ATS has no explicit regulatory authority over commercial tourism activity in Antarctica, but activities are still subject to the broader stipulations of the ATS and the Environmental Protocol when occurring below 60° latitude. Tourism is also subject to other basic external regulations, such as the polar codes established by the International Maritime Organization, which standardize emergency precautions and procedures.[xxix] Finally, all tourism operations are subject to the laws of their respective governments. All commercial tourism operations today are also members of IAATO, and thereby voluntarily subject to their regulations, such as the strict management of tour timing and traffic control. This has proved relatively effective thus far but will be put to the test as tourism activity increases, thereby increasing the risk of an accident or larger threat to the environment. Establishing a regulatory regime for tourism has

not yet been possible within the ATS, although talk surrounding the subject has increased in recent years, pointing to its potential development in the future. Even with this regulatory foundation, increased physical access and tourism still poses a host of issues and potential catastrophes.

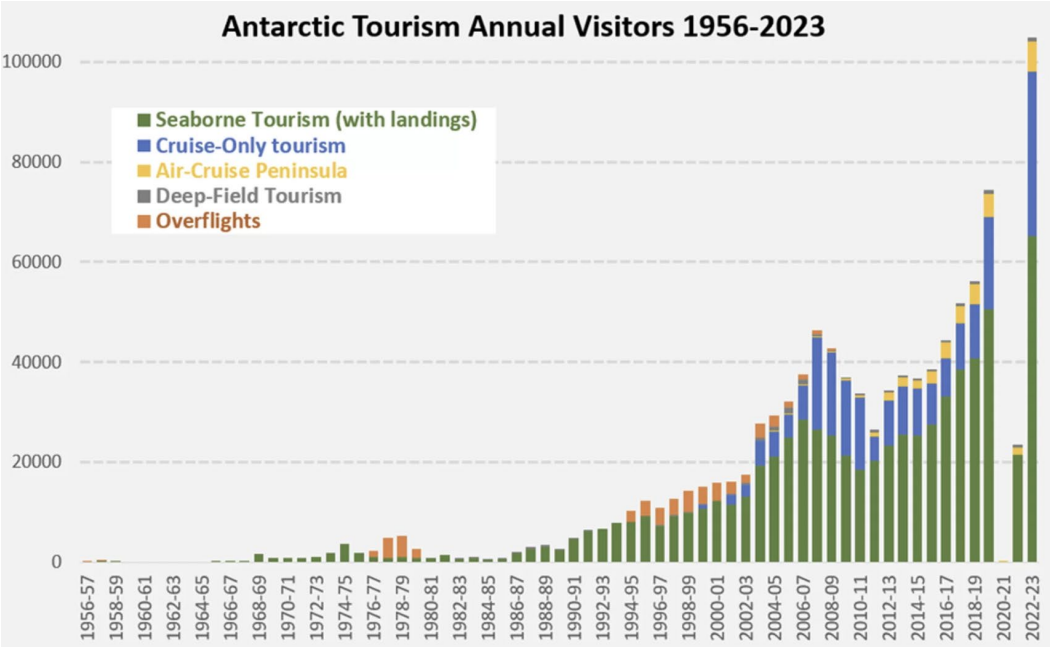

Figure 1. This graph demonstrates the vast increase in tourism since ATS governance began, with an explosion in the past three decades perpetuated by a wave of new technology. From: Tejedo, P., Cajiao, D., Oniell, T., Lamphere, A., & Liggit, D. (2024, November 13). Tourism in Antarctica: facts, concerns, and challenges. *Antarctic Environments Portal*. https://doi.org/10.48361/4GWG-DB92

Nearly all tourism in Antarctica occurs on the Antarctic Peninsula (see image below), where vessels carry passengers from gateway cities, such as Cape Town in South Africa, Hobart in Australia, Christchurch in New Zealand, Ushuaia in Argentina, and Punta Arenas in Chile, into the region.[xxx] An increasing number of exhibitions are offering landing opportunities, where tourists can journey onto the terrestrial land of the continent itself, rather than view it from the water. Both of these types of excursions – aquatic and terrestrial – facilitate the transfer of non-native flora and fauna species to an otherwise relatively undisturbed ecosystem, contributing to environmental degradation. The travel itself also produces carbon emissions and waste effluent release into the surrounding air and water. Furthermore, tourism involves the transport of oil and fuel into a particularly susceptible ecological region. Increasing amounts of marine traffic raises the likelihood of spillage or shipwrecks, which are associated with large human and environmental costs. The perceived accessibility gained through increased awareness of Antarctica and Antarctic tourism has inherently led to a vast increase in tourism, heightening the risk of the environmental degradation highlighted above. Conversely, Antarctic tourism is capable of instilling concern about the Antarctic environment and ecosystems into those who visit, increasing public awareness of the importance of conservation there and spawning advocacy efforts.[xxxi] With large swells over the past three decades, Antarctic tourism can be an effective tool for spreading word around the world about the importance of environmental conservation in Antarctica, but also poses an increased risk to the environment there.

Image: Map of Antarctica, highlighting the Antarctic Peninsula. (National Snow and Ice Data Center, University of Colorado Boulder)

Other manifestations of increasing accessibility of the continent, including new forms of satellite contact and internet access, have led to the ability to install and maintain more advanced technology within Antarctic research bases.[xxxii] Countries such as Australia and China have been accused of deliberately implementing and utilizing multi-use technologies in their research bases, meaning they could be leveraged both to conduct advanced scientific research and to achieve other strategic means, such as interfering with and intercepting communications in the region. China's activities in Antarctica have especially sparked concern amongst other ATS parties, an example being the installation of the BeiDou global navigation satellite system at their research bases.[xxxiii] Nevertheless, the installation of the US GPS and European Galileo systems has not drawn the same concern from Western experts. This technology has both communications implications, such as monitoring other parties' transmissions, as well as potential military applications, able to aid missile operations and targeting.

The opportunities for commercial prospecting in a variety of fields are bolstered by the presence of technological development, raising the likelihood for a major breach of Article 7 of the Environmental Protocol, which prohibits "any activity related to mineral resources" beyond use for scientific research.[xxxiv] While states such as Russia have been commonly accused of engaging in prospecting for traditional natural resource exploitation, new technology has led to concerns regarding widespread engagement in an entire new field called bioprospecting.[xxxv] "Bioprospecting" refers to scientific research and resource extraction that involves a commercial application, or economic interests.[xxxvi] Antarctica's extreme climate makes it ideal for finding rare molecules and enzymes with potential commercial uses, with significant recent gains in biotechnology, like portable DNA extraction kits, making bioprospecting more efficient and commercially profitable. Despite the extractive nature of this emerging field, bioprospecting remains entirely unregulated by the ATS.

New technology is not an issue contained to the present. It will continue to be a challenge to the ATS until proper regulatory responses can keep pace with technological developments, which today could involve the creation of a tourism regulatory body or monitoring systems specifically for multi-use technology. Exploration of regions that states struggle to control due to their remote geography and harsh conditions – from Antarctica, to space, to the high seas – have shown that new technologies enable both economic exploitation and surveillance.[xxxvii] Nevertheless, the high costs and technological complexity of missions to these regions have required a certain level of international cooperation, which can be difficult to win in a consensus-based environment. Worryingly, the nature of technological innovation also indicates that as time passes, technology will continue to improve, diminishing mission complexity and cost. With advancements like all-weather airstrips and more deceptive multi-use technology, this issue will continually challenge and potentially alter the value proposition of the ATS.[xxxviii] Without a response from the ATS regime, technology will continue to test the boundaries of the ATS and the political will of parties for peaceful multilateral cooperation.

Consensus-Based Decision-Making

Since its founding, the ATS has relied on a consensus-based decision-making structure. The major bodies of the treaty system today still rely on this structure,[7] whereby any objection by a consultative party[8] causes matters of substance and proposals to fail.[xxxix] Fundamentally, this system creates several challenges and opportunities. When consensus cannot be obtained, which requires opposition from only one consultative party, no action is taken. In practice, decisions are dismissed with a mere statement of a lack of support by one state.[xl] Thus, advancing even the highest priority items can be difficult. Consensus-based decision-making also provides several benefits, as this system means that when consensus is reached, there is increased willingness to follow the rule. When voting for a substantive measure, parties will generally concur that their interests are upheld, or even supported, by the said rule, and thus full support means a higher likelihood of accountability. This is particularly important in a remote and vulnerable environment such as Antarctica, where the actions of one nation could be hard to track and have serious impacts on the interests of others. Therefore, despite its fundamental challenges, consensus-based decision-making can also be useful in the implementation of the ATS.

The success of consensus-based decision-making has waxed and waned. Yet, as is visible in Figure 2, the system has increasingly produced stalled proposals and a lack of substantive action within the ATS. For the first twenty years following the entry into force of the AT, there was a steady adoption of significant measures, resolutions, and decisions,[9] with a rapid entry into force of these outputs.[xli] By the late 1980s and through the 1990s, there were more outputs that simply never entered into force or were substantially delayed in the process. Nevertheless, several major actions were still taken, including the signing and entry into force of the Environmental Protocol, providing key protections to the Antarctic region.[xlii] Finally, since 2000, there have been few substantive outputs that have been approved or ratified.[xliii] Given that one nation's dissent is enough to quash a proposal, and the diverse range of interests now held by an expanded body of consultative parties, issues that historically would have reached the voting stage increasingly do not progress. Each party understands these dynamics and can sense which issues are likely to win broad support, which today, is fewer than ever before.

The ATS has established several protected areas, including the Ross Sea Marine Protected Area, in recent years.[xliv] Even so, the number and diversity of legally binding measures has dropped significantly. In contrast to prior eras, since 2000, 234 out of 240 of the legally binding agreements within

[7] The two major bodies are the ATCM and CCAMLR. Their subsidiary bodies, including the CEP and the CCAMLR Scientific Committee also follow this procedure.

[8] "Consultative Party" is the language of the ATCM. CCAMLR refers to these states as "Members".

[9] Measures are legally binding outputs, resolutions are non-binding soft law agreements, and decisions are non-binding soft law agreements that focus on administrative and organizational matters.

the ATS are specifically dedicated to small area protection and management.[xlv] However, larger issues such as tourism, have not been acted on. Many parties have declared tourism a major issue and set up working groups to analyze the threat.[xlvi] Nevertheless, very little substantive action has been taken on this issue. CCAMLR has also seen decreased consensus, particularly regarding conservation issues. Russia and China in particular have blocked and delayed passage of key measures, likely using their vote as a bargaining chip in other matters external to the Antarctic.[xlvii] Still, a general lack of proactivity from other members has led to decreased cooperation and the increased stalling of proposals. Clearly, these examples demonstrate that operating under a consensus-based decision-making structure is becoming increasingly challenging, with signatories less willing to collaborate fully to advance collective interests in Antarctica.

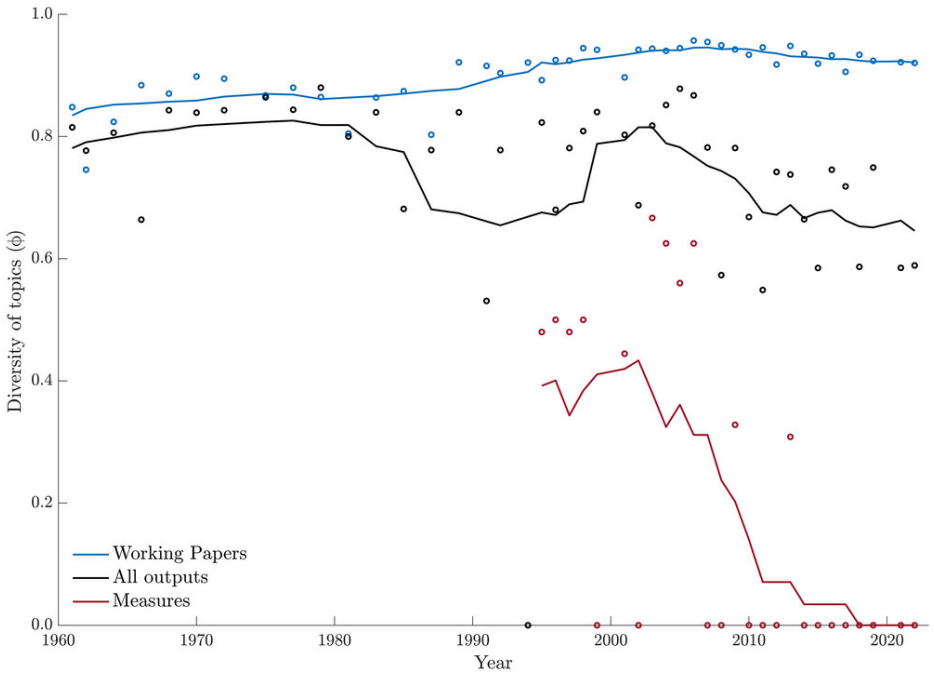

Figure 2. This graph shows the diversity of topics addressed in ATCM meetings. It demonstrates consistent diversity in working papers, and all outputs of the meetings, but a sharp decline since 2000 in the diversity of formal measures adopted. From: Gardiner, N. B. (2024). Measuring the performance of Antarctic Treaty decision-making. *Conservation Biology*, *38*(1), e14349. https://doi.org/10.1111/cobi.14349

Compatibility with Other International Regulations

The ATS is not the only international regime which regulates activity below the 60° South latitude line. Despite the strict mandate that the ATS is binding below that latitude for AT signatories, there are inherent overlaps with other international regimes and other international organizations. These issues are compounded in importance when sovereignty claims on the continent are considered. Every signatory nation is a party to other international treaties and organizations which provide essential services in other parts of the world. However, their presence in Antarctica generates a conflict which could challenge the central tenets of the ATS itself.

One regulation in particular has represented a potentially unwieldy challenge to Article IV of the Antarctic Treaty, which sets forth the principle of sovereign neutrality amongst claimant states.[xlviii] This article effectively froze the issue of sovereignty on the continent by laying out that any treaty parties are not forced to recognize sovereignty claims by signing the treaty, nor are claimant states required to renounce their sovereignty claims.[xlix] All seven of these claimant states are also party to the United Nations Convention on the Law of the Sea (UNCLOS).[l] The basis of sovereignty claims related to

UNCLOS arise from the recognition of an exclusive economic zone (EEZ) for each party, which stretches 200 nautical miles from their sovereign coastline and includes the continental shelf within that reach. UNCLOS required that land claims be submitted to the Commission on the Limits of the Continental Shelf (CLCS) within the United Nations, but in doing so these claimant states risked re-igniting the issue of sovereignty in the ATS.[li] In a manner which steadfastly upheld their commitment to collective governance in Antarctica and the importance of maintaining the ATS, some claimant states (following the example of Australia) submitted the necessary claims and data to the CLCS but requested that it not be reviewed, beginning in 2004.[lii] This includes New Zealand in 2006,[liii] Norway in 2009,[liv] and the United Kingdom in 2009.[lv] Others, such as Argentina, submitted their claims and elected not to object when the UNCLOS chose not to consider that portion of the request. This was done due to a number of nations submitting comments requesting Antarctica be excluded from consideration. Therefore, for the time being, the issue of sovereignty remains ambiguous to a level which allows the ATS to maintain primacy. Despite upholding Article IV in the early 21st century, by submitting their continental shelf claims to CLCS, these seven nations also maintained their right to address these claims in the future. This entails another avenue by which Article IV and the notion of sovereign neutrality may be challenged in the future, especially considering that the United States and other non-claimants continue to submit papers to UNCLOS stating there is no sovereignty in the region. Further exemplifying this concern is the case *Humane Society International v. Kyodo Senpaku Kaisha Ltd,* in which a Japanese whaling firm was illegally fishing in a whale sanctuary within Australia's territorial waters and EEZ, which were also technically part of the ATS governed zone. Although Australia ultimately decided to bring charges against Japan under the International Whaling Convention in the International Court of Justice, broader implications may have arisen if litigation had progressed in the case under the ATS as an issue of sovereign laws and regulations. The issue of sovereign neutrality would once again be questioned, as all parties under article VIII of the Antarctic Treaty operate under the jurisdiction of the sponsoring consultative party, thereby proposing that Japan had violated Australia's laws in ATS governed area.[lvi] Although avoided in this case, future legal challenges in territorial waters below the 60° latitude line could pose a similar threat to ATS governance.[lvii]

Another point of conflict resides within the United Nations General Assembly more generally, where Malaysia, with the support of other developing nations, introduced the "Question of Antarctica" during the 1980s. In doing so, Malaysia and supporting countries advocated for the continent and surrounding seas to be dedicated as a "common heritage for mankind."[lviii] This action primarily evolved due to concern around consultative parties' abilities to access mineral resources and the disparities this might cause for developing nations due to the perceived high threshold to become a consultative party in the late 20th century. However, the Convention on the Regulation of Antarctic Mineral Resource Activities, which would have permitted and instituted a regulatory regime for mining in Antarctica, failed to win consensus in 1989. After it was assured that Antarctica's mineral resources would not be exploited for commercial purposes, the objection within the UN to the ATS subsided.[lix] These objections ceded further after the signing of the Environmental Protocol in 1991.[lx] Even so, this example once again demonstrates how conflicting jurisdictions of international regimes, in this case the United Nations, could potentially generate conflicting priorities in Antarctica and challenges to the ATS governance.

Intrusion of Geopolitics into Collective Governance

Antarctica is a region defined by its physical remoteness. Still, the area has never truly been isolated from geopolitical tensions, even when viewed through the lens of decades of regime success and peace under the ATS. Initial cooperation in the late 1950s and early 1960s that spawned the AT was burgeoned by the shared scientific interests promoted by the IGY, and did ultimately calm the frictions that preceded it.[lxi] That being said, science did not occur in a vacuum – the countries involved in AT deliberations, especially the United States and the Soviet Union, were interested in its ability to bolster national prestige.[lxii] Furthermore, science was a convenient alibi for establishing an early presence in a

region that had the potential to bear great spoils – whether territorial, natural resource-related, commercial, or otherwise.[lxiii] These interests, present before the advent of the AT and IGY, did not evaporate, instead manifesting in the prevailing values of the era, and science continues to be a means of concealing other, more unilateral intentions.

As the ATS grew to include a number of supplemental protocols and agreements in the latter half of the 20th Century, the most serious issues of the time were successfully resolved through these topic-specific conventions. The success of consensus-based decision-making smoothed over geopolitics internal to the parties of the ATS, contributing to its global reputation as a model for peaceful coexistence.[lxiv] However, those countries external to the ATS did, and continue to, far outnumber those within and with participatory powers, which continues to motivate animosity amongst the outgroup. In the 1980s, this structure provoked a handful of nations, led by Malaysian Prime Minister Mahatir bin Mohammed, to challenge the ATS and advocate for jurisdiction to be shifted to the UN, objecting to the "undemocratic" management of Antarctic resources by the "privileged few."[lxv] While this specific "Question of Antarctica," as discussed above, has been assuaged by the fact that the AT is open for accession by any member of the UN and that more countries have since signed on to the regime and become consultative parties, along with the passage of the Environmental Protocol, this means that consensus is more difficult to achieve, which has begun to limit further consultative party expansion.

Today, external tensions are increasingly visible within the ATS forum and consultative party approvals. Specifically, the onset of the Russian invasion of Ukraine has created complications that have penetrated the bounds of the ATS. At ATCMs, overt action has been taken to protest Russia's presence, including delegates walking out of meetings when Russian officials speak and avoiding any interaction outside of formal sessions.[lxvi] Traditionally, ATCMs are quarantined from other global issues, but these tensions have forced recent gatherings to openly address the presence of the war, potentially setting a new precedent. Aside from symbolic actions, the regime has also seen the withholding of consensus leveraged on the basis of issues unconnected to Antarctica,[lxvii] which again includes the Ukrainian War.[lxviii] Researchers have demonstrated that, despite providing evidence of significant scientific activity that exceeds that of previous successful bids for consultative status, countries continue to struggle to win the vote of all current members.[lxix] Canada is one recent example, with its strong bids repeatedly rejected by Russia. Belarus, which operates an Antarctic station but is closely aligned with Russian war efforts, is also repeatedly rejected for consultative status by a coalition led by Ukraine. An example outside of the Ukrainian War is Venezuela, which has attempted repeatedly to gain consultative status but has been rebuffed by the other nations opposed to the current state of Venezuelan domestic politics.

The formation of discernable blocs – most evident in how countries align in the Canada and Belarus consultative party debate – is further evidence that geopolitics external to Antarctica have crept into the regime. On one hand, these blocs can be viewed through the lens of strictly Antarctic activity and ambitions: new Antarctic states, without territorial claims, are seeking to become prominent players within the region, as traditional Antarctic states, often with territorial claims, aspire to preserve their preeminent posture. Or, for example, nations that fish typically coalesce around one another, putting them at odds with those more concerned about environmental protection.[lxx] Nevertheless, this occurs in the context of broader trends, with newer Antarctic states appearing as part of a larger demographic, economic, and international rise, and traditional Antarctic states facing retrenchment and the perception that their international profiles are in relative decline.[lxxi] It also occurs in the context of current events, with the Ukrainian War motivating fractures between nations that historically shared the same views on fishing and resource extraction, namely Russia and China versus Ukraine and its allies. Of note, in the case of the ATCM or CCAMLR, this means that votes are not regularly taken, as an expression of objection by representatives is sufficient evidence that consensus will not be reached. Thus, these blocs should not be understood as traditional voting blocs, but rather as groups of shared interests that have become increasingly rivalrous and contingent on external dynamics.[lxxii]

China has increasingly blocked consensus on issues that the United States and other western allies have rallied widespread scientific support behind, and has recently stood with Russia, a nation that is notorious for unilaterally rejecting consensus and scientific evidence.[lxxiii] China justifies this alignment by arguing that other nations are too willing to allow external issues to penetrate the forum. As BRICS members, cooperation between Russia and China is natural, but is viewed with suspicion by traditional Antarctic states who possess stronger western ties and worry about broader Chinese ambitions as an aspiring global hegemon. At the 2024 ATCM in Kochi, India, China and Russia were the two nations to formally object to proposals, the former blocking emperor penguin protection and the latter stymieing a resolution on marine biodiversity on the high seas.[lxxiv] These actions were consistent with Russian and Chinese collaboration since 2016 after the establishment of the Ross MPA, which provoked the two nations to double down on preventing new MPAs and refusing to agree on research and monitoring plans for existing MPAs.[lxxv] While critics argue that "distrusted" states typically share the same interests as all other states active in the Antarctic, and are victims of western anxiety over poles of power and global reordering, agreement is widespread that tension is growing within the system due to dynamics beyond the system.

The ATS and American Interests

U.S. interests are complex, diverse, and ever-evolving. Yet, as an international forum with legally binding and non-binding agreements, the ATS interacts regularly with these interests. As a result, we primarily rely on the priorities laid out in the 2024 "National Security Memorandum on United States Policy on the Antarctic Region," the current federal policy on the Antarctic region. Principally, these interests in the area include its peaceful and cooperative future, the conservation of its resources and ecosystems, and continued opportunities to conduct scientific research.[lxxvi] Still, due to the change in administration, we also take into account some of their policy focuses, such as economic growth and private-sector freedom, so that this document most accurately represents the current state of American interests abroad and in the Antarctic.[lxxvii]

Existing restrictions within the ATS on militarization and resource extraction, alongside systems for shared scientific findings promote peace, limit environmental degradation, and allow for innovation and collaboration. Nevertheless, they also prevent traditional displays of American military might, commercial mining and fishing, and privatized technological advancements. Despite current challenges and limitations, we conclude that the ATS does substantially promote US interests. Therefore, to uphold American geopolitical, economic, security, and scientific interests, it is crucial that the United States remains dedicated to upholding and supporting the current Antarctic system of governance.

Image: Resupply of McMurdo Station. (Navy Expeditionary Logistics Support Group photo by Chief Petty Officer RJ Stratchko)

Advancing of American Interests

The ATS plays a critical role in advancing US national interests. First and foremost, the ATS has served as a successful mechanism to promote peace in the Antarctic region, which is roughly 10% of the Earth's surface and is essentially as far away from the United States as one can get on the planet.[lxxviii] Prior to the founding of the ATS, territorial claims and rights to resources created an adversarial environment in the Antarctic region. Seven nations made land claims to Antarctica, and in 1952, hostile gunfire rang out as Argentinians attempted to scare off a British landing party on the frozen continent.[lxxix] In 1959, the world was in the midst of the Cold War. Nevertheless, twelve nations with diverse interests, including major geopolitical opponents in the United States and the USSR, went on to sign the AT.[lxxx] This treaty had the goals of promoting peace, cooperation, and non-militarization, while also ensuring that this part of the world was left for scientific research.[lxxxi] Since the signing of the ATS, parties to the treaty have been on opposing sides of major international issues, imposed economic sanctions on each other, and even been engaged in conflicts with each other. Nevertheless, peace in the Antarctic region has lasted for more than 60 years, as the treaty has historically protected this territory from other geopolitical tensions. The consensus-based decision-making structure has been fundamental to this collaboration and benefits long-term American interests. This system ensures that the ATS only takes actions that the United States supports – or else, a veto may be used. Furthermore, decisions that are made are more likely to be followed by every party, since they also all agreed to take action.[lxxxii] This is especially important in Antarctica, since the actions of one party can have effects on the whole of the continent and its unique ecosystems. Non-compliance can even threaten the ability to do valuable scientific research and limit the associated co-benefits. If the United States were to withdraw from the ATS, it would lose the ability to advance its interests diplomatically in this region, a choice that could result in the need for significant additional effort and investment, at no small cost, in the other elements of national power.

The preservation of peace over 10 percent of the globe aligns with the American interests and has provided several related benefits to the US. As a result of this peace, the United States does not need to deploy a major military presence to Antarctica to ward off hostile acts, let alone to fight a war. Even when considering the trend of increasing accessibility, the lack of transportation, housing, and military infrastructure, alongside the difficult conditions in Antarctica would make militarization an extremely

costly venture, more so than typical deployments. Thus, the non-militarization of the continent removes a massive financial burden on the United States. In a contemporary world rife with conflict and requests for US assistance, a region cordoned off from such dynamics is invaluable. As a result, the sustained non-militarized peace in the Antarctic region has benefited US economic and military interests, in addition to supporting the interest of maintaining a peaceful and cooperative region.

The conservation regarding Antarctic ecosystems, a core American interest deeply tied to scientific research, is facilitated by the ATS. Through CCAS, CCAMLR, and other treaties, the ATS has created a web of protection for Antarctic wildlife and ecosystems. In spite of decreasing collaboration between parties, the ATS has still supported these conservation efforts, creating numerous protected areas, including the massive Ross Sea Marine Protected Area in 2016.[lxxxiii] These regions benefit the existing natural environment, support the protection of existing resources, and enable important scientific research to occur. Antarctic ecosystems provide roughly $180 billion in annual benefits to global markets.[lxxxiv] Furthermore, Antarctic research has and continues to generate important discoveries. From historic discoveries that launched space exploration,[lxxxv] to the potential benefits of the new field of bioprospecting, the conservation of Antarctic ecosystems and the research that occurs therein has created immense value for the world.[lxxxvi] The ATS provides the framework for this conservation and thus is fundamental to protecting these American interests.

Obstacles to American Interests

The ATS confers a litany of valuable benefits to the United States. Yet, the treaty system ensures that its advantages are distributed among its parties. Thus, the benefits to the United States come at the expense of reining in unfettered American interests and preventing the capture of more concentrated spoils. A first obstacle is inherent to the concept of consensus-based decision making: as long as it remains in the ATS, the United States will never be able to advance, within the regime, doctrine that is unilaterally advantageous. Action under the ATS is capable of being blocked by one singular veto, and with an ever-expanding body of diverse signatory nations, wide appeal is required to enact new stipulations. Even policy that is appealing to a majority of nations can still be blocked by strategic competitors if it fails to provide them adequate incentive. Thus, America may be forced to cede concessions to other nations in the interest of progress within the regime. Furthermore, in recent years, productivity and major action under the ATS has ground to a halt.[lxxxvii] This shift is partly due to diverging interests among consultative parties and the intrusion of external geopolitical dynamics. Even if the United States sought to pursue environmental or scientific policies in the common interest through collaborative means, its odds of success via the current consensus-based framework are narrow. While the rules in place historically have served US interests, an inability to expand or modify them in response to modern challenges, such as tourism, may be a hindrance.

The existing provisions of the ATS also conceivably restrict what physical resources America could reap from the Antarctic. As long as the AT and Article IV are in place, America will not be permitted to act on its status as a potential claimant. While there is no guarantee that, in the absence of a treaty, America would be capable of realizing territory, as the totality of the continent has already been claimed by seven, historically friendly nations, it also means that the continent and surrounding waters must continue to be shared. American presence on the continent and in the region, as well its overall resource capacity, would support the prospect of establishing a unilateral claim and pursuing individual interests within it, though at considerable cost. Separately, Article 7 of the Environmental Protocol explicitly prohibits mining and resource exploitation, which, if undertaken, could yield both critical mineral resources and revenue inflows to the US economy. While this would undoubtedly be at the expense of peace and environmental quality and require large amounts of capital to commence, few regions of the world are left so untapped. The extreme conditions of the continent also bring into question the economic viability of such an opportunity, but continued technological advances could overcome this concern.

A final hindrance is found in the extent to which the ATS mandates collaboration and transparency. Per the AT, any nation is able to conduct inspections at any point in time of any infrastructure or equipment present below 60° latitude. Furthermore, the nature of scientific activity is to be collaborative, with findings shared amongst parties to the regime. As a result, the United States is significantly limited in its ability to leverage the scientific and technological capabilities which it has unilaterally invested in to return any sole benefits on these fronts, to include bioprospecting. It also limits what military resources can be stationed and utilized within the region, as confidentiality is not able to be maintained. Thus, the United States cannot integrate the region into global military pursuits and strategy as it may otherwise would.

While supporting the ATS limits the extent of which the United States could maximize return from the Antarctic region, doing so would be at the expense of other, equally important US interests that are not solely exploitative and individualistic. In the absence of the ATS, other powerful nations would likely seek to maximize the benefits that could be secured from the region, which is highly likely to produce confrontation and conflict. The hindrances considered above are hypothetical – in reality, they would not occur in a vacuum. This would significantly limit the potential opportunity costs, even considering the vast tools of power that the United States possesses. What is certain is that securing them would require a steep price, whether in fiscal or diplomatic terms.

Conclusion and Recommendations:

Signed in 1959, the Antarctic Treaty laid the foundation for the collective governance system that still rules Antarctica today. Through its consensus-based decision-making structure, the AT aimed to promote peace, collaboration, and scientific cooperation, in spite of the major geopolitical battles raging across the globe. Almost 70 years later, the ATS has expanded upon the AT, providing more protection to the unique ecosystems and resources found south of 60° latitude, while continuing to use its unconventional system of governance.

Today, the ATS faces a variety of new and emerging challenges. New technology has vastly increased access to and aspirations for the Antarctic region, bringing with it threats to the pristine environment. New technology has heightened risks of resource exploitation and instances of potentially detrimental multi-use technology implementation in emerging technological fields, with areas such as bioprospecting and new navigation systems standing out as key challenges to the ATS governance regime now and in the future. Consensus-based decision-making, while vital to the past decades of ATS success, is proving to be an increasingly high barrier to addressing concerns arising in this new era of intrusive and pervasive geopolitical competition. The productivity of regime outputs have largely become stagnant within pressing issue areas. Concerns brought into the ATS forum must also take into account overlap with other international regulations, which hold the potential to flare the issues of sovereign neutrality and the legitimacy of the ATS, a threat that has proven omnipresent in the ATS's past and undoubtedly in its future. Increasing trends of geopolitical tensions through the penetration of outside interests, especially due to the continuing Ukrainian War, have vastly increased the visibility of coalitions and voting blocs. These threaten the continued success of the ATS in successfully engaging in collective governance. Together, these four issue areas represent the key challenges to the ATS in the future, and they are vital for understanding how consultative parties should proceed.

Yet, the ATS is a uniquely efficient and effective means of securing a number of core US national interests. Few other international agreements have secured sustained peace over such a large and historically contested area. This alone emphasized the massive value of the ATS. Furthermore, the cost to sustain the agreement is relatively low for the United States. In its absence, the United States would likely require mobilizations of vast manpower and military spending to achieve a peace that is far from guaranteed in a particularly adverse physical environment. Furthermore, the ATS promotes the continued access to science and research that has, and will likely continue to, fuel domestic innovation in other

technological and biological fields, generating economic and societal value. Discovery is delicately balanced with conservation under the current regime, ensuring that no one nation can selfishly exploit Antarctic natural resources, and it is vital for preserving the unique ecological diversity of the region. The ATS does restrict American interests through the focus on collaboration, reducing the unilateral powers of individual parties. As a result, the United States is hindered from exerting its military, industrial, or economic power, in favor of a more diplomatic and multilateral problem-solving approach. Even so, we conclude that the ATS provides numerous benefits to American interests that could not be effectively achieved without this system of governance.

Thus, it is vital that the United States continues to support the ATS through the use of several tools. First, continued funding to the National Science Foundation and the US Antarctic Program is crucial to continued scientific research and discoveries. Without these organizations, scientific research would be stalled, and many of the co-benefits associated with the ATS would be diminished. In addition to this funding, the United States should devote the necessary technological and human resources to continue rigorous inspections and facilitate the functioning of Antarctic research. To ensure the proper functioning of the collective governance system and maintain its legitimacy, it is vital for the United States to promote maximum participation in the ATS systems and processes. This could include activities such as diplomatic participation in ATCMs, meaningful negotiation, and consistently producing the documentation necessary for ATS procedure and operations. Given the intrusion of geopolitics into the functioning of the ATS, the United States may consider using its vote as a bargaining chip. Yet, this action undermines the stated interests of the United States, as it reduces collaboration and sparks further clashes, threatening Antarctic peace and the performance of the ATS itself. Finally, given recent uncertainty in national and global politics, we recommend a formal statement of renewed commitment from the United States to the ATS and the values and ideals which undergird it. The Antarctic region is home to some of the most unique and endangered ecosystems on the planet. Now, more than ever, it is vital that the United States renews its commitment to maintaining this environment and the benefits it provides for generations to come.

Acknowledgements:

We would like to thank CAPT Tony Russell, USCG (Ret.), William Munteen, and Dr. Abbie Tingstad their assistance as we undertook this project. This paper would not have been possible without

their expertise and suggestions. Furthermore, we would like to thank Dr. David Blanding and the entire MPA Staff for their guidance and support throughout this process.

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Disclaimer:

The authors are candidates for the degree of Master of Public Affairs (MPA) at Brown University and have produced this deliverable for their Policy in Action project, an academic requirement for the MPA degree. The partner organization, The Coast Guard Academy Center for Arctic Study and Policy, did not commission the document. Contribution of a substantive policy question and advisory input was requested by the MPA program from the partner organization to support the students in completing their Policy in Action project. A copy of this document was provided to the partner organization at the completion of the project prior to its submission. The views, analysis, and recommendations contained in this document are not necessarily those of the partner organization. There is no obligation on the partner organization to adopt, publish, or otherwise use the analysis and recommendations contained in this document. Any questions about the content of this report should be addressed to the corresponding authors.

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