

# Antarctic Treaty Summit: Science-Policy Interactions in International Governance

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## *Abstract*

For the past five decades, the Antarctic Treaty has provided a firm foundation for ongoing international cooperation to successfully manage nearly ten percent of the Earth for “peaceful purposes only... on the basis of freedom of scientific investigation.” Growing from seven claimant and five non-claimant signatories, the Antarctic Treaty now engages 47 nations, representing nearly 90 percent of humankind. To assess the legacy lessons of the Antarctic Treaty and to celebrate the 50th anniversary of its December 1, 1959 signature in the city where it was adopted in “in the interest of all mankind [sic]” – the Antarctic Treaty Summit: Science-Policy Interactions in International Governance will be convened in Washington, DC at the Smithsonian Institution, National Museum of Natural History, from November 30 to December 3, 2009. The Antarctic Treaty Summit will provide a unique open forum for scientists, legislators, administrators, lawyers, historians, educators, executives, students and other members of civil society to share insights. Together, this international and interdisciplinary group of stakeholders will explore science-policy achievements and precedents for sustained peaceful governance of international spaces that cover nearly 75 percent of the Earth’s surface beyond national jurisdictions.

## 1. *Summit Background*

... it is in the interest of all mankind [sic] that Antarctica shall continue for ever to be used exclusively for peaceful purposes.

Antarctic Treaty, Preamble

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Global science offers a path to peace for humanity. This concept was first instituted in the Antarctic Treaty, which was signed in Washington, DC on 1 December, 1 1959 to continue international “cooperation on the basis of freedom of scientific investigation in Antarctica as applied during the International Geophysical Year.”<sup>1</sup> Documents from the administration of President Eisenhower reveal that rapid emergence of the *Antarctic Treaty* was much more than serendipity and that the International Geophysical Year itself (convened from 1 July 1957 to 31 December 1958) was a carefully crafted tool of diplomacy to unite the cold-war superpowers in the peaceful use of international spaces, starting with Antarctica.<sup>2</sup>

Original members of the 1959 *Antarctic Treaty* included seven claimant nations (Argentina, Australia, Chile, France, New Zealand, Norway and the United Kingdom) and five non-claimant nations (Belgium, Japan, South Africa, Soviet Union and the United States). Between 1976 and 1991 – following reports of potential Antarctic mineral resources and international complaints that the Antarctic Treaty System (ATS) had become an ‘old boys club’ – ATS membership skyrocketed more than 500 percent (Fig. 1) to accommodate the interests of the international community.

Today, there are 47 signatories to the *Antarctic Treaty*<sup>3</sup> which represent nearly 70 percent of the human population. Because of their “substantial research activities,” as stated in Article IX of the Antarctic Treaty, 28 nations now have consultative status with voting rights in the Antarctic Treaty Consultative Meetings (ATCM). Another 19 nations have acceded to the *Antarctic Treaty*, but are not entitled to vote at the ATCM that now occur annually for the purposes of:

exchanging information, consulting together on matters of common interest pertaining to Antarctica, and formulating and considering, and recommending to their Governments, measures in furtherance of the principles and objectives of the Treaty.<sup>4</sup>

Among the 47 signatories, nearly 25 percent are Latin nations. The original Consultative Parties included Argentina and Chile as claimants. Brazil became the third new Consultative Party in 1983. By 1999 – Uruguay, Peru, Spain, Cuba, Ecuador, Colombia, Guatemala and Venezuela had entered the ATS, with seven of these nations achieving consultative status because of

<sup>1</sup> Preamble, *Antarctic Treaty* (Washington) 1 December 1959, in force 23 June 1961; 402 UNTS 71. (*Antarctic Treaty*).

<sup>2</sup> Paul Berkman. “Why is the Antarctic Treaty the first nuclear arms agreement?” *Polar Record*, in revision (2009).

<sup>3</sup> Antarctic Treaty Secretariat <http://www.ats.aq> (accessed 6 March 2009).

<sup>4</sup> Antarctic Treaty, Article IX.

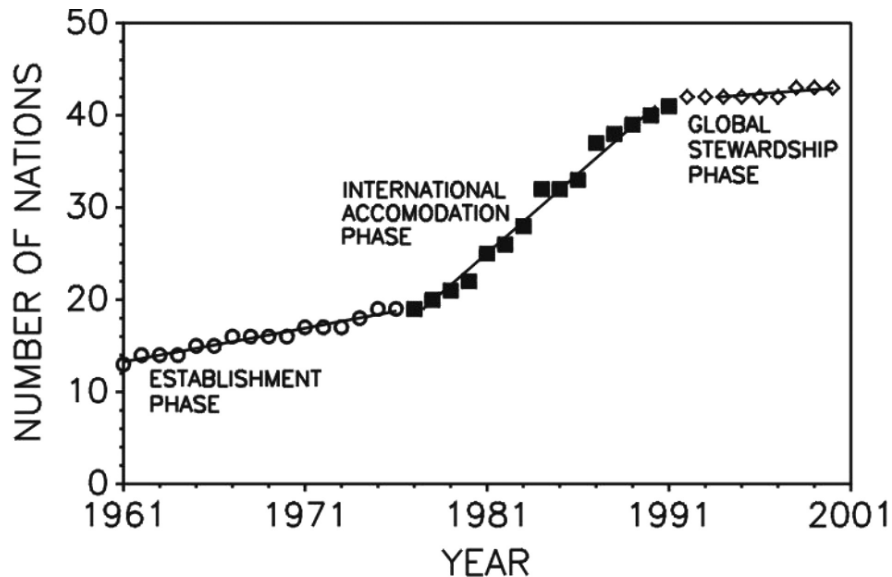


Figure 1: The number of *Antarctic Treaty* nations over time<sup>5</sup> increased markedly in the mid-1970's in relation to potential mineral deposits in the ocean surrounding Antarctica. Transitions in the composition of the Antarctic Treaty System expose the generalised development phases of international regimes. Adapted from Berkman (2002).<sup>6</sup>

their “substantial research activities.” This consultative process has imbued the ATS with the agility and resilience to adopt “measures” needed to evolve in the face of diverse challenges (e.g., Fig. 1).

The only other international governance systems to manage ‘international spaces’ involve the laws of the sea and outer space.<sup>7</sup> With vision toward the distant future of our civilisation, global relevance of the 1959 *Antarctic Treaty* is reflected by its position in the forefront of international governance systems, which largely emerged during the second half of the 20th century – when more than 95 percent of the multilateral environmental and ecosystem agreements came into existence (Fig. 2).

<sup>5</sup> See the list of signatories on the website of the Antarctic Treaty Secretariat <http://www.ats.aq> (accessed 6 March 2009).

<sup>6</sup> Paul Berkman, *Science into Policy: Global Lessons from Antarctica* (London: Academic Press, 2002), 215.

<sup>7</sup> John Kish, *The Law of International Spaces* (Leiden: AW Sijthoff, 1973), 185.

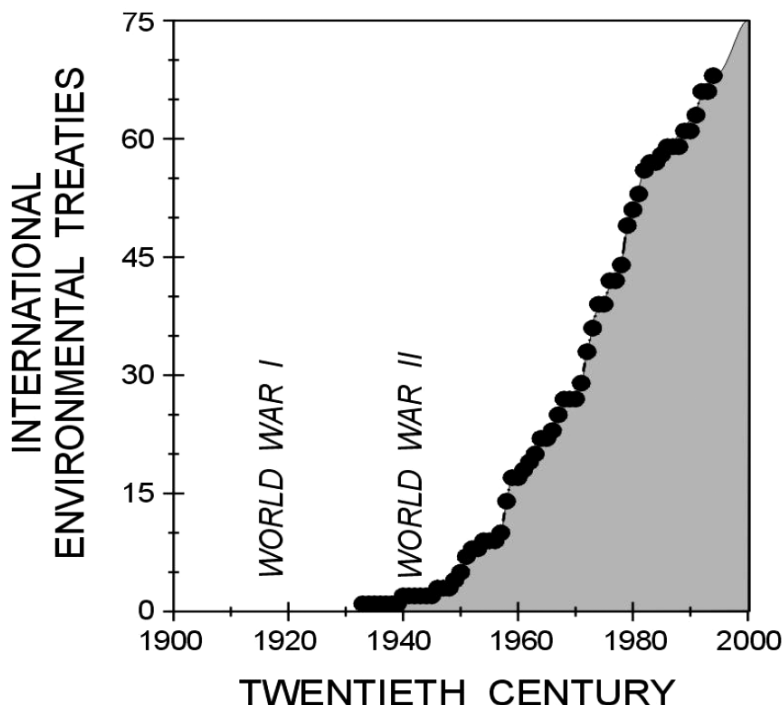


Figure 2: Emergence of our 'global community' during the 20th century. In stark contrast to the international hostilities of the two 'world wars' during the first half of the 20th century – nearly 95 percent of the international ecosystem and environmental regimes that facilitate cooperation among nations have come into force after 1950.

Adapted from Berkman (2002).<sup>8</sup>

Since the *Antarctic Treaty* came into force in 1961, members of this international governance system have supplemented its provisions with a number of additional agreements and entities that collectively can be considered as the Antarctic Treaty System (ATS) (Table 1). In addition, measures that have been adopted by the Antarctic Treaty Consultative Parties include references to other international regimes (Table 2), which reflect the global relevance of the ATS. These compilations have been constructed with the Antarctic Treaty Searchable Database.<sup>9</sup>

<sup>8</sup> Paul Berkman, *Science into Policy: Global Lessons from Antarctica* (London: Academic Press, 2002), 215.

<sup>9</sup> This database can be accessed at <http://aspire.tierit.com> Paul Berkman, George Morgan, Regan Moore, and Babak Hamidzadeh, "Automated Granularity to Integrate Digital Records: The 'Antarctic Treaty Searchable Database' Case Study," *CODATA Data Science Journal* 5 (2006): 84–99.

Table 1: Antarctic Treaty System (Ats)

Antarctic Regime	Year Signed	Year Ratified	Depository Government	Associated Insitutions	Area of Jurisdiction
Antarctic Treaty	1959	1961	United States	“Specialized agencies of the United Nations and other international organisations having a scientific or technical interest in Antarctica;” Antarctic Treaty Secretariat	South of 60°S
Agreed Measures <sup>1</sup>	1964	1964	United States	Scientific Committee on Antarctic Research (SCAR)	South of 60°S
Seals Convention <sup>2</sup>	1972	1978	United Kingdom	SCAR	South of 60°S + Sea Ice
Living Resources Convention <sup>3</sup>	1980	1984	Australia	CCAMLR Commission, Scientific Committee, Secretariat and Arbitral Tribunal	South of 60°S + Antarctic Convergence
Mineral Resources Convention <sup>4</sup>	1988	not ratified	New Zealand	CRAMRA Commission, Advisory Committee, Regulatory Committees, Secretariat and Arbitral Tribunal	South of 60°S
Environmental Protocol <sup>5</sup>	1991	1998	United States	PROTOCOL Committee on Environmental Protection (CEP) and Arbitral Tribunal along with: Annex I: Environmental Impact Assessment; Annex II: Conservation of Antarctic Fauna and Flora; Annex III: Waste Disposal and Management; Annex IV: Prevention of Marine Pollution Annex V: Area Protection and Management Annex VI: Liability	South of 60°S

<sup>1</sup> *Agreed Measures for the Conservation of Antarctic Fauna and Flora* (AGREED MEASURES)

<sup>2</sup> *Convention on the Conservation of Antarctic Seals* (CCAS)

<sup>3</sup> *Convention on the Conservation of Antarctic Marine Living Resources* (CCAMLR)

<sup>4</sup> *Convention on the Regulation of Antarctic Mineral Resource Activities* (CRAMRA)

<sup>5</sup> *Protocol on Environmental Protection to the Antarctic Treaty* (PROTOCOL)

Table 2: International Institutions Referenced within the Antarctic Treaty System (ATS)

International Institution	ATS Reference	Date
<i>Agreement on the Conservation of Albatrosses and Petrels;</i>	Annex H to Measure XXIX-1	2006
<i>Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal</i>	Resolution XIX-2	1995
<i>Convention for the Safety of Life at Sea</i>	Resolution XXVI-3	2003
<i>Convention on Biological Diversity</i>	Attachment to AT Special Consultative Meeting XII Resolution 1	2000
<i>Convention on Diplomatic Relations</i>	Annex to Measure XXVI-1, Article 15	2003
<i>Convention on International Civil Aviation</i>	Annex to Recommendation XV-20	1989
<i>Convention on the Conservation of Migratory Species of Wild Animals</i>	Annex H to Measure XXIX-1	2006
<i>Convention on the International Regulations for Preventing Collisions at Sea</i>	Recommendation XV-4	1989
<i>Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter</i>	Recommendation XV-4	1989
<i>International Convention for the Control and Management of Ships' Ballast Waters and Sediments</i>	Resolution XXIX-3	2006
<i>International Convention for the Prevention of Pollution from Ships, 1973, as amended by the Protocol of 1978</i>	Recommendation XV-4	1989
<i>International Convention for the Regulation of Whaling</i>	CCAMLR Article 6	1980
<i>International Convention for the Safety of Life at Sea</i>	Recommendation XV-4	1989
<i>International Convention on Load Lines</i>	Recommendation XV-4	1989
<i>International Convention on Standards of Training, Certification and Watchkeeping for Seafarers with Annex</i>	Recommendation XV-4	1989
<i>International Convention on Tonnage Measurement of Ships</i>	Annex to Measure XXVIII-1, PROTOCOL Annex VI, Preamble	2005
<i>United Nations Convention on the Law of the Sea</i>	Decision XXIII-2 (1999)	1999

The ATS began with six “matters of common interest” that the 12 original signatories identified in Article IX of the 1959 *Antarctic Treaty* (Fig. 3). These common interests have enabled the Antarctic Treaty nations to cooperatively manage the region south of 60° south latitude “for peaceful purposes only,” as illustrated poignantly in 1982 when Argentina and the United Kingdom were consulting about *Antarctic Treaty* matters at Chile’s Teniente Rodolfo Marsh Station in Antarctica at the same time when they were waging war in the Malvinas/Falkland Islands.

Since the International Geophysical Year, science has provided a common language and reference point for nations to cooperate in the ATS independent of their political, economic or cultural perspectives. The ATS also has evolved over the past half century from a system dominated by interacting nations to a system that now involves global civil society. The underlying hypothesis of the Antarctic Treaty Summit is that science provides the ‘keystone common interest’ to facilitate ongoing consultation and constructive interactions among the diverse stakeholders involved with international governance systems “for peaceful purposes only” (Fig. 3).

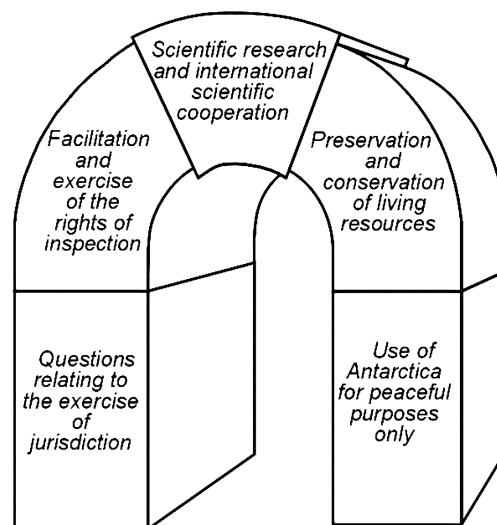


Figure 3: “Matters of common interest pertaining to Antarctica” (from Article IX of the Antarctic Treaty) with science as the ‘keystone common interest’ that underlies the policies that have enabled the Antarctic Treaty System to successfully accommodate the international community since 1959. Adapted from Berkman (2002).<sup>10</sup>

<sup>10</sup> Paul Berkman, *Science into Policy: Global Lessons from Antarctica* (London: Academic Press, 2002), 215.

## 2. Summit Design

The Antarctic Treaty Summit: Science-Policy Interactions in International Governance<sup>11</sup> will be convened at the Smithsonian Institution, National Museum of Natural History in Washington, DC from November 30 to December 3, 2009: celebrating the 50th anniversary of the signature-day for the Antarctic Treaty in the city where it was adopted “in the interest of all mankind [sic].”<sup>12</sup> The Antarctic Treaty Summit is endorsed by the International Council of Science / World Meteorological Organization joint committee for the International Polar Year and funded internationally from public as well as private sources. Initial government support for the Antarctic Treaty Summit is provided through the US-UK Fulbright Commission, which is administrated by the United States Department of State (Bureau of Educational and Cultural Affairs) with funding from the United States Congress. Additional government support is provided by the Marine Mammal Commission. The initial non-governmental support is provided by the Tinker Foundation and American Geophysical Union. Coordination of the Antarctic Treaty Summit involves active oversight by a international board that includes natural and social scientists as well as directors of national programs and international non-governmental organisations.

The Antarctic Treaty Summit will provide – for the first time – an open international forum for scientists, legislators, lawyers, administrators, educators, students, corporate executives, historians and other members of civil society to explore science-policy achievements from the first fifty years of the Antarctic Treaty.<sup>13</sup> In addition, this inclusive forum will complement government celebrations of the Antarctic Treaty anniversary. Specific objectives of the Antarctic Treaty Summit project are to assess:

- a. the nature and consequences of interactions between science and policy to meet the challenges facing the Antarctic Treaty System;
- b. precedents from the Antarctic Treaty System that can be applied to the governance of international regions and resources; and
- c. determinants of resilience in international governance systems.

<sup>11</sup> See <http://www.atsummit50.aq> for further information.

<sup>12</sup> Preamble, *Antarctic Treaty*.

<sup>13</sup> Paul Berkman, David Walton, and Susan Weiler, “Antarctic Treaty Summit to Focus on Global Science Policy Lessons”. *Transactions of the American Geophysical Union*, 89– 42 (2008): 406.



The Antarctic Treaty Summit project is being designed to elevate the societal awareness of global ‘lessons learned’ from the Antarctic Treaty System and provide insights about science-policy interactions in international governance that will have value for global civil society into the distant future. The matrix of topics for the Antarctic Treaty Summit is shown in Table 3. Results of the Antarctic Treaty Summit will fall into three categories: (i) innovative proposals to address current and emerging issues facing the Antarctic Treaty System and other international governance systems; (ii) additions to our knowledge regarding the science-policy interface; and (iii) the beginnings of an epistemic community encompassing interdisciplinary individuals from around the world who share a common interest in the resilience of international governance systems and who trust each other as members of an informal community in our global civil society.

The Antarctic Treaty System faces current and emerging challenges to its resilience. These involve both issues that are endogenous to the regime (e.g. the growth of tourism, friction between proponents and opponents of designating Antarctica a world park) and exogenous to the regime (e.g. stratospheric ozone depletion, climate change). The Antarctic Treaty Summit project will yield a number of creative ideas suitable for serious consideration by stakeholders in the Antarctic Treaty System (i.e., Table 1) as well as those involved with affiliated regimes (e.g., Table 2) and other international spaces.

Research results will focus on science-policy interactions in international governance. These results will reveal that science provides more than data for decision-makers to use for designing policies (Table 3). Science also has

Table 3: Legacy Lessons and Stories from the Antarctic Treaty Summit

International Governance Topics	Science-policy Interactions		
	Data Generation	Diplomacy Tool	Continuous Foundation
Living Resources			
Non-Living Resources			
Environmental Protection			
Protected Areas			
Ecosystem Interactions			
Climate Change			
Inspection			
Institutional Overlap			
Information Exchange			
Logistic Coordination			
Peaceful Use			

a significant policy role as a diplomatic tool<sup>14</sup> that facilitates cooperation among diverse stakeholders beyond economic, political or cultural perspectives that tend to be divisive. Moreover, science provides a “firm foundation” (as designed in the Antarctic Treaty) for stable international management that can extend into the distant future, as has been demonstrated by the Antarctic Treaty System over the past half-century. International strategies that can extend into the distant future are critical as we now deal with climate, which requires cooperative management on a planetary scale. A principal research result will be the insights that are revealed as well as discovered from the international and interdisciplinary dialogues during the Antarctic Treaty Summit regarding “matters of common interest” (Fig. 3) – with science hypothesised as the ‘keystone common interest’ that has facilitated the resilience of the Antarctic Treaty System as a model for international governance.

While scientists and policymakers often seem standoffish, members of these communities would have much to share in productive dialogues once they get over their initial biases and develop a sense of mutual respect and trust. Often called epistemic communities, such groups of scientists and policymakers who share a common perspective on the relevant problems can be highly effective in efforts to solve or alleviate large-scale environmental, resource or ecosystem problems. We expect the project as a whole and especially the Antarctic Treaty Summit in 2009 to launch such a community. With proper care and support, this community can continue to provide an effective mechanism for creative thinking about issues facing the ATS as well as other international governance systems long after the Summit is completed.

International, interdisciplinary dimensions of the Antarctic Treaty Summit will reveal lessons and stories that have legacy value for governing ‘international spaces’ (high seas and deep sea as well as outer space and Antarctica) into the distant future. As observed by the polar explorer and former President of the Scientific Committee on Antarctic Research, Laurence Gould (Fig. 4), in his testimony to the United States Senate Foreign Relations Committee on 20 June 1960:

The Antarctic Treaty is indispensable to the world of science which knows no national or other political boundaries, but it is much more than that...it is a document unique in history which may take its place alongside the Magna Carta and other great symbols of man’s [sic] quest for enlightenment and order.

<sup>14</sup> Paul Berkman, *Science into Policy: Global Lessons from Antarctica* (London: Academic Press, 2002), 215.



Figure 4: Signature of the Antarctic Treaty on 1 December 1959 in Washington, D.C. by Ambassador Herman Phleger from the United States, who chaired the Conference on Antarctica from October 15 – December 1, 1959.<sup>15</sup> The inscription reads: “To Laurence Gould without whom there would be no Antarctic Treaty, Warm Regards Herman Phleger.” Permission to reproduce the photograph with courtesy from the Carleton College Archives.

<sup>15</sup> United States Department of State. Conference on Antarctica. Washington, October 15 – December 1, 1959. Department of State Publication 7060. *International Organization and Conference Series* 13 (1960), 1–76.

### 3. Summit Significance

After World War II, three independent challenges appeared that would converge during the following decade with global relevance for future generations.<sup>16</sup> The military challenge was the inevitability of rockets that could deliver nuclear weapons. The political challenge was “establishment of international status for the Antarctic area,” as initiated by the draft agreement from the United States in 1948. The scientific challenge was to coordinate geophysical observations of the Earth system in a shared international context on a planetary scale, building on previous International Polar Year experiences. The nexus of ballistic missiles, international spaces and global science emerged with the Antarctic Treaty, which was signed in Washington, DC on 1 December 1959 to continue international:

cooperation on the basis of freedom of scientific investigation in Antarctica as applied during the International Geophysical Year [which] accords with the interests of science and the progress of all mankind.”<sup>17</sup>

Research on international governance has focused to date on processes of regime formation and on factors affecting the initial effects of the resultant governance systems.<sup>18</sup> But institutions, like ecosystems, are influenced by a variety of dynamic stresses and cumulative impacts. Consequently, successful governance systems must be resilient in the sense of having the capacity to adapt to changing circumstances without losing their basic form or function.<sup>19</sup> The Antarctic Treaty Summit project will build on insights that

<sup>16</sup> Paul Berkman. “Why is the Antarctic Treaty the first nuclear arms agreement?” *Polar Record*, in revision (2009).

<sup>17</sup> Preamble, *Antarctic Treaty*.

<sup>18</sup> See for example Stephen Krasner, ed., *International Regimes* (Ithaca: Cornell University Press, 1983), 388; Volker Rittberger, ed., *Regime Theory and International Relations* (Oxford: Clarendon Press, 1993), 406; Peter Haas, Marc Levy, and Robert Keohane, eds. 1993. *Institutions for the Earth: Sources of Effective International Protection*. (Cambridge: MIT Press 1993); Oran Young, ed., *The Effectiveness of International Environmental Regimes: Causal Connections and Behavioral Mechanisms* (Cambridge, MA: MIT Press, 1999), 326; Edward Miles, Arild Underdal, et al. *Environmental Regime Effectiveness Confronting Theory with Evidence*. (Cambridge, MA: MIT Press, 2002), 508.

<sup>19</sup> Lance Gunderson, and Crawford Holling, eds., *Panarchy: Understanding Transformation in Human and Natural Systems*. (Washington, DC: Island Press, 2002); Oran Young, Frans Berkhout, G. Gallopin, Marco Janssen, Elinor Ostrom, and Sander van der Leeuw, “How will Globalization Affect the Resilience, Vulnerability, and Adaptability of Socio-Ecological Systems at Various Scales,” *Global Environmental Change* 16–3 (2006): 304–316.

science is a source of resilience and continuity in international governance systems.<sup>20</sup>

The Earth system is experiencing accelerated climate impacts in the polar regions.<sup>21</sup> The Arctic, in particular, is going through an environmental-state change with rapid disappearance of summer sea-ice coverage<sup>22</sup> that will impact international trade routes as well as energy, freshwater and marine-ecosystem resource activities.

The geopolitical environment in the Arctic also is undergoing a state change with claimant nations, like Russia, asserting deep-sea claims with formal proposals under the *United Nations Convention on the Law of the Sea*<sup>23</sup> (UNCLOS), which will need to adjudicate these claim extensions in view of the “common heritage of mankind [sic]”<sup>24</sup> UNCLOS involvement in the Arctic effectively creates a new geopolitical demography in the region, like a donut, where the centre is under international authority and the adjacent sectors (like the claims in Antarctica) are under jurisdictions of the eight Arctic nations. Reasonably, a common interest of all stakeholders is to ensure the sustainable development of the Arctic in a manner that reduces the potential for international discord in this region where strategic nuclear submarine deployments have been ongoing over the past five decades. Another common interest involves science to understand the natural and anthropogenic dimensions of environmental and ecosystem change in the Arctic region. Analogous common interests, with science as the basis for international cooperation, have led to the peaceful use of south-polar region for the past half-century under the Antarctic Treaty.

There is much to be learned from a governance system like the ATS that has proven remarkably resilient over time in the face of serious international challenges. For example, international interest in the ATS was abruptly stimulated by the possibility that “45 billion barrels of oil and 115 trillion cubic feet of natural gas could be recovered from the continental shelf of West

<sup>20</sup> Polar Research Board, *Science and Stewardship in the Antarctic* (Washington, DC: National Academy Press, 1993), 107; Karen Litfin, *Ozone Discourses: Science and Politics in Global Environmental Cooperation* (New York: Columbia University Press, 1994); Paul Berkman, *Science into Policy: Global Lessons from Antarctica* (London: Academic Press, 2002), 215; Alexander Farrell and Jill Jäger, eds., *Assessments of Regional and Global Environmental Risks: Designing Processes for the Effective Use of Science in Decisionmaking* (Washington, DC: Resources for the Future, 2006);

<sup>21</sup> <http://www.ipy.org> (accessed 6 March 2009).

<sup>22</sup> ACIA, *Arctic Climate Impact Assessment* (Cambridge, Cambridge University Press, 2005). 1046.

<sup>23</sup> United Nations Convention on the Law of the Sea (Montego Bay, 10 December 1982) 21 *ILM* (1982), 1261

<sup>24</sup> See <http://lawofthesea.tierit.com> (accessed 6 March 2009).

Antarctica.”<sup>25</sup> Soon after, the ATS entered its ‘international accommodation phase’ when the rate of nations joining the ATS suddenly increased (Fig. 1). It was during this period that the Antarctic Treaty Consultative Parties negotiated the 1988 *Convention on the Regulation of Antarctic Mineral Resource Activities*<sup>26</sup> (CRAMRA), which was signed but never ratified because it held open the door that mineral resource activities may eventually be “acceptable.” In place of CRAMRA, the 1991 *Protocol on Environmental Protection to the Antarctic Treaty*<sup>27</sup> quickly emerged with the simple statement in Article VII that: “Any activity relating to mineral resources, other than scientific research, shall be prohibited.” The ability to identify and support the “common interests” of diverse nations is a hallmark of the ATS (Table 1) and its global stewardship (Fig. 1) “in the interest of all mankind [sic].”

With its half-century history of international accommodation, the ATS has become a preeminent example of a multilateral governance system that manages human activities across a vast region of our planet “for peaceful purposes only.” By considering science as a ‘keystone common interest’ (Fig. 3) – on the 50th anniversary of the signature-day for the Antarctic Treaty in the city where it was adopted “in the interest of all mankind [sic]” (Fig. 5) – lessons learned from science-policy interactions in the Antarctic Treaty System will have global significance for governance systems involved with managing international regions, resources and ecosystems.

### *Acknowledgments*

This article emerged from international planning for the *Antarctic Treaty Summit: Science-Policy Interactions in International Governance*<sup>28</sup> that will be convened at the Smithsonian Institution in Washington, DC from 30 November – 3 December 2009. Initial support for this International Polar Year activity<sup>29</sup> (was provided by a Fulbright Distinguished Scholarship

<sup>25</sup> Jonathan Spivak, “Frozen assets. Now. The energy crisis spurs idea of seeking oil at South Pole,” *Wall Street Journal*, February 21, 1974. See also James Zumberge, ed., *Possible Environmental Effects of Mineral Exploration and Exploitation in Antarctica*, (Cambridge, UK: Scientific Committee on Antarctic Research, 1979), 59; and Christopher Joyner, *Governing the Frozen Commons: The Antarctic Regime and Environmental Protection*. (Columbia: University of South Carolina Press, 1998), 363.

<sup>26</sup> *Convention on the Regulation of Antarctic Mineral Resource Activities*, done at Wellington, 2 June 1988, not in force 27 ILM 868 (1988).

<sup>27</sup> 1991 *Protocol on Environmental Protection to the Antarctic Treaty* done at Madrid, 4 October 1991, 30 ILM 1461 (1991) .

<sup>28</sup> See <http://www.atsummit50.aq> for further information.

<sup>29</sup> See <http://www.ipy.org>.

through the US-UK Fulbright Commission, with funding from the United States Congress and administration by the United States Department of State (Bureau of Educational and Cultural Affairs), along with funding from the Marine Mammal Commission and The Tinker Foundation. I especially thank collaborators on the International Board of the Antarctic Treaty Summit for their thoughtful contributions and insights that are focused “in the interests of all mankind [sic].”



Figure 5: Logo for the *Antarctic Treaty Summit: Science-Policy Interactions in International Governance* which is an IPY-endorsed project<sup>30</sup> that will be convened at the Smithsonian Institution from 30 November through 3 December 2009, on the 50th anniversary of the signature-day for the Antarctic Treaty in the city where this international institution was adopted “in the interest of all mankind [sic].”<sup>31</sup>

<sup>30</sup> International Polar Year, “Full Proposals for IPY 2007–2008 Activities: Browsing Endorsed Proposals. Project 342.” <http://classic.ipy.org/development/eoi/proposal-details.php?id=342> (accessed 2 March 2009).

<sup>31</sup> Preamble, *Antarctic Treaty*.

