Polar Law and Good Governance

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The Antarctic Treaty System is one of the most successful international law regimes while Arctic governance is still emerging. This chapter explores the existing governance arrangements in the Antarctic and Arctic, examines emerging polar coordination, the challenges that lie ahead, and a way forward.

Introduction

Antarctica is a continent surrounded by a sea, while the Arctic is a sea surrounded by continents. Both the Arctic and Antarctic are fragile polar ecosystems, yet the lack of a permanent human population in Antarctica has facilitated a more straightforward legal framework than has been achieved in the Arctic. Nothing comparable to the freezing of Antarctic sovereignty claims exists in Arctic governance. While there are distinct geopolitical sensitivity thresholds in the Arctic and Antarctic, strengthening cooperation at all levels and across all sectors can enhance overall good governance.

Emerging polar law is interdisciplinary at the intersection of law, policy, politics, and science. Crosscutting issues that come into play when addressing polar law include domestic and international environmental law generally and climate and biodiversity law in particular. Human rights law, state constitutional law, and maritime law also impact upon polar decision-making. Transcending inertia can facilitate inclusive ecosystem governance within a meaningful timeframe. The emerging consensus on enhancing polar governance can stimulate effective decision-making that is both equitable and reasonable. This chapter will

explore the governance regimes that exist in both the Antarctic and Arctic regions. It will assess the Antarctic Treaty System, ask what lessons can be learned regarding common pool resources, and analyse law of the sea and related measures. It will consider such substantive areas as natural resource management as well as procedural opportunities for inclusive governance structures. Enhancing good governance can occur through trust-building forums that bring together stakeholders to share information, and make sensible decisions regarding sustainable development.

**Antarctic Treaty System**

The Antarctic Treaty System (ATS) includes the Antarctic Treaty and its related agreements. The ATS froze sovereignty claims and established the continent as a zone of peace and a scientific reserve south of 60°S latitude. Its origins are found in the first International Geophysical Year (IGY) in 1957-58 in which more than 65 nations participated. By that time Chile, Argentina, the United Kingdom, Australia, New Zealand, Norway and France had claimed sovereignty over regions of Antarctica. The Soviet Union and the United States had Antarctic scientific research stations but had not made territorial claims nor recognised the claims of others. The countries which became the 12 original signatories of the treaty participated in Antarctic cooperation during the 1957–58 IGY and attended the treaty negotiation conference. This unprecedented cooperation led to the Antarctic Treaty, which came into force in 1961.

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5 South of 60°S latitude is a generally accepted boundary for the Antarctic (despite CCAMLR use of the Antarctic convergence).


7 Argentina, Australia, Belgium, Chile, France, Japan, New Zealand, Norway, South Africa, Soviet Union, the UK and US.

Calling for ‘preservation and conservation of living resources in Antarctica,’\(^9\) Antarctic Treaty Article 9 mandates member states to meet periodically, share information, and agree upon measures to further the treaty. Parties have adopted over 200 recommendations at these consultative meetings.\(^{10}\)

Beyond making recommendations under the Treaty, states entered into three additional international treaties (1) the 1972 Convention for the Conservation of Antarctic Seals;\(^{11}\) the 1980 Convention on the Conservation of Antarctic Marine Living Resources;\(^{12}\) and the 1988 Convention on the Regulation of Antarctic Mineral Resource Activities\(^{13}\) – ratified primarily by Consultative Parties.\(^{14}\) After Australia and France abandoned the latter in favor of greater conservation,\(^{15}\) states concluded the Madrid Protocol on Environmental Protection to the Antarctic Treaty prohibiting mining.\(^{16}\)

Since 2004 Argentina has hosted the Antarctic Treaty Secretariat. Any state wishing to become a Consultative Party, with full rights under the Treaty, must conduct substantial


\(^{14}\) Loukacheva, op. cit., pp. 33-34.


research activity in Antarctica. The original 12 signatories and 16 states that have demonstrated sufficient scientific research constitute the Consultative Parties that can make decisions in Antarctic Treaty Consultative Meetings. Non–Consultative member states can attend but are not able to participate in decision-making. Given the substantial expense of conducting research, a two-tier status has emerged with largely rich states able to vote as Consultative Parties and poorer states left with non–Consultative status and no voting rights.

Despite room for improvement, the ATS has successfully diffused a volatile sovereignty conflict and achieved continental ecosystem preservation on an unprecedented scale. The Antarctic Treaty refrains from recognising, disputing, or establishing sovereignty. It preserves the continent ‘for peaceful purposes only; military activity, such as weapons testing, is prohibited but military personnel and equipment may be used for scientific research or any other peaceful purpose’ and calls for continued global scientific cooperation and information sharing. It protects the environment by banning nuclear explosions or disposal of radioactive wastes. Further, the Madrid Protocol on Environmental Protection to the Antarctic Treaty (1991) prohibits some mineral development and introduces annexes on marine pollution, fauna and flora, environmental impact assessments, waste management, and protected areas. The Protocol also prohibits non-scientific mineral activities and introduces liability arising from environmental emergencies. These aspects of the Madrid Protocol will be compared to Arctic resource management in the following sections.

18 Ibid, Art. 4.
19 Ibid, Art. 1.
20 Ibid, Art. 2.
21 Ibid, Art. 3.
22 Ibid, Art. 5.
23 (Only the latter has yet to come into force.)
Polar Natural Resource Governance Generally and an Emerging Arctic Framework

Where polar oil and gas exploration presents common pool resource gaming, one entity’s extraction of non-renewable resources increases natural resource scarcity and costs to other entities that have to seek more remote resources. In the context of marine pollution, the common pool problem occurs when entities place a larger pollution burden on the common pool than the pool can sustain. This lowers the value of the resource and raises costs to find alternatives to the ecosystem services once accessible from the common pool. For instance, traditional subsistence foods and the public health of Arctic communities are adversely impacted by the negative externalities of energy extraction and global persistent organic pollutants. Whether discussing Hardin’s sheep grazing a public grassy field or polar resource extraction, absent incentives for polluters to internalise the cost of negative externalities, negative impacts on fragile polar regions are unlikely to be minimised. Yet, Elinor Ostrom notes that cooperation can overcome the race to overexploit a natural resource irrespective of the interests of others. Antarctic cooperation has been built upon the freezing of sovereignty claims. This approach has not resonated with Arctic coastal states that have significant populations and economic investments in the Arctic. Nevertheless, applying Ostrom’s cooperative approach to the Arctic, governance structures layered on top of private natural resource use could facilitate environmentally sound multilateral, multi-resource use.

Since there are no permanent human populations in Antarctica, states have been able to agree upon environmental provisions without regard to impacts on tribal or non-tribal local communities. While fewer than 30 states have ratified the Madrid Protocol, the international

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25 Eric A. Posner, Alan O. Sykes, Economic Foundations Of The Law Of The Sea, 104 Am. J. Int'l L. 569, 574 (2010) (“The economic theory of international law suggests that the primary function of international law, whether customary or treaty law, is to ameliorate international externalities.”) Id.
community has largely adhered to an “aesthetic and scientific” priority for Antarctic activities;\textsuperscript{26} a ban on mineral resources use beyond scientific research;\textsuperscript{27} environmental assessment studies for all activities;\textsuperscript{28} a Committee for Environmental Protection;\textsuperscript{29} state emergency response preparation;\textsuperscript{30} and dispute resolution provisions.\textsuperscript{31}

Similarly, Antarctic governance benefits from the 1982 Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR),\textsuperscript{32} part of the Antarctic Treaty system that protects marine life and addresses activities that can have a negative impact on marine life. Article 2 specifically clarifies that conservation encompasses maintaining a sound ecological relationship among harvested, dependent, and related populations. Article 2 also covers effects on marine life as a result of associated activities on the marine ecosystem and environmental changes. Energy extraction would generally be at odds with such conservation and thus CCAMLR provides an important means by which to protect the Antarctic ecosystem. Implementing CCAMLR requires extensive development of appropriate analytical methods to collect sufficient scientific information.\textsuperscript{33} CCAMLR calls upon states to use a ‘precautionary’ approach to minimise adverse impacts in the face of uncertainty.\textsuperscript{34} Using an ecosystem approach, the CCAMLR Commission coordinates activities with other decision-making bodies within the ATS framework. The International Polar Year provided an opportunity to coordinate polar research generally and climate research in particular.\textsuperscript{35}

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\textsuperscript{26} \textit{Protocol on Environmental Protection to the Antarctic Treaty}, opened for signature 15 October 1959, (entered into force 23 June 1961) (‘Madrid Protocol’) Art. 3.
\textsuperscript{27} Ibid, Art. 7. (In contrast, the \textit{Convention on the Regulation of Antarctic Mineral Resource Activities} would have regulated mining pursuant to an international organization.)
\textsuperscript{28} Ibid, Art. 8.
\textsuperscript{29} Ibid, Art. 11.
\textsuperscript{30} Ibid, Art. 15.
\textsuperscript{31} Ibid, Arts. 18-20.
\textsuperscript{32} The \textit{Convention on the Conservation of Antarctic Marine Living Resources} (‘CCAMLR’) came into force in 1982, as part of the Antarctic Treaty System, in pursuance of the provisions of Article IX of the Treaty.
\textsuperscript{34} Ibid.
\end{flushleft}
Antarctic Treaty Meeting of Experts (ATME) on climate change and implications for Antarctic management and governance agreed to focus upon the implications of climate change for Antarctica.\textsuperscript{36}

Turning to the Arctic, a third of remaining global hydrocarbon reserves appear to be north of the Arctic Circle under less than 500 meters of water and within clear national jurisdictions.\textsuperscript{37} Additional resources appear to lie in disputed territorial areas, where delineation of continental shelves is underway. Eight states have territorial claims,-- the five Arctic coastal states (Canada, Denmark, Norway, Russia, and the United States) and three others (Iceland, Finland, and Sweden). While many conflicting claims have been resolved, melting ice due to climate change is opening up areas where states seek to extend continental shelf activity.\textsuperscript{38} With millions of Russians within the Arctic Circle and a substantial Arctic military, Russia is the largest stakeholder in the region.\textsuperscript{39} Building on the numerous calls for scientific cooperation the United Nations Convention on the Law of the Sea (UNCLOS),\textsuperscript{40} countries are beginning to work together to expand relevant baseline data – a foundation upon which ecosystem-based, integrated management can occur. Mapping, combining information into a shared database, and deciding upon a single method of analysis can facilitate coordinated interpretations and even a boundary agreement prior to submitting information.\textsuperscript{41} Entering into multilateral agreements and increasing polar inclusive governance and funding can address environment and development challenges going forward.


\textsuperscript{39} Baker, op. cit., p. 251.


\textsuperscript{41} Monique Andree Allain, \textit{Canada's Claim to the Arctic: a Study in Overlapping Claims to the Outer Continental Shelf}, 42 J. MAR. L. & COM. 1, 37 (2011).
A number of provisions of UNCLOS are relevant to Arctic governance. Article 76 established a process for resolving conflicting continental shelf claims.\(^\text{42}\) Annex II of UNCLOS requires states to make submissions within ten years of ratification.\(^\text{43}\) Once states submit claims to the Commission on the Limits of the Continental Shelf, the latter can proceed with approval and reconciling claims.\(^\text{44}\) Article 122 encourages regional sea cooperation, emphasizing coordination on such multilateral concerns as natural resource management. Together with the International Maritime Organization\(^\text{45}\) and Arctic Council,\(^\text{46}\) the above provide a loose Arctic legal framework.

While Article 193 of UNCLOS recognizes states' rights to mineral resources, Article 192 sets forth states’ duties to protect marine ecosystems. Article 234 authorizes Arctic coastal states to enforce shipping environmental protection provisions for such ice-covered waters as the Northwest Passage.\(^\text{47}\) Nonetheless, there are substantial gaps in this loose Arctic legal framework including disagreement as to the status of the Northwest Passage as an international strait or historic internal waters of Canada; the absence of the United States in the UNCLOS dispute resolution procedures regarding the Northwest Passage due to its failure to ratify the Convention; and general uncertainty as to the extent to which given states can extend into newly accessible regions of the Arctic.

Arctic coastal states seek to frame Arctic governance narrowly, based upon territorial sovereignty. In 2008 the five Arctic coastal states met in Greenland without including the

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\(^{42}\) UNCLOS, Art. 76.
\(^{43}\) Ibid, Annex II Art. 4.
\(^{44}\) Ibid, Annex II Art. 76.
\(^{45}\) See IMO, online. Available HTTP: <http://www.imo.org/>.
\(^{46}\) See Arctic Council, online. Available HTTP: <www.arctic-council.org/>.
\(^{47}\) UNCLOS, Art. 234.
three other Arctic states or other stakeholders.\textsuperscript{48} The Ilulissat Declaration\textsuperscript{49} that the Arctic coastal states crafted demonstrates strong Arctic coastal state consensus that UNCLOS should be the framework for the Arctic. While the Arctic coastal states may prefer a status quo law of the sea based path forward, UNCLOS does not mention indigenous peoples. The international human rights regime, on the other hand, does recognize indigenous rights and is part of the fabric with which stakeholders can weave inclusive Arctic governance.\textsuperscript{50} International law recognizes individuals and groups as subjects of international law with rights. UN General Assembly adoption of the United Nations Declaration on the Rights of Indigenous Peoples brings with it the opportunity to redefine the governance relationship among indigenous peoples and the rest of the international community.\textsuperscript{51} The need for protection of indigenous territory is already recognized and falls within provisions set forth by the International Covenant on Civil and Political Rights,\textsuperscript{52} the International Convention on the Elimination of All Forms of Racial Discrimination,\textsuperscript{53} and Protocol 1 of the European Convention on Human Rights.\textsuperscript{54} International minority rights standards also apply to

\textsuperscript{52}International Covenant on Civil and Political Rights, opened for signature 16 December 1966, 999 UNTS 171 (entered into force 23 March 1976) Art. 1.  
\textsuperscript{54}Protocol to the Convention for the Protection of Human Rights and Fundamental Freedoms, opened for signature 20 March 1952, 213 UNTS 262 (entered into force 1 November 1998) art. 1; T. Koivurova,
indigenous peoples in minority situations within modern nation states. Irrespective of sovereignty claims under UNCLOS, international law provides an emerging legal framework with which to enhance inclusive decision-making.

In the Arctic, Denmark’s recognition of Greenland’s right to self-determination and natural resource devolution is an encouraging sign for inclusive governance.\(^55\) In contrast to Greenlanders, many Arctic indigenous communities have yet to regain self-determination recognition generally and jurisdiction over land/resources in particular. The Alaska Native Claims Settlement Act of 1971 (ANCSA) exemplifies domestic state law impacting indigenous rights to self-determination\(^56\) where full, effective and meaningful participation and consent were not applied. It is also worth noting that only Denmark and Norway have ratified the International Labour Organization (ILO) Convention No. 169 concerning Indigenous and Tribal Peoples in Independent Countries.\(^57\)

Climate risks to tribes are both physical and cultural as traditional livelihoods retreat with the ice. Even urban indigenous individuals face a disproportionate risk to the general population of most states given their relative lack of financial resources.\(^58\) The international community has looked to indigenous communities for traditional knowledge.\(^59\) Prior informed consent, acknowledging native research contributions, active participation in research as well as sharing research outcomes with indigenous communities all can go a long way to enhance

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\(^{59}\) G. Alfredsson, ‘Human Rights and Indigenous Rights’, in Loukacheva (ed.) op. cit., p. 10333: (“the relocation of the village of Newtok is expected to cost as much as $130 million.”)

\(^{59}\) Ibid.
understanding of the Arctic.\textsuperscript{60} Canada’s Oceans Act has begun this process by mandating indigenous cooperation, facilitating traditional knowledge sharing in ocean ecosystem assessment.\textsuperscript{61} Similarly, the Yukon River Inter-Tribal Watershed Council (YRITWC) exemplifies an indigenous led initiative that provides a best practice model.\textsuperscript{62}

**Learning Polar Lessons about Common Pool Resources**

International law has regulated Antarctic environmental protection while national environmental laws have regulated much of the Arctic beyond the international high seas and deep seabed.\textsuperscript{63} Antarctic cooperation has also resulted in more hard international law while Arctic cooperation has thus far come primarily in the form of such softer measures as the declarations establishing the Arctic Council. Yet, the Arctic Council has recently established a permanent secretariat in its last ministerial meeting in Nuuk Greenland May 2011 as well as adopting the first ever legally binding agreement on search and rescue.\textsuperscript{64}

Can the Arctic and Antarctic regimes borrow anything from one another? At the beginning of this chapter, this author described ways in which an emerging Arctic framework can build upon the strong species and habitat treaties that make up the ATS. For instance the Arctic could benefit from the best practice established by the Madrid Protocol’s restriction on mineral extraction and environmental impact assessments for all activities. In return, the ATS can benefit from growing Arctic Council understanding of climate and persistent organic pollutants. Similarly, Timo Koivurova explains that the Arctic Council can ‘benefit from the

\begin{itemize}
\item \textsuperscript{60} Ibid.
\item \textsuperscript{61} *Oceans Act*, R.S.C., ch. 31, §§29, 33, 42j (Can.).
\item \textsuperscript{63} Loukacheva, op. cit., 36.
\end{itemize}
long-standing high-quality environmental protection regime created for Antarctica\textsuperscript{65} while the ATS can join the Arctic Council’s efforts to highlight the need for comprehensive climate change mitigation, adaptation, environmentally sound technology transfer, and funding in polar regions.\textsuperscript{66}

Due to atmospheric circulation and ocean currents both polar regions have become persistent organic pollutant sinks and have suffered from global problems produced beyond these regions. Internalising such externalities as pollution can best be accomplished through robust environmental provisions at the source of the pollution. The Arctic Council has been a strong public health advocate addressing the bio-magnification of persistent organic pollutants and contamination of traditional foods.\textsuperscript{67} The Arctic Council’s work to highlight the profound impact of polar chemical contamination provides a model with which other international entities, including the ATS can affect global sustainable development decision-making.\textsuperscript{68}

Many countries deal with polar issues together. Furthermore such Arctic States as the USA, Norway, Sweden, Finland and Russia are Consultative Parties in the ATS while Denmark and Canada hold non-consultative status.\textsuperscript{69} The polar regimes held a joint Antarctic Treaty – Arctic Council meeting at the end of the International Polar Year 2009, issuing the Washington Declaration on the International Polar Year and Polar Science.\textsuperscript{70} They agreed to: cooperate to reviewing scientific findings; to base cooperation on science; coordinate

\textsuperscript{65} Loukacheva, op. cit., p. 40.
\textsuperscript{69} Loukacheva, op. cit., p. 41.
\textsuperscript{70} Ibid.
information gathering and sharing. They affirmed “international cooperation at all levels in polar regions among States, scientists, Arctic residents, including indigenous peoples, and their institutions” and called for coordinated observational systems as well as government and non-governmental use of scientific understandings to inform IPCC recommendations and implementation of polar protection measures.

As polar routes expand, new shipping routes may tempt those seeking shorter transit durations. Yet, unsettled claims, a dearth of navigational aids, and harsh conditions still deter rapid development. Building upon existing governance structures and addressing the center of the Arctic ocean first may be useful means by which to build collective political will. One inclusive approach that addresses global interests in the high seas and deep seabed involves negotiation of a polar ocean protocol to UNCLOS. UNCLOS provides a framework with which to identify and resolve competing resource claims and free rider problems among states. Integrating inclusive, ecosystem adaptive management can enhance polar good governance.

Remaining challenges to such an approach include the focus on delineating polar claims. The status of the Northwest Passage (as an international strait or Canadian internal waters) provides a case in point.

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72 Ibid.
75 UNCLOS, Art. 234.
Timo Koivurova and Erik Molenaar have identified various substantive and procedural gaps in Arctic governance: Regarding procedure, Arctic states are jeopardizing global polar interests through their unwillingness to cooperate under UNCLOS, its related Fish Stocks Agreement\textsuperscript{76} or customary international law. In addition, despite willingness to recognise much of the law of the sea as customary international law, the failure of the United States to ratify the 1982 UNCLOS precludes full use of its dispute settlement mechanism under Part XV. Nevertheless, new or existing competent international organisations should play a role in facilitating conflict resolution in the face of rapid environmental change and economic development. As to substantive regulatory gaps, such emerging maritime activities as floating energy installations, CO\textsubscript{2} sequestration, tourism and piracy lack multi-sectoral integrated, ecosystem management. Comprehensive environmental impact assessments and other regulatory tools would enhance Arctic governance.

Regional marine environmental protection models for Arctic decision-makers to consider include (1) the OSPAR Commission of the OSPAR Convention for the Protection of the marine Environment of the North-East Atlantic;\textsuperscript{77} (2) the Helsinki Commission of the Helsinki Convention for the Baltic Sea;\textsuperscript{78} (3) other regimes resulting from the Regional Seas Programme of the United Nations Environment Programme;\textsuperscript{79} and (4) Antarctic Treaty Consultative Meetings of the Antarctic Treaty.\textsuperscript{80} Arctic decision-makers can look to these

\textsuperscript{76} Agreement for the Implementation of the Provisions of the United Nations Convention of the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (1995), Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks, 6\textsuperscript{th} Sess, UN Doc A/ CONF 164/37, 34 ILM 1542.
\textsuperscript{80} ATCM. Online. Available HTTP: <http://www.ats.aq/e/ats_meetings_atcm.htm>.
models to fill both enhanced procedural governance as well as flesh out substantive regulatory provisions.

The Convention for the Protection of the Marine Environment in the North-East Atlantic (OSPAR)\(^81\) exemplifies ecosystem regional marine protection and can play a direct as well as indirect role in Arctic governance. It directly obligates member Arctic states to implement protection measures and indirectly provides a model with which Arctic good governance may be expanded. One option would be for OSPAR to become the umbrella framework to protect the Arctic marine environment. OSPAR states can unanimously invite new members to join the convention.\(^82\) If it is politically infeasible for OSPAR membership to expand to all Arctic stakeholders, best practices can be borrowed from OSPAR and applied to the Arctic. While the Arctic Council has conducted crucial scientific studies, effectively responding to emerging environmental and natural resource use challenges can best be facilitated through a commission/council with a secretariat that can enact binding decisions in light of the polluter pays principle, precautionary principle, and best environmental practices principle.\(^83\) OSPAR Annex III addresses offshore pollution and the OSPAR Commission has already adopted mandatory provisions to reduce offshore pollution.\(^84\) OSPAR Annex V addresses the establishment of marine protected areas.\(^85\) The OSPAR Commission has integrated climate change and offshore oil and gas analysis into its overall work. The Arctic marine environment constitutes a substantial part of OSPAR jurisdiction and its expansion to the Arctic at large may provide the most effective protection of the fragile Arctic region.

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\(^{81}\) *OSPAR*, pmbl.

\(^{82}\) Ibid, Art 27(2).

\(^{83}\) Ibid, Art 2(2).


\(^{85}\) *OSPAR*, Annex V, Art. 2.
All of the Arctic states have ratified the International Convention on Oil Pollution Preparedness, Response, and Co-operation (OPRC) calling for oil pollution emergency plans, pollution event reporting to coastal authorities, and assistance in the event of an oil pollution incident. Taking precautionary and polluter pays principles into account OPRC, parties and the International Maritime Organization facilitate compliance through adoption of regulations, reporting, cooperation and collaboration.

OPRC addresses the narrow field of oil pollution, not attempting to cover fisheries, navigation, or other areas in need of Arctic coordination. While it addresses the Arctic in scope it may not be sufficiently focused upon unique polar vulnerabilities. Given the relative success of layering the 1995 United Nations Agreement on Straddling and Highly Migratory Fish Stocks on UNCLOS, Arctic stakeholders should try to negotiate an offshore energy instrument with which the US can participate despite US non-party status with UNCLOS. This could be an UNCLOS protocol-like agreement, a free standing multilateral agreement on Arctic energy, or some hybrid. Whether to center consensus building upon a theme such as energy or a region such as the Arctic is not as important as beginning the process of trying to strengthen protection before economic activity advances beyond the ecosystem’s capacity.

86 Ibid, Art. 3(2).
87 Ibid, Art. 4(1)(a).
88 Ibid, Art. 7.
89 Ibid, pmbl.
90 Ibid, Art. 2(6).
91 Ibid, Art. 12(2).
92 Ibid, Art. 3(1)(a).
93 Ibid, Art. 4(2).
94 Ibid, Art. 8(1).
to cope. The new search and rescue agreement endorsed in the last Nuuk ministerial Arctic Council meeting and the task force on oil spill pollution response provide a model.\textsuperscript{96}

To maximize Arctic ecosystem protection, “special area” status should be extended to the Arctic under Annex I of MARPOL 73/78, discussed below.\textsuperscript{97} Another option involves expanding the membership and area covered by OSPAR. While the nature and scope of the instrument may depend upon geopolitical constraints, there appears to be widespread recognition on the following. (1) Arctic governance strengthening constitutes a global public good. (2) Arctic stakeholders can build upon cooperation to date. (3) Human rights, energy, natural resources and other sensitive topics can be broached through inclusive ecosystem decision-making forums. Some of these non-exclusive points may have broader support than others. Yet, climate and energy consensus building provides the catalyst with which to transcend isolationism to enhance good governance in the Arctic.

The European Union’s Marine Strategy Framework Directive (MSFD)\textsuperscript{98} marks a departure from a sector-by-sector approach to the regulation of maritime activities.\textsuperscript{99} Legally the Directive is based upon ecosystem protection.\textsuperscript{100} Directives require a given outcome but leave member states the flexibility with which to carry out the Directive.


Conceptually the Directive is based upon the (1) precautionary principle (2) the principle that preventive action should be taken (3) the polluter pays principle and (4) the principle that pollution should be reduced at its source. Given that most marine pollution originates from inland sources, the MSFD and the EU Water Framework Directive are integrated – using a natural resource methodology based upon cooperative, scientific, adaptive coordination at regional levels. The MSFD seeks to fulfill the European Union’s UNCLOS obligation to take all measures that are necessary to prevent, reduce and control pollution of the marine environment.

The MSFD preamble states “the serious environmental concerns, in particular those due to climate change, relating to the Arctic waters, a neighbouring marine environment of particular importance for the Community, need to be assessed by the Community institutions and may require action to ensure the environmental protection of the Arctic.” The European Union has begun integrating Arctic matters into European Union policies and negotiations, including with Norway and Iceland on how the MSFD will be integrated into the European Economic Area Agreement’s coverage of the Arctic Ocean.

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102 UNCLOS, Arts. 194, 195.

103 Recital 42 of Directive 2008/56/EC.


The International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) currently applies to oil and gas exploration and exploitation in the Arctic.

All five Arctic coastal states have ratified MARPOL 73/78, which addresses energy in that fixed or floating platforms are included in the definition of ships. Nevertheless, the shallow Arctic Ocean floor is not sufficiently mapped and single hulled container ships pose a serious risk of spilling oil/hazardous chemicals. Global cooperation is needed to prevent such events given the impracticability of remediation. States lack the capacity to mitigate and respond to temperate oil and gas disasters areas, let alone chronic and catastrophic Arctic contamination. Furthermore, the Arctic Council's Arctic Offshore Oil and Gas Guidelines remain voluntary and do not address the reality that technologies do not exist to clean up polar oil spills.

There should be agreement on substantial levels of funding with which to understand scientific baseline conditions and environmental impacts of both successful and unsuccessful oil and gas activities. Funding discussions should also include the amount that will go towards insurance to fully compensate injured parties and mitigate environmental impacts of disasters. Drilling should not get out in front of fiscal and technological capacity to respond to disasters. The design, execution, and outcome of monitoring programs should be transparent and involve active civil society participation. Legally required environmental and safety reviews should occur at the planning stage of energy development. Existing provisions can be amended to facilitate multi-scale governmental cooperative regulation.

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106 Marpol 73/78, pmbl.
107 Ibid, Art. 2(4).
108 Arctic Council, Protection of the Arctic Marine Environment (PAME), Arctic Offshore Oil and Gas Guidelines § 1.5 (Oct. 10, 2002).
Permitting should involve adequate timeframes within which to review proposed operations as well as adequate funding with which to carry out such reviews.\textsuperscript{111}

**Conclusion**

One of the best practices of the Antarctic regime that could be implemented in the Arctic involves the listing of “special areas.”\textsuperscript{112} Antarctica is a special area known to be vulnerable to pollution. The Arctic is similarly fragile and could benefit from comprehensive designation as a special area where certain activities are prohibited except for minor and well-defined exceptions.\textsuperscript{113}

Good governance of energy resources remains embryonic and regulatory capture a real risk. However, international, tribal, state, and civil society coordination of imminent polar energy generation through ongoing efforts to implement best practices may help to address the problems.\textsuperscript{114}

Open and transparent decision-making facilitates trust and the capacity to coordinate both ongoing multi-natural resource sustainable development as well as occasional disaster responses among an array of polar stakeholders. As Norse & Amos note, “[w]hen disseminated publicly, the analyses of skilled nongovernmental observers can provide crucial perspective and a useful reality check on powerful economic interests and government.”\textsuperscript{115}

Scientific understanding and economic recognition of ecosystem services continue to gain broad support but are at risk of being outstripped by industry capacity for rapid expansion of


\textsuperscript{112} Ibid, Annexes I, V (as amended Mar. 17, 1992).

\textsuperscript{113} Ibid, Annex I, reg. 1(10). See also Existing Particularly Sensitive Sea Areas (PSSA).

\textsuperscript{114} Norse and Amos, op. cit., p. 11070.

\textsuperscript{115} Ibid, p. 11058.
extraction activities beyond the public sector’s current regulatory capacity. Crafting a sound energy policy involves informed public discourse regarding the following: whether energy operations should be permitted; what should be the scope of full environmental review and adequate contingency plans; who decides and who bares the risk of energy extraction; what are current pollution levels; who is responsible for minimizing pollution; and how can coordinated oversight become most effective at preserving fragile ecosystems?

The five Arctic coastal states belong to the Conference of the Parliamentarians of the Arctic Region, Spitsbergen Treaty, North Atlantic Coastguard Forum, MARPOL and other multilateral agreements. National legislation applicable in the Arctic includes the U.S. Environmental Protection Act, Endangered Species Act, and the Canadian Arctic Waters Pollution Prevention Act. The IMO has developed The IMO Guidelines for Ships Operating in Arctic Ice-covered Waters. Efforts are underway to make the IMO 2009 polar code legally binding.

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117 Norse and Amos, op. cit., p. 11071.
122 The U.S. Congress enacted NEPA in order to require federal agencies to incorporate environmental assessment into the decision-making process. 42 U.S.C. § 4331(a).
124 Arctic Waters Pollution Prevention Act, R.S.C. 1985, c. A-12 (Can.) [hereinafter AWPP].
This chapter has considered the ATS and polar lessons on common pool resources. The law of the sea and related measures provide a broad framework that can be supplemented by further substantive polar region natural resource management and inclusive polar region governance. Integrating inclusive, ecosystem adaptive management can enhance good governance.

Preserving ten percent of the Earth's surface, the ATS has successfully protected Antarctica to date.127 While political will among the Arctic states is currently lacking with regard to establishing a global polar code,128 some or all of an ATS model may eventually meet the collective needs of stakeholders in the Arctic. As climate change renders the Arctic unrecognisable to its native inhabitants and governance becomes an ever-pressing matter of international security, good governance appears elusive. Yet, inclusive decision-making forums can build trust. Global cooperation in the face of unprecedented environmental and security challenges remains a sensible path forward.

Can supplementing the existing polycentric Arctic loose framework with a new multilateral regime enhance Arctic governance? If so does it make sense to agree upon a sectoral or comprehensive approach? Given the contemporary geopolitical pulse, a starting point might be to build consensus regarding the central Arctic Ocean that is emerging as the ice cap melts. Irrespective of Arctic state efforts to expand continental claims, the centre of the Arctic still represents high seas and seabeds that are global commons.

128 The Arctic Governance Project, op. cit., p. 18.
Regarding substantive good governance, the first question should be whether to drill for oil and gas, given the substantial carbon dioxide, methane, and other GHG emissions that result from such industrial operations.129 Answering this question requires robust life cycle analyses of the spectrum of energy sources. A broad array of assessments that include wind, wave, solar, and geothermal options both on and off shore should be part of an informed, transparent, examination of the risks and advantages of polar energy generation.

Procedural good governance might be achieved by introducing multi-scale government and diverse stakeholder participation into polar decision-making. This can be done by scaling up involvement by civil society, including establishing regional citizen advisory councils with subpoena power into energy extraction and transportation oversight.130 Transcending the one-industry-versus-one-agency governance model by introducing pluralism into the process of crafting sound energy policies can enhance polar governance.

Enhancing governance involves inclusive decision-making at all levels and across all sectors. Issues such as sovereignty and oil exploration are clearly controversial. Addressing them in an integrated and straightforward manner can build trust among stakeholders with which to strengthen good governance.

129 Norse and Amos, p. 11064.
130 Plater, op. cit., p. 11046 (Building on the post Exxon Valdez spill requirement that the oil industry fund independent watchdog citizen oversight councils).