

79. "Human Rights and Climate Change", Human Rights Council, Resolution A/HRC/10/L. (30 March 2009).
80. IPCC, *Climate Change 2007: The Physical Science Basis*, p. 5.
81. N.L. Poff et al., *Aquatic Ecosystems & Global Climate Change, Potential Impacts on Inland Freshwater and Coastal Wetland Ecosystems in the United States*, Pew Center on Global Climate Change (2002); available at <<http://www.pewclimate.org/docuploads/aquatic.pdf>>; Robert W. Adler, "Freshwater: Sustaining Use by Protecting Ecosystems", *Environmental Law Reporter News & Analysis* (2009), pp. 10309–10315, p. 11311.
82. Bryson Bates, Zbigniew W. Kundzewicz, Shaohong Wu and Jean P. Palutikof (eds), *Climate Change and Water*, Technical Paper of the Intergovernmental Panel on Climate Change (Geneva, 2008); available at <<http://www.ipcc.ch/pdf/technical-papers/climate-change-water-en.pdf>>.
83. A right to development was first officially proclaimed by the United Nations in the 1986 Declaration on the Right to Development, UNGA Resolution 41/128, 1986. It was further recognized in the African Charter on Human and Peoples' Rights and reaffirmed in the 1993 Vienna Declaration and Programme of Action. Those instruments are, however, soft law instruments, and the concept of this right remains controversial, with commentators disputing whether it is a right at all. Up to the present, discussions by international institutions involving the right to development have provided a forum for reflection on human rights and development in general that is certainly comprehensive and useful for future legislative and policy development regarding climate change law.
84. See, for example, Paul Baer et al., *The Greenhouse Development Rights Framework – The Right to Development in a Climate Constrained World*, revised second edition (Berlin: Heinrich Böll Foundation, Christian Aid, EcoEquity and the Stockholm Environment Institute, 2008).
85. On the development of a GDR framework, see Baer et al., *The Right to Development in a Climate Constrained World*. According to this research the threshold is schematically set at US\$9000 per capita at purchasing power parity. The GDR framework also offers pointers for determining the level at which different countries should cap their GHG emissions and emphasizes the importance of technology transfer, swift and substantial adaptation funding, and other forms of assistance. The authors of the study perceive that, for the system to work, levies would be imposed on wealthy countries, calculated on the basis of excess GHG usage.
86. "Petition to the Inter-American Commission on Human Rights Seeking Relief from Violations Resulting from Global Warming Caused by Acts and Omissions of the United States", submitted by Sheila Watt-Cloutier, with the support of the Inuit Circumpolar Conference on behalf of the Arctic Region of the United States and Canada, 7 December 2005, p. 70.
87. See International Council on Human Rights Policy, *Climate Change and Human Rights: A Rough Guide* (2008), p. vii; available at <<http://www.ichrp.org>>; Svitlana Kravchenko and John E. Bonine, *Human Rights and the Environment: Cases, Law, and Policies* (Durham, NC: Carolina Academic Press, 2009).

## 8

## A new ocean to govern: Drawing on lessons from marine management to govern the emerging Arctic Ocean

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Nearly half of the Arctic Ocean is currently covered by a permanent ice cap that grows and shrinks seasonally, with maximum cover in March and minimum cover in September. The extent of summer sea ice has been declining over the past fifty years by an average of 8 per cent a decade,<sup>1</sup> and on 15 September 2007 the ice cap was 22 per cent smaller than it was in 2005, the previous record year.<sup>2</sup> The 2007 record went beyond the computer model predictions used to prepare the *Fourth Assessment Report* of the Intergovernmental Panel on Climate Change in 2007.<sup>3</sup>

Partly as a result of reduced sea ice, the Arctic seems to be on the verge of a new era of development. The improved access to the region will likely result in an expansion of oil and gas, minerals and fisheries resource extraction, as well as an expansion of shipping and tourism. All of these commercial activities entail significant environmental, social and cultural issues. According to some researchers, a scramble for resources is under way,<sup>4</sup> with the Arctic Ocean coastal states competing to see who gets to claim most of the seabed. Even though this line of thinking seems to exaggerate the realities in the region and, in particular, to forget that the Arctic states have complied rather well with the United Nations Convention on the Law of the Sea,<sup>5</sup> it is true that the perceived competition for hydrocarbon reserves has triggered a new type of policy discussion on how the Arctic, in particular the Arctic Ocean, should be governed.

This chapter tries to tease out principles that could be used to address, more sustainably, the challenges in governing the Arctic Ocean. A crucial resource to this end is the recently published report of the Arctic Council's

Best Practices in Ecosystems-based Oceans Management in the Arctic (BePOMAr) project;<sup>6</sup> the project's findings allow us to examine whether an approach to Arctic marine management that draws on past and current experience is enough to counter the considerable challenges that managing the Arctic Ocean entails. Our argument is that, while BePOMAr has much to offer, we cannot content ourselves to rely solely on the type of experience it cites if we are to deal with rapid change such as that affecting the Arctic Ocean.

Before studying ideal principles for Arctic Ocean management, it is important to introduce the Arctic Council, the prevailing intergovernmental forum in the Arctic, and to examine the recent dynamics in Arctic governance, where various states and the European Union are recasting their Arctic policies in the face of a rapidly changing ocean.

### Introduction to the present arctic intergovernmental cooperation and its marine work

Before one can study the emergence of the Arctic Council, which has also done marine-related work, it is necessary to define the Arctic. This is a complex question since several different criteria can be presented for drawing the southernmost boundary of the region. Possible natural boundaries are, for instance, the tree line (the northernmost boundary where trees grow) or the 10 °C isotherm (the southernmost location where the mean temperature of the warmest month of the year is below 10 °C). In Arctic-wide cooperation, the Arctic Circle has been used as a criterion for membership, with only those states invited to participate in cooperation that possess areas of territorial sovereignty above the Circle.

The same complexity applies to the Arctic marine areas, since no such definition is available. A widely used one is that adopted by the Arctic Monitoring and Assessment Programme (AMAP) of the Arctic Council, which uses the working definition of marine areas north of the Arctic Circle (66°32'N), and north of 62°N in Asia and 60°N in North America (as modified to include the marine areas north of the Aleutian chain, Hudson Bay, and parts of the North Atlantic Ocean, including the Labrador Sea).<sup>7</sup> There is no universally accepted definition of Arctic Ocean. It does seem generally accepted, however, that there are only five coastal states, namely, Canada, Denmark (through Greenland), Norway, the Russian Federation and the United States.

### *Emergence of the Arctic Council*

The initial idea of Arctic-wide cooperation was launched in 1987 in Mur-

that the Arctic states could initiate cooperation in various fields, one being protection of the Arctic environment.<sup>8</sup> The idea was developed further when Finland convened a conference of the eight Arctic states in Rovaniemi in 1989 to discuss the issue. After two additional preparatory meetings – in Yellowknife, Canada, and Kiruna, Sweden – the eight Arctic states, as well as other actors, met again in Rovaniemi in 1991 to sign the Rovaniemi Declaration, by which they adopted the Arctic Environmental Protection Strategy (AEPS).<sup>9</sup>

The AEPS identified six priority environmental problems facing the Arctic: persistent organic contaminants, radioactivity, heavy metals, noise, acidification and oil pollution. It also outlined the international environmental protection treaties that apply in the region and, finally, specified actions to counter the environmental threats. The eight Arctic states established four environmental protection working groups: Conservation of Arctic Flora and Fauna (CAFF), Protection of the Arctic Marine Environment (PAME), Emergency Prevention, Preparedness and Response (EPPR) and the Arctic Monitoring and Assessment Programme (AMAP). After the signing of the Rovaniemi Declaration and the AEPS, three ministerial meetings were held in this first phase of Arctic cooperation, generally referred to as the AEPS process. The meetings were held in 1993 (Nuuk, Greenland), 1996 (Inuvik, Canada) and 1997 (Alta, Norway). Between the ministerial meetings, cooperation was guided by senior Arctic officials (SAO), typically officials from the foreign ministries of the Arctic states. The final AEPS ministerial was held after the establishment of the Arctic Council and focused on integrating the AEPS into the structure of the Council.

The Arctic Council was established in September 1996 in Ottawa, Canada, where the Arctic states signed the Declaration on the Establishment of the Arctic Council and issued a joint communiqué to explain the newly created body.<sup>10</sup> With the founding of the Council came changes in the forms of Arctic cooperation that had been based on the AEPS document, changes that extended the terms of reference beyond the previous focus on environmental protection. The Council was empowered to deal with "common Arctic issues, in particular issues of sustainable development and environmental protection in the Arctic".<sup>11</sup> This yielded a very broad mandate, since "common issues" can include almost any international policy issue; however, the Declaration provides in a footnote that "the Arctic Council should not deal with matters related to military security".<sup>12</sup> Environmental cooperation is now included as a principal focus within the mandate of the Council,<sup>13</sup> with the four environmental protection working groups that started as part of AEPS cooperation continuing under the umbrella of the Council.<sup>14</sup> The second "pillar" of the Council's mandate is cooperation on sustainable development<sup>15</sup> whose terms of

held in 2000 in Barrow, Alaska, and which is managed by the Arctic Council Sustainable Development Working Group (SDWG).<sup>16</sup>

The Declaration amends and elaborates the rules on participation set out in the AEPS. It provides for three categories of participants: members, permanent participants and observers. The eight Arctic states are members; the three organizations representing the indigenous peoples of the Arctic are permanent participants.<sup>17</sup> The Declaration also lays down the criteria for acquiring the status of observer<sup>18</sup> and permanent participant, as well as the decision-making procedure for determining those statuses.<sup>19</sup>

The decision-making procedure of the Arctic Council, which developed in AEPS cooperation, is made more explicit in the Declaration. Article 7 provides: "Decisions of the Arctic Council are to be by consensus of the Members." In art. 2, "member" is defined as including only the eight Arctic states. Decision-making by consensus is to be undertaken only after "full consultation"<sup>20</sup> with the permanent participants, i.e. the organizations of the Arctic indigenous peoples. Although the permanent participants do not have formal decision-making power, they are clearly in a position to exert much influence in practice on the decision-making of the Council.<sup>21</sup>

The work of the Arctic Council is much dictated by its chair states. The first was Canada (1996–1998), followed by the United States (1998–2000), Finland (2000–2002), Iceland (2002–2004), Russia (2004–2006) and Norway (2006–2009);<sup>22</sup> the current chair is Denmark. Since the Council has no permanent secretariat, the chair state has a great deal of freedom to choose its priorities during its tenure, which hampers the formation of long-term policies. (The three Scandinavian states have created a semi-permanent secretariat, to function in Tromsø, Norway, until 2012).<sup>23</sup> The Arctic Council has also created certain programmes of its own, such as the Arctic Council Action Plan to Eliminate Pollution in the Arctic (ACAP), which recently became the sixth working group, and the Arctic Climate Impact Assessment (ACIA). The Council has carried out many ambitious scientific assessments in addition to the ACIA, the most recent being the oil and gas assessment released in 2008 and the Arctic Marine Shipping Assessment in 2009.<sup>24</sup> Both the AEPS and the Arctic Council have been established by declarations and thus Arctic-wide cooperation has been based on soft law from its very inception.<sup>25</sup>

### *The Arctic Council's marine work*

The Arctic Council is engaged in various kinds of activities related to the Arctic marine environment, in particular through the AMAP and PAME working groups, but to some extent through CAFF's projects as well. The

main driver in the Council's marine policy is PAME's Arctic Marine Strategic Plan (AMSP), which urges actions on many fronts. The AMSP<sup>26</sup> identifies the largest drivers of change in the Arctic as climate change and increasing economic activity.

The AMSP encourages the Arctic states to develop guidelines and procedures for port reception facilities for ship-generated wastes and residues; to examine the adequacy of the Arctic Council's Oil & Gas Guidelines, which led to the third revision of the guidelines, endorsed by the April 2009 ministerial;<sup>27</sup> to identify potential areas where new guidelines and codes of practice for the marine environment are needed; to promote application of the ecosystem approach; to support the establishment of marine protected areas, including a representative network (work which is still to be commenced);<sup>28</sup> to call for periodic reviews of both international and regional agreements and standards; and to encourage implementation of contaminant-related conventions or programmes and possible additional global and regional actions. PAME has also regularly reviewed the IMO's Polar Code (*Guidelines for Ships Operating in Ice-covered Waters*), which are soon to be adopted as guidelines applicable to both polar regions. A process has also been set in motion to make these guidelines legally binding.<sup>29</sup>

One of the important outcomes of the April 2009 ministerial meeting was the BePOMar project, which highlighted some of the best practices in Arctic marine area management and encouraged the use of certain principles in future marine governance work in the region. Later in the chapter we will examine the BePOMar principles to ascertain whether they could form the best basis for managing the vulnerable and unique marine ecosystems of the Arctic Ocean.

### *Evaluation*

The Arctic Council has done marine-related work, but clearly there are limits to what the Council can do as a soft-law body, that is, one not empowered to take legally binding decisions, and as an organization with an ad hoc funding base. Nevertheless, it is important to keep in mind that there are various international treaties that apply to the Arctic Ocean because one or more of the Arctic states are parties to them.<sup>30</sup> Since ice still covers much of the Arctic Ocean, these treaties are at present more theoretical than practically applicable. The most important instrument is the United Nations Convention on the Law of the Sea (UNCLOS), together with its implementing agreements.<sup>31</sup> Of the five coastal states of the Arctic Ocean, the United States is the only one that is not a party to the UNCLOS; nevertheless the US considers itself bound by most of the

provisions of the Convention as a matter of customary international law.<sup>32</sup>

Hence, in the Arctic Ocean, it is still very much the coastal states that are responsible for managing the ocean, which they do on the basis of the law of the sea and the UNCLOS and all related agreements. Unlike the Southern Ocean in Antarctica, the Arctic Ocean is to a large extent subject to the sovereign rights and jurisdiction of its coastal states and art. 234 of the LOS Convention even accords those states expanded powers to control shipping in the ice-covered areas.<sup>33</sup> However, the central Arctic Ocean is high seas, and this area may well contain two fairly small pockets of deep seabed area after the coastal states have fixed the outer limits of their continental shelves on the basis of recommendations from the Commission on the Limits of Continental Shelf.<sup>34</sup> There are also some unresolved disputes over the legal status of certain areas, some of which have a significant bearing on Arctic Ocean governance.<sup>35</sup>

### Current dynamics of Arctic Ocean policy and law

It was the 2008 Ilulissat meeting in Greenland of the five coastal states of the Arctic Ocean that sparked genuine discussion on future Arctic governance. The meeting was mainly designed to explain to the rest of the world that there is no scramble for resources going on in the Arctic, as had been widely portrayed in the media after the Russians planted their flag underneath the North Pole. In fact, quite the opposite is the case: the position is one of orderly development. Even though the original intention of the meeting was to highlight that the coastal states are acting in accordance with their duties under the law of the sea, as they in fact are, the meeting still provoked reaction among various Arctic stakeholders.<sup>36</sup>

The states perceived that the Arctic Ocean was on the threshold of significant changes as a result of climate change and melting sea ice, and thus: "By virtue of their sovereignty, sovereign rights and jurisdiction in large areas of the Arctic Ocean the five coastal states are in a unique position to address these possibilities and challenges."<sup>37</sup> The states also projected themselves as protectors of the environment and of indigenous and other local inhabitants in the Arctic Ocean area:

Climate change and the melting of ice have a potential impact on vulnerable ecosystems, the livelihoods of local inhabitants and indigenous communities ... By virtue of their sovereignty, sovereign rights and jurisdiction in large areas of the Arctic Ocean the five coastal states are in a unique position to address these possibilities and challenges ... The Arctic Ocean is a unique ecosystem, which the five coastal states have a stewardship role in protecting. Experience

has shown how shipping disasters and subsequent pollution of the marine environment may cause irreversible disturbance of the ecological balance and major harm to the livelihoods of local inhabitants and indigenous communities.<sup>38</sup>

The Arctic Ocean coastal states saw "no need to develop a new comprehensive international legal regime to govern the Arctic Ocean".<sup>39</sup>

Notably, the law of the sea provides for important rights and obligations concerning the delineation of the outer limits of the continental shelf, the protection of the marine environment, including ice-covered areas, freedom of navigation, marine scientific research, and other uses of the sea. We remain committed to this legal framework and to the orderly settlement of any possible overlapping claims. This framework provides a solid foundation for responsible management by the five coastal States and other users of this Ocean through national implementation and application of relevant provisions.<sup>40</sup>

Even though Denmark insisted at the 2007 Narvik SAO meeting, prior to the Ilulissat meeting, that coastal state cooperation would not compete with the Arctic Council, the meeting caused friction among the Council members.<sup>41</sup> Iceland has been the most concerned of the three states (the others being Finland and Sweden) left out of this meeting. It expressed its concern in the Narvik SAO meeting<sup>42</sup> and also in the August 2008 Conference of the Arctic parliamentarians.<sup>43</sup> This is, of course, no surprise. The Ilulissat Declaration seems to outline an agenda for cooperation between the coastal states of the Arctic Ocean regarding high-level ocean policy issues, potentially challenging the Arctic Council, with its eight members, broad circumpolar focus and soft-law efforts in the areas of environmental protection and sustainable development.

The Greenland meeting also provoked a reaction from one of the strongest of Arctic Council permanent participants, the Inuit Circumpolar Council (ICC), as well as national Inuit leaders, who in their "Statement issued by Inuit Leaders at the Inuit Leaders' Summit on Arctic Sovereignty"<sup>44</sup> outlined their concerns over the meeting of the five coastal states:

Concern was expressed among us leaders gathered in Kuujuaq that governments were entering into Arctic sovereignty discussions without the meaningful involvement of Inuit, such as the May, 2008 meeting of five Arctic ministers in Ilulissat, Greenland. The Kuujuaq summit noted that while the Ilulissat Declaration asserts that it is the coastal nation states that have sovereignty and jurisdiction over the Arctic Ocean, it completely ignores the rights Inuit have gained through international law, land claims and self-government processes. Further, while the ministers strongly supported the use of international mechanisms and international law to resolve sovereignty

disputes, it makes no reference to those international instruments that promote and protect the rights of indigenous peoples.

But the ICC and the Inuit leaders were also critical of the present Arctic governance:

We recognized the value of the work of the Arctic Council and asked ICC, through its permanent participant status on the Council ... We further noted the meaningful and direct role that indigenous peoples have at the Arctic Council, while at the same time expressing concern that the Council leaves many issues considered sensitive by member states off the table, including security, sovereignty, national legislation relating to marine mammal protection, and commercial fishing.

They also cited their own justification for being strongly involved in Arctic governance:

We took note of various declarations and statements made by governments and industry regarding overlapping claims and assertions of Arctic sovereignty without full regard to Inuit concerns and rights. We further asserted that any claim of sovereignty that nation states may make is derived through the use and occupancy by Inuit of lands and seas in the Arctic ... Various aspects of what sovereignty means for Inuit were discussed. There was agreement among us that the foundation of Inuit sovereignty begins at home, and that only through Inuit well-being and the development of healthy and sustainable communities can meaningful sovereignty be achieved. To achieve these goals, we called upon Arctic governments to be active partners in creating such a foundation.

Thereafter, they clarified their position should a new governance arrangement be negotiated:

We called upon Arctic governments to include Inuit as equal partners in any future talks regarding Arctic sovereignty. We insisted that in these talks, Inuit be included in a manner that equals or surpasses the participatory role Inuit play at the Arctic Council through ICC's permanent participant status.

The Inuit can be viewed as favouring a stronger governance arrangement than the present Arctic Council, since they direct serious criticism towards the Council's inability to tackle sensitive issues. Even though they naturally make their own case – that Inuit should be included in any future talks on Arctic governance – they also refer to indigenous peoples' rights in general and the Arctic Council's permanent participant status in particular. One possible view that emerges from their statement is that any future governance arrangement should make the present permanent

participants of the Council partners in equal standing to the eight Arctic Council member states.

On 9 October 2008, the EU Parliament<sup>45</sup> adopted a resolution in which it first took note of the Greenland meeting (para. I) and then established its Arctic agency in the following terms:

Whereas three of the EU's Member States, and a further two of the EU's closely-related neighbours participating in the internal market through the BEA Agreement, are Arctic nations, meaning that the EU and its associated states comprise more than half the numeric membership of the Arctic Council.

For the EU Parliament, the ultimate governance solution should be one that involves a broader group of countries and the region's indigenous peoples:

Suggests that the Commission should be prepared to pursue the opening of international negotiations designed to lead to the adoption of an international treaty for the protection of the Arctic, having as its inspiration the Antarctic Treaty, as supplemented by the Madrid Protocol signed in 1991, but respecting the fundamental difference represented by the populated nature of the Arctic and the consequent rights and needs of the peoples and nations of the Arctic region; believes, however, that as a minimum starting-point such a treaty could at least cover the unpopulated and unclaimed area at the centre of the Arctic Ocean (paragraph 15).<sup>46</sup>

Given that the EU has no Arctic coastline, but does have potentially significant navigational and fishery interests in the region, establishing a more inclusive governance arrangement for the Arctic would suit the Union's interests better than the "of-the-sea" approach embraced by the five coastal states, or even the approach of the Arctic Council, which rests on the difference between Arctic and non-Arctic states. This strategic choice by the Parliament of having an inclusive governance arrangement for the Arctic is amply reflected in the resolution: it suggests the governance model for the Arctic draw on the Antarctic Treaty System (ATS), a very inclusive arrangement in that it is, in principle, open to all states who conduct scientific research in Antarctica.<sup>47</sup> As a minimum requirement, the Parliament proposes the conclusion of a treaty covering the unpopulated and unclaimed area at the centre of the Arctic Ocean. Although worded incorrectly in legal terms,<sup>48</sup> this suggestion entails an inclusive approach to Arctic governance since all states possess rights and interests in the high seas and deep seabed of the Arctic Ocean, under the law of the sea.

Even though the European Parliament made the above-mentioned suggestion to the European Commission, the latter did not respond to



the proposal in its November 2008 Communication. The Commission did, however, provide an interesting starting point for its Arctic policy by first diagnosing the problem: "The main problems relating to Arctic governance include the fragmentation of the legal framework, the lack of effective instruments, the absence of an overall policy-setting process and gaps in participation, implementation and geographic scope."<sup>49</sup> The Commission then proposed that one remedy for tackling such problems would be to:

explore the possibility of establishing new, multi-sector frameworks for integrated ecosystem management. This could include the establishment of a network of marine protected areas, navigational measures and rules for ensuring the sustainable exploitation of minerals.<sup>50</sup>

Non-Arctic coastal states (China, South Korea and Japan) and the European Commission have expressed their interest in becoming part of the established Arctic intergovernmental forum, currently by applying for observership status from the Arctic Council. The Council did not approve permanent observerships for China or the European Commission in its last ministerial meeting.

Even though there clearly is a new dynamic in Arctic governance, the reaction of the Arctic Ocean coastal states has been less than enthusiastic – as shown by the rejection of observership status for China and the European Commission. The recent Arctic policy documents of the United States and Russia have been very much in line with the Ilulissat Declaration in that they view the current Arctic Council and the law of the sea as an adequate solution for the Arctic. The US policy considers that the Arctic Council "should remain a high-level forum devoted to issues within its current mandate"<sup>51</sup> but a certain desire for proactive regulation that would enhance governance in the changing Arctic can be found in the document:

Consider, as appropriate, new or enhanced international arrangements for the Arctic to address issues likely to arise from expected increases in human activity in that region, including shipping, local development and subsistence, exploitation of living marine resources, development of energy and other resources, and tourism.<sup>52</sup>

### *Evaluation*

In a very short time, the discussions of Arctic governance have moved from being a topic of scholarly attention and NGO advocacy to featuring on the agendas of states and the European Union. It would however be

ance. The established Arctic actors – especially the Arctic Council's eight member states – are defending the status quo, arguing that the Arctic, and the Arctic Ocean in particular, can be governed best by the Council, the law of the sea – the UNCLOS in particular – and related multilateral environmental agreements.<sup>53</sup>

However, it is important to note that the Council is defending this approach as an ideal approach for governance, not one dictated by political realities. The Arctic Ocean coastal states have taken the same tack, representing themselves in the Ilulissat Declaration as stewards of the unique Arctic Ocean ecosystem in the face of unprecedented change in the region. With all of the major players subscribing to the same approach, one would do well to ask whether that approach is in fact the best one for governing the fragile Arctic Ocean ecosystem.

### *Experience in marine management in the Arctic*

Even though the Arctic Council does not possess a strong mandate in the area of marine policy, it has recently taken a step forward in providing guidance on Arctic marine governance by endorsing the conclusions of the BePOMAr. Although BePOMAr has not received much publicity, its conclusions will likely constitute a milestone in the activities of the Arctic Council in ocean management. The BePOMAr project was initiated during the Norwegian chairmanship of the Arctic Council in 2006.<sup>54</sup> The project report builds on the expertise of both the Sustainable Development Working Group and the Protection of the Arctic Marine Environment Working Group. Rather than drawing on abstract principles and concepts from existing international regulatory instruments, the report relies on the experiences in ocean management of seven of the Arctic states and identifies best practices.<sup>55</sup> The report presents the national approaches of each of the participating states to ocean management, as well as an indigenous perspective on the issue. Initially, the objective of the project was to deliver a set of lessons from past experience and to foster mutual learning and understanding.

The authors of the report decided midway through their work to provide a more recommendatory perspective on the issue of ocean management in the Arctic through a short conclusion specifying core elements and common themes in ecosystems-based oceans management.<sup>56</sup> After the review of its conclusions by the two working groups involved, at the SAO meeting in Kautokeino in October 2008, the report was submitted to the sixth ministerial meeting in Tromsø, in April 2009. The ministerial formally welcomed the report and endorsed its conclusions.<sup>57</sup> Given that the Arctic Council is a political forum rather than an international or-

decisions – such an endorsement gave strong status to the conclusions of the report.

The geographic scope of the report covers “Arctic waters”. However, most of the policies examined in the document relate specifically to the Arctic Ocean.<sup>58</sup> The rationale underpinning the BePOMAr project is recognition of the fact that the cumulative impact of multiple uses of the Ocean can only be addressed through an ecosystems-based approach to ocean management.<sup>59</sup> As early as 2004, the Arctic Marine Strategic Plan identified an ecosystems-based approach as the best approach for managing the Arctic Ocean.<sup>60</sup>

Based on the study of the national marine policies of the seven participating states and of the contributions by indigenous peoples, the authors of the report identified six key principles whose implementation in practice have proven particularly useful. These principles are:

1. The flexible application of effective ecosystem-based ocean management, which entails consideration given to local circumstances, and the conception of ocean management as a process rather than a designed state;
2. The requirement of integrated and science-based decision-making, thus constituting a comprehensive approach to ocean management, including through transboundary sharing of information and the involvement of all levels of government;
3. National commitment to ecosystem-based oceans management, through the redaction of a management plan and the establishment of a structure in order to guarantee the holistic approach;
4. The necessity for area-based approaches and transboundary perspectives, the definition of the geographic scope of policies should be based on the natural range of ecosystems;
5. Stakeholder and Arctic residents’ participation is an additional key element, thus including the human dimension of the ecosystems, and providing for public participation;
6. Adaptive management, in order to respond to changes of natural circumstances, in particular in the context of climate change.<sup>61</sup>

These six principles constitute further practical guidance for the member states of the Arctic Council. The practices identified reinforce the findings of the AMSP on the implementation of ecosystem-based ocean management in the Arctic Ocean in the context of climate change.

### *Critical evaluation*

The approach adopted by the BePOMAr study – identifying best practices from currently implemented policies – offers the advantage of being a pragmatic course of action rather than an abstract exercise. The prag-

matic focus can be seen in the study being confined to the Arctic region, whereby it identifies only practices that have already proven their value in the very particular conditions prevailing there. Finally, and given the Arctic Ocean coastal states’ express reluctance to accept additional international regulations applicable to the region’s natural resources,<sup>62</sup> a principled approach to further international cooperation might constitute a more viable step forward than the immediate development of a formal legal instrument.

However, the approach adopted by the BePOMAr project has two major shortcomings. First, by focusing solely on the past and present experiences of the Arctic States in ocean management, the report fails to propose forward-looking solutions. Given that the regional impacts of climate change render the Arctic Ocean one of the fastest evolving marine environments in recent history, exclusive reliance on traditional and tested principles and solutions will fail to provide an adequate solution to the challenges facing the regional environment. Indeed, most of the economic activities anticipated for the Arctic in the future have either not materialized as yet or occur on a much smaller scale today. The conclusions of the report thus endorse the application of principles applied at present to what will be a different economic and environmental situation. This lack of ambition in providing innovative solutions contrasts with the apparent readiness of the Arctic states to adopt a proactive approach to cooperation and governance in the face of a changing climate.<sup>63</sup>

Second, the report does not provide an incisive analysis of the global context in relation to marine management. While the introduction makes brief mention of some international legal agreements and the conclusion evokes references in major multilateral environmental instruments to the importance of ecosystem-based management, such references do not serve as a basis for the identification of principles of an ecosystems-based approach to ocean management.<sup>64</sup> Accordingly, when assessing the core elements of ecosystem-based ocean management in general, the report identifies only those elements that have actually been recognized as principles of an ecosystems-based approach to ocean management and implemented by some of the Arctic states. By relying exclusively on regional experiences, the report fails to learn from principles of international environmental law that have been identified in international instruments but not necessarily emphasized in the context of Arctic environmental governance.

The rapid development of new economic activities in the Arctic region – including hydrocarbon and mineral resources exploitation, shipping, fisheries and tourism – will constitute the main challenge to the effective implementation of the principles identified in the report. Indeed, regulatory frameworks are more effective when implemented prior to the

establishment of strong economic interests. In this regard, the ATS constitutes a specific regional experience from which the Arctic coastal states could learn, in order to further develop the regulatory framework in their region. However, the Antarctic regime should not be seen as a *facie* solution for the Arctic context, for the two polar regions differ in certain key respects: the Arctic has local populations, in particular indigenous peoples, and practically all land area in the Arctic is under the sovereignty of eight states, whereas the Antarctic has no sovereigns; and the Arctic has an extensive set of norms applicable to the region.<sup>65</sup>

Nevertheless, these differences should not mean ignoring the similarities between the two regions. The Antarctic regime has been developed proactively. The Convention on the Conservation of Antarctic Seals,<sup>66</sup> the Convention on the Conservation of Antarctic Marine Living Resources<sup>67</sup> (CCAMLR), and the Convention on the Regulation of Antarctic Mineral Resources Activities<sup>68</sup> (CRAMRA) each rely heavily on a proactive approach in the regulation of the conservation and exploitation of the resources which they cover. Where the exploitation of mineral resources is concerned, the Protocol on Environment Protection to the Antarctic Treaty relies on a more "extreme approach," since all economic activity is prohibited until the absence of unacceptable harm for the local environment has been demonstrated.<sup>69</sup>

The Arctic currently represents a similar context in that an increase in and diversification of economic activities – and thus the scale of their impact on the local environment – is expected in the midterm. Indeed, until climate change further modifies the natural circumstances prevailing in the region, new economic activities will remain marginal as the ice still renders navigation and the exploitation of local resources hazardous.

The precautionary approach, the core of the development of the Antarctic regime,<sup>70</sup> constitutes a premier example of a proactive regulatory approach in international environmental law. This approach is one of the central components of international environmental law. It has been described as "the most prominent – and perhaps the most controversial – development in international environmental law in the last two decades".<sup>71</sup> As it has been both adopted in many multilateral environmental agreements and referred to in the judgments of international tribunals, scholars have made the case that it possesses the status of customary law.<sup>72</sup> Principle 15 of the Rio Declaration provides a definition of the precautionary approach:

In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environ-

In the context of marine ecosystems, international agreements have also urged implementation of the approach. Although the UNCLOS does not refer to the approach, it is mentioned in the international instruments related to fisheries management.<sup>74</sup>

In relation to the Arctic Ocean more specifically, the precautionary approach has also been recognized as a key component in the management of natural resources and the conservation of the marine environment. The precautionary approach has indeed been an element of many multilateral agreements specifically addressing the Arctic environment, such as the Fur Seal Convention<sup>75</sup> and the Polar Bear Agreement.<sup>76</sup> The approach has also been implemented through the North Atlantic Salmon Conservation Organization (NASCO), which in 1998 adopted the Agreement on Adoption of a Precautionary Approach<sup>77</sup> and the subsequent 1999 Action Plan for Application of the Precautionary Approach.<sup>78</sup> Finally, the Convention for the Protection of the Marine Environment of the North-East Atlantic<sup>79</sup> (the OSPAR Convention), which covers a small section of the Arctic Ocean, also espouses the precautionary approach, recognizing it as a legal principle. According to art. 2.2(a), the parties to the Convention shall apply:

the precautionary *principle*, by virtue of which preventive measures are to be taken when there are reasonable grounds for concern that substances or energy introduced, directly or indirectly, into the marine environment may bring about hazards to human health, harm living resources and marine ecosystems, damage amenities or interfere with other legitimate uses of the sea, even when there is no conclusive evidence of a causal relationship between the inputs and the effects. (emphasis added)

The repeated references to the precautionary approach in the international agreements related to both polar regions not only confirm the relevance of the implementation of this approach, but also can be seen as contributing to the recognition of the precautionary approach as a general principle of international environmental law.<sup>80</sup>

The BePOMAr report notes that the precautionary approach has been recently affirmed as a legal principle in Norway in relation to environmental protection.<sup>81</sup> Furthermore, and while not explicitly elevating the approach to the status of a principle as such, all but one of the seven national regimes of marine management studied in the BePOMAr project refer to the implementation of the precautionary approach in the description of various aspects of their domestic maritime policies.<sup>82</sup> Although the principle provides for a very effective approach in the management of marine ecosystems, it entails ambiguous elements and, until now, has not been widely implemented in the case of oceans other



the US Congress, which in October 2007 considered the need for international cooperation regarding the migratory, transboundary and straddling fish stocks in the Arctic Ocean.<sup>84</sup> In a Joint Resolution with the House of Representatives, the Senate invited the United States government to cooperate with the other Arctic nations in order to negotiate an agreement managing the regional fisheries, establish the appropriate international organization or organizations, and reinforce the implementation of the existing provisions under the UN Fish Stock Agreement.<sup>85</sup> An interesting component of the joint resolution was the recommendation that the fisheries in the Arctic Ocean be frozen at their present extent until such an agreement can be reached at the regional level. The need for the effective implementation of the precautionary approach – and to possibly recognize it explicitly as a legal principle – in the Arctic region is further highlighted by the considerable degree of scientific uncertainty regarding the pace and consequences of climate change for local ecosystems.<sup>86</sup> Indeed, while recent scientific assessments pointed to the possibility of ice-free summers in the Arctic before the end of the century,<sup>87</sup> the latest scientific assessments currently highlight the alarming fact that such a situation could occur as early as 2030.<sup>88</sup> In addition, there is also a significant range of uncertainty concerning the quantities of natural resources located in the region and the scale of economic opportunities generated by environmental changes. The recognition of this high level of uncertainty should urge a science-driven approach such as that highlighted in the conclusions of the BePOMAr report, but more specifically oriented towards anticipatory decisions and the implementation of the precautionary principle.

## Conclusions

There is no doubt that the Arctic Council's BePOMAr project has done important work by identifying the six principles for stronger Arctic marine and, particularly, ocean management. This principled approach to marine management should guide the way in which the Arctic Ocean coastal states exercise their self-proclaimed environmental stewardship over the Arctic Ocean ecosystem. In the Ilulissat meeting, the coastal states announced their readiness to regulate proactively, that is, before economic activities spread into the ice-covered regions, but not through a comprehensive international treaty. This approach gives those states ample room to commence and continue regulatory efforts in their coastal regions on the basis of the principles identified in this chapter.

The BePOMAr principles – together with proactive and precautionary approaches in use in the Antarctic Treaty System and OSPAR – could indeed frame future actions by the Arctic Ocean coastal states. Such an

approach is suitable for the time being, given that the Arctic Ocean sea ice will be opening in the near future, primarily in areas under the marine jurisdictions of the five coastal states. However, when the projected melting of the Arctic Ocean extends to high seas, more difficult questions may have to be addressed: in principle, all countries of the world and their fishing and commercial fleets can make use of many parts of the Arctic Ocean, in particular the large high seas area at the centre of the Ocean. The coastal states could thus also consider what types of solutions might be available to engage other countries in Arctic Ocean governance in the future.

## Notes

1. Julianne Stroeve, Marika Holland, Walt Meier, Ted Scambos and Mark Serreze, "Arctic Sea Ice Decline: Faster than Forecast", *Geophysical Research Letters*, vol. 34 (2007), pp. 1–5.
2. See press release from the National Snow and Ice Data Center (NSIDC), "Arctic Sea Ice Shatters All Previous Record Lows" (2007); available at: <[http://nsidc.org/news/press/2007\\_seaiceminimum/20071001\\_pressrelease.html](http://nsidc.org/news/press/2007_seaiceminimum/20071001_pressrelease.html)>.
3. See news release from the National Center for Atmospheric Research (2007); available at <<http://www.ucar.edu/news/releases/2007/seaiice.shtml>>.
4. Scott G. Borgerson, "Arctic Meltdown, the Economic and Security Implications of Global Warming", *Foreign Affairs* (March/April 2008), p. 65.
5. See Timo Koivurova, "Do the Continental Shelf Developments Challenge the Polar Regimes?", in Gudmundur Alfredsson and Timo Koivurova (ed.), *The Yearbook of Polar Law, Volume 1* (Leiden: Brill Publishers, 2009), pp. 477–497.
6. Håkon Hoel (ed.), *Best Practices in Ecosystems Based Oceans Management in the Arctic* (BePOMAr), Report Series no. 129 (Norwegian Polar Institute, 2009).
7. Arctic Monitoring and Assessment Programme, geographical coverage; available at <<http://www.amap.no/aboutamap/geocov.htm>>.
8. Gorbachev proposed that a nuclear-weapon-free zone be declared in northern Europe, naval activity be limited in the seas adjacent to northern Europe, peaceful cooperation be the basis for utilizing the resources of the Arctic, scientific study of the Arctic has great significance for all humankind, the countries of the North cooperate in matters of environmental protection, and the Northern Sea Route be opened by the Soviet Union to ice-breaker-escorted passage.
9. The history of the negotiation process is studied in Monica Tennberg, *The Arctic Council: A Study in Governmentality* (Rovaniemi: University of Lapland, 1998), pp. 53–61. The AEPS is reproduced in 30 *ILM* 1624 (1991).
10. The 1996 Declaration on the Establishment of the Arctic Council. The Declaration is reproduced in 35 *ILM* 1385–1390 (1996).
11. *Ibid.*, art. 1(a).
12. *Ibid.*, p. 3, fn.
13. *Ibid.*, art. 1(b).
14. *Ibid.* Article 1(b) reads: "The Arctic Council is established as a high level forum to ... b. oversee and coordinate the programs established under the AEPS on the Arctic Monitoring and Assessment Programme (AMAP): Conservation of Arctic Flora and

- Fauna (CAFF); Protection of the Arctic Marine Environment (PAME); and Emergency Prevention, Preparedness and Response (EPPR)."
15. Ibid. Article 1(c) reads: "The Arctic Council is established as a high level forum to ... c. adopt terms of reference for, and oversee and coordinate a sustainable development program."
  16. The home page of the SDWG is at <<http://portal.sdwg.org>>.
  17. Article 2 of the Declaration on the Establishment of the Arctic Council enumerates the following as permanent participants: "The Inuit Circumpolar Conference, the Saami Council and the Association of Indigenous Minorities of the North, Siberia and the Far East of the Russian Federation." Three organizations have since been accepted as permanent participants: the Aleut International Association, the Gwich'in Council International and the Arctic Athabaskan Council.
  18. Article 3 of the Declaration reads: "Observer status in the Arctic Council is open to: a) non-Arctic states; b) inter-governmental and inter-parliamentary organisations, global and regional; and c) non-governmental organisations that the Council determines can contribute to its work."
  19. Article 2(2) reads: "Permanent participation is equally open to other Arctic organisations of indigenous peoples with majority Arctic indigenous constituency, representing: a. a single indigenous people resident in more than one Arctic State; or b. more than one Arctic indigenous people resident in a single Arctic state." Decisions by the Arctic states on whether this criterion is fulfilled must be unanimous. Article 2 also states: "the number of Permanent Participants should at any time be less than the number of members".
  20. Ibid., art. 2.
  21. Timo Koivurova and Leena Heinämäki, "The Participation of Indigenous Peoples in International Norm-making in the Arctic", *Polar Record*, vol. 42, no. 221 (2006), pp. 101-109.
  22. In the Scandinavian chair-period, Norway, Denmark and Sweden organize the ministerial meetings during the spring rather than fall, as previously.
  23. See the Norwegian, Danish, Swedish common objectives for their Arctic Council chairmanships 2006-2012 (2007); available at <[http://arctic-council.org/article/2007/11/common\\_priorities](http://arctic-council.org/article/2007/11/common_priorities)>.
  24. See the *Arctic Council Arctic Marine Shipping Assessment 2009 Report* (2009); available at <<http://arctic-council.org/filearchive/amsa2009report.pdf>>.
  25. For a comprehensive account of the evolution of the Arctic Council, see Timo Koivurova and David VanderZwaag, "The Arctic Council at 10 Years: Retrospect and Prospects", *University of British Columbia Law Review*, vol. 40, no. 1 (2007), pp. 121-194.
  26. *Arctic Marine Strategic Plan* (2004), p. 8; available at <<http://web.arcticportal.org/uploads/bi/d8/bid8eronocy8atetm8kzoq/pame-bklingur-a4.pdf>>.
  27. See <<http://arctic-council.org/filearchive/Arctic%20Offshore%20Oil%20and%20Gas%20Guidelines%202009.pdf>>.
  28. See Timo Koivurova, "Governance of Protected Areas in the Arctic", *Utrecht Law Review*, vol. 5, no. 1 (2009), pp. 44-60.
  29. Maritime Safety Committee, 86th session, agenda item 26, MSC 86/26, 12 June 2009, at 23.32. (On file with the authors.)
  30. Convention for the Prevention of Pollution from Ships (MARPOL 73/78), Oslo, 15 February 1973, 1340 UNTS 184 as amended by the Protocol 1978 which entered into force 2 October 1983; Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, London, 13 November 1972, entered into force 30 August 1975, 1046 UNTS 120, (London Convention); Convention on Persistent Organic Pollutants, Stockholm, 23 May 2001, entered into force 17 May 2004, 40 ILM 532; Global Programme of Action for the Protection of the Marine Environment from Land-based Activities, Washington DC, 3 November 1995, UNEP(OCA)/LBA/IG.2/7; International Convention on the Regulation of Whaling (ICRW), Washington DC, 2 December 1946, entered into force 10 November 1948, 161 UNTS 72; the Agreement on the Conservation of Polar Bears, Oslo 15 November 1973, entered into force 26 May 1976, 13 ILM 13 (1974); Convention on the Conservation of Migratory Species of Wild Animals, Bonn, June 1979, entered into force 1 November 1983, 19 ILM 15 (1980); Convention on Biological Diversity, Rio de Janeiro, 5 June 1992, entered into force 29 December 1993, 1760 UNTS 79; 31 ILM 818 (1992); and International Convention on Oil Pollution Preparedness, Response and Co-Operation, London, 30 November 1990, entered into force 13 May 1995, 1891 UNTS 51; 30 ILM 773 (1991).
  31. United Nations Convention on the Law of the Sea, Montego Bay, 10 December 1982, entered into force 16 November 1994, 1833 UNTS 397; Agreement relating to the Implementation of Part XI of the UNCLOS, New York, 28 July 1994, entered into force 28 July 1996, 33 ILM 1309; and Agreement for the Implementation of the Provisions of the UNCLOS Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, New York, 4 December 1995, entered into force 11 December 2001.
  32. As new Secretary of State, Hillary Clinton has committed to make the ratification of the UNCLOS one of her priorities. See transcript of Hillary Clinton's confirmation hearing; available at <[http://www.cfr.org/publication/18225/transcript\\_of\\_hillary\\_clintons\\_confirmation\\_hearing.html](http://www.cfr.org/publication/18225/transcript_of_hillary_clintons_confirmation_hearing.html)>.
  33. Article 234 reads: "Coastal States have the right to adopt and enforce non-discriminatory laws and regulations for the prevention, reduction and control of marine pollution from vessels in ice-covered areas within the limits of the exclusive economic zone, where particularly severe climatic conditions and the presence of ice covering such areas for most of the year create obstructions or exceptional hazards to navigation, and pollution of the marine environment could cause major harm to or irreversible disturbance of the ecological balance. Such laws and regulations shall have due regard to navigation and the protection and preservation of the marine environment based on the best available scientific evidence."
  34. Since the US is not yet a party to the UNCLOS, it cannot make a submission to the Commission on the Limits of the Continental Shelf.
  35. There are few still pending disputes over the delimitation of maritime borders, namely those between the United States and the Russian Federation, between the US and Canada in the Beaufort Sea and between Russia and Norway in the Barents Sea. Because of the process of drawing the outermost limits of the continental shelves of Arctic Ocean coastal states, there may also be areas of the seabed that two or even three states perceive as belonging to their continental shelf. The status of the waters and seabed surrounding the Svalbard islands is also controversial, Norway perceiving the status of these areas differently from other contracting states to the Svalbard Treaty. Finally, the legal status of Northwest passage(s) is disputed and to some extent also portions of the Northern Sea Route.
  36. For a study over how the Arctic Ocean coastal states have followed their Law of the Sea Convention duties in establishing the outer limits of their continental shelves, and how this process may impact on the Arctic Council, see Koivurova, "Do the Continental Shelf Developments Challenge the Polar Regimes?"
  37. The Ilulissat Declaration (2008), p. 1; available at <<http://arctic-council.org/filearchive/Ilulissat-declaration.pdf>>.
  38. Ibid., pp. 1-2.
  39. Ibid., p. 2.

40. Ibid., p. 1.
41. *Final Report of the Narvik SAO Meeting 2007* (2007); available at <<http://arctic-council.org/filearchive/Narvik%20-final%20report-%2023Apr08.doc>>.
42. During discussion at the Narvik SAO meeting, *ibid.* (18.1), "Iceland expressed concerns that separate meetings of the five Arctic states, Denmark, Norway, US, Russia and Canada, on Arctic issues without the participation of the members of the Arctic Council, Sweden, Finland and Iceland, could create a new process that competes with the objectives of the Arctic Council. If issues of broad concern to all of the Arctic Council Member States, including the effect of climate change, shipping in the Arctic, etc. are to be discussed, Iceland requested that Denmark invite the other Arctic Council states to participate in the ministerial meeting. Permanent participants also requested to participate in the meeting. Denmark responded that the capacity of the venue may be an issue."
43. The Conference statement, in para. 39, "Notes the information from the Danish delegation concerning the Ilulissat Declaration, and the concerns of the Icelandic delegation regarding full participation of all states of the Arctic Council." Conference Report (2008), p. 36; available at: <[http://www.arcticparl.org/\\_res/site/file/files%20from%208th%20conference/Conference\\_Report\\_Fairbanks\\_final.pdf](http://www.arcticparl.org/_res/site/file/files%20from%208th%20conference/Conference_Report_Fairbanks_final.pdf)>.
44. Statement issued by Inuit Leaders at the Inuit Leaders' Summit on Arctic Sovereignty, Kuujjuak, Canada (6-7 November 2008): "Arctic Sovereignty Begins with Inuit"; available at <<http://www.sikunews.com/art.html?artid=5711&catid=2>>.
45. *European Parliament resolution of 9 October 2008 on Arctic governance* (2008); available at: <<http://www.europa.eu/sides/getdoc.do?pubref=-//ep/text+ta+p6-ta-2008-0474+0+doc+xml+v0/en>>.
46. The Commission did not follow this suggestion by the EU Parliament, but provided that "The full implementation of already existing obligations, rather than proposing new legal instruments should be advocated. This however should not preclude work on further developing some of the frameworks, adapting them to new conditions or Arctic specificities." *Communication from the Commission to the European Parliament and the Council - The European Union and the Arctic Region*, Brussels, COM(2008) 763; available at: <[http://ec.europa.eu/maritimeaffairs/pdf/com08\\_763\\_en.pdf](http://ec.europa.eu/maritimeaffairs/pdf/com08_763_en.pdf)>.
47. See the provision on membership in article IX.2 of the Antarctic Treaty, Washington DC, 1 December 1959, entered into force 23 June 1961, 402 UNTS 71 (1961).
48. The EU Parliament speaks of the "unclaimed area at the centre of the Arctic Ocean", meaning types of areas beyond national jurisdiction, the deep seabed (the Area) and the high seas. First, if the Parliament refers to the deep seabed, this cannot said to be an unclaimed area since the coastal states do not claim their continental shelf for it is a natural prolongation of the land mass into the sea. Hence, the deep seabed is a result of what remains after the coastal states have drawn the outer limits of their continental shelves. Second, high seas cannot be subjected to sovereignty claims under the law of the sea. It would thus have been legally correct to speak, for instance, of "areas beyond national jurisdiction at the centre of the Arctic Ocean". It is also a bit odd that the Parliament speaks of this area as "unpopulated", given that it is referring to the core of an ice-covered Ocean.
49. *Communication from the Commission to the European Parliament and the Council - The European Union and the Arctic Region*.
50. Ibid., p. 12.
51. US Arctic Region Policy 2009, "National Security Presidential Directive/NSPD-66", Homeland Security Presidential Directive/HSPD-25, January 9, 2009, Arctic Region Policy. (On file with the authors.)
52. Ibid., C 5b.
53. For a forthcoming account, see Timo Koivurova, "Limits and Possibilities of the Arctic Council in a Rapidly Changing Scene of Arctic Governance", *Polar Record* (2009), published online by Cambridge University Press, doi:10.1017/S0032247409008365, 08 Sep 2009.
54. See the report of the SAO, *Report of Senior Arctic Official to Ministers at the Fifth Arctic Council Ministerial Meeting* (2006); available at <[http://archive.arcticportal.org/287/01/sao-reportto\\_ministers.pdf](http://archive.arcticportal.org/287/01/sao-reportto_ministers.pdf)>.
55. All the member states of the Arctic Council except Sweden participated, Sweden considering its marine management activities as not being of "oceanic" character.
56. This decision was taken at the February 2008 meeting of the authors in Washington, DC.
57. See Arctic Council, *Tromsø Declaration* (2009), p. 7; available at <<http://arctic-council.org/filearchive/Tromsø%20Declaration-1.pdf>>.
58. The report also includes analysis of the ocean management policies of the Arctic Council states, thus also including marine areas located outside the Arctic Ocean such as the Baltic Sea in the case of the Finnish policy.
59. *PAME Working Group Meeting Report No: II-2007*, Agenda Item 8: Project Document on Best Practices in Ecosystems-based Oceans Management in the Arctic (2007); available at <<http://web.arcticportal.org/uploads/ot/nb/otnbzpwwbxkpxruaowkg/pame-report-ii-2007.pdf>>.
60. *Arctic Marine Strategic Plan*, p. 8.
61. Hoel, *Best Practices in Ecosystems Based Oceans Management in the Arctic*, pp. 111-112.
62. See extract from the Ilulissat Declaration reproduced above.
63. The Ilulissat Declaration.
64. Hoel, *Best Practices in Ecosystems Based Oceans Management in the Arctic*, pp. 8-9, p. 10.
65. As is well known, seven states have made sovereignty claims over the Antarctic continent, but they have agreed not to consolidate these into full sovereignty on the basis of the 1959 Antarctic Treaty.
66. Convention on the Conservation of Antarctic Seals, London, 1 June 1972, entered into force 11 March 1978, 11 ILM 251 (1972).
67. Convention on the Conservation of Antarctic Marine Living Resource, Canberra, 20 May 1980, entered into force 7 April 1982, 1329 UNTS 48; 19 ILM 841 (1980).
68. Convention on the Regulation of Antarctic Mineral Resource Activities, Wellington, 2 June 1988, not yet in force, 27 ILM 868.
69. Protocol on Environment Protection to the Antarctic Treaty, art. 7, Madrid, 40 October 1991, entered into force 14 January 1998, 30 ILM 1.
70. Rosie Cooney, *The Precautionary Principle in Biodiversity Conservation and Natural Resource Management: An issues paper for policy-makers, researchers and practitioners* (Gland: IUCN, 2004), p. 21.
71. Jonathan B. Wiener, "Precaution", in Daniel Bodansky, Jatta Brunnée, Hellen Hey (eds), *The Oxford Handbook of International Environmental Law* (Oxford: Oxford University Press, 2007), pp. 597-612, p. 599.
72. See Philippe Sands, *Principles of International Environmental Law*, 2nd edn (Cambridge: Cambridge University Press, 2003), p. 273.
73. Rio Declaration on Environment and Development, Principle 15, 1992, 31 ILM 874.
74. See 1995 UN Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1992 relating to the Conservation and Management of Straddling Fish Stocks and Migratory Fish Stocks, 34 ILM 1542, in force 11 December 2001, article 6 and the FAO Code of Conduct, art. 6(5).

75. Convention between Great Britain, Japan, Russia and the United States respecting Measures for the Preservation and Protection of Fur Seals in the North Atlantic Ocean, in force 7 July 1911, treaty no longer in force, 214 ConTS 80.
76. Agreement on the Conservation of Polar Bears.
77. CNL(98)46, Agreement on Adoption of a Precautionary Approach (1998); available at <[http://www.nasco.int/pdf/agreements/pa\\_agreement.pdf](http://www.nasco.int/pdf/agreements/pa_agreement.pdf)>.
78. CNL(99)48, *Action Plan for Application of the Precautionary Approach* (1999); available at <[http://www.nasco.int/pdf/nasco\\_res\\_actionplan.pdf](http://www.nasco.int/pdf/nasco_res_actionplan.pdf)>.
79. Convention for the Protection of the Marine Environment of the North-East Atlantic, Ostend, June 2007, not yet into force.
80. Donald R. Rothwell, *The Polar Regions and the Development of International Law* (Cambridge: Cambridge University Press, 1996), p. 401.
81. Hoel, *Best Practices in Ecosystems Based Oceans Management in the Arctic*, p. 46.
82. Besides Sweden, which is not included in the report, Finland is the only state which does not refer to the precautionary approach.
83. David VanderZwaag, "The Precautionary Principle and Marine Environmental Protection: Slippery Shores, Rough Seas, and Rising Normative Tides", *Ocean Development & International Law*, vol. 33, no. 2 (2002), pp. 165–188.
84. US Senate Joint Resolution 17, Directing the United States to initiate international discussions and take necessary steps with other Nations to negotiate an agreement for managing migratory and transboundary fish stocks in the Arctic Ocean 110th Congress, 5 October 2007.
85. *Ibid.*, paras. 1 and 2.
86. For a discussion of the relation between the degree of uncertainty and the proportionality of precautionary measures, see Nicolas de Sadeleer, *Environmental Principles: From Political Slogans to Legal Rules* (Oxford: Oxford University Press, 2002), pp. 167–172.
87. Intergovernmental Panel on Climate Change, *Assessment Report 4* (Cambridge: Cambridge University Press, 2007).
88. Muyin Wang and James E. Overland, "A Sea Ice Free Summer Arctic within 30 Years?", *Geophysical Research Letters*, vol. 36 (2009).

## 9

## Moving beyond the tragedy of the global commons: The Grotian legacy and the future of sustainable management of the biodiversity of the high seas

Rosemary Rayfuse

### The Grotian ideal and the freedom of the seas

Freedom of the seas. Considered one of the fundamental principles of international law, it embodies the notion that the oceans cannot be occupied or appropriated by anyone and that freedom of navigation and exploitation of the high seas and its resources cannot be interfered with or restricted in any way. Originally expounded by Hugo Grotius in his now famous treatise, *Mare Liberum*,<sup>1</sup> the principle is arguably of considerably longer lineage,<sup>2</sup> having had its origins in the principle of freedom of navigation accepted in Roman and Greek law.<sup>3</sup> During the Middle Ages, as piracy spread and sea power grew, security concerns resulted in attempts by maritime powers to appropriate areas of the sea.<sup>4</sup> However, the principle was revived by Grotius to lend support to the claims of the Dutch East India Company to its right to trade in the East Indies and to take Portuguese ships in prize, and in support of Dutch arguments against the restrictions being placed on their fishery by the British.<sup>5</sup> To Grotius the seas were vast, limitless, inexhaustible of use and, because they could not be occupied by anyone, neither were they subject to appropriation by anyone.<sup>6</sup> The sea, he said, was "a public thing", "the common property of all".<sup>7</sup>

Not everyone agreed with Grotius. Almost immediately, English and European lawyers set out to refute the argument that the seas were open to all. Thus began what has been called "the battle of the books"<sup>8</sup> in which some argued for a *mare clausum*<sup>9</sup> against the Grotian assertions of