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International Governance and Regulation of the Marine Arctic

OVERVIEW AND GAP ANALYSIS

A report prepared for the WWF International Arctic Programme by

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Foreword

The Arctic Ocean holds considerable strategic interest for the arctic states, arctic residents and the international community as a whole. The arctic marine environment is one of the world's largest, most valuable and pristine natural regions. It is the source of half of the fish consumed in Europe. It is also the source of 22 percent of the world's remaining undiscovered but technically recoverable hydrocarbon reserves, according to the US Geological Survey. The area is facing unprecedented changes with melting sea ice and is under threat from increased economic activities such as shipping, oil and gas development, tourism and fishing. The new sea emerging right before our eyes from beneath the sea ice is in urgent need of regulation and protection.

It is often said that there is no need to develop a new comprehensive international legal regime to govern the Arctic Ocean as an extensive international legal framework already applies. While we do have indeed a 'Constitution for the Oceans' – the UN Convention for the Law of the Sea - it sets out only minimum standards for the protection of the marine environment. As a result, the fragile arctic marine environment is left with only marginal levels of protection while facing rapid expansion of offshore economic activity.

WWF believes that the current regulatory and governance regime for the protection of the arctic marine environment is inadequate and must be changed urgently. The WWF International Arctic Programme commissioned this report, *International Governance and Regulation of the Marine Arctic: Overview and Gap Analysis*, in order to have a full overview of the current international governance and regulatory regime of the marine Arctic, and a thorough analysis of the main governance and regulatory gaps of that regime in light of current and future impacts of accelerating climate change.

The report, which is the first of a series of three, shows that the numerous existing gaps in the regulatory and governance regime are serious indeed. We need to act urgently and fill them before it is too late, in order to ensure that there is an adequate level of environmental protection in place to counter the vast challenges ahead.

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Executive summary

Introduction

This report was commissioned by the WWF International Arctic Programme to examine the adequacy of the current international governance and regulatory regime of the marine Arctic in light of current and future impacts of climate change on the Arctic. The main elements of this report are an overview of the current international governance and regulatory regime of the marine Arctic and an analysis of the main governance and regulatory gaps in that regime.

The mandate was to examine the governance and regulation of human activities occurring within the marine Arctic, the current report devotes no attention to human activities taking place far beyond the Arctic but having an impact within it (e.g. long-range transboundary air pollution or global climate change). This therefore also determines the scope of the overview of the current international regime of the marine Arctic and the gap analysis.

For the purpose of this report, governance gaps and regulatory gaps are understood to mean the following:

> 'Governance gaps': gaps in the international institutional framework, including the absence of institutions or mechanisms at a global, regional or sub-regional level and inconsistent mandates of existing organizations and mechanisms.
>
> 'Regulatory gaps': substantive and/or geographical gaps in the international legal framework, i.e. issues which are currently unregulated or insufficiently regulated at a global, regional or subregional level.

The identified gaps are grouped below under the headings 'Arctic Council and its Constitutive Instrument', 'Current International Law of the Sea', 'Sectoral Governance and Regulation of the Marine Arctic' and 'Cross-Sectoral Issues'.

Arctic Council and its constitutive instrument

The following seem to be the main gaps:

1. **No legally binding obligations.** The Ottawa Declaration on the Establishment of the Arctic Council does not impose legally binding obligations on any of its participants and the Arctic Council is also not empowered to do so.
2. **Not an operational body.** The Arctic Council is project-driven and is not empowered to impose legally binding obligations on any of its participants. While a number of useful non-legally binding guidelines are produced within the framework of the Arctic Council, the impacts of these are difficult to determine given that the Council does not systematically evaluate whether these are being followed.
3. **Limited participation.** The Arctic Council is quite unique due to the role it gives to the region's Indigenous peoples, but non-arctic states can only obtain observer status. It could be argued that this is not a problem in view of the current role and powers of the Arctic Council, which do not directly affect the rights of non-arctic states in the Arctic. On the other hand, it can also be argued that by giving the Arctic Council such a limited role and powers, the arctic states have not discharged certain obligations under international law and thereby affect the rights and interests of other states and the international community.

4. **No permanent independent secretariat**[1].
5. **No structural funding.**

Current international law of the sea

The cornerstones of the current international law of the sea are the LOS Convention and its two implementation agreements, the Part XI Deep-Sea Mining Agreement and the Fish Stocks Agreement. The current international law of the sea applies to the marine environment of the entire globe; including therefore the entire marine environment of the Arctic, however defined.

By referring to the law of the sea as an "extensive international legal framework", the Ilulissat Declaration by the five Arctic Ocean coastal states of 28 May 2008 implicitly acknowledges the need for implementation by international organizations. The LOS Convention and the Fish Stocks Agreement are in many ways framework conventions that rely on implementation by means of concrete regulation at the global and regional levels through 'competent' or 'appropriate' international organizations. A pragmatic reason for implementation at the regional level is that it allows for taking proper account of various regional characteristics, for instance distributional ranges of fish stocks, spatial dimensions of marine ecosystems, maritime boundaries and relationships between states.

But while the LOS Convention and the Fish Stocks Agreement acknowledge the need for regional approaches with respect to fisheries management, marine environmental protection and enclosed or semi-enclosed seas, the obligations on cooperation:

- are often subject to qualifiers (e.g. "shall endeavour" or "appropriate")
- provide alternatives to regional cooperation (e.g. "global" or "directly")
- do not provide guidance on the outcome of such regional cooperation (e.g. an international organization or a legally binding or non-legally binding instrument)

One of the few exceptions in this regard relates to the obligation to cooperate under the Fish Stocks Agreement. This obligation, however, applies only to straddling and highly migratory fish stocks and therefore not to shared fish stocks and anadromous fish stocks.

Notwithstanding the inadequacies of the obligations on cooperation in relation to marine environmental protection and enclosed and semi-enclosed seas, however, quite a few regional marine environmental protection regimes have been established so far. The main reasons for the establishment of the regional regimes other than the Antarctic Treaty system seem to be to:

- discharge applicable obligations to cooperate under the LOS Convention and customary international law and in so doing taking account of a range of regional characteristics
- address transboundary effects of various human activities
- ensure a minimum level of marine environmental protection for the entire region by means of regional minimum obligations and thereby a regional level playing field

It should be noted, however, that large parts of the world's seas and oceans are not covered by regional environmental protection regimes or by regional fisheries management organizations (RFMOs) and Arrangements. The reasons for such gaps may be obvious and understandable in some regions, but less so in others. The fact nevertheless remains that the relevant states are not willing or able to discharge their obligations to cooperate under the LOS Convention, Fish Stocks Agreement or customary international law and thereby undermine relevant rights and interests of other states and the international community.

Another significant gap in the law of the sea as it applies to the Arctic marine area is the non-participation of the United States in the LOS Convention. This means, among other things, that the dispute settlement mechanism of Part XV of the LOS Convention does not apply between the United States and other parties to the LOS Convention, including the other Arctic Ocean coastal states.

1 The three Scandinavian states have agreed to establish a secretariat for their successive chair periods.

Finally, it is worth pointing out that the mere existence of the two implementation agreements to the LOS Convention reflects that the international community was prepared to address what it perceived to be as gaps at the time. Recent undertakings within the framework of the United Nations General Assembly (UNGA) and the Convention on Biological Diversity (CBD) address newly perceived gaps in relation to marine biodiversity in areas beyond national jurisdiction. Table 1 below summarizes the main regulatory and governance gaps identified by a group of independent researchers. Most of these gaps also apply to the Arctic marine area, both as regards areas within national jurisdiction, and beyond. An important exception is the Atlantic sector of the Arctic marine area, which is covered by the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention) and the OSPAR Commission established by it. The ability of the OSPAR Commission to act as an authority by default in the absence of a competent international organization at the global level (e.g. for marine scientific research) and for new and emerging activities, is particular noteworthy in this context.

Sectoral governance and regulation of the marine Arctic

The focus on sectoral governance and regulation of the marine Arctic has been on three sectors, namely fisheries management, shipping and offshore hydrocarbon activities. For each of these issues, the main gaps are summarized in Table 2 below.

Cross-sectoral issues

The three most important cross-sectoral issues seem to be (transboundary) environmental impact assessment (EIA) and strategic environmental assessment (SEA), representative networks of marine protected areas (MPAs) and integrated, cross-sectoral ecosystem-based ocean management. For each of these issues, the main gaps are summarized in Table 3 below.

Table 1: Main regulatory and governance gaps in the international legal regime for the conservation and management of marine biodiversity in areas beyond national jurisdiction

Regulatory gaps	Governance gaps

• no regulatory* regime for
  • several existing maritime activities, namely marine scientific research (and archaeology), bioprospecting (qualitative and quantitative), laying of cables and pipelines, artificial islands and seabed constructions, and military activities
  • emerging and new maritime activities, such as deep-sea tourism, activities relating to CO_2 sequestration, and floating installations
• no requirement of integrated, cross-sectoral ecosystem-based ocean management
• absence of modern regulatory tools, such as the precautionary approach per se, and in particular operationalized, EIA and SEA, and integrated, cross-sectoral MPAs
• no default regulatory mechanism for existing, emerging and new activities and in absence of regional regimes
	• no competent international organizations to regulate various maritime activities
	• no default authority
	• RFMOs & Arrangements with narrow mandates or substandard performance
	• sectoral governance, also reflected in the LOS Convention
	• an undesirable balance between user states and non-user states

* The authors take the view that the LOS Convention only provides a framework, but not an operational regulatory regime.

Table 2: Main gaps in sectoral governance and regulation of the marine Arctic

Fisheries management	Shipping	Offshore hydrocarbon activities
1. **Fisheries research and future scenarios development.** There is a need for basic fisheries research as well as the development of future scenarios about areas, dates, species, and fishing techniques for which new fishing opportunities are likely to arise and potential impacts for non-target species. Such an assessment could be carried out in the framework of the Arctic Council, e.g. through its Conservation of Arctic Flora and Fauna working group (CAFF) or independently. 2. **Action by states individually.** There is likely to be a lack of domestic regulation in relation to those parts of the Arctic marine area where ice-coverage used to be extensive for most of the year, but that now experience diminishing ice-coverage and thereby attract fishing vessels looking for possible new fishing opportunities. 3. **EIA and SEA.** Apart from the non-legally binding obligations pursuant to paragraphs 83–87 of UNGA Resolution 61/105, there are no global EIA or SEA mechanisms or procedures that can be applied to new or expanding fisheries in the Arctic marine area. 4. **Bilateral and (sub)regional arrangements for shared fish stocks.** While there are some bilateral arrangements between the relevant Arctic Ocean coastal states on the conservation and management of shared fish stocks, some are missing. This would seem to relate to Canada – United States (Beaufort Sea), Canada – Greenland and Russian Federation – United States (Chukchi Sea). 5. **RFMOs or Arrangements for species other than tuna and tuna-like species and anadromous species.** A large part of the Arctic marine area is not covered by an RFMO or Arrangement with competence over target species other than tuna and tuna-like species and anadromous species. This conclusion assumes that the Bering Sea would come within the scope of the WCPFC, and that ICCAT and NASCO may in principle have competence within the entire FAO Statistical Area No. 18.	1. **Participation in relevant international instruments.** Not all arctic states are parties to relevant international instruments. For instance, the Russian Federation is not a party to the International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC) 90. 2. **Lack of special global rules.** As regards substantive standards or requirements, the international legal framework contains: • no special IMO discharge, emission or ballast water exchange standards for the Arctic marine area • no comprehensive mandatory or voluntary IMO ships' routeing system for the Arctic marine area in its entirety or a large part thereof • no legally binding special CDEM (including fuel content and ballast water treatment) standards for the Arctic marine area The extent to which the absence of these standards or requirements pose a threat to the marine environment or biodiversity in the Arctic marine area cannot be assessed in this context. 3. **Contingency planning and preparedness.** While the global OPRC 90 and its 2000 HNS Protocol are complemented by the regional 1993 Nordic Agreement and the 1983 bilateral agreement between Canada and Denmark, there are gaps in the coverage of the entire Arctic marine area by all arctic states. A related gap is the absence of a regional agreement on search and rescue. 4. **Compliance and enforcement.** There is no regional approach by arctic states or an alternative group of states specifically aimed at ensuring compliance with applicable international rules and standards and national laws and regulations. It is moreover uncertain to what extent the IMO Arctic Shipping Guidelines and the IACS Unified Requirements concerning Polar Class are complied with by states, ship-owners and operators, crew and IACS members.	1. **Lack of global and regional rules in general.** The LOS Convention's linkage between the general coastal state obligations to global rules is seriously weakened due to the fact that there are no global rules, standards and recommended practice and procedures apart from those laid down in the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78). The OSPAR Convention and the decisions, recommendations and other agreements adopted by the OSPAR Commission and its predecessors only apply to part of the Arctic marine area. Likewise, the competence of the ISA and its decisions only apply to parts of the Arctic marine area. The 'Arctic Offshore Oil and Gas Guidelines' and other output of the Arctic Council are non-legally binding. Even though the Guidelines are revised on regular basis, there is no evaluation as to whether they are being followed. 2. **No full coverage by global or regional bodies**. While the ISA and the OSPAR Commission have competence over certain parts of the Arctic marine area, other parts are not covered by a global or regional body with competence for the comprehensive regulation of offshore hydrocarbon activities. 3. **Contingency planning and preparedness.** While the global OPRC 90 and its 2000 HNS Protocol are complemented by the regional 1993 Nordic Agreement and the 1983 bilateral agreement between Canada and Denmark, there are gaps in the coverage of the entire Arctic marine area by all arctic states.

Table 3: Main gaps in cross-sectoral issues

(Transboundary) EIA and SEA	Representative networks of MPAs	Integrated, cross-sectoral ecosystem-based ocean management
1. **Applicability of regional conventions.** The applicability of the Espoo Convention and its SEA Protocol to the Arctic marine area is limited. Some arctic states are not parties to the Espoo Convention, the SEA Protocol has not yet entered into force, and some arctic states have not even signed the SEA Protocol. 2. **Lack of legally binding regional and bilateral rules.** While there are various legally binding regional and bilateral rules, some gaps remain, for instance between the Russian Federation and its Nordic neighbours and between the Russian Federation and the United States. The Arctic Council's EIA Guidelines provide important but non-legally binding guidance as to how (transboundary) EIA should be conducted to give due consideration for the special conditions in the Arctic. On the other hand, recent research has shown that the guidelines have not been used in practice. 3. **Lack of global rules on EIA and SEA for activities in areas beyond national jurisdiction.** While there are already EIA rules in place for mining in the Area, this is not of immediate importance to the Arctic marine area. The pockets of the Area are relatively small and mining will probably start even later than elsewhere due to the likely unfavourable conditions. There is a lack of specific rules on how to conduct an assessment procedure which can potentially also cover activities within areas beyond national jurisdiction, as generally required in Article 206 of the LOS Convention and encouraged in Article 14(1)(c) of the CBD.	1. **No representative network of MPAs.** There is currently no representative network of MPAs in most or all of the Arctic marine area. 2. **No specific legally binding obligation, procedure or body.** Even though there are non-legally binding and legally binding international instruments containing obligations and commitments with regard to (representative networks of) MPAs, there is no specific legally binding obligation, procedure or body to enable the establishment of representative networks of MPAs for most or all of the Arctic marine area.	1. **No specific legally binding obligation, procedure or body.** The Atlantic sector of the Arctic marine area is covered by several regional bodies with complementary mandates – namely the International Council for the Exploration of the Sea (ICES), North Atlantic Marine Mammal Commission (NAMMCO), (NEAFC) and the OSPAR Commission – which are increasingly coordinating and cooperating towards integrated, cross-sectoral ecosystem-based ocean management. However, the remainder of the Arctic marine area is not covered by similar coordinating and cooperating bodies, or a single overarching body, to ensure integrated, cross-sectoral ecosystem-based ocean management.

List of abbreviations

ACAP	Arctic Contaminants Action Program (Arctic Council working group)
ACIA	Arctic Climate Impact Assessment
AEPS	Arctic Environmental Protection Strategy
AMAP	Arctic Monitoring and Assessment Programme (Arctic Council working group)
AMSA	Arctic Marine Shipping Assessment
AMSP	Arctic Marine Strategic Plan
APMs	associated protective measures
BWM Convention	International Convention for the Control and Management of Ship's Ballast Water and Sediments
CAFF	Conservation of Arctic Flora and Fauna (Arctic Council working group)
CBD	Convention on Biological Diversity
CDEM	construction, design, equipment and manning (standards)
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CLCS	Commission on the Limits of the Continental Shelf
CMS	Convention on the Conservation of Migratory Species of Wild Animals
CoP	Conference of Parties
EAF	Ecosystem Approach to Fisheries
EC	European Community
EEA	European Economic Area
EEZ	exclusive economic zone
EIA	environmental impact assessment
EPPR	Emergency, Prevention, Preparedness and Response (Arctic Council working group)
EU	European Union
FAO	United Nations Food and Agriculture Organization
FMP	fishery management plan
GAIRAS	generally accepted international rules and standards
HNS Protocol	Protocol on Preparedness, Response and Co-operation to Pollution Incidents by Hazardous and Noxious Substances
IACS	International Association of Classification Societies
ICC	Intergovernmental Consultative Committee
ICCAT	International Commission on the Conservation of Atlantic Tunas
ICES	International Council for the Exploration of the Sea
ICRW	International Convention for the Regulation of Whaling
IMO	International Maritime Organization
IPHC	International Pacific Halibut Commission
IPOA	International Plan of Action
ISA	International Sea-bed Authority
IUCN	International Union for Conservation of Nature
IUU	Illegal, Unreported and Unregulated
LOS Convention	United Nations Convention on the Law of the Sea
MARPOL	International Convention for the Prevention of Pollution from Ships
MEPC	Marine Environment Protection Committee
MOU	Memorandum of Understanding
MPA	marine protected area
MSY	maximum sustainable yield
NAFO	Northwest Atlantic Fisheries Organization
NAMMCO	North Atlantic Marine Mammal Commission
NASCO	North Atlantic Salmon Conservation Organization
NEAFC	North-East Atlantic Fisheries Commission
NGOs	Non-Governmental Organizations
NPAFC	North Pacific Anadromous Fish Commission
NPFMC	North Pacific Fishery Management Council
OPRC	International Convention on Oil Pollution Preparedness, Response and Cooperation
PAME	Protection of the Arctic Marine Environment (Arctic Council working group)
PSSA	Particularly Sensitive Sea Area
PSC	Pacific Salmon Commission
RFMO	Regional Fisheries Management Organization
SAOs	Senior Arctic Officials (of the Arctic Council)
SDWG	Sustainable Development Working Group (Arctic Council working group)
SEA	strategic environmental assessment
UNGA	United Nations General Assembly
UNWG BBNJ	United Nations Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction
WCPFC	Western and Central Pacific Ocean Fisheries Commission

1. Introduction

This report was commissioned by the WWF International Arctic Programme to examine the adequacy of the current international governance and regulatory regime of the marine Arctic in light of current and future effects of climate change on the Arctic. The main elements of this report are an overview of the current international governance and regulatory regime of the marine Arctic (section 2) and an analysis of the main governance and regulatory gaps[2] in that regime (section 3).

2 The terms 'governance gaps' and 'regulatory gaps' are defined in subsection 3.1.

2. Overview of the current international governance and regulatory regime of the marine Arctic

2.1. Introduction

The overview of the current international governance and regulatory regime of the marine Arctic contained in this section is very concise.[3] This is not just a consequence of time constraints and a preference for brevity, but also of the fact that its central purpose is to facilitate the identification of the main regulatory and governance gaps in this regime in section 3.

The overview is moreover delimited in view of the fact that the envisaged enhanced arctic governance would relate exclusively to the regulation and governance of human activities occurring within the marine Arctic. No attention is therefore devoted to human activities taking place far beyond the Arctic but having an impact within it. This means that the overview does not also encompass the regime of long-range transboundary air pollution or global climate change.

The next subsection addresses the spatial scope of the marine Arctic, followed by subsection 2.3 on the Arctic Council and its constitutive instrument, subsection 2.4 on the current international law of the sea, subsection 2.5 on the OSPAR Convention, subsection 2.6 on sectoral governance and regulation of the marine Arctic, subsection 2.7 on cross-sectoral issues – including for instance transboundary environmental impact assessment (EIA) and strategic environmental assessment (SEA)[4] – and, finally, subsection 2.8 on other relevant global, regional and bilateral agreements.

2.2. The spatial scope of the marine Arctic

There is currently no universally accepted definition for the spatial scope of the marine Arctic. Relevant instruments and processes use different definitions for the Arctic, for instance the area north of the northern treeline or the area north of the Arctic circle (66° 33' North). 'Arctic states' are the states that are members of the Arctic Council, namely Canada, Denmark (in relation to Greenland), Finland, Iceland, Norway, the Russian Federation, Sweden and the United States.[5]

Of particular importance is the 'AMAP area', as agreed by the Arctic Monitoring and Assessment Programme (AMAP) of the Arctic Council.

However, other relevant global international organizations have opted either explicitly or implicitly for different definitions of the Arctic or marine Arctic. For instance, the International Maritime Organization (IMO) by means of its Arctic Shipping Guidelines[6] and the United Nations Food and Agriculture Organization (FAO) by means of its definition of FAO Statistical Area No. 18: Arctic Sea.

There is no universally accepted definition for the 'Arctic Ocean' either. However, it seems generally accepted that there are only five coastal states to the Arctic Ocean,

3 Several more extensive overviews are contained in reports produced within the project 'Arctic TRANSFORM: Transatlantic Policy Options for Supporting Adaptations in the Marine Arctic', funded by the European Commission, Directorate-General External Relations (info at <www.arctic-transform.eu>).

4 Strategic environmental assessment is the formalized, systematic and comprehensive process of identifying and evaluating the environmental consequences of proposed policies, plans or programmes to ensure that they are fully included and appropriately addressed at the earliest possible stage of decision-making on a par with economic and social considerations, while environmental impact assessment is a process of evaluating the likely environmental impacts of a proposed project or development (CBD COP decision VI/7).

5 Cf. Rule 1 of the Arctic Council Rules of Procedure, note 11 infra and accompanying text.

6 'Guidelines for Ships Operating in Arctic Ice-Covered Waters', IMO Doc. MSC/Circ.1056 – MEPC/Circ.399, of 23 December 2002.

namely Canada, Denmark (in relation to Greenland), Norway, the Russian Federation and the United States.[7]

2.3. The Arctic Council and its constitutive instrument

The Arctic Council was established as a high level forum in 1996 by means of the Ottawa Declaration.[8] The Council's mandate broadened pre-existing cooperation under the 1991 Arctic Environmental Protection Strategy (AEPS)[9] to "common Arctic issues, in particular issues of sustainable development and environmental protection in the Arctic" but excluding "matters related to military security".[10] In Ottawa, the arctic states also committed to develop Rules of Procedure[11] and Terms of Reference for a Sustainable Development Program, which the council adopted by means of its 1998 Iqaluit Declaration. The Rules of Procedure apply to all bodies of the council and specify in considerable detail – especially in view of the fact that the Arctic Council is not an inter-governmental organisation in international law – how meetings are run and how decisions are taken.[12]

The Arctic Council is consensus-based and project-driven and not an operational body. It also has no general role in coordinating arctic policies, other than in spheres specifically agreed upon in advance. This is among other things implied in the Terms of Reference for a Sustainable Development Program, which are merely procedural and do not contain a list of agreed themes.[13] As project proposals ultimately require consensus, this imposes a considerable restriction on the Council's mandate. Marine mammal issues[14] and, more recently, arctic fisheries management[15] have therefore not been substantively addressed; let alone culminated in projects.

The eight arctic states are Members of the Arctic Council. A unique aspect of the Arctic Council is the role it gives to the region's Indigenous peoples. They are normally accorded the status of non-governmental organizations (NGOs) in different inter-governmental organisations and forums, but the Arctic Council defines them as 'Permanent Participants', a distinct category of membership between Members proper and Observers, whom the Arctic Council Members must consult prior to any consensus decision-making. The group of observers is large, and consists of inter-governmental and non-governmental organisations as well as states that are active in the Arctic region.[16]

The four environmental protection working groups of the AEPS – namely 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) – were integrated into the structure of the Council. In addition, two new working groups were established, namely the Sustainable Development Working Group (SDWG) and the Arctic Contaminants Action Program (ACAP). In the absence of a permanent secretariat,[17] the work of the Arctic Council is heavily influenced by the priorities that the chair-state lays out for its two-year chair period, and by the ministerial meetings which are held at the end of each chair's term. Senior Arctic Officials

7 This can for instance be deduced from the Ilulissat Declaration, note 220 infra.

8 Declaration on the Establishment of the Arctic Council, Ottawa, 19 September 1996; 35 *International Legal Materials* 1387 (1996), <arctic-council.org>.

9 Adopted in Rovaniemi, 14 June 1991; 30 *International Legal Materials* 1624 (1991), <arctic-council.org>.

10 Art. 1 of the Ottawa Declaration.

11 Annex 1 to the 1998 Senior Arctic Officials (SAOs) Report.

12 Cf. E.T. Bloom, 'Establishment of the Arctic Council', 93 *American Journal of International Law* 712-722 (1999), at p. 718

13 Cf. Bloom, note 12 supra, at. p. 719.

14 Cf. Bloom, note 12 supra, at. pp. 719-720.

15 Final Report of the November 2007 SAOs Meeting, at p. 12.

16 For an analysis, see T. Koivurova and D.L. VanderZwaag, 'The Arctic Council at 10 Years: Retrospects and Prospects' 40 University of *British Columbia Law Review* 121-194 (2007), at pp. 128-159. For the current list of Permanent Participants and Observers see <www.arctic-council.org>. Annex 2 to the Arctic Council Rules of Procedure, note 11 supra, contains in para. 1 a list of Accredited Observers. Other Observers are so-called Ad-Hoc Observers.

17 Note, however, that the three Scandinavian states established a semi-permanent secretariat in Tromsø, which will operate until 2012.

(SAOs), a group of high-level officials, guides the work of the Council between ministerial meetings.

The Arctic Council is an inter-governmental forum established by means of a non-legally binding declaration and does not have the competence to impose legally binding obligations of any kind whatsoever on its Members, Permanent Participants or Observers. The most it can do from the governance perspective is to issue policy recommendations, such as the one commissioning the Arctic Climate Impact Assessment (ACIA), and to adopt guidelines and recommendations on how the arctic states should conduct themselves in certain fields of activity. It should be noted, however, that the issue of the 'Effectiveness and Efficiency of the Arctic Council' is currently a standing item on the agenda of SAOs meetings and will also be addressed at the April 2009 Ministerial meeting.[18] So far, the main focus has been to ensure that the existing forms of cooperation work as effectively as possible (e.g. the role of observers and tasking of various Working Groups).

The Arctic Council has done important assessment work (sometimes with policy recommendations) relating to the Arctic marine area and produced non-legally binding guidelines and manuals of good practice. These have often been influential in many international environmental protection processes. PAME's work agenda has become increasingly ambitious with the adoption of its 2004 Arctic Marine Strategic Plan (AMSP), which encourages actions on many fronts. PAME developed the AMSP through the various Arctic Council working groups and mechanisms, as well as via regional and global bodies. The AMSP identifies the largest drivers of change in the Arctic to be climate change and increasing economic activity and suggests actions in many areas, for instance: conducting a comprehensive assessment of arctic marine shipping, which led to the Arctic Marine Shipping Assessment (AMSA) to be finalized in 2009; developing guidelines and procedures for port reception facilities for ship-generated wastes and residues; examining the adequacy of the Arctic Council's Arctic Offshore Oil and Gas Guidelines with revision by 2009; identifying potential areas where new guidelines and codes of practice for the marine environment are needed; promoting application of the ecosystem approach; promoting the establishment of marine protected areas, including a representative network; calling for periodic reviews of both international and regional agreements and standards; and promoting implementation of contaminant-related conventions or programs and possible additional global and regional actions.

2.4. The current international law of the sea

The cornerstones of the current international law of the sea are the LOS Convention[19] and its two implementation agreements, the Part XI Deep-Sea Mining Agreement[20] and the Fish Stocks Agreement[21]. The current international law of the sea applies to the marine environment of the entire globe; including therefore the entire marine environment of the Arctic, however defined.

The LOS Convention's overarching objective is to establish a universally accepted, just and equitable legal order – or 'Constitution' – for the oceans that lessens the risk of international conflict and enhances stability and peace in the international community.

18 Final Report of the November 2007 SAOs Meeting, at p. 14.

19 United Nations Convention on the Law of the Sea, Montego Bay, 10 December 1982. In force 16 November 1994, 1833 *United Nations Treaty Series* 396; <www.un.org/Depts/los>.

20 Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982, New York, 28 July 1994. In force 28 July 1996, 33 *International Legal Materials* 1309 (1994); <www.un.org/Depts/los>.

21 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, New York, 4 August 1995. In force 11 December 2001, 34 *International Legal Materials* 1542 (1995); <www.un.org/Depts/los>.

The LOS Convention currently has 157 parties, the Part XI Deep-Sea Mining Agreement 135 parties and the Fish Stocks Agreement 72 parties. All arctic states are parties to these three treaties, except for the United States, which is not a party to either the LOS Convention or the Part XI Deep-Sea Mining Agreement.[22] The European Community (EC) is party to all three treaties. This is important in view of the fact that Denmark, Finland and Sweden are Member States of the European Union (EU)[23] and Iceland and Norway are parties to the EEA Agreement[24].

The LOS Convention recognizes the sovereignty, sovereign rights, freedoms, rights, jurisdiction and obligations of states within several maritime zones. The most important of these for the Arctic are internal waters, territorial sea, exclusive economic zone (EEZ), continental shelf, high seas and the 'Area'[25]. Internal waters lie landward of the baselines. The maximum breadth of the territorial sea is 12 nautical miles (nm; 1 nm = 1852 meters) measured from the baselines, 24 nm the maximum breadth for the contiguous zone, and 200 nm for the EEZ. However, in many geographical settings these maximum breadths cannot be reached due to the proximity of the baselines of opposite states. In such circumstances maritime boundaries have to be agreed on by the opposite states. Several of such maritime boundaries have already been established in the Arctic marine area and negotiations on several others are still ongoing.

There are four high seas pockets (enclaves) in the AMAP area. These are the so-called 'Banana Hole' in the Norwegian Sea, the so-called 'Loop Hole' in the Barents Sea, the so-called 'Donut Hole' in the central Bering Sea and the central Arctic Ocean.

The LOS Convention recognizes the sovereignty of a coastal state over its internal waters, archipelagic waters and territorial sea, the airspace above and its bed and subsoil. Sovereignty entails exclusive access and control of living and non-living resources and all-encompassing jurisdiction over all human activities, unless states have in one way or another consented to restrictions thereon. The LOS Convention also recognizes specified economic and resource-related sovereign rights and jurisdiction of a coastal state with respect to its EEZ and (where relevant) outer continental shelf. Nevertheless, other states have navigational rights or freedoms within the maritime zones of coastal states and, with respect to their EEZ and (where relevant) outer continental shelf, also the freedoms of overflight, laying of submarine cables and pipelines and "other internationally lawful uses of the sea related to these freedoms".[26]

Article 76 of the LOS Convention also recognizes that in certain circumstances the continental shelf extends beyond 200 nm from the baselines. This is the so-called 'outer continental shelf'. Coastal states that take the view that they have an outer continental shelf, must submit information on its outer limits on the basis of the criteria in Article 76 to the Commission on the Limits of the Continental Shelf (CLCS). The limits of the outer continental shelf established by the coastal state "on the basis of" the recommendations of the CLCS "shall be final and binding".[27] So far, only the Russian Federation and Norway have made submissions to the CLCS in relation to their outer continental shelves that lie within the Arctic marine area. The CLCS has up until now only made an interim recommendation in relation to the submission of the Russian Federation. The CLCS essentially recommended the Russian Federation to make a revised submission as

22 Information obtained from <www.un.org/Depts/los> on 16 December 2008.

23 Even though EU membership of Denmark does not encompass Greenland.

24 Agreement on the European Economic Area, Brussels, 17 March 1993. In force 1 January 1994; <www.efta.int>. Note that the EEA Agreement does not apply to Svalbard.

25 Art. 1(1)(1) of the LOS Convention defines 'Area' as "the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction".

26 Art. 58(1) of the LOS Convention.

27 Art. 76(8) of the LOS Convention.

regards the central Arctic Ocean basin. The Russian Federation is expected to do this in 2010. Canada, Denmark (in relation to Greenland) and the United States are all engaged in activities to enable them to make submissions to the CLCS, despite the fact that the United States is not yet party to the LOS Convention. Canada has to make its submission before November 2013 and Denmark before November 2014.[28] It should be noted that it is likely that there will be two pockets of the Area in the central Arctic Ocean.[29]

In the high seas, all states have the freedoms already mentioned above as well as the freedom to construct artificial islands and other installations, the freedom of fishing and the freedom of scientific research. These freedoms are all subject to conditions and obligations.[30] The Area and its resources are the common heritage of mankind and the International Sea-bed Authority (ISA) is charged with organizing and controlling all activities of exploration for, and exploitation of, the resources of the Area.[31]

The Treaty of Spitsbergen[32] grants sovereignty over Svalbard to Norway and there seems to be increasingly less opposition by other states to Norway's entitlement to establish an EEZ and outer continental shelf off Svalbard. Disagreement still exists, however, on the way in which these sovereign rights and jurisdiction granted to coastal states under the LOS Convention should be exercised in light of the equal rights accorded to parties to the Treaty of Spitsbergen.[33]

2.5. OSPAR Convention[34]

2.5.1. Introduction

The spatial scope of the regional OSPAR Convention[35] extends to the 'OSPAR Maritime Area', which includes areas within and beyond national jurisdiction.[36] The OSPAR Maritime Area roughly overlaps with the Atlantic sector of the Arctic marine area, but about half extends further south. The complete spatial overlap of the OSPAR Maritime Area with the NEAFC Convention[37] Area offers potential for integrated, cross-sectoral ecosystem-based ocean management.[38]

The OSPAR Convention contains a set of basic rules and principles which are elaborated in its five annexes and three accompanying appendices. The four annexes that were adopted together with the convention deal with pollution from land-based sources (Annex I), pollution by dumping or incineration (Annex II), pollution from offshore sources (Annex III) and the assessment of the quality of the marine environment (Annex IV). Annex V on the Protection and Conservation of Ecosystems and Biological Diversity of the Maritime Area was adopted in 1998, together with Appendix 3 containing criteria for

28 Cf. Art. 4 of Annex II to the LOS Convention.

29 There may also be a pocket of the Area in the central Bering Sea.

30 Art. 87(1) of the LOS Convention.

31 Arts 1(1)(3), 136 and 157(1) of the LOS Convention.

32 Treaty on the Status of Spitsbergen, Paris, 9 February 1920. In force 14 August 1925; 2 *League of Nations Treaty Series* 8.

33 See in this regard the Notes Verbales by Spain and the Russian Federation in response to the Norwegian submission to the CLCS in 2006 (available at <www.un.org/Depts/los>).

34 The text of this section benefits from earlier research, the results of which are laid down in H. Dotinga and E.J. Molenaar, 'The Mid-Atlantic Ridge: A Case Study on the Conservation and Sustainable Use of Marine Biodiversity in Areas Beyond National Jurisdiction', IUCN Marine Law and Policy Paper No. 3 (2008), available at <cms.iucn.org>.

35 Convention for the Protection of the Marine Environment of the North-East Atlantic, Paris, 22 September 1992. In force 25 March 1998, <www.ospar.org>. Annex V, Sintra, 23 September 1998. In force 30 August 2000; amended and updated text available at <www.ospar.org>.

36 Art. 1(a) of the OSPAR Convention.

37 See note 85 infra.

38 Note, however, that the NEAFC Convention Area and the OSPAR Maritime Area do not appear to encompass the waters north of Greenland between 44° west longitude and 42° west longitude extending to the North Pole. While Art. 1(a)(1) of the NEAFC Convention and Art. 1(a)(i) of the OSPAR Convention use the phrase "Atlantic and Arctic Oceans", the term 'Arctic' does not appear in Art. 1(a)(2) of the NEAFC Convention or Art. 1(a)(2) of the OSPAR Convention. While it may sometimes be difficult to point out where the Arctic Ocean begins and the Atlantic Ocean ends, the waters north of Greenland would seem undoubtedly part of the Arctic Ocean. In the fall of 2008, the Secretary of NEAFC approached the Members of NEAFC to obtain their view on this issue.

identifying human activities for the purpose of Annex V, and entered into force in 2000. The main pillars to guide the implementation of the OSPAR Convention and its annexes are the six strategies that were reaffirmed and updated in 2003, including the Biological Diversity and Ecosystems Strategy (OSPAR Biodiversity Strategy).[39]

There are currently 16 parties to the OSPAR Convention: all coastal states bordering the North-East Atlantic except the Russian Federation, two states (Luxemburg and Switzerland) that are located upstream on watercourses reaching the OSPAR Maritime Area and the EC. Of the arctic states, Canada and the United States (in addition to the Russian Federation) are also not parties. Nevertheless, the OSPAR Convention specifically provides for the participation of other states, such as coastal states outside the OSPAR Maritime Area or states whose vessels or nationals are engaged in activities in the OSPAR Maritime Area. These can be invited by the contracting parties by unanimous vote to accede to the convention and, if necessary, the spatial scope of the Maritime Area can even be redefined.[40] Other states can also obtain observer status.[41] So far, this has not occurred.

The OSPAR Convention covers the regulation of all human activities which can have an adverse effect on the ecosystems and the biodiversity in the North East Atlantic, with the explicit exception of fisheries management and with certain limitations for the regulation of shipping.[42] Nevertheless, while these limitations significantly restrain the competence of the OSPAR Commission to adopt effective programs or measures for these activities, both maritime activities are given due consideration in the context of the assessment of the quality status of the marine environment in the region conducted in accordance with article 6 and Annex IV to the OSPAR Convention. These assessments are holistic in scope and include data on all human activities, including the effects of fisheries and shipping. A new Quality Status Report for the entire North East Atlantic is under preparation to be completed by 2010.

The OSPAR Commission can adopt measures and programs in the form of legally binding decisions, non-legally binding recommendations[43] and other agreements[44] for all activities except fisheries and with some limitations for other activities (see below under 'regulation of maritime activities'). These measures and programs can apply to the entire Maritime Area or to a specific (sub)region.[45] It should be noted, however, that so far the OSPAR Commission has not imposed measures on non-parties.

The overall objective of the OSPAR Convention is "to prevent and eliminate marine pollution and to achieve sustainable management in the region, that is, the management of human activities in such a manner that the marine ecosystem will continue to sustain the legitimate uses of the sea and will continue to meet the needs of present and future generations".[46] In accordance with this general objective, the OSPAR Biodiversity Strategy provides that a specific objective of the OSPAR Commission is "to protect and conserve the ecosystems and the biological diversity of the maritime area which are, or could be, affected as a result of human activities, and to restore, where practicable, marine areas

39 Strategies of the OSPAR Commission for the Protection of the Marine Environment of the North-East Atlantic, Chapter I (OSPAR Agreement 2003-21; Summary Record OSPAR 2003, OSPAR 03/17/1-E, Annex 31).

40 Art. 27(2) of the OSPAR Convention.

41 Art. 11 of the OSPAR Convention.

42 Art. 4 of Annex V to the OSPAR Convention.

43 It should be noted that recommendations carry in practice almost the same weight as legally binding decisions and they are often endowed with similar features such as deadlines and reporting requirements.

44 Arts 10(3) and 13 of the OSPAR Convention.

45 Art. 24 of the OSPAR Convention.

46 Preamble to the OSPAR Convention.

which have been adversely affected, in accordance with the provisions of the Convention, including Annex V and Appendix 3."[47]

The OSPAR Convention and Annex V in particular, provide a comprehensive legal framework for the implementation of Part XII of the LOS Convention and the CBD[48] and its work program on marine and coastal biodiversity at a regional level.[49] The OSPAR Convention mandates the application of the precautionary principle, which is also seen as a central part of the ecosystem approach.[50] In the context of pollution, the OSPAR Convention also requires the application of the polluter pays principle, the use of best available techniques and best environmental practice, including, where appropriate, clean technology.[51]

Even though the OSPAR Convention does not explicitly refer to the ecosystem approach, the OSPAR Commission has defined it and agreed to apply it and to further develop the measures necessary for its implementation.[52] The OSPAR Commission has already developed a set of ecological quality objectives that (can) serve as a tool to implement the ecosystem approach (to date only applied to the North Sea, but their application to other parts of the North East Atlantic is being considered). Other tools such as marine spatial planning are under consideration, but not yet operational. While the application of an ecosystem approach is promoted by the OSPAR Commission for the entire North East Atlantic, the extent to which this will be successful depends on the extent to which all other competent international organizations (global and regional) and non-parties cooperate. The OSPAR Commission encourages other authorities whose actions affect the North East Atlantic to adopt management measures and strategies that are consistent with an ecosystem approach. This includes promoting cooperation in marine spatial planning between competent authorities.

The remainder of this chapter contains a more detailed look at the following topics (a) shipping, (b) dumping and pollution from offshore sources, (c) marine scientific research and bioprospecting, (d) other existing, new and emerging activities, (e) representative networks of marine protected areas (MPAs) and (f) assessments, including EIA and SEA.

2.5.2. Shipping

While competence for the regulation of shipping lies first of all with IMO, action under the OSPAR Convention is not entirely precluded. As with fisheries, the OSPAR Commission must first bring questions to the attention of the IMO, if it considers that action is desirable. Contracting Parties who are IMO members must endeavour to cooperate "in order to achieve an appropriate response, including in relevant cases that Organisation's agreement to regional or local action …".[53] The OSPAR Commission has already taken some supplementary action. This includes for example the adoption of regional voluntary guidelines to reduce the risk of the introduction of non-indigenous species through ships' ballast water,[54] as an interim measure pending the entry into force of the BWM

47 OSPAR Agreement 2003-21, Chapter I, para. 1.1.

48 Convention on Biological Diversity, Nairobi, 22 May 1992. In force 29 December 1993, 31 *International Legal Materials* 822 (1992); <www.biodiv.org>.

49 Art. 2 of Annex V to the OSPAR Convention.

50 Art. 2(2)(a) of the OSPAR Convention and Art. 3(1)(b)(ii) of Annex V.

51 OSPAR Convention, articles 2(2)(b) and 2(3).

52 The definition is contained in the Statement on the Ecosystem Approach to the Management of Human Activities (Joint Meeting of the Helsinki & OSPAR Commissions 2003, Record of the Meeting, Annex 5), para. 5.

53 Art. 4(2) of Annex V to the OSPAR Convention.

54 General Guidelines on the voluntary interim application of the D-1 Ballast Water Exchange Standard in the North-East Atlantic (Summary Record OSPAR 2007, OSPAR 07/24/1-E, Annex 9).

Convention[55]. These guidelines recommend that all vessels within the scope of the BWM Convention entering the North East Atlantic have a Ballast Water Management Plan, record all ballast water operations and exchange ballast water at least 200 nm from the nearest land in water at least 200 metres deep. These voluntary guidelines are recommended for all vessels, including those of non-contracting parties to the OSPAR Convention.

2.5.3. Dumping and pollution from offshore sources

The regulation of pollution by dumping and pollution resulting from offshore sources is covered by Articles 4 and 5 of the OSPAR Convention, its Annexes II and III, the Offshore Oil and Gas Industry Strategy[56] and an extensive list of Decisions, Recommendations and other agreements adopted by the OSPAR Commission and its predecessor[57]. Some of these Decisions and Recommendations complement global rules standards under MARPOL 73/78[58].[59]

Annex II provides that dumping (and incineration) of all wastes or other matter is prohibited in the OSPAR Maritime Area, except for the listed substances.[60] However, the Annex does not apply to any deliberate disposal of wastes or other matter from offshore installations.[61] Annex III prohibits any dumping of wastes or other matter from offshore installations in the OSPAR Maritime Area and provides the legal basis for the measures that have been adopted for the prevention and elimination of pollution from offshore sources.[62] It also prohibits the dumping of disused offshore installations and disused offshore pipelines without a permit obtained from the competent authorities and subjects the "use on, or the discharge or emission from, offshore sources of substances which may reach and affect the maritime area" to authorization and regulation.[63]

Annexes II and III were amended in 2007 to allow the storage of carbon dioxide (CO_2) streams in geological formations under the seabed, combined with a decision to ensure environmentally safe storage and guidelines for risk assessment and management of this activity.[64] At the same time, the OSPAR Commission adopted a decision prohibiting the storage of CO_2 streams in the water column or on the seabed.[65] These measures are consistent with those adopted in relation to CO_2 storage within the framework of the London Convention[66] and its 1996 Protocol[67].

55 International Convention for the Control and Management of Ships' Ballast Water and Sediments, London, 13 February 2004. Not in force, IMO Doc. BWM/CONF/36, of 16 February 2004.

56 See note 39 supra.

57 These are available at <www.ospar.org>.

58 International Convention for the Prevention of Pollution from Ships, London, 2 November 1973, as modified by the 1978 Protocol (London, 1 June 1978) and the 1997 Protocol (London, 26 September 1997) and as regularly amended. Entry into force varies for each Annex. At the time of writing Annexes I-VI were all in force. At the 57th Session of MEPC in April 2008, extensive draft amendments to Annex VI were adopted. If adopted at the 58th Session in October 2008, these amendments would enter into force 16 months thereafter in accordance with the tacit amendment procedure. The amendments are contained in IMO Doc. MEPC 57/21/Add.1, of 2008, 'Report of the Marine Environment Protection Committee on its Fifty-Seventh Session', Annex 5.

59 E.g. PARCOM Recommendation 86/1 'of a 40mg/l emission standard for platforms'.

60 Art. 3(1) of Annex II to the OSPAR Convention.

61 Art. 1(a) of Annex II to the OSPAR Convention.

62 Art. 3(1) of Annex III to the OSPAR Convention.

63 Cf. Arts 4(1) and 5 of Annex III to the OSPAR Convention and, inter alia, OSPAR Decision 98/3 on the Disposal of Disused Offshore Installations.

64 See, inter alia, OSPAR Decision 2007/2 and OSPAR Agreement 2007-12 'Guidelines for Risk Assessment and Management of Storage of CO2 Streams in Geological Formations'.

65 OSPAR Decision 2007/1.

66 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, London, Mexico City, Moscow, Washington D.C., 29 December 1972. In force 30 August 1975, 11 *International Legal Materials* 1294 (1972); as amended, consolidated version available at <www.imo.org>.

67 London, 7 November 1996. In force 24 March 2006, *Law of the Sea Bulletin* No. 34 (1997), p. 71; as amended in 2006, consolidated version at <www.imo.org>.

2.5.4. Marine scientific research and bioprospecting

In 2008, the OSPAR Commission adopted the 'Code of Conduct for Responsible Marine Research in the Deep Seas and High Seas of the OSPAR Maritime Area'.[68] More technical documents focused on research into particular deep sea features are foreseen.[69]

2.5.5. Other existing, new or emerging activities

Annex V allows the OSPAR Commission to adopt programs and measures to safeguard against harm to marine ecosystems and biodiversity resulting from all other existing or new activities. A variety of human activities has been identified by the OSPAR Commission on the basis of the criteria contained in Appendix 3 for assessment purposes. These include: the exploration for oil, gas and solid minerals; the placement of structures for the exploitation of oil and gas; the construction or placement of artificial islands, artificial reefs, installations and structures; the placement of cables and pipelines; the introduction of alien or genetically modified species, whether deliberately or unintentionally; and sea-based tourism.[70] These activities are currently the subject of assessments with attention also given to underwater noise and marine litter. The aim of these assessments is to identify the impact of these activities on the marine environment, what is already being done and to provide the basis for decisions on the development of programs and measures for specific human activities.

2.5.6. Representative networks of MPAs

Annex V requires the OSPAR Commission "to develop means, consistent with international law, for instituting protective, conservation, restorative or precautionary measures related to specific areas or sites or related to specific species or habitats".[71] It thus provides a legal basis for the adoption of area-based measures in the entire North East Atlantic, including both for areas within and beyond national jurisdiction. This is affirmed by the OSPAR Biodiversity Strategy and more specifically by OSPAR Recommendation 2003/3 that requires the OSPAR Commission to develop and evaluate by 2010 an ecologically coherent network of well-managed protected areas in the maritime area (the 'OSPAR Network of MPAs').

The OSPAR Commission has developed a procedure for the identification, selection and management of OSPAR MPAs. While many OSPAR Members have nominated MPAs, the OSPAR Commission has so far not adopted measures to manage these MPAs. The principal gap appears to lie in the limitations on the regulatory competence of the OSPAR Commission with regard to certain activities and the absence of mechanisms to coordinate the regulation of all maritime activities by the relevant competent global and regional organizations. Mention can in this context be made of the test-case proposal for an OSPAR MPA situated beyond 200 nm from the coast.[72] Success in achieving the integrated, cross-sectoral ecosystem-based ocean management objectives of this MPA is likely to require coordination and cooperation between the OSPAR Commission with, inter alia, NEAFC, IMO and ISA. Cooperation with NEAFC on this issue has already taken place.

68 Summary Record OSPAR 2008, OSPAR 08/24/1-E, at Annex 6.

69 See also D. Owen, 'The powers of the OSPAR Commission and coastal State parties to the OSPAR Convention to manage marine protected areas on the seabed beyond 200 nm from the baseline' (WWF Germany: 2006).

70 OSPAR Agreement 2003-21, Chapter I, para. 2.2

71 Art. 3(1)(b)(ii) of Annex V to the OSPAR Convention.

72 'Proposal for an OSPAR area of interest for establishing an MPA on the Mid Atlantic Ridge/Charlie Gibbs Fracture Zone. Presented by WWF, the Netherlands and Portugal' (Doc. OSPAR 08/7/9-E). See also Summary Record OSPAR 2008, OSPAR 08/24/1-E, at paras 7.16-7.24.

Another indication of the strengthening cooperation between the two organizations is the OSPAR/NEAFC Memorandum of Understanding (MOU) that entered into force in 2008.[73]

2.5.7. Assessments, including EIA and SEA

Article 6 of the OSPAR Convention contains a general obligation to collaborate in regular joint monitoring and assessment of the quality of the marine environment in the North East Atlantic. Annex IV elaborates this by providing specific requirements on cooperation in monitoring programs, joint quality assurance arrangements, the development of scientific assessment tools, such as modelling, remote sensing and risk assessment strategies, and the preparation of assessments. These requirements are closely linked to the monitoring and assessment requirements for the maritime activities that are covered by each of the other annexes to the convention. The Strategy for the Joint Assessment and Monitoring Programme sets out the basis on which the OSPAR Contracting Parties will work together in fulfilling these obligations over the period until 2010.[74] The OSPAR Biodiversity Committee is currently conducting a review of existing arrangements to establish whether they adequately cover transboundary and cumulative impacts other than environmental impacts.

The OSPAR Convention does not establish a separate (transboundary) EIA or SEA procedure. However, several provisions in the Annexes to the OSPAR Convention de facto require EIAs for certain human activities such as dumping or offshore hydrocarbon activities. Moreover, the monitoring and assessment programs under the OSPAR Convention clearly contribute to assessing whether existing and new activities have significant adverse impacts on marine biodiversity in the North East Atlantic.

2.6. Sectoral governance and regulation of the marine Arctic

2.6.1. Introduction

This section focuses on sectoral governance and regulation of the marine Arctic. So far, only a concise overview of fisheries management, shipping and offshore hydrocarbon activities has been incorporated. Other sectors that could be covered are:

- Pollution by dumping
- Land-based pollution
- Conservation and management of marine mammals
- Marine scientific research

Note, however, that subsections 2.5.3 and 2.5.4 devote some attention to pollution by dumping and marine scientific research and that subsection 2.8 lists some relevant global, regional and bilateral agreements relating to the conservation and management of marine mammals.

2.6.2. Fisheries management

All the global legally binding and non-legally binding instruments related to fisheries conservation and management are also applicable to marine areas in the Arctic, however defined. The most important ones are the LOS Convention, the Fish Stocks Agreement, the FAO Compliance Agreement,[75] the FAO Code of Conduct for Responsible Fisheries,[76]

73 The Draft adopted by the OSPAR Commission is contained in Annex 13 to Summary Record OSPAR 2008, OSPAR 08/24/1-E, at Annex 13. See also para. 7.23(f). The MOU entered into force on 5 September 2008.

74 OSPAR Agreement 2003-22.

75 Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, Rome, 24 November 1993. In force 24 April 2003, 33 *International Legal Materials* 969 (1994); <www.fao.org/legal>.

76 Code of Conduct for Responsible Fisheries. Adopted by the Twenty-eight Session of the FAO Conference, Rome, 31 October 1995, <www.fao.org/fi>.

and its Technical Guidelines, international plans of action (IPOAs) – for instance the IPOA-IUU[77] – and the Model Scheme on PSM[78] and Resolutions of the United Nations General Assembly (UNGA), among other things on driftnets and destructive fishing practices[79]. Moreover, all marine areas of the Arctic also fall in principle within the competence of the bodies established by these instruments or that are responsible for adopting them.

At the regional level, there are a number of RFMOs and bilateral or regional organizations/arrangements whose spatial scope overlaps to some extent with the Arctic marine area. These are:

- the International Commission on the Conservation of Atlantic Tunas (ICCAT), established by the ICCAT Convention[80]
- the bilateral (Canada and the United States) International Pacific Halibut Commission (IPHC), established by the IPHC Convention[81]
- the bilateral (Russian Federation and the United States) Intergovernmental Consultative Committee (ICC), established by the Agreement on Mutual Fisheries Relations[82]
- the Northwest Atlantic Fisheries Organization (NAFO), established by the NAFO Convention.[83] Its main regulatory body is the NAFO Fisheries Commission
- the North Atlantic Salmon Conservation Organization (NASCO), established by the NASCO Convention[84]
- the North-East Atlantic Fisheries Commission (NEAFC), established by the NEAFC Convention[85]
- the North Pacific Anadromous Fish Commission (NPAFC), established by the NPAFC Convention[86]

77 International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing. Adopted by consensus by FAO's Committee on Fisheries on 2 March 2001 and endorsed by the FAO Council on 23 June 2001; <www.fao.org/fi>.

78 Model Scheme on Port State Measures to Combat Illegal, Unreported and Unregulated Fishing endorsed by the Committee on Fisheries (COFI) at its Twenty-Sixth Session in March 2005.

79 See inter alia UNGA Resolution No. 61/105, of 8 December 2006, 'Sustainable fisheries, including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and related instruments', in particular paras 59 and 80-86.

80 International Convention for the Conservation of Atlantic Tunas, Rio de Janeiro, 14 May 1966. In force 21 March 1969, *United Nations Treaty Series* No. 9587 (1969); <www.iccat.int>.

81 Convention for the Preservation of the Halibut Fishery of the North Pacific Ocean and the Bering Sea, Ottawa, 2 March 1953. In force 28 October 1953, 222 *United Nations Treaty Series* 78 (1955). Exchange of Notes Constituting an Agreement to Amend the [IPHC Convention], Washington, 29 March 1979. In force 29 March 1979, 1168 *United Nations Treaty Series* 380 (1980).

82 Agreement between the Government of the United States of America and the Government of the Union of Soviet Socialist Republics on Mutual Fisheries Relations, Moscow, 31 May 1988. In force 28 October 1988, *Treaties and other International Acts Series* 11,422. The agreement expires on 31 December 2008 but the United States will seek to extend it with another five years. The two states are currently engaged in negotiations to establish a comprehensive fisheries agreement for the Northern Bering Sea. At the 2007 ICC meeting, only three provisions of the draft agreement remained unresolved. The next ICC meeting is scheduled to take place in September 2008 (information obtained from <www.nmfs.noaa.gov/ia/bilateral>, visited 26 August 2008).

83 Convention on Future Multilateral Cooperation in the Northwest Atlantic Fisheries, Ottawa, 24 October 1978. In force 1 January 1979, 1135 *United Nations Treaty Series* 369; <www.nafo.int>. 2007 Amendment, Lisbon, 28 September 2007. Not in force, NAFO/GC Doc. 07/4. The 2007 Amendment consists of eight articles which replace the title with 'Convention on Cooperation in the Northwest Atlantic Fisheries' and the existing preamble, annexes and almost all provisions by new ones.

84 Convention for the Conservation of Salmon in the North Atlantic Ocean, Reykjavik, 2 March 1982. In force 1 October 1983, 1338 *United Nations Treaty Series* 33; <www.nasco.int>.

85 Convention on Future Multilateral Cooperation in the North-East Atlantic Fisheries, London, 18 November 1980. In force 17 March 1982, 1285 *United Nations Treaty Series* 129; <www.neafc.org>. 2004 Amendments (Art. 18bis), London; 12 November 2004. Not in force, but provisionally applied by means of the 'London Declaration' of 18 November 2005; <www.neafc.org>. 2006 Amendments, London (Preamble, Arts 1, 2 and 4), 11 August 2006. Not in force, but provisionally applied by means of the 'London Declaration' of 18 November 2005; <www.neafc.org>.

86 Convention for the Conservation of Anadromous Stocks in the North Pacific Ocean, Moscow, 11 February 1992. In force 16 February 1993, 22 *Law of the Sea Bulletin* 21 (1993); <www.npafc.org>.

- the Norway-Russian Federation Fisheries Commission (governed and established by the 1975 Framework Agreement,[87] the 1976 Mutual Access Agreement[88] and the 1978 Grey Zone Agreement[89]) and the trilateral Loophole Agreement and Protocols[90]
- the Western and Central Pacific Ocean Fisheries Commission (WCPFC), established by the WCPFC Convention[91]
- the Yukon River Panel of the bilateral (Canada and the United States) Pacific Salmon Commission (PSC), established by the Pacific Salmon Treaty[92]
- the annual Conference of Parties (CoP) to the CBS Convention[93]

The Arctic Council has so far not focused on the conservation and management of target species and also lacks any express mandate for conserving or managing Arctic fisheries. The Arctic Council can at any rate not be equated with an RFMO or Arrangement. In view of the discussion at the meeting of SAOs in November 2007,[94] there is currently considerable opposition within the membership of the Arctic Council against it becoming actively involved in fisheries management and conservation.

In some parts of the Arctic marine area, for instance the North Atlantic, national regulation is expected to be extensive and relate to all or most of the relevant capacities in which states can exercise jurisdiction, namely as flag, coastal, port and market states and with regard to their natural and legal persons. In other parts of the marine Arctic, the presence of ice for most of the year has up until now rendered national fisheries regulation for those areas unnecessary. However, as diminishing ice-coverage will attract fishing vessels looking for possible new fishing opportunities, arctic states will have to develop national regulation for such areas in order to discharge their obligations under international law. The United States is currently engaged in this process with regard to fishing in the maritime zones off Alaska north of the Bering Strait.[95]

2.6.3. Shipping

Introduction

International regulation of vessel-source pollution is primarily done by global bodies and in particular within the IMO. This is a direct consequence of the global nature of

87 Agreement between the Government of Norway and the Government of the Union of Soviet Socialist Republics on Co-operation in the Fishing Industry, Moscow, 11 April 1975. In force 11 April 1975; 983 *United Nations Treaty Series* 7 (1975). See also O.S. Stokke, 'The Loophole of the Barents Sea Fisheries Regime', in: *Governing High Seas Fisheries: The Interplay of Global and Regional Regimes*, O.S. Stokke (ed.) (Oxford University Press: 2001), pp. 273-301, at p. 274.

88 Agreement between the Government of the Union of Soviet Socialist Republics and the Government of the Kingdom of Norway Concerning Mutual Relations in the Field of Fisheries, Moscow, 15 October 1976. In force 21 April 1977; 1157 *United Nations Treaty Series* 146 (1980).

89 'Avtale mellom Norge og Sovjetunionen om en midlertidig praktisk ordning for fisket i et tilstøtende område i Barentshavet', Oslo, 11 January 1978. In force 11 January 1978; Overenskomster med fremmede stater (1978), 436 (Agreement between Norway and the Soviet Union on provisional practical arrangements on fishing in an adjacent area of the Barents Sea).

90 Agreement between the Government of Iceland, the Government of Norway and the Government of the Russian Federation Concerning Certain Aspects of Co-operation in the Area of Fisheries, St. Petersburg, 15 May 1999. In force 15 July 1999; 41 *Law of the Sea Bulletin* 53 (1999); Protocol between the Government of Iceland and the Government of the Russian Federation under the Agreement between the Government of Iceland, the Government of Norway and the Government of the Russian Federation concerning Certain Aspects of Co-operation in the Area of Fisheries St. Petersburg, 15 May 1999. In force 15 July 1999; 14 *International Journal of Marine and Coastal Law* 488-490 (1999); <faolex.fao.org>; and Protocol between the Government of Norway and the Government of Iceland under the Agreement between the Government of Iceland, the Government of Norway and the Government of the Russian Federation concerning Certain Aspects of Co-operation in the Area of Fisheries St. Petersburg, 15 May 1999. In force 15 July 1999; 41 *Law of the Sea Bulletin* 56 (1999) <faolex.fao.org>.

91 Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean, Honolulu, 5 September 2000. In force 19 June 2004, 40 *International Legal Materials* 277 (2001); <www.wcpfc.int>.

92 Treaty between the Government of Canada and the Government of the United States of America Concerning Pacific Salmon, Ottawa, 28 January 1985. In force 18 March 1985; <www.psc.org>. The Yukon River Panel was established by means of the Yukon River Salmon Agreement of December 2002, which amended the Pacific Salmon Treaty.

93 Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea, Washington, 16 June 1994. In force 8 December 1995, 34 *International Legal Materials* 67 (1995); <www.afsc.noaa.gov/refm/cbs>.

94 Final Report of the November 2007 SAOs Meeting, at p. 12.

95 The North Pacific Fishery Management Council (NPFMC) is currently developing a comprehensive arctic fishery management plan (FMP) which may be adopted in December 2008 and may become effective in 2009 (see Council Motion, Arctic Fishery Management Plan, June 2008, available at <www.fakr.noaa.gov/npfmc>). See also note 231 infra and accompanying text.

international shipping and the interest of the international community in globally uniform international regulation. The LOS Convention safeguards the latter interest by only allowing unilateral coastal state prescription in a few situations. The regional bodies or groupings of states that nevertheless exercise prescriptive or enforcement jurisdiction over vessel-source pollution commonly do this in their capacities as flag states or port states. For instance, Annex IV, entitled 'Prevention of Marine Pollution' of the Environmental Protocol to the Antarctic Treaty[96] is largely a flag state approach[97] and regional agreements on port state control such as the Paris MOU[98] and the Tokyo MOU[99] are examples of a port state approach.

LOS Convention

Most of the LOS Convention's provisions on vessel-source pollution are laid down in Part XII, entitled 'Protection and Preservation of the Marine Environment'. Section 1 of Part XII, entitled 'General Provisions', applies to all sources of pollution. These sources are:

- Pollution from land-based sources
- Pollution from seabed activities subject to national jurisdiction
- Pollution from activities in the Area
- Pollution by dumping
- Pollution by vessels
- Pollution from or through the atmosphere

Section 1's first provision – Article 192 – lays down the general obligation for all states, in whatever capacity therefore, "to protect and preserve the marine environment". This is elaborated in Article 194 with regard to measures to prevent, reduce and control pollution of the marine environment; aimed specifically at vessel-source pollution in paragraph (3)(b). Other relevant general obligations relate to rare or fragile ecosystems and the habitat of endangered species (Article 194(5)), introduction of alien species (Article 196), co-operation on a global or regional basis (Article 197), contingency plans against pollution (Article 199), monitoring of the risks or effects of pollution (Article 204) and assessment of potential effects of activities (Article 206). Sections 5 and 6 contain separate provisions on prescription and enforcement for each of the sources of pollution.

The jurisdictional framework relating to vessel-source pollution laid down in the LOS Convention is predominantly aimed at flag and coastal states. Apart from one explicit provision (Article 218), port state jurisdiction is only dealt with implicitly. As a general rule, prescriptive jurisdiction by flag and coastal states is linked by means of rules of reference to the notion of 'generally accepted international rules and standards' (GAIRAS). These are the technical rules and standards laid down in instruments adopted by regulatory organizations, in particular IMO. It is likely that the rules and standards laid down in legally binding IMO instruments that have entered into force can at any rate be regarded as GAIRAS.[100] The LOS Convention stipulates that flag state prescriptive jurisdiction over vessel-source pollution is mandatory and must have at least the same level as GAIRAS.[101] Coastal state prescriptive jurisdiction over vessel-source pollution is optional under the

96 Protocol on Environmental Protection to the Antarctic Treaty; Annexes I-IV, Madrid, 4 October 1991. In force 14 January 1998; Annex V (adopted as Recommendation XVI-10), Bonn, 17 October 1991. In force 24 May 2002; Annex VI (adopted as Measure 1(2005)), Stockholm, 14 June 2005. Not in force. All texts available at <www.ats.org.ar>.

97 Cf. Art. 2.

98 Memorandum of Understanding on Port State Control, Paris, 26 January 1982. In effect 1 July 1982, as regularly amended. Updated version at <www.parismou.org>.

99 Asia-Pacific Memorandum of Understanding on Port State Control in the Asia-Pacific Region, Tokyo, 1 December 1993. In effect 1 April 1994, as regularly amended. Most recent text at <www.tokyo-mou.org>.

100 For a discussion see E.J. Molenaar, *Coastal State Jurisdiction over Vessel-Source Pollution* (The Hague/Boston/London, Kluwer Law International: 1998), pp. 140-167.

101 Cf. Art. 211(2) of the LOS Convention.

LOS Convention but, if exercised, cannot be more stringent than the level of GAIRAS.[102] This is the general rule even though it is subject to some exceptions. Canada and the Russian Federation rely on one of these – Article 234, entitled 'Ice-covered areas' – to prescribe standards that are more stringent than generally accepted international rules and standards (GAIRAS). It should be noted, however, that the LOS Convention gives no guidance as to whether the regime of transit passage – for straits used for international navigation – trumps the regime of Article 234 or vice versa.

IMO

IMO's mandate relates to (i) vessel-source pollution, (ii) maritime safety and (iii) maritime security. In view of this report's objective, the latter two spheres of competence are in principle not relevant. However, IMO rules and standards that are primarily aimed at ensuring maritime safety and security are still taken into account if they have a significant subsidiary purpose of pollution prevention. In view of the jurisdictional framework for vessel-source pollution laid down in the LOS Convention and the types of standards agreed to within IMO so far, the following categories of substantive standards or requirements can be distinguished:

- discharge and emission standards, including standards relating to ballast water exchange
- construction, design, equipment and manning (CDEM) standards, including fuel content specifications and ballast water treatment requirements
- navigation standards, in the form of ships' routeing measures, ship reporting systems (SRSs) and vessel traffic services (VTS)
- contingency planning and preparedness standards
- liability and insurance requirements

These types of standards are laid down in a large number of legally binding and non-legally binding instruments. The following are the most important:

Legally binding	Non-legally binding
• COLREG 72[i] • MARPOL 73/78[ii] • SOLAS 74[iii] • STCW 78[iv] • BWM Convention[v] • OPRC 90[vi] and its 2000 HNS Protocol[vii] • 1969 Civil Liability Convention[viii] • 1971 Fund Convention[ix]	• General Provisions on Ships' Routeing[x] • PSSA Guidelines[xi] • Arctic Shipping Guidelines[xii]

Apart from the Arctic Shipping Guidelines, all these legally binding and non-legally binding instruments have a global scope of application and therefore apply in principle to the entire marine Arctic.[103] Nevertheless, in varying ways most of other these instruments also allow for the adoption of more stringent measures in specified geographical areas. As explained below, this is very explicit for MARPOL 73/78 which contains – in addition to CDEM standards – also discharge and emission standards. The BWM Convention is the only other IMO instrument that contains discharge standards. Below some attention

i Convention on the International Regulations for Preventing Collisions at Sea, London, 20 October 1972. In force 15 July 1977, as regularly amended.

ii See note 58 supra.

iii International Convention for the Safety of Life at Sea, London, 1 November 1974. In force 25 May 1980, with protocols and regularly amended.

iv International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, London, 1 December 1978. In force 28 April 1984, as amended and modified by the 1995 Protocol.

v See note 55 supra.

vi International Convention on Oil Pollution Preparedness, Response and Co-operation, London, 30 November 1990. In force 13 May 1995, 30 International Legal Materials 733 (1990).

vii Protocol on Preparedness, Response and Co-operation to Pollution Incidents by Hazardous and Noxious Substances, London, 15 March 2000. In force 14 June 2007, IMO Doc. HNS-OPRC/CONF/11/Rev.1, of 15 March 2000.

viii International Convention on Civil Liability for Oil Pollution Damage, Brussels, 29 November 1969. In force 19 June 1975, 9 International Legal Materials 45 (1970).

ix International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, Brussels, 18 December 1971. In force 16 October 1978, 11 International Legal Materials 284 (1972).

x IMO Resolution A.572(14), 'General Provisions on Ships' Routeing'. Adopted on 20 November 1985, amended among other things by Resolution MSC.71(69), Resolution MSC.165(78) and Resolutions adopted by MSC 70, MSC 73 and MSC 79 (see IMO Doc. SN/Circ.204, of 8 January 1999, IMO Doc. SN/Circ.215, of 19 January 2001 and IMO Doc. SN/Circ.241, of 14 December 2004). At its 54th Session in 2008, NAV adopted amendments to the General Provisions on Ships' Routeing. These still have to be adopted by the MSC and confirmed by the IMO Assembly (info obtained from <www.imo.org> at 25 August 2008).

xi IMO Assembly Resolution A.982(24), of 1 December 2005, 'Revised Guidelines for the Identification and Designation of Particularly Sensitive Sea Areas' (IMO doc. A 24/Res.982, of 6 February 2006).

xii 'Guidelines for Ships Operating in Arctic Ice-Covered Waters', IMO Doc. MSC/Circ.1056 – MEPC/Circ.399, of 23 December 2002. See also note 121 infra and accompanying text.

102 Cf. Arts 21(2), 39(2) and 211(5) of the LOS Convention.

103 Even though not all arctic states may be parties to all these instruments. Note, for instance, that the Russian Federation is not a party to the OPRC 90.

is given to MARPOL 73/78, the BWM Convention, the Arctic Shipping Guidelines and the PSSA Guidelines.

MARPOL 73/78

The Annexes to MARPOL 73/78 contain discharge standards for oil (Annex I), noxious liquid substances (Annex II), sewage (Annex IV) and garbage (Annex V) and emission standards for ozone depleting substances, nitrogen oxides (NOx), sulphur oxides (SOx) and volatile organic compounds (VOCs) (Annex VI). Annexes I, II and V make use of so-called 'special areas' where more stringent discharge standards apply. Annex VI currently uses so-called 'SOx Emission Control Areas', but this will be broadened with 'particulate matter' and NOx.[104] Rather than emission standards, SOx Emission Control Areas have maximum limits of the sulphur content in fuel and requirements relating to exhaust gas cleaning systems, which should either be regarded as CDEM standards or must be treated as analogous with them. No part of the Arctic marine area currently falls within either a special area or a SOx Emission Control Area. By contrast, the Antarctic area has been designated as a special area under Annexes I, II and V and the special discharge standards therein are currently also in effect.[105] Specific criteria and procedures have been developed for the designation of special areas and SOx Emission Control Areas.[106]

BWM Convention

The BWM Convention stipulates that vessels using the ballast water exchange method should not discharge ballast water within 200 nm from the nearest land or in waters less than 200 meters deep and must meet an efficiency of at least 95% volumetric exchange.[107] The BWM Convention allows states individually or in concert to regulate more stringently above the minimum ballast water exchange level laid down in the convention.[108]

Arctic Shipping Guidelines

The only IMO instrument that is specifically tailored to the Arctic is the non-legally binding IMO Arctic Shipping Guidelines. These are currently under revision and may eventually become applicable to the Antarctic as well.[109] The current IMO Arctic Shipping Guidelines contain only CDEM standards and no discharge, emission, navigation or contingency[110] standards, or liability or insurance requirements. However, several CDEM standards are explicitly aimed at preventing or controlling vessel-source pollution. It is also noteworthy that the Guidelines only apply to international voyages and follow the definition of 'ship' used in SOLAS 74, which excludes for instance fishing and cargo vessels below a certain size or length and all naval vessels. It should be noted that the Unified Requirements concerning Polar Class[111] developed by the International Association

104 See the draft amendments to Annex VI, note 58 supra.

105 Cf. Molenaar, note 100 supra, at p. 434. Ø. Jensen, 'The IMO Guidelines for Ships Operating in Arctic Ice-covered Waters. From Voluntary to Mandatory Tool for Navigation Safety and Environmental Protection?', FNI Report 2/2007 (available at <www.fni.no>) notes on p. 10 that an earlier draft of what was to become the IMO Arctic Shipping Guidelines envisaged the Antarctic to be designated as a special area under one or more Annexes of MARPOL 73/78.

106 As regards special areas see the 'Guidelines for the Designation of Special Areas under MARPOL 73/78', as set out in Annex 1 to IMO Assembly Resolution A.927(22), of 2001; as regards SOx Emission Control Areas see Appendix III to Annex VI to MARPOL 73/78.

107 Regulations B-4 and D-1.

108 Cf. Art. 2(3) and Section C of the Annex.

109 At the 51st Session of the its Sub-Committee on Design and Equipment (DE) in February 2008, it was agreed that a complete revision was necessary and a correspondence group was established to prepare draft revised guidelines for submission to the next Session of the DE (sometime in 2009) (information obtained from <www.imo.org> on 15 April 2008).

110 Para. 13.3.1 requires operating manuals to conform to Assembly Resolution A.852(20), of 27 November 1997, 'Guidelines for the Structure of an Integrated System of Contingency Planning for Shipboard Emergencies'.

111 These are Unified Requirement (UR) I1 'Polar Class Descriptions and Application' (Corr.1, Oct. 2007), UR I2 'Structural Requirements for Polar Class Ships' (Corr.1, Oct. 2007) and UR I3 'Machinery Requirements for Polar Class Ships' (Corr.1, Oct. 2007). All texts are available at <www.iacs.org.uk>.

of Classification Societies (IACS) complement the Arctic Shipping Guidelines and other relevant IMO instruments. Several provisions of the Guidelines contain linkages with the IACS Unified Requirements concerning Polar Class.[112]

PSSA Guidelines

Designation of an area as a PSSA pursuant to the IMO's PSSA Guidelines does not bring about regulation of shipping within that area as such. This requires adoption of one or more associated protective measures (APMs). Attention can in this context be drawn to the possibility to have special discharge standards within PSSAs (other than by means of designation as special area under MARPOL 73/78) and "other measures aimed at protecting specific sea areas against environmental damage from ships, provided that they have an identified legal basis".[113] Innovative standards are therefore not ruled out.

Bilateral and regional agreements

Arctic states have also adopted several relevant bilateral and regional instruments on contingency planning and preparedness for spills of oil and other hazardous substances. These are:

- The 1983 bilateral agreement between Canada and Denmark,[114] which relates to the prevention, reduction and control of pollution of the marine environment resulting from activities within the area covered by the agreement, including pollution incidents resulting from shipping[115]
- The 1988 bilateral agreement between Canada and the United States,[116] by which, inter alia, the "Government of the United States pledges that all navigation by U.S. icebreakers within waters claimed by Canada to be internal will be undertaken with the consent of the Government of Canada"[117]
- The 1992 bilateral Agreement between Norway and the Russian Federation on Cooperation in Environmental Matters,[118] pursuant to which the Joint Norwegian-Russian Commission on Environmental Protection operates. Its Working Group on Protection of the Marine Environment – established in 2005 – has to a certain degree dealt with issues related to transshipment of oil at sea, but not as one of its main themes.[119] Its predecessor – the Working Group on Marine Protection – dealt among other things with the implementation of a 1994 bilateral Agreement[120].[121] The Russian Federation has recently proposed establishing a new working group on 'Ecological Safety regarding Marine Transportation of Oil along the coasts of Norway and Russia'. This proposal may be discussed at the Commission meeting in November/ December of 2009[122]

112 E.g. paras 1.1.4 and P-2.7.

113 Para. 6.1.3 of the PSSA Guidelines.

114 Agreement Between the Government of Canada and the Government of the Kingdom of Denmark for Cooperation relating to the Marine Environment, Copenhagen, 26 August 1983. In force 26 August 1983, 1348 *United Nations Treaty Series* 121 (1984)

115 See, inter alia, Art. VII entitled 'Vessel Traffic' and Annex B entitled 'Joint Contingency Plan concerning pollution incidents resulting from shipping activities'.

116 Agreement between the Government of Canada and the Government of the United States of America on Arctic Cooperation, 11 January 1988. In force 11 January 1988, *Canada Treaty Series* 1988, No. 29.

117 Clause 3.

118 Agreement Between the Governments of the Kingdom of Norway and the Russian Federation on Cooperation in Environmental Matters, Oslo, 3 September 1992. In force same day; Overenskomster med fremmede makter (Oslo, Norwegian Ministry of Foreign Affairs: 1992), pp. 1,532-1,535. This agreement replaces a narrower 1988 under the same name. See also O.S. Stokke, 'Sub-regional Cooperation and Protection of the Arctic Marine Environment: the Barents Sea' in: D. Vidas (ed.) *Protecting the Polar Marine Environment – Law and Policy for Pollution Prevention* (Cambridge, Cambridge University Press: 2000), pp. 124-148, at p. 125.

119 Information provided by M. Nyborg, Department for International Cooperation, Section for Polar Affairs and Cooperation with Russia, Norwegian Ministry of the Environment, September 2008.

120 See note 136 infra and accompanying text.

121 Information provided by M. Nyborg, note 131 supra. Cf. also Stokke, note 130 supra.

122 Information provided by M. Nyborg, note 131 supra.

- The 1993 Nordic Agreement.[123] The Nordic Agreement deals with a range of measures, including monitoring maritime zones and abatement in case of pollution incidents
- The 1994 bilateral Agreement between Norway and the Russian Federation Concerning Cooperation on the Combating of Oil Pollution in the Barents Sea,[124] containing requirements on notification and contingency planning
- The Joint Contingency Plan of the United States and the Russian Federation on Combating Pollution in the Bering and Chukchi Seas[125]
- The Canada-United States Joint Marine Contingency Plan,[126] which provides for a coordinated system for planning, preparedness, and responding to harmful substance incidents in the contiguous waters of Canada and the United States. This plan is supported by five geographic annexes

Arctic Council

All relevant output of the Arctic Council is non-legally binding and predominantly originates from within the Protection of the Arctic Marine Environment (PAME) and Emergency, Prevention, Preparedness and Response working group (EPPR) working groups. Among the main output are:

- Guidelines for Transfer of Refined Oil and Oil Products in Arctic Waters (TROOPS)
- Arctic Guide for Emergency Prevention, Preparedness and Response
- Field Guide for Oil Spill Response in Arctic Waters

PAME is currently engaged in the Arctic Marine Shipping Assessment (AMSA), which is to be released at the Arctic Council Ministerial Meeting in April 2009 in Norway.

2.6.4. Offshore hydrocarbon activities

At the global level, there is currently no instrument for the comprehensive regulation of offshore hydrocarbon activities and also no global regulatory or governance body with such a mandate. Nevertheless, there are four sources for limited global and regional regulation.[127] First, as hydrocarbons are included within the broad definition of 'resources' in Article 133(a) of the LOS Convention,[128] offshore hydrocarbon activities in the Area have to be in accordance with the relevant provisions of the LOS Convention[129] and regulations adopted by the ISA. A second source for limited global regulation is contained in MARPOL 73/78, which includes 'fixed or floating platforms' in its definition of 'ship'.[130] As a consequence, the discharge and emission standards are in principle applicable to offshore installations as well. Third, at the regional level, regulation is pursued by means of the OSPAR Convention and the OSPAR Commission established by it.[131] Finally, reference should be made to the International Regulators' Forum, whose efforts are aimed at health

123 Agreement Between Denmark, Finland, Iceland, Norway and Sweden Concerning Cooperation in Measures to Deal with Pollution of the Sea by Oil or Other Harmful Substances, Copenhagen, 29 March 1993. In force 16 January 1998, 2084 *United Nations Treaty Series* I-36173.

124 Moscow, 28 April 1994. In force 30 January 1996; Overenskomster med fremmede makter (Oslo, Norwegian Ministry of Foreign Affairs: 1996), pp. 94-98.

125 As noted on p. 88 of the United States National Response Plan, of August 2004 (available at <www.usda.gov/documents/NRPallpages.pdf>). It also observes that this plan was updated and signed in March 2001.

126 Ibidem.

127 While platforms are covered by the London Convention and its 1996 Protocol, notes 66 and 67 supra, the authors do not regard this as regulation of hydrocarbon activities as such.

128 Namely "all solid, liquid or gaseous mineral resources in situ in the Area at or beneath the seabed, including polymetallic nodules".

129 Those contained in Part XI as well as in Part XII (e.g. Arts 209 and 215). See also Annex III to the LOS Convention, entitled 'Basic Conditions of Prospecting, Exploration and Exploitation'.

130 Art. 2(4). See also the definition of 'discharge' in Art. 2(3)(a), and the specific exception in Art. 2(3)(b)(ii).

131 See subsection 2.5.3.

and safety standards in the offshore oil and gas industry. Its members are domestic regulatory authorities from nine different states.[132]

LOS Convention

The limited global and regional regulation is complemented by the relevant provisions of the LOS Convention. These are the general provisions in Sections 1–4 of Part XII that apply to all sources of marine pollution (discussed in subsection 2.6.3) as well as the provisions on individual sources of pollution; in this case 'Pollution from seabed activities subject to national jurisdiction'. These provisions thus apply exclusively to the continental shelves of coastal states. Section 5 (prescription) and Section 6 (enforcement) each contain one single provision on this source of pollution. Article 208, included in Section 5, stipulates:

1. Coastal States shall adopt laws and regulations to prevent, reduce and control pollution of the marine environment arising from or in connection with seabed activities subject to their jurisdiction and from artificial islands, installations and structures under their jurisdiction, pursuant to articles 60 and 80.
2. States shall take other measures as may be necessary to prevent, reduce and control such pollution.
3. Such laws, regulations and measures shall be no less effective than international rules, standards and recommended practices and procedures.
4. States shall endeavour to harmonize their policies in this connection at the appropriate regional level.
5. States, acting especially through competent international organizations or diplomatic conference, shall establish global and regional rules, standards and recommended practices and procedures to prevent, reduce and control pollution of the marine environment referred to in paragraph l. Such rules, standards and recommended practices and procedures shall be re-examined from time to time as necessary.

Much of the wording in this provision is similar to the corresponding provisions for other sources of pollution. The obligations in paragraphs (1) and (2) are very general even though not qualified. Moreover, the strong linkage to international rules in paragraph (3) by means of the phrase "shall be no less effective" is seriously weakened due to the fact that there are no global rules, standards and recommended practices and procedures apart from those laid down in MARPOL 73/78. This contrasts markedly with the abundance of rules and standards in the sphere of vessel-source pollution. The regional rules adopted by the OSPAR Commission are allowed pursuant to paragraph (5).

Article 214 on enforcement, included in Section 6, is a very straightforward provision obliging coastal states to exercise enforcement jurisdiction.

While these provisions above all approach the issue from the perspective of obligations, the LOS Convention explicitly confers on coastal states within their EEZs jurisdiction for "the protection and preservation of the marine environment".[133] As regards the outer continental shelf, it is generally accepted that the sovereign rights of coastal states over their continental shelves also entitle it to associated jurisdiction. Even though Article 77 does not mention the coastal state's jurisdiction for the purpose of conservation or the protection and preservation of the marine environment, such jurisdiction would be implied if it would be exercised in relation to offshore hydrocarbon activities.[134]

132 Based on information obtained at <www.irfoffshoresafety.com>.

133 Art. 56(1)(b)(iii) of the LOS Convention.

134 See also Art. 80 which grants coastal states "the exclusive right to authorize and regulate drilling on the continental shelf for all purposes".

Other bilateral, regional and global instruments

Even though they do not purport to directly regulate offshore hydrocarbon activities, the following bilateral, regional and global instruments are relevant as well:

- The 1983 bilateral agreement between Canada and Denmark,[135] which – in addition to contingency planning[136] – also contains a very broad but also very general provision on, inter alia, the construction and operation of installations in order to minimize marine pollution.[137] Unlike the OSPAR Convention, however, this bilateral agreement does not establish a body to implement this in more detail
- The 1993 Nordic Agreement[138]
- The 1992 and 1994 bilateral agreements between Norway and the Russian Federation[139]. Among the main activities of the Working Group on Protection of the Marine Environment are the environmental regulation of the hydrocarbon industry[140]
- The Joint Contingency Plan of the United States and the Russian Federation on Combating Pollution in the Bering and Chukchi Seas[141]
- The Canada-United States Joint Marine Contingency Plan[142]
- OPRC 90 and its 2000 HNS Protocol,[143] which apply both to vessels and offshore installations

Arctic Council

The key instrument relating to offshore hydrocarbon activities of the Arctic Council are the 'Arctic Offshore Oil and Gas Guidelines'. A first version of the guidelines was adopted in 1997, a second in 2002 and the PAME working group is currently undertaking its third revision, due to be completed in 2009. The guidelines contain recommended practices for the regulation of offshore hydrocarbon activities, including transportation and onshore activities that are an integrated part of the offshore activity in the Arctic.[144] In addition to specifying goals, the Guidelines also recommend offshore hydrocarbon activities to be based on the precautionary approach, the polluter-pays principle and the principle of sustainable development.[145] The guidelines document has separate chapters on EIAs, interests that are to be taken into account (e.g. Indigenous peoples, biodiversity), safety and environment management, monitoring, operating practices,[146] emergencies and decommissioning and site clearance.

Finally, in addition to the output of the Arctic Council listed in subsection 2.6.3, reference can be made to the EPPR's 'Environmental Risk Analysis of Arctic Activities'.

135 See note 126 supra and accompanying text.

136 See Annex A entitled 'Joint Contingency Plan concerning pollution incidents resulting from offshore hydrocarbon exploration or exploitation'.

137 Art. V provides: "The Parties shall take measures to ensure that installations engaged in exploration for or exploitation of the natural resources of the seabed and subsoil in their respective areas of responsibility are designed, constructed, placed, equipped, marked, operated and maintained in such a manner that the risk of pollution of the marine environment is minimized."

138 See note 135 supra and accompanying text.

139 See notes 130 and 136 supra.

140 Information provided by M. Nyborg, note 131 supra.

141 See note 137 supra.

142 Ibid.

143 See notes 108 and 109 supra.

144 2002 Arctic Offshore Oil and Gas Guidelines (available at <www.pame.is>), at p. 8.

145 Ibid, at p. 10.

146 Note also the zero-discharge policy that is recommended for the main waste streams (pp.31-32).

2.7. Cross-sectoral issues

2.7.1. Introduction

The ensuing discussion deals with transboundary EIA and SEA, EIA and SEA in areas beyond national jurisdiction, representative networks of MPAs and integrated, cross-sectoral ecosystem-based ocean management.

2.7.2. Transboundary EIA and SEA

Espoo Convention

The main international instrument on transboundary EIA is the Espoo Convention.[147] This convention was signed by the eight arctic states, but three of them are still to become parties to it (Iceland, the Russian Federation and the United States). The applicability of the Espoo Convention also extends to "large-diameter pipelines for the transport of oil, gas or chemicals", "offshore hydrocarbon production" and "major storage facilities for petroleum, petrochemical and chemical products".[148] However, it should be noted that the origin state for a planned activity is obliged to commence the transboundary EIA procedure (by notifying the potentially affected state on the basis of Article 3) only if such planned activity is likely to cause adverse transboundary impacts to the environment under the jurisdiction of another contracting state. In other words, the origin state is not obliged to notify the potentially affected state if the planned activity (e.g. offshore hydrocarbon activities) is not likely to cause significant adverse transboundary environmental impact. If the concerned states disagree on the likelihood of such impact, Article 3(7) and Appendix IV of the convention provide for an inquiry commission procedure. It is important to note that the Espoo Convention does not apply to cases of potential harm to global commons (such as high seas), but only when the proposed activity is likely to cause pollution to the environment located in another state's maritime zones.

SEA Protocol

SEA was still in development when the Espoo Convention was drafted. By means of Article 2(7) the delegations at the negotiations only indicated their willingness to endeavour to apply the principles of the convention to strategic level decisions. Subsequently, the parties to the convention decided to develop a special SEA Protocol, which has not yet entered into force.[149] Of the arctic states, Finland, Norway and Sweden have consented to be legally bound by the protocol and Denmark has signed it. The protocol focuses on creating national SEA procedures but also stipulates rules by which transboundary SEA is to be organized in certain cases of transboundary environmental effects.[150] The protocol was largely inspired by the SEA Directive of the EC,[151] which also contains a provision on transboundary consultations.[152] Both the SEA Directive and the SEA Protocol explicitly apply to offshore hydrocarbon exploitation.[153] At the moment, the transboundary SEA procedure has little potential in the Arctic since four arctic states have not even signed

147 Convention on Environmental Impact Assessment in a Transboundary Context, Espoo, 25 February 1991. In force 10 September 1997; 1989 *United Nations Treaty Series* 310 (1997). As amended; consolidated version at <www.unece.org>.

148 Appendix I to the Espoo Convention, at 8, 15 and 16.

149 Protocol on Strategic Environmental Assessment, Kiev, 21 May 2003. Not in force; <www.unece.org>.

150 Art. 10 of the SEA Protocol.

151 Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 'on the assessment of the effects of certain plans and programmes on the environment', OJ 2001, L 197/30.

152 See Art. 7.

153 The SEA Protocol requires SEAs to be carried out for programmes that set the framework for future development consent, as enshrined in Art. 4(2) and Annex I (listing the same projects as in Appendix I of the Espoo Convention). The SEA Directive requires in its Art. 3(2) "Subject to paragraph 3, an environmental assessment shall be carried out for all plans and programmes, (a) which are prepared for agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning or land use and which set the framework for future development consent of projects listed in Annexes I and II to Directive 85/337/EEC […]".

the protocol and the protocol has not yet entered into force. However, by means of the European Economic Area (EEA) Agreement, the SEA Directive currently applies, in addition to the EU members Finland, Sweden and Denmark, also to Iceland and Norway.[154]

Other instruments

The Espoo Convention establishes a legal basis for transboundary EIA between those five arctic states that are party to it. There are also other treaties that provide for transboundary EIA procedures between arctic states. There are also quite a few other applicable conventions and other instruments between the eight arctic states that provide for a transboundary EIA type of procedure,[155] for instance between Nordic states,[156] between Canada and the United States (thus also covering the Alaska-Yukon border)[157] and between Canada and Denmark[158].

There are also global treaties that apply throughout most of the Arctic (except for the United States) and contain a transboundary EIA, which covers also the potential damage to global commons but is worded in such a way that may even question their legal status. A good example is the CBD, which imposes a highly qualified obligation on contracting states "as far as possible and as appropriate" to promote and encourage conclusion of multilateral and bilateral arrangements on transboundary EIA. It is nevertheless important that the CBD encourages states to extend such transboundary EIAs to planned activities which are likely to significantly affect the biological diversity in areas beyond national jurisdiction.[159] A stronger obligation is contained in Article 206 of the LOS Convention (see below).

There are also (maritime) borders that are not covered by any type of transboundary EIA, such as those between the Russian Federation and the United States and the Russian Federation and its Nordic neighbours. However, the 1992 Convention on the Transboundary Effects of Industrial Accidents[160] provides for a transboundary EIA procedure between the Russian Federation and its Nordic neighbours in situations where it applies.[161] Unfortunately, it does not provide transboundary EIA for offshore hydrocarbon activities since the convention does not explicitly apply to "(f) accidents caused by activities in the marine environment, including seabed exploration or exploitation; (g) spills of oil or other harmful substances at sea".[162]

LOS Convention

An interesting transboundary EIA procedure that applies to the Arctic marine area is contained in Article 206 of the LOS Convention. When there are reasonable grounds for believing that planned activities within the jurisdiction or control of a state may cause

154 See note 24 supra and accompanying text.

155 For a detailed assessment, see T. Koivurova, *Environmental Impact Assessment in the Arctic: A Study of International Legal Norms* (Ashgate: 2002), pp. 181-286.

156 E.g. the 1974 Nordic Environment Protection Convention (3 *International Legal Materials* 591 (1974)); the 1976 Guidelines for Communication Between Finland, Norway, Sweden and Denmark on Security Issues Related To the Nuclear Installations Constructed Near the Border (*Finnish Treaty Series* 19/1977) and the OSPAR Convention.

157 E.g. the 1975 Agreement Between the United States of America and Canada Relating to the Exchange of Information on Weather Modification Activities (14 *International Legal Materials* 589 (1975)); the 1987 Agreement Between the Government of Canada and the Government of the United States of America on the Conservation of the Porcupine Caribou Herd (17 July 1987; text available at <arcticcircle.uconn.edu/ANWR/anwrint-agreement.html>) and the 1991 Agreement Between the Government of the United States of America and the Government of Canada on Air Quality (30 *International Legal Materials* 676 (1991)).

158 See note 126 supra.

159 Art. 14(1)(c) of the CBD.

160 Helsinki, 17 March 1992. In force 19 April 2000, 31 *International Legal Materials* 1330 (1992). As amended; consolidated text at <www.unece.org>.

161 The applicability of the Convention derives from its definition of 'hazardous activity' as "any activity in which one or more hazardous substances are present or may be present in quantities at or in excess of the threshold quantities listed in Annex I to the Convention and which is capable of causing transboundary effects", which encompasses most large-scale industrial activities. However, there is a large list of exclusions from the scope of the Convention.

162 Art. 2.

substantial pollution of or significant harmful changes to the marine environment, the convention requires that states must assess the potential effects of such activities, including offshore hydrocarbon activities, on the marine environment. Since the provision speaks of the effects on the marine environment in general, it means that states are required to conduct an assessment of the effects of activities taking place in their maritime jurisdiction on the marine environment located in other states' jurisdiction as well as on areas beyond national jurisdiction. The assessment of transboundary impacts on the marine environment located in another state's jurisdiction cannot be very systematic. There are no provisions on how potentially affected states can contribute to an assessment. More importantly, the duty of assessment is qualified by the phrase "as far as practicable", giving the origin state a fair amount of discretion. The results of assessments must be communicated to the competent international organizations "which should make them available to all states".[163] A potentially affected state can thus obtain information through this channel.

Arctic Council

There is also work within the arctic cooperation to produce guidance on how to conduct EIAs and transboundary EIAs in arctic conditions, resulting in the 'Guidelines for Environmental Impact Assessment in the Arctic' (EIA Guidelines), which were agreed to be applied by the arctic states in the Alta ministerial in 1997. These apply to offshore hydrocarbon activities as well, although the more relevant instrument here is the Arctic Offshore Oil and Gas Guidelines. The EIA Guidelinesprovide important guidance as to how EIA should be conducted to give due consideration to the special conditions in the Arctic.[164] Yet, according to a recent assessment, the EIA Guidelines have not influenced how EIAs are conducted in the Arctic.[165]

2.7.3. EIA and SEA in areas beyond national jurisdiction

Article 209 of the LOS Convention governs pollution from activities in the Area, and also lays out obligations to establish EIA and SEA procedures. Its first paragraph reads:

> International rules, regulations and procedures shall be established in accordance with Part XI to prevent, reduce and control pollution of the marine environment from activities in the Area. Such rules, regulations and procedures shall be re-examined from time to time as necessary.

163 Art. 205 of the LOS Convention

164 The drafting of the instrument was prompted by the realization that the arctic states share many challenges in applying EIA in their arctic areas. For example, the participation of the public in EIA is constrained by the region's small population, which includes many Indigenous peoples. The long distances and the limited number of cities and towns also affect how public participation is organized. Moreover, although environmental conditions vary in different parts of the Arctic, EIA must address the similarities in the region's ecosystems and the challenge of integrating Indigenous peoples and their traditional knowledge into the decision-making processes. Chapter 11 of the guidelines provides useful recommendations for the arctic states on how to organize their transboundary EIA procedures. As all the arctic states are signatories to the Espoo Convention, the guidelines are meant to adjust the requirements of the convention to the Arctic. Above all, the guidelines urges that all activities assessed according to the national EIA legislation should be screened also from the viewpoint of whether transboundary impacts are likely (para. 8 of chapter 11 of the EIA Guidelines). Thus, all activities to which a national EIA procedure is applied should be screened in view of likely transboundary impacts in the arctic context. In addition, lower thresholds may be needed for those activities listed in the Espoo Convention if proposed to operate in arctic conditions. According to the guidelines, the origin state should initiate the transboundary EIA procedure in a very early phase of its national EIA procedure. The guidelines recommend that in the scoping phase of the national EIA procedure, potential transboundary impacts should be identified and methods to be used for assessing them should be agreed upon between the concerned states; joint steering groups are recommended to perform these tasks (para. 4). The guidelines also urge cooperation in the implementation of the transboundary EIA procedures taking place in the Arctic (paras. 7 and 8). The Espoo Convention provides for a basic right for all those private legal subjects of the affected state located in the area likely to be affected to participate in the transboundary EIA procedure, just as the private legal subjects of the origin state may also participate. The guidelines go further and urge the arctic states to be as inclusive as possible when organising a transboundary EIA procedure: "Communities in the area of anticipated impacts should be given an opportunity to participate, irrespective of their location relative to the border" (para. 10). In the arctic context, these communities normally are Indigenous peoples, as referred to in chapter 11. The guidelines also emphasize that even though activities may be far away from the border, transboundary impacts may occur anyway, especially with respect to large-scale activities such as oil and gas activities (para. 9).

165 See T. Koivurova, 'Implementing Guidelines for Environmental Impact Assessment in the Arctic' in K. Bastmeijer and T. Koivurova (eds) *Theory and Practise of Transboundary Environmental Impact Assessment* (Martinus Nijhoff Publishers: 2008), pp. 151-174.

Part XI provides rules for adopting norms in the case of pollution from activities in the Area. Article 145 of the LOS Convention requires measures to be taken in order to ensure effective environmental protection from activities taking place in the Area. The ISA is required to adopt rules and procedures for the prevention of pollution to the marine environment and for conserving the natural resources of the Area.[166]

The Part XI Deep-Sea Mining Agreement is of importance here, especially paragraph 7 of Section 1 of its annex. The plans of work submitted by the qualified applicants must specify two sites of equal estimated commercial value, one of which must be reserved for the exploitation by the Enterprise of the Authority for a certain period of time. In all cases, the Legal and Technical Commission of the ISA is the first body to examine the proposed plan. If the commission recommends approval to the council, which decides these issues, the plan is, as a rule, approved unless specific grounds are adduced for rejecting it.[167] Moreover, paragraph 7 of Section 1 stipulates:

> An application for approval of a plan of work shall be accompanied by an assessment of the potential environmental impacts of the proposed activities and by a description of a programme for oceanographic and baseline environmental studies in accordance with the rules, regulations and procedures adopted by the Authority.

Clearly, these assessments must be of a wide scope since Article 145 requires preventive measures with regard to all areas of the marine environment, both within and beyond national jurisdiction. Since the envisaged exploitation of the deep sea-bed has thus far been mainly confined to polymetallic nodules[168], the assembly of the ISA has approved the 'Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area',[169] which contain rules on EIA as well as on environmental protection.[170] The authority is currently working on additional regulations on prospecting and exploration for cobalt-rich crusts and polymetallic sulphides.

Second, the deep-sea bed regime of the LOS Convention – as modified by the Part XI Deep-Sea Mining Agreement – ensures that not only the ISA but also states parties are obligated to protect the environment from activities taking place in the Area. According to Article 209(2), states parties are required to adopt regulations to prevent pollution of the marine environment from activities in the Area undertaken by a state. These regulations must be as strict as the ones adopted by the ISA.[171]

Even when technology develops to make commercial use of these minerals in the Area, these provisions have only marginal relevance in the Arctic. As was argued above, there will not likely be much Area left after the Arctic Ocean coastal states have enacted the

166 Art. 145 reads: '(a) the prevention, reduction and control of pollution and other hazards to the marine environment, including the coastline, and of interference with the ecological balance of the marine environment, particular attention being paid to the need for protection from harmful effects of such activities as drilling, dredging, excavation, disposal of waste, construction and operation or maintenance of installations, pipelines and other devices related to such activities; (b) the protection and conservation of the natural resources of the Area and the prevention of damage to the flora and fauna of the marine environment'.

167 The beginning of para. 6(a) of Section 1 of the Annex to the Part XI Deep-Sea Mining Agreement reads: "An application for approval of a plan of work for exploration shall be considered by the Council following the receipt of a recommendation on the application from the Legal and Technical Commission".

168 These have been defined in Art. 3(d) of the Polymetallic Nodules Regulations, see note 181 infra, as "any deposit or accretion of nodules, on or just below the surface of the deep seabed, which contain manganese, nickel, cobalt and copper".

169 Decision of the Assembly relating to the regulations on prospecting and exploration for polymetallic nodules in the Area (ISBA/6/A/18)

170 Regulation 18 and Part V of the regulations. See also the Report of the Deep-Seabed Polymetallic Nodule Exploration (20 November 2000). Development of Environmental Guidelines (ISA 99/02). Part 3 contains draft guidelines for the EIA procedure: 'Chapter 9, Guidelines for the Assessment of the Environmental Impacts from the Exploration for Polymetallic Nodules in the Area'. For a thorough overview, see G. Le Gurun, 'EIA and the International Sea Bed Authority' in Bastmeijer and Koivurova 2008, note 177 supra, at pp. 221-263.

171 Art. 209(2) reads: "Subject to the relevant provisions of this section, States shall adopt laws and regulations to prevent, reduce and control pollution of the marine environment from activities in the Area undertaken by vessels, installations, structures and other devices flying their flag or of their registry or operating under their authority, as the case may be. The requirements of such laws and regulations shall be no less effective than the international rules, regulations and procedures referred to in paragraph 1."

outer limits of their continental shelves on the basis of the recommendations provided by the CLCS.

More pertinent normative development from the arctic perspective relates to the process within the CBD to develop scientific guidance for EIAs and SEAs in case of activities which may have a significant adverse impact on marine biodiversity beyond national jurisdiction – a task for which a working group was created at the 9th Conference of the Parties (CoP). The most recent CoP decided, in line with Article 14(1)(c) of the CBD, to:

> 8. [Invite] Parties, other Governments and relevant organizations, including in the context of the United Nations Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction, to cooperate in further developing scientific and technical guidance for the implementation of environmental impact assessments and strategic environmental assessments for activities and processes under their jurisdiction and control which may have significant adverse impacts on marine biodiversity beyond national jurisdiction, taking into consideration the work of Food and Agriculture Organization of the United Nations, the International Maritime Organization, and other relevant organizations, with a view to ensuring such activities are regulated in such a way that they do not compromise ecosystem integrity, and to report to the Conference of the Parties at its tenth meeting on progress made in that regard; […]
>
> 10. For the purpose of paragraphs 8 and 9 of the present decision, taking into account the relevant provisions of the United Nations Convention on the Law of the Sea and the Convention on Biological Diversity, decides to convene an expert workshop, including experts from different relevant organizations, with balanced regional and sectoral representation, to discuss scientific and technical aspects relevant to environmental impact assessment in areas beyond national jurisdiction with a view to contributing to the development of such scientific and technical guidance, building on ongoing relevant sectoral, regional and national environmental impact assessment efforts;[172]

Finally, reference can also be made to the initiatives under the purview of the UNGA, as described in subsection 3.3.5.

2.7.4. Representative networks of MPAs

There is currently no universally accepted definition for the term 'marine protected area' (MPA). However, the definition of an MPA adopted by the International Union for Conservation of Nature (IUCN) is the most widely used. This reads:

> Any area of intertidal or subtidal terrain, together with its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment.[173]

The essence of this broad definition is that MPAs have a special status in comparison with the surrounding area due to their more stringent regulation of one of more human activities (e.g. shipping or fishing) by one or more measures (e.g. prohibition of anchoring or bottom trawling) for one or more purposes (e.g. preservation of habitats, conservation of target species or marine scientific research). It is important to note that the identification of an area as an MPA does not necessarily mean that all human activities are prohibited whatsoever. This can, inter alia, be deduced from the different IUCN categories of

172 Decision IX/20 (2008), 'Marine and coastal biodiversity'.

173 Resolution 17.38 (1988) by the General Assembly of the IUCN, reconfirmed in Resolution 19.46 (1994).

protected areas.[174] For these reasons, some instruments and fora prefer terms such as 'area-based management tools'[175] or 'spatial measures'. The remaining discussion uses these terms interchangeably.

Under the current international law of the sea, coastal states have various options for establishing spatial measures for various purposes that do not require the support of, or approval by, other states. Fishing or whaling within its maritime zones or shipping within ice-covered areas are examples.[176] In other scenarios, however, coastal states must seek approval from the competent international organization, for instance IMO in relation to special areas under MARPOL 73/78. With regard to areas beyond national jurisdiction, a wide range of global, regional and bilateral instruments already provide for the designation of spatial measures with more stringent regulation therein, albeit only sectorally. A good example are the spatial measures (e.g. closed areas) adopted by RFMOs.

Besides a coastal state capacity, states can also rely on other capacities for establishing spatial measures and regulating human activities therein. These are its capacity as a flag state or with regard to its natural or legal persons. Nothing under general international law prevents in principle states from restricting the activities of its vessels or natural and legal persons in certain areas beyond national jurisdiction or the maritime zones of other states.[177] This becomes different when such states – acting individually or collectively – exert pressure on vessels or natural or legal persons of other states to comply with such restrictions. It should in this context be noted that the mandates and legitimacy of the IMO and RFMOs are in principle beyond doubt and their spatial measures are therefore capable – at least potentially – of affecting the rights and freedoms of third states, even if not through non-flag enforcement on the high seas. By contrast, the current international legal framework relating to areas beyond national jurisdiction lacks both a mandate and a process for the designation of integrated MPAs as well as for the regulation of all human activities therein, for the purpose of the conservation and sustainable use of marine biodiversity.[178] In the absence of these, designation of MPAs in areas beyond national jurisdiction and regulation of activities therein lack legitimacy and make interference with the freedoms of the high seas by third states unjustifiable, except if interference is based on rights under customary international law.

Support for the need for integrated MPAs in areas beyond national jurisdiction is growing. The 9th CoP to the CBD in May 2008 adopted scientific criteria for identifying areas in need of protection in open-ocean waters and deep-sea habitats as well as scientific guidance for designing representative networks of MPAs and agreed to convene an expert workshop that will provide guidance to Parties and the United Nations on identifying important areas that need protection in areas beyond national jurisdiction as well as on the use and further development of biogeographic classification systems.[179] Despite these positive developments, however, there is no consensus in the international community yet on the process of designation of such MPAs and the regulation of human activities therein. States that support the EU proposal for an Implementation Agreement to the LOS Convention[180] probably see integrated MPAs in areas beyond national jurisdiction

174 These can be found at <www.unep-wcmc.org>.

175 See note 245 infra and accompanying text.

176 See, e.g. Arts 62(4)(c), 65, 77 and 234.

177 See in this regard Council Regulation (EC) No 734/2008, of 15 July 2008, 'on the protection of vulnerable marine ecosystems in the high seas from the adverse impacts of bottom fishing gears' OJ 2008, L 201/8, in particular Art. 8 entitled 'Area closures'. This Council Regulation implements paras 80-86 of UNGA Resolution No. 61/105, note 79 supra.

178 See also T. Scovazzi, 'Marine Protected Areas on the High Seas: Some Legal and Policy Considerations', 19 *International Journal of Marine and Coastal Law* 1-19 (2004).

179 Decision IX/20, note 184 supra, at paras 14 and 19.

180 Cf. the Annex to the Statement by Austria, on behalf of the EU, at the 7th Meeting of the ICP (2006) and COM(2007) 575 final, of 10 October 2007, 'An Integrated Maritime Policy for the European Union', at p. 14, where it is noted that the "Commission will propose an Implementing Agreement of UNCLOS on marine biodiversity in areas beyond national jurisdiction and work towards successful conclusion of international negotiations on Marine Protected Areas on the high seas".

as one of its main elements. Reference can also be made here to the test-case proposal for an OSPAR MPA discussed in subsection 2.5.6.

So far, the discussion has been focused on the right of states to designate MPAs and regulate human activities therein. It is submitted, however, that various non-legally binding and legally binding international instruments contain obligations and commitments with regard to MPAs. One of the targets of the JPOI[181] is, for instance

> the establishment of marine protected areas consistent with international law and based on scientific information, including representative networks by 2012 and time/area closures for the protection of nursery grounds and periods[182]

In addition, Article 8(a) of the CBD requires contracting parties to establish a system of MPAs for the purpose of the conservation of biodiversity within areas under national jurisdiction, even though this obligation is qualified by the phrase "as far as possible and as appropriate". Moreover, the obligations under the LOS Convention and the Fish Stocks Agreement in relation to over-exploitation, associated and dependent species, rare and fragile ecosystems and the preservation of marine biodiversity will in various scenarios require a state to designate MPAs and regulate human activities therein.

As regards the Arctic Council, mention can be made of the Circumpolar Protected Areas Network (CPAN) developed by CAFF. While this initiative seems to have contributed to the establishment of protected areas in the Arctic, most of these are terrestrial. Moreover, PAME's AMSP explicitly promotes the establishment of MPAs, including representative networks,[183] but this does not seem to have had a follow-up.

2.7.5. Integrated, cross-sectoral ecosystem-based ocean management

There is currently no universally accepted definition for the term 'integrated, cross-sectoral ecosystem-based ocean management'.[184] Nevertheless, the different words included in the term indicate a holistic approach which takes due account of spatial dimensions, processes and relationships within ecosystems.[185] It is also submitted that integrated, cross-sectoral ecosystem-based ocean management operates at a higher hierarchical level than sectoral ecosystem-based management, for instance ecosystem-based fisheries management or an ecosystem approach to fisheries (EAF).[186] Moreover, sectoral ecosystem-based management can also be pursued in the absence of an overarching integrated approach. Neither the LOS Convention nor any other global instrument contains a legally binding obligation to pursue it. However, various non-legally binding commitments to pursue ecosystem-based ocean management exist at the global level.[187] Reference can also be made to the discussion in subsection 3.3.5.

As regards the Arctic Council, it is also noteworthy that integrated management of resources and ecosystem-based management feature prominently in the program of the

181 Plan of Implementation of the World Summit on Sustainable Development, Johannesburg, 4 September 2002; <www.unep.org>.

182 Para. 32(c).

183 At p. 11, under 7.3.2.

184 Cf. the 'Report on the work of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea at its seventh meeting' (UN doc. A/61/156, of 17 July 2006), which notes this at para. 6 and subsequently lists various elements relating to ecosystem approaches and oceans.

185 See the elements referred to in note 196 supra.

186 The FAO Technical Guidelines on 'The ecosystem approach to fisheries' (FAO Technical Guidelines for Responsible Fisheries No. 4, Suppl. 2 (FAO, Rome: 2003)) defines EAF as follows: "An ecosystem approach to fisheries strives to balance various societal objectives by taking into account the knowledge and uncertainties about biotic, abiotic and human components of ecosystems and their interactions and applying an integrated approach to fisheries within ecologically meaningful boundaries" (at p. 6). See also E.J. Molenaar, 'Ecosystem-Based Fisheries Management, Commercial Fisheries, Marine Mammals and the 2001 Reykjavik Declaration in the Context of International Law', 17 *International Journal of Marine and Coastal Law* 561-595 (2002).

187 E.g. paras 30(d) and 32(c) of the JPOI, note 193 supra, and UNGA Resolution No. 61/222, 'Oceans and the law of the sea', of 20 December 2006, at para. 119.

Norwegian chairmanship of the Arctic Council (2006–2008) and in the Norwegian, Danish and Swedish common objectives for their Arctic Council chairmanships 2006–2012.[188] Other relevant activities within the framework of the Arctic Council are:

- 'Best Practices in Ecosystems Based Oceans Management' (BePoMAR), a joint project by PAME and SDWG that will report on countries' approaches to ecosystem-based oceans management and look at progress towards the World Summit on Sustainable Development goals to implement sustainable integrated ecosystem management. The outcome in the form of a report is expected by October 2008;
- The 'Circumpolar Map of Resources at Risk from Oil Spills in the Arctic' developed by EPPR; and
- The large marine ecosystems (LMEs) of the Arctic marine area developed by PAME.

As regards the Arctic marine area more in general, reference can be made to the following:

- 'The pursuance of the ecosystem approach by the OSPAR Commission;[189]
- 'The large overlap between the spatial competence of the OSPAR Commission, NEAFC and ICES and the test-case proposal for an OSPAR MPA discussed in subsection 2.5.6;
- 'The efforts on integrated management of the marine environment by the Working Group on Protection of the Marine Environment under the Joint Norwegian-Russian Commission on Environmental Protection;[190] and
- 'The 'Integrated Management of the Marine Environment of the Barents Sea and the Sea Areas off the Lofoten Islands (Management Plan)',[191] adopted by the Norwegian Parliament in 2006. It does not extend beyond the maritime zones of Norway.

2.8. Other relevant global, regional and bilateral agreements

While the preceding sections have covered most of the global, regional and bilateral agreements that are relevant to the Arctic marine area, they are by no means complete. Reference can here be made to a broad overview study by Nowlan.[192] It is submitted, however, that most of the framework and regulatory instruments relating to the Arctic marine area and relevant in view of the focus of this report,[193] have been covered so far. Conversely, no discussion has yet taken place on the following conventions:

- the Ramsar Convention[194]
- the World Heritage Convention[195]
- the CITES[196]
- the CMS[197]

188 These are available at <arctic-council.org>.

189 See note 52 supra.

190 Information provided by M. Nyborg, note 131 supra. See also note 130 supra and accompanying text.

191 Helhetlig forvaltning av det marine miljø i Barentshavet og havområdene utenfor Lofoten (forvaltningsplan) (St. Meld. Nr. 8 (2005-2006); English version at <www.regjeringen.no/en/dep/md/Selected-topics/Svalbard_og_polaromradene.html?id=1324>. The plan was approved by the Norwegian Parliament in June 2006.

192 L. Nowlan, 'Arctic Legal Regime for Environmental Protection' (*IUCN Environmental Policy and Law Paper* No. 44: 2001). Nowlan uses the following groups of instruments relevant to the Arctic: marine; atmosphere, biodiversity - protection of species and ecosystems -; resource extraction and waste disposal; environmental impact assessment (EIA); indigenous people and indigenous rights and trade agreements.

193 See subsection 2.1.

194 Convention on Wetlands of International Importance especially as Waterfowl Habitat, Ramsar, 2 February 1971. In force 21 December 1975, as amended. Consolidated text available at <www.ramsar.org>.

195 Convention concerning the Protection of the World Cultural and Natural Heritage, Paris, 16 November 1972. In force 17 December 1975; 11 *International Legal Materials* 1972; <www.unesco.org>.

196 Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, D.C., 3 March 1973. In force 1 July 1975, 993 *United Nations Treaty* Series 243; <www.cites.org>.

197 Convention on the Conservation of Migratory Species of Wild Animals, Bonn, 23 June 1979. In force 1 November 1983, 1651 *United Nations Treaty Series* 355; <www.cms.int>.

- the Basel Convention[198]

As regards **marine mammals**, the following are relevant international instruments:

- the ICRW[199]
- the regional NAMMCO Agreement,[200] which established the North Atlantic Marine Mammal Commission (NAMMCO) and provides a framework for cooperation among its four parties for the conservation, rational management and study of marine mammals in the North Atlantic
- the regional Polar Bear Agreement[201]
- the 2000 bilateral agreement on polar bears between the Russian Federation and the United States[202]
- the bilateral Norway-Russian Federation Fisheries Commission,[203] which also manages seals
- the Joint Commission on the Conservation and Management of Narwhal and Beluga established by Canada and Greenland by means of an Memorandum of Understanding[204]

As regards **birds**, reference can be made to a recent study.[205]

As regards **marine scientific research**, reference should be made to the International Council for the Exploration of the Sea (ICES), which coordinates and promotes marine scientific research and provides scientific advice with respect to the North Atlantic.[206]

198 Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, Basel, 22 March 1989. In force 5 May 1992, 28 *International Legal Materials* 657 (1989); <www.basel.int>.

199 International Convention for the Regulation of Whaling, Washington D.C., 2 December 1946. In force 10 November 1948, 161 *United Nations Treaty Series* 72; <www.iwcoffice.org>.

200 Agreement on Cooperation in Research, Conservation and Management of Marine Mammals in the North Atlantic, Nuuk, 9 April 1992. In force 8 July 1992, *Law of the Sea Bulletin* No. 26, 66-68 (1994); <www.nammco.no>.

201 Agreement on the Conservation of Polar Bears and Their Habitat, Oslo, 15 November 1973. In force 26 May 1976; <pbsg.npolar.no>.

202 Agreement between the Government of the United States of America and the Government of the Russian Federation on the Conservation and Management of the Alaska-Chukotka Polar Bear Population, Washington, D.C., 16 October 2000. In force January 2007.

203 See notes 87 - 89 supra.

204 Memorandum of Understanding between the Department of Fisheries and Oceans of the Government of Canada and the Ministry of Fisheries and Industry of the Greenland Home Rule Government on the Conservation and Management of Narwhal and Beluga, December 1989.

205 A. Trouwborst, 'A Bird's-Eye View of Polar Governance: Reflecting on the Role of International Law in 'Arctic Cooperation from a Bird Conservation Perspective', 1 *Yearbook of Polar Law* (forthcoming).

206 Established by the ICES Convention (Convention for the International Council for the Exploration of the Sea, Copenhagen, 12 September 1964. In force 22 July 1968, 7 *International Legal Materials* 302 (1968); <www.ices.dk>). Of particular relevant is the Arctic Fisheries Working Group.

3. Gap analysis

3.1. Introduction

The purpose of this section is to identify the main governance and regulatory gaps in the current international regime of the marine Arctic as described in section 2 in view of the current and future impacts of global climate change on the Arctic. For the purpose of this report, regulatory gaps and governance gaps are understood to mean the following:

> 'Governance gaps': gaps in the international institutional framework, including the absence of institutions or mechanisms at a global, regional or sub-regional level and inconsistent mandates of existing organizations and mechanisms.
>
> 'Regulatory gaps': substantive and/or geographical gaps in the international legal framework, i.e. issues which are currently unregulated or insufficiently regulated at a global, regional or subregional level.[207]

Not included in gaps defined as such are:

- the fundamental characteristics and limitations of international law such as its consensual nature and the pacta tertiis principle, meaning that no state can be bound against its will
- the shortcomings associated with the primacy of flag state jurisdiction over its vessels on the high seas
- relatively minor shortcomings that undermine the effectiveness of existing rules, for instance insufficiently stringent standards, limited enforcement powers and inadequate implementation

The structure of this section largely mirrors that of section 2. As a consequence, subsection 3.2 will focus on the Arctic Council and its constitutive instrument, followed by subsection 3.3 on the current international law of the sea, subsection 3.4 on sectoral governance and regulation of the marine Arctic and, finally, subsection 3.5 on cross-sectoral issues.

3.2. Arctic Council and its constitutive instrument

The following seem to be the main gaps:

1. **No legally binding obligations.** The Ottawa Declaration on the Establishment of the Arctic Council does not impose legally binding obligations on any of its participants and the Arctic Council is also not empowered to do so.
2. **Not an operational body.** The Arctic Council is project-driven and is not empowered to impose legally binding obligations on any of its participants. While a number of useful non-legally binding guidelines are produced within the framework of the Arctic Council, the impacts of these are difficult to determine given that the Council does not systematically evaluate whether these are being followed.
3. **Limited participation.** The Arctic Council is quite unique due to the role it gives to the region's Indigenous peoples, but non-arctic states can only obtain a status as observer. It could be argued that this is not a problem in view of the current role and

207 These definitions are derived from K.M. Gjerde, 'Regulatory and Governance Gaps in the International Regime for the Conservation and Sustainable Use of Marine Biodiversity in Areas beyond National Jurisdiction' (IUCN Marine Law and Policy Paper No. 1: 2008; available at <cms.iucn.org>), at p. 1.

powers of the Arctic Council, which do not directly affect the rights of non-arctic states in the Arctic. On the other hand, it can also be argued that by giving the Arctic Council such a limited role and powers, the arctic states have not discharged certain obligations under international law and thereby affect the rights and interests of other states and the international community.

4. **No permanent independent secretariat**.
5. **No structural funding**.

3.3. The current international law of the sea

3.3.1. Introduction

Subsection 2.4 concludes that the current international law of the sea applies to the entire marine Arctic, however defined. This is also emphasized by the five Arctic Ocean coastal states in the 2008 Ilulissat Declaration.[208] Accordingly, as the "law of the sea" is an "extensive international legal framework", they "therefore see no need to develop a new comprehensive international legal regime to govern the Arctic Ocean".[209] Conversely, they recognize the need for "appropriate measures" as a consequence of "developments in the Arctic Ocean".[210] In the less than a single page text that follows, reference is among other things made to the safety of navigation, vessel-source pollution and contingency planning and emergency response to incidents with shipping and offshore exploitation. Notably, no mention is made of international fisheries instruments, fisheries management in general or the need for integrated, cross-sectoral ecosystem-based management.

The ensuing discussion will focus on the need for regional implementation in subsection 3.3.2, non-participation by the United States in the LOS Convention in subsection 3.3.3, gaps in the Fish Stocks Agreement in subsection 3.3.4 and other gaps in subsection 3.3.5.

3.3.2. The need for regional implementation

By referring to the law of the sea as an "extensive international legal framework", the Ilulissat Declaration implicitly acknowledges the need for implementation by international organizations. The LOS Convention and the Fish Stocks Agreement are in many ways framework conventions that rely on implementation by means of concrete regulation at the global and regional levels through 'competent' or 'appropriate' international organizations. A pragmatic reason for implementation at the regional level is that it allows for taking proper account of various regional characteristics, for instance distributional ranges of fish stocks, spatial dimensions of marine ecosystems, maritime boundaries and relationships between states.

Shipping

In the sphere of maritime safety, maritime security and vessel-source pollution, the abovementioned implementation mandate is mainly given to the IMO. As a consequence of the global nature of international shipping and the interest of the international community in globally uniform international regulation, the LOS Convention does not require or promote regional approaches to regulation. At the same time, however, Article 211(3) of the LOS Convention explicitly acknowledges the right of port states to prescribe – unilaterally or in concert – more stringent standards than GAIRAS. This provision takes

208 Ilulissat, 28 May 2008 (available at <arctic-council.org>).

209 Ibid.

210 Ibid.

account of regional arrangements on port state control, the first of which – the Paris MOU[211] – had been established just before the adoption of the LOS Convention.

It seems that Arctic Ocean coastal states and other arctic states do not have special problems with the role and mandate of IMO.[212] But at the same time they are not likely to preclude unilateral or collective action outside IMO but in accordance with international law, for instance based on Article 234 of the LOS Convention or on a port state's residual jurisdiction under customary international law, as inter alia acknowledged by Article 211(3) of the LOS Convention.

Fisheries management

As regards fisheries management, the LOS Convention obliges the relevant states to cooperate with respect to transboundary fish stocks and discrete high seas fish stocks but does not prescribe the form of cooperation.[213] The Fish Stocks Agreement, however, stipulates that fisheries for straddling and highly migratory fish stocks are to be managed at the regional level through RFMOs or Arrangements. The duty to cooperate in relation to such transboundary fish stocks means in fact a duty to cooperate with the relevant RFMO or Arrangement.[214] Arguably, this duty to cooperate with the relevant RFMO or Arrangement is already part of customary international law and thereby entitles the relevant members or participants to take measures against (non-cooperating) non-members and non-participants that would otherwise be in violation of international law, for instance trade-related measures.[215] The practice of RFMOs on trade-related measures has at any rate not been challenged by means of the establishment of a dispute settlement procedure under the World Trade Organization.

RFMOs and Arrangements are to be established where these do not exist.[216] Moreover, as a consequence of in particular bottom fisheries targeting deep-sea fish species – which are often discrete high seas fish stocks – there is broad support in the international community to ensure that all areas beyond national jurisdiction are covered by RFMOs or Arrangements. Such coverage would ensure that all target fisheries fall within the mandate of an RFMO or Arrangement. Moreover, these RFMOs or Arrangements need to have modern ecosystem-based fisheries management mandates that also allow them to address fisheries impacts on non-target species (including on benthic habitats).[217]

These developments have among other things led to the 'filling' of gaps in such coverage in the Southern Indian Ocean and the establishment of negotiation processes to fill gaps in the Southern Pacific and the Northern or Northwest Pacific.[218] Within the United States, these developments have led to the adoption of Senate joint resolution (SJ Res.) No. 17 of 2007, "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".[219]

211 See note 98 supra.

212 See the words "including through the International Maritime Organization" on p. 2 of the Ilulissat Declaration.

213 See e.g. Art. 63(1).

214 Cf. Art. 8(3) of the Fish Stocks Agreement.

215 Cf. See UNGA Resolution No. 61/105, note 79 supra, at para. 46.

216 Cf. Art. 8(5) of the Fish Stocks Agreement.

217 See UNGA Resolution No. 61/105, note 79 supra, at para. 82.

218 For an overview see E.J. Molenaar, 'Current Legal and Institutional Issues Relating to the Conservation and Management of High Seas Deep Sea Fisheries', in 'Report and documentation of the Expert Consultation on Deep-Sea Fisheries in the High Seas, Bangkok, Thailand, 21-23 November 2006' (*FAO Fisheries Report* No. 838; 2007), pp. 113-139, inter alia, at p. 124. See also the overview of gaps in Gjerde, note 219 above, at pp. 5-6.

219 Passed by the Senate on 4 October 2007. The House of Representatives voted in favour of SJ Res. No. 17 in May 2008 and the President signed it on 4 June 2008.

Marine environmental protection

As regards marine environmental protection, Part XII of the LOS Convention, entitled 'Protection and Preservation of the Marine Environment' contains frequent references to the need for regional cooperation. Such references are explicitly or implicitly included in

- Article 194(1) by which states "shall endeavour to harmonize their policies" related to the taking of measures "necessary to prevent, reduce and control pollution of the marine environment from any source"
- Articles 197–201 contained in Section 2, entitled "Global and Regional Cooperation", which inter alia relate to notification, contingency plans and scientific research
- Article 204(1) on monitoring the risks or effects of pollution
- Article 207(3) and(4) on pollution from land-based sources
- Article 208(4) and (5) on pollution from seabed activities subject to national jurisdiction
- Article 210(4) on pollution by dumping
- Article 212(3) on pollution from or through the atmosphere

Enclosed or semi-enclosed seas

The LOS Convention also contains a separate Part IX, titled 'Enclosed or Semi-Enclosed Seas'. It consists of Article 122, containing a definition of the term "enclosed or semi-enclosed sea", and Article 123, entitled 'Cooperating of States bordering enclosed or semi-enclosed seas'. Article 123 reads:

> States bordering an enclosed or semi-enclosed sea should cooperate with each other in the exercise of their rights and in the performance of their duties under this Convention. To this end they shall endeavour, directly or through an appropriate regional organization:
>
> (a) o coordinate the management, conservation, exploration and exploitation of the living resources of the sea;
>
> (b) to coordinate the implementation of their rights and duties with respect to the protection and preservation of the marine environment;
>
> (c) to coordinate their scientific research policies and undertake where appropriate joint programmes of scientific research in the area;
>
> (d) to invite, as appropriate, other interested States or international organizations to cooperate with them in furtherance of the provisions of this article.

Two comments are offered here. First, it is not evident that the Arctic Ocean would fall within the definition of an 'enclosed or semi-enclosed sea' laid down in Article 122. Second, even if the Arctic Ocean would fall within this definition, it would not give cooperating coastal states – whether as a collective or by means of an established regional organization – additional rights justifying additional restrictions on the rights and freedoms of third (flag) states to what they would be allowed to do unilaterally. This is an important distinction with RFMOs and Arrangements as discussed above. Such additional rights would only become available by means of a global mandate, for instance in the form of an implementation agreement to the LOS Convention.

Conclusions

In view of these observations, it is clear that the LOS Convention and the Fish Stocks Agreement acknowledge the need for regional approaches with respect to fisheries management, marine environmental protection and enclosed or semi-enclosed seas. At the same time, however, the obligations on cooperation:

- are often subject to qualifiers (e.g. "shall endeavour" or "appropriate")
- provide alternatives to regional cooperation (e.g. "global" or "directly")

- do not provide guidance on the outcome of such regional cooperation (e.g. an international organization or a legally binding or non-legally binding instrument)

One of the few exceptions in this regard relates to the obligation to cooperate under the Fish Stocks Agreement. This obligation, however, applies only to straddling and highly migratory fish stocks and therefore not to shared fish stocks and anadromous fish stocks (see subsection 3.3.4). [220]

Notwithstanding the inadequacies of the obligations on cooperation in relation to marine environmental protection and enclosed and semi-enclosed seas, however, quite a few regional marine environmental protection regimes have been established so far. These are:

- the OSPAR Commission established under the OSPAR Convention[221] in relation to the North East Atlantic, including the North-East Atlantic sector of the Arctic Ocean
- the Helsinki Commission established under the Helsinki Convention[222] in relation to the Baltic Sea
- the various regimes set up under the Regional Seas Programme of the United Nations Environment Programme[223]
- the Antarctic Treaty Consultative Meetings operating under the Antarctic Treaty[224] in conjunction with the Committee on Environmental Protection established under the Environmental Protocol to the Antarctic Treaty[225] in relation to the marine areas south of 60° South

The rationale for establishing these regional regimes varies. The main rationale for the establishment of the Antarctic Treaty and its associated instruments was to resolve the sovereignty issue and the associated risks for conflict. The main reasons for the establishment of the other regional regimes seem to be to:

- discharge applicable obligations to cooperate under the LOS Convention and customary international law and in so doing taking account of a range of regional characteristics
- address transboundary effects of various human activities
- ensure a minimum level of marine environmental protection for the entire region by means of regional minimum obligations and thereby a regional level playing field

It should be noted, however, that large parts of the world's seas and oceans are not covered by regional environmental protection regimes or by RFMOs and Arrangements.[226] The reasons for such gaps may be obvious and understandable in some regions, but less so in others. The fact nevertheless remains that the relevant states are not willing or able to discharge their obligations to cooperate under the LOS Convention, Fish Stocks Agreement or customary international law and thereby undermine relevant rights and interests of other states and the international community.

220 While straddling and highly migratory fish stocks occur both in the high seas and in the coastal state's maritime zones, shared stocks occur in the maritime zones of two or more coastal states but not on the high seas.

221 Convention for the Protection of the Marine Environment of the North-East Atlantic, Paris, 22 September 1992. In force 25 March 1998, <www.ospar.org>. Annex V, Sintra, 23 September 1998. In force 30 August 2000; <www.ospar.org>.

222 Convention on the Protection of the Marine Environment of the Baltic Sea Area, Helsinki, 9 April 1992. In force 17 January 2000; <www.helcom.fi>.

223 For information see <www.unep.org/regionalseas>.

224 Antarctic Treaty, Washington D.C., 1 December 1959. In force 23 June 1961, 402 *United Nations Treaty Series* 71; <www.ats.aq>.

225 Protocol on Environmental Protection to the Antarctic Treaty; Annexes I-IV, Madrid, 4 October 1991. In force 14 January 1998; Annex V (adopted as Recommendation XVI-10), Bonn, 17 October 1991. In force 24 May 2002; Annex VI (adopted as Measure 1(2005)), Stockholm, 14 June 2005. Not in force. All texts available at <www.ats.aq>.

226 See the overview of gaps in Gjerde, note 219 above, at pp. 5-6 which, it should be emphasized, all relate to areas beyond national jurisdiction.

3.3.3. Non-participation by the United States in the LOS Convention

It is worth noting that the Ilulissat Declaration refers to the "law of the sea" but not explicitly to the LOS Convention. This is hardly surprising as the United States is not a party to the LOS Convention. It is well-known that the United States takes the view that, except for its Part XI, the LOS Convention is already part of customary international law and in that way creates rights and obligations for the United States. However, while the United States does not also explicitly exclude the dispute settlement mechanism in Part XV of the LOS Convention, this mechanism is not able to become part of customary international law as a consequence of its procedural nature.[227] The dispute settlement mechanism in Part XV is widely regarded as a critical component of the package-deal that paved the way for the adoption of the LOS Convention. The fact that it provides for compulsory third party dispute settlement entailing binding decisions in many scenarios, was a novelty in international law at the time. It thereby helps to safeguard the preservation of the package-deal of the LOS Convention by undesirable applications and interpretations of its provisions. The non-applicability of the dispute settlement mechanism of Part XV of the LOS Convention between the United States and other parties to the LOS Convention, including the other Arctic Ocean coastal states, is therefore a significant gap in the "extensive international legal framework" referred to in the Ilulissat Declaration.[228]

3.3.4. Gaps in the Fish Stocks Agreement

The limited scope of the Fish Stocks Agreement came to the fore particularly as a consequence of the already mentioned bottom fisheries targeting deep-sea fish species. At some stage, it was proposed that a legally binding instrument should address the non-applicability of the Fish Stocks Agreement to discrete high seas fish stocks.[229] So far, however, there is not much more than operative paragraphs in various UNGA Resolutions, the most recent of which reads:

> *Calls upon* all States, directly or through regional fisheries management organizations and arrangements, to apply widely, in accordance with international law and the Code, [footnote omitted] the precautionary approach and an ecosystem approach to the conservation, management and exploitation of fish stocks, including straddling fish stocks, highly migratory fish stocks and discrete high seas fish stocks, and also calls upon States parties to the Agreement to implement fully the provisions of article 6 of the Agreement as a matter of priority;[230]

While this paragraph applies in principle to all fish stocks, its purpose seems mainly aimed at singling out discrete high seas fish stocks. In the arctic context, however, new fishing opportunities are also likely to relate to shared and anadromous fish stocks. The non-applicability of the Fish Stocks Agreement to these fish stocks would mean that only the relatively general obligations contained in the LOS Convention apply.

3.3.5. Gaps in the current international law of the sea

The LOS Convention was adopted more than 25 years ago and many of the provisions that are relevant to this report already received very broad support several years prior thereto. The mere existence of its two implementation agreements reflects that the

227 Cf. T.L. McDorman, 'Global Ocean Governance and International Adjudicative Dispute Resolution', 43 *Ocean and Coastal Management* 255-275 (2000), at p. 259.

228 Note the attention on dispute settlement devoted by J.B. Bellinger, III, Legal Advisor of the United States Department of State in his address 'The United States and the Law of the Sea Convention' of 3 November 2008 (available at <www.state.gov/s/l/rls/111587.htm>).

229 See, inter alia, Molenaar, note 230 supra, at pp. 129-133.

230 UNGA Resolution No. 61/105, note 79 supra, at para. 5.

international community was prepared to address what it perceived to be as gaps at the time. Recent undertakings within the framework of the UNGA and the CBD[231] address newly perceived gaps in relation to marine biodiversity in areas beyond national jurisdiction.

As regards the UNGA, it established the United Nations Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction (UNWG BBNJ) in 2004. So far, the UNWG BBNJ convened twice: in 2006 and in 2008. A group of independent researchers prepared several documents[232] in support of the second meeting and conclude that the following seem to be the main regulatory and governance gaps:

Regulatory gaps	Governance gaps

• no regulatory* regime for:
  • several existing maritime activities, namely marine scientific research (and archeology), bioprospecting (qualitative and quantitative), laying of cables and pipelines, artificial islands and seabed constructions, and military activities
  • emerging and new maritime activities, such as deep-sea tourism, activities relating to CO_2 sequestration, and floating installations
• no requirement of integrated, cross-sectoral ecosystem-based ocean management
• absence of modern regulatory tools, such as the precautionary approach per se, and in particular operationalized, EIA and SEA, and integrated, cross-sectoral MPAs
• no default regulatory mechanism for existing, emerging and new activities and in absence of regional regimes
	• no competent international organizations to regulate various maritime activities
	• no default authority
	• RFMOs & Arrangements with narrow mandates or substandard performance
	• sectoral governance, also reflected in LOS Convention
	• an undesirable balance between user states and non-user states

* The authors take the view that the LOS Convention only provides a framework, but not an operational regulatory regime.

Most of these gaps also apply to the Arctic marine area, both as regards areas within national jurisdiction, and beyond. An important exception is the Atlantic sector of the Arctic marine area, which is covered by the OSPAR Convention and the OSPAR Commission established by it. The ability of the OSPAR Commission to act as an authority by default in the absence of a competent international organization at the global level (e.g. for marine scientific research) and for new and emerging activities, is particular noteworthy in this context (see, inter alia, subsection 2.5.5).

While there was no negotiated outcome of the 2nd Meeting of the UNWG BBNJ, attention should be drawn to some of the issues selected by the Co-chairpersons as issues which the UNGA may decide as suitable for consideration by a next meeting of the UNWG BBNJ, namely:

> (b) The strengthening of cooperation and coordination at all levels and across all sectors, including enhanced cooperation in capacity-building for developing countries;
>
> (c) The development and implementation of effective [environmental impact assessment (EIA)] as a tool for improving ocean management;

231 Convention on Biological Diversity, Nairobi, 22 May 1992. In force 29 December 1993, 31 *International Legal Materials* 822 (1992); <www.biodiv.org>.

232 See Gjerde, note 219 supra, and K.M. Gjerde, 'Options for Addressing Regulatory and Governance Gaps in the International Regime for the Conservation and Sustainable Use of Marine Biodiversity in Areas beyond National Jurisdiction' (IUCN Marine Law and Policy Paper No. 2: 2008; available at <cms.iucn.org>).

(d) Development and use of [area-based management tools (ABMTs)], including designation, management, monitoring and enforcement, consistent with [the LOS Convention];[233]

Arguably, the reason why the Co-Chairpersons selected these issues is their perception that many states regard them as gaps in the current international law of the sea, despite disagreement on the solutions to address these gaps. Issues (b) and (d), read in conjunction, could be interpreted as support for integrated, cross-sectoral ecosystem-based ocean management, operationalized by among other things spatial measures or tools (e.g. MPAs). Such support has also been expressed by the UNGA in its 2006 and 2007 Resolutions on Oceans and the law of the sea.[234]

As regards the CBD, mention can be made of efforts in relation to MPAs in areas beyond national jurisdiction and, more recently, on EIAs and SEAs in relation to unregulated activities in areas beyond national jurisdiction (see subsections 2.7.3 and 2.7.4).

Finally, as briefly noted in one of the bullets above, it is submitted that a fundamental regulatory and governance gap in the current international law of the sea relates to mechanisms that safeguard the interests of non-user states or the international community as a whole in the protection and preservation of the marine environment and marine biodiversity.[235] As noted at the end of subsection 3.3.2, spatial gaps in the coverage of the world's seas and oceans by regional environmental protection regimes and RFMOs and Arrangements undermine these interests. While there are a few relevant international instruments that allow for the participation of non-user states,[236] these do not seem to have led to a satisfactory balance between socio-economic interests and the abovementioned interests for present and future generations.

Particular account should in this context be taken of the innovative approach by the UNGA in relation to the impact of bottom fisheries on vulnerable marine ecosystems.[237] The main elements of this approach are:

- conducting prior EIAs
- identifying the location of vulnerable marine ecosystems
- freezing the footprint of bottom fishing in areas where vulnerable marine ecosystems are known to occur or likely to occur, until adequate conservation and management measures are in place
- making actions taken pursuant to these elements publicly available

These elements essentially operationalize the precautionary approach; the need for science-based fisheries management and accountability. Subsequently, they are made applicable to three different scenarios, namely (1) areas covered by existing RFMOs or Arrangements, (2) areas covered by negotiation processes to establish RFMOs or Arrangements and (3) areas beyond national jurisdiction not covered by existing RFMOs or Arrangement or negotiation processes to establish them. Unfortunately, however, only the first two scenarios are subject to deadlines. But the mere possibility that the UNGA

233 The 'Joint statement of the Co-Chairpersons of the Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction' (Advance and unedited text), at para. 54, p. 12.

234 UNGA Resolution No. 61/222, note 199 supra, at para. 119 and UNGA Resolution No. 62/215 'Oceans and the law of the sea', of 22 December 2007, para. 99.

235 For a discussion see E.J. Molenaar, 'Managing Biodiversity in Areas Beyond National Jurisdiction', 21 *International Journal of Marine and Coastal Law* 89-124 (2007), at pp. 108-110.

236 Notably the ICRW (International Convention for the Regulation of Whaling, Washington D.C., 2 December 1946. In force 10 November 1948, 161 *United Nations Treaty Series* 72; <www.iwcoffice.org>), the 1958 Fisheries Convention (Convention on Fishing and Conservation of the Living Resources of the High Seas, Geneva, 29 April 1958. In force 20 March 1966, 559 *United Nations Treaty Series* 285; <www.un.org/law/ilc>) and the CCAMLR Convention (Convention on the Conservation of Antarctic Marine Living Resources, Canberra, 20 May 1980. In force 7 April 1982, 19 *International Legal Materials* 837 (1980); <www.ccamlr.org>).

237 See UNGA Resolution No. 61/105, note 79 supra, at paras 83-87.

would adopt non-legally binding restrictions on bottom fisheries in areas beyond national jurisdiction is likely to have been the main driver for the establishment of the negotiation process in the Northwest Pacific.[238] Or, in other words, regional action to pre-empt global action. These actions by the UNGA are clearly aimed at safeguarding the interests of the international community in light of the inability or unwillingness of states to discharge their obligations to cooperate at the regional level.

3.4. Sectoral governance and regulation of the marine Arctic

3.4.1. Fisheries management

The following seem to be the main gaps:

1. **Fisheries research and future scenarios development.** There is a need for basic fisheries research as well as the development of future scenarios about areas, dates, species, fishing techniques for which new fishing opportunities are likely to arise and potential impacts for non-target species. It may for instance be revealed that new fishing opportunities in the Pacific side of the Arctic Ocean will be mainly located in the maritime zones of coastal states for a considerable time, whereas fishing opportunities in the Atlantic side may much sooner also encompass high seas areas that were not fished before. Such an assessment could be carried out in the framework of the Arctic Council (e.g. through its Conservation of Arctic Flora and Fauna working group (CAFF)) or independently.
2. **Action by states individually.** There is likely to be a lack of domestic regulation in relation to those parts of the Arctic marine area where ice-coverage used to be extensive for most of the year, but that now experience diminishing ice-coverage and thereby attract fishing vessels looking for possible new fishing opportunities.
3. **EIA and SEA.** Apart from the non-legally binding obligations pursuant to paragraphs 83–87 of UNGA Resolution 61/105, there are no global EIA or SEA mechanisms or procedures that can be applied to new or expanding fisheries in the Arctic marine area.
4. **Bilateral and (sub)regional arrangements for shared fish stocks.** While there are some bilateral arrangements between the relevant Arctic Ocean coastal states on the conservation and management of shared fish stocks, some are missing. This would seem to relate to Canada – United States (Beaufort Sea), Canada – Greenland and Russian Federation – United States (Chukchi Sea).
5. **RFMOs or Arrangements for species other than tuna and tuna-like species and anadromous species.** A large part of the Arctic marine area is not covered by an RFMO or Arrangement with competence over target species other than tuna and tuna-like species and anadromous species. This conclusion assumes that the Bering Sea would come within the scope of the WCPFC, and that ICCAT and NASCO may in principle have competence within the entire FAO Statistical Area No. 18.
6. **Shortcomings in global fisheries instruments.** The applicability of global fisher ies instruments to the Arctic marine area also means that their shortcomings apply as well, for instance the non-applicability of the Fish Stocks Agreement to fish stocks other than straddling and highly migratory fish stocks. This is relevant for the arctic context as new fishing opportunities are also likely to relate to shared and anadromous fish stocks.

238 See note 230 supra and accompanying text.

3.4.2. Shipping

The following seem to be the main gaps:

1. **Participation in relevant international instruments.** Not all arctic states are parties to relevant international instruments. For instance, the Russian Federation is not a party to OPRC 90.
2. **Lack of special global rules.** As regards substantive standards or requirements, the international legal framework contains:
   - no special IMO discharge, emission or ballast water exchange standards for the Arctic marine area
   - no comprehensive mandatory or voluntary IMO ships' routeing system for the Arctic marine area in its entirety or a large part thereof
   - no legally binding special CDEM (including fuel content and ballast water treatment) standards for the Arctic marine area

   The extent to which the absence of these standards or requirements poses a threat to the marine environment or biodiversity in the Arctic marine area cannot be assessed in this context.
3. **Contingency planning and preparedness.** While the global OPRC 90 and its 2000 HNS Protocol are complemented by the regional 1993 Nordic Agreement and the 1983 bilateral agreement between Canada and Denmark, there are gaps in the coverage of the entire Arctic marine area by all arctic states. A related gap is the absence of a regional agreement on search and rescue.
4. **Compliance and enforcement.** There is no regional approach by arctic states or an alternative group of states specifically aimed at ensuring compliance with applicable international rules and standards and national laws and regulations. It is moreover uncertain to what extent the IMO Arctic Shipping Guidelines and the IACS Unified Requirements concerning Polar Class are complied with by states, ship-owners and operators, crew and IACS members.

3.4.3. Offshore hydrocarbon activities

The following seem to be the main gaps:

1. **Lack of global and regional rules in general.** The LOS Convention's linkage between the general coastal state obligations to global rules is seriously weakened due to the fact that there are no global rules, standards and recommended practice and procedures apart from those laid down in MARPOL 73/78. The OSPAR Convention and the decisions, recommendations and other agreements adopted by the OSPAR Commission and its predecessors only apply to part of the Arctic marine area. Likewise, the competence of the ISA and its decisions only apply to parts of the Arctic marine area as well. The 'Arctic Offshore Oil and Gas Guidelines' and other output of the Arctic Council are non-legally binding. Even though the guidelines are revised on a regular basis, there is no systematic evaluation as to whether they are being followed.
2. **No full coverage by global or regional bodies**. While the ISA and the OSPAR Commission have competence over certain parts of the Arctic marine area, other parts are not covered by a global or regional body with competence for the comprehensive regulation of offshore hydrocarbon activities.
3. **Contingency planning and preparedness.** While the global OPRC 90 and its 2000 HNS Protocol are complemented by the regional 1993 Nordic Agreement and the 1983 bilateral agreement between Canada and Denmark, there are gaps in the coverage of the entire Arctic marine area by all arctic states.

3.5. Cross-sectoral issues

3.5.1. (Transboundary) EIA and SEA

The following seem to be the main gaps:

1. **Applicability of regional conventions.** The applicability of the Espoo Convention and its SEA Protocol to the Arctic marine area is limited: some arctic states are not parties to the Espoo Convention; the SEA Protocol has not yet entered into force; and some arctic states have not even signed the SEA Protocol.
2. **Lack of legally binding regional and bilateral rules.** While there are various legally binding regional and bilateral rules, some gaps remain, for instance between the Russian Federation and its Nordic neighbours and between the Russian Federation and the United States. The Arctic Council's EIA Guidelinesprovide important but non-legally binding guidance as to how (transboundary) EIA should be conducted to give due consideration for the special conditions in the Arctic. On the other hand, recent research has shown that the guidelines have not been used in practice.
3. **Lack of global rules on EIA and SEA for activities in areas beyond national jurisdiction.** While there are already EIA rules in place for mining in the Area, this is not of immediate importance to the Arctic marine area. The pockets of the Area are relatively small and mining would probably start later than elsewhere due to the likely unfavourable conditions. There is a lack of specific rules on how to conduct an assessment procedure which can also potentially cover activities within areas beyond national jurisdiction, as generally required in Article 206 of the LOS Convention and encouraged in Article 14(1)(c) of the CBD.

3.5.2. Representative networks of MPAs

The following seem to be the main gaps:

1. **No representative network of MPAs.** There is currently no representative network of MPAs in most or all of the Arctic marine area.
2. **No specific legally binding obligation, procedure or body.** Even though there are non-legally binding and legally binding international instruments containing obligations and commitments with regard to (representative networks of) MPAs, there is no specific legally binding obligation, procedure or body to enable the establishment of representative networks of MPAs for most or all of the Arctic marine area.

3.5.3. Integrated, cross-sectoral ecosystem-based ocean management

The following seem to be the main gaps:

No specific legally binding obligation, procedure or body. The Atlantic sector of the Arctic marine area is covered by several regional bodies with complementary mandates – namely ICES, NAMMCO, NEAFC and the OSPAR Commission – which are increasingly coordinating and cooperating towards integrated, cross-sectoral ecosystem-based ocean management. However, the remainder of the Arctic marine area is not covered by similar coordinating and cooperating bodies, or a single overarching body, to ensure integrated, cross-sectoral ecosystem-based ocean management.

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