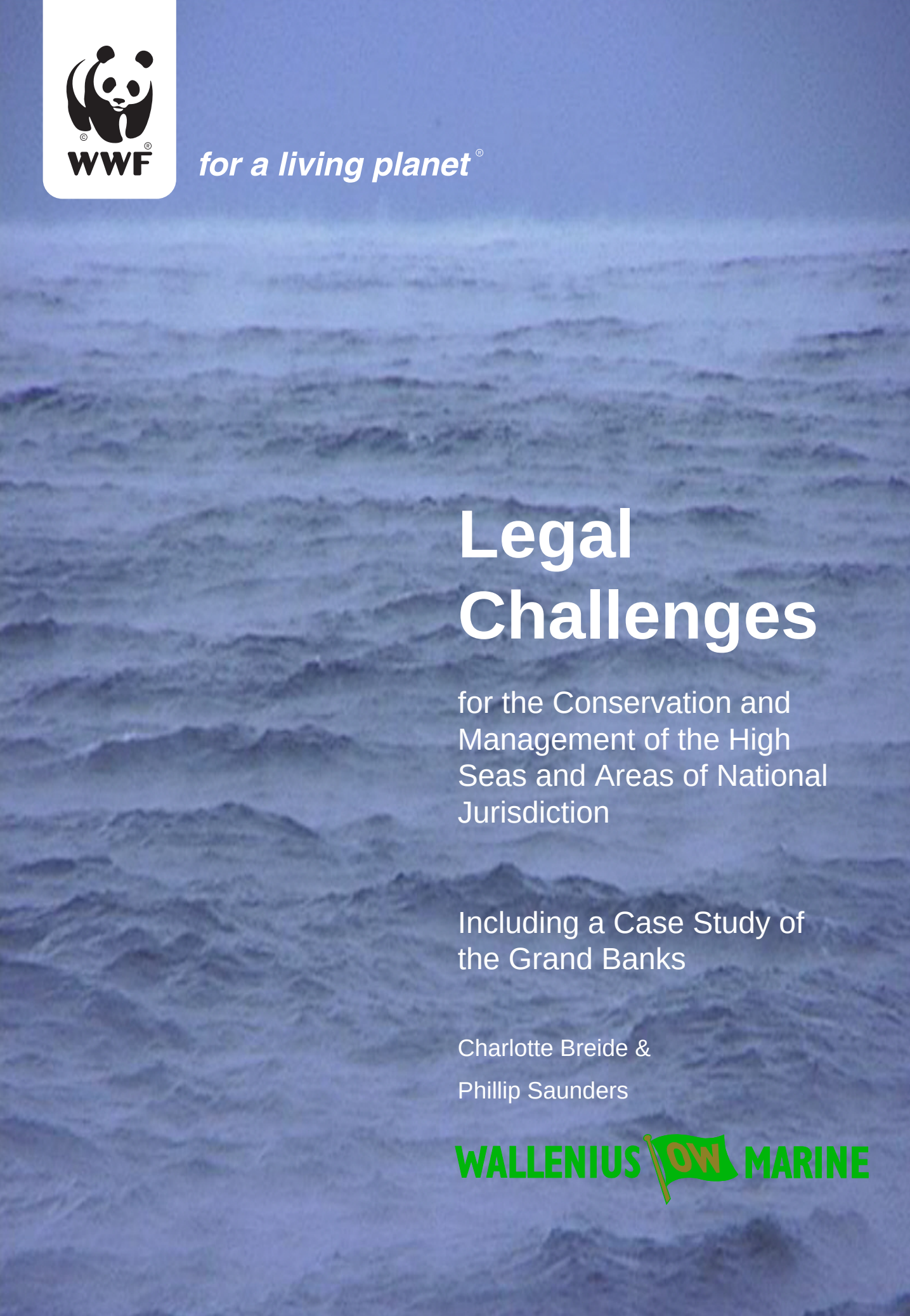

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Legal Challenges

for the Conservation and Management of the High Seas and Areas of National Jurisdiction

Including a Case Study of the Grand Banks

Charlotte Breide &

Phillip Saunders

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2005

This document should be cited as:

Breide, C. and Saunders, P. (2005). Legal challenges for the conservation and management of the high seas and areas of national jurisdiction. WWF International, Gland, Switzerland. 99pp.

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Abstract

The conservation and management of biodiversity in marine areas beyond national jurisdiction is one of the major conservation issues facing the international community. The threats posed by uncontrolled or poorly managed uses of these areas, including high seas fishing, have been well documented, as have the impacts on conservation efforts within adjacent areas of national jurisdiction. A significant element of this challenge is the lack of enforceable legal obligations respecting the conservation and management of the resources of these areas. If conservation measures are to be more than symbolic, they must be supported by an adequate legal infrastructure.

This study focuses on the status of the current international legal regime for the conservation and management in areas of national jurisdiction and the high seas, with a concentration on the latter. The particular situation of the Grand Banks, off the east coast of Canada, is used as a case study. This region encompasses areas within and outside national jurisdiction, and is representative of a number of the problems which affect conservation and management efforts elsewhere, including the following: implementing marine conservation efforts at the interface between areas of national jurisdiction and adjacent high seas; the difficulty of developing *integrated, area-based* conservation strategies, including marine protected areas, outside internal waters and the territorial sea; and the inadequacy of formal legal measures without accompanying institutional and administrative capacities.

A review of the legal status of marine spaces and resources under the law of the sea (in Part 2), taken together with a consideration of specific measures applicable to the high seas (Part 3), provide a summary of the structure of the international law of the sea as it relates to conservation actions and the potential for governmental action on marine biodiversity conservation. A number of significant gaps and implementation difficulties are noted. These include the continued reliance on flag state jurisdiction and consent-based derogations from that principle, and the sectoral nature of much of the current legal regime, with legal instruments based on industries or uses (such as shipping and fishing), an approach that obstructs progress towards integrated and area-based management efforts. The subsequent review of the application of this legal regime on the Grand Banks (Part 4) offers concrete examples of the potential and limitations of the available legal structures.

Proceeding from the analysis of the legal regime in general, and the experience on the Grand Banks in particular, a number of conclusions and recommendations for future action are suggested (Part 5). With respect to area-based initiatives, it is argued that the development of high seas marine protected areas as distinct entities will face a number of legal obstacles under the current legal regime, and that analogous measures, with important conservation outcomes, can be more productively pursued by the creative use of existing legal instruments such as regional fishing agreements and provisions related to the regulation of shipping in vulnerable areas. This will require substantial input, from regional institutions and non-governmental organizations, in the definition of conservation objectives and the coordinated application of these disparate instruments.

The more general development of legal principles for high seas areas is identified as a priority, and a number of strategic issues are highlighted, including the need to focus first on full implementation of existing legal instruments, and to give priority to issues (such as high seas fishing) which are of current, rather than speculative, significance.

Finally, a number of issues respecting practical implementation are set out, including specific areas of action for dealing with high seas fisheries arrangements (particularly at the regional level), and the opportunities for non-governmental organizations to encourage the development of more integrated, cross-sectoral planning approaches at the regional level.

Detail of a sea anemone at a cold-water coral reef off Norway. © WWF-Canon / Erling SVENSEN

Acknowledgements

A number of individuals and organizations provided support and input during the preparation of this study, and the authors and WWF International wish to acknowledge their contributions. In WWF Canada, Dr. Robert Rangeley and his staff at the Atlantic Regional Office in Halifax assisted in the development of the study concept as part of the Grand Banks initiative, and additionally provided invaluable material related to the scientific and technical issues facing the Grand Banks region. At the national office, Toronto, Arlin Hackman and Josh Laughren contributed both financial support and policy input throughout the project. In addition, WWF Canada Board members gave generously of their time for this project. Dr. Arthur May was an invaluable source of encouragement and advice, and the authors drew heavily on his expertise on fisheries management issues. George and Martha Butterfield and Michael and Honor de Pencier were strong supporters of the project from the outset, and were instrumental in drawing it to the attention of a wider audience. Charlotte Mogensen of the WWF European Policy Office, Brussels, provided scientific expertise and introductions to the European Commission.

In Halifax, the Marine and Environmental Law Institute at Dalhousie Law School made available office space and library access, as well as administrative assistance from Lauri MacDougall, and various faculty members assisted in discussion of drafts. Attorney Jay Batongbacal, Esq., Trudeau Scholar and doctoral candidate at Dalhousie Law School, contributed extensively to the document at a number of stages. At the Department of Fisheries and Oceans, Paul Macnab and Glen Herbert of the Oceans and Coastal Management Division provided very helpful comments, especially with respect to the development of Canadian marine protected areas. In St. John's, Mike Warren, Executive Director of the Policy and Planning Branch of the Department of Fisheries and Aquaculture, and Tom Dooley, Director of the Resource Planning and Development Division in the same department, gave of their time and expertise to comment on drafts and provide insight as to the nature of regional concerns respecting the conservation and management of the Grand Banks.

Preliminary results of this study were presented at a Workshop on high seas legal issue held in Canberra, Australia in April 2005, supported by the Government of Australia and WWF Australia. Invaluable feedback and further information obtained at this meeting contributed to the final report. Two individuals were especially responsible for the organization and implementation of this workshop (as well as contributing extensively in their own right): Philip Burgess, Manager (International) at the National Oceans Office, and Margaret Moore of WWF.

A draft of this report was reviewed by Dr. Stuart Kaye, Dean of the Faculty of Law at Wollongong University, and Captain Robin Warner RAN, doctoral candidate at the University of Sydney. Their comments and advice were of immense assistance in the finalization of the study. All errors and omissions are, of course, the sole responsibility of the authors.

Finally, the authors and WWF International would like to acknowledge the generous financial support provided by Wallenius Marine, Stockholm, both for this study and for the high seas legal project at WWF.

Abbreviations and Acronyms

AOI	Areas of Interest
ASPA	Antarctic Specially Protected Areas
CBD	Convention on Biological Diversity
CCAMLR	Convention on the Conservation of Antarctic Marine Living Resources (or Commission for the Conservation of Antarctic Marine Living Resources, where documents so refer
CCSBT	Commission for the Conservation of Southern Bluefin Tuna
CEAA	Canadian Environmental Assessment Act
CEMP	CCAMLR Ecosystem Monitoring Program
CEP	Committee for Environmental Protection
CEPA	Canadian Environmental Protection Act
CITES	Convention on International Trade in Endangered Species of Wild Flora and Fauna
COP	Conference of Parties
DWFNs	Distant Water Fishing Nations
EEZ	Exclusive Economic Zone
ESSIM	Eastern Scotian Shelf Integrated Management
CSA	Canada Shipping Act
EU	European Union
FAO	Food and Agriculture Organization of the UN
GFCM	General Fisheries Commission for the Mediterranean
WCFPC	Commission for the Conservation and Management of Highly Migratory Stocks in the Western and Central Pacific Ocean
HELCOM	Helsinki Commission
HSMPA	High Seas Marine Protected Area
HSTF	High Seas Task Force
IATTC	Inter-American Tropical Tuna Commission
IBSFC	International Baltic Sea Fisheries Commission
ICCAT	International Commission for the Conservation of Atlantic Tuna
ILO	International Labour Organization
IMO	International Maritime Organization
INTERTANKO	International Association of Independent Tanker Owners
IOTC	Indian Ocean Tuna Commission
IPOA	International Plans of Action
ISA	International Seabed Authority
ISPS	International Ship and Port Facility Security
ITLOS	International Tribunal on the Law of the Sea
ITOPF	International Tanker Owners' Pollution Federation
IUCN	International Union for the Conservation of Nature and Natural Resources
IUU	Illegal, Unregulated and Unreported Fishing
IWC	International Whaling Commission
LDC	London Convention (1972)
LOMA	Large Ocean Management Areas
LOS 1982	1982 United Nations Convention on the Law of the Sea

MARPOL	International Convention for the Prevention of Pollution from Ships
MBCA	Migratory Birds Convention Act
MOU	Memorandum of Understanding
MPA	Marine Protected Areas
MSY	Maximum Sustainable Yield
n.m.	Nautical Mile
NAFO	Northwest Atlantic Fisheries Organization
NASCO	North Atlantic Salmon Conservation Organization
NMCA	National Marine Conservation Areas
NEAFC	Northeast Atlantic Fisheries Commission
NGO	Non-Governmental Organization
OECD	Organization for Economic Cooperation and Development
OSPAR	Convention for the Protection of the Marine Environment of the North-East Atlantic (1992)
PSSA	Particularly Sensitive Sea Areas
RFMO	Regional Fisheries Management Organization
SARA	Species at Risk Act
SC	Scientific Committee (CCAMLR)
SCAR	Scientific Committee for Antarctic Research (CCAMLR)
SEAFO	South-East Atlantic Fisheries Organization
SEAFPO	Southeast Pacific Fisheries Organization
SPA	Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean
SPAMI	Specially Protected Areas of Mediterranean Interest
SPMA	Antarctic Specially Managed Areas
SUA	Convention For The Suppression Of Unlawful Acts Of Violence Against The Safety Of Maritime Navigation
TAC	Total Allowable Catch
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNCLOS	UN Conference on the Law of the Sea (also UN Convention on the Law of the Sea, where cited as such)
UNCTAD	UN Conference on Trade and Development
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFSA	United Nations Fish Stocks Agreement
UNICPOLOS	UN United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea
WHC	World Heritage Convention
WWF	The global conservation organization

1 Introduction

The conservation and management of biodiversity in marine areas beyond national jurisdiction has been well-documented as one of the major conservation challenges currently facing the international community.

Numerous previous studies have highlighted both the important ecological values represented in high seas areas, and the significant threats to those values posed by uncontrolled or poorly controlled uses, including high seas fishing and shipping.[1] At least eleven categories of significant features, resources, habitats and biological communities were identified in a 2001 WWF/IUCN study:

- hydrothermal vents
- seamounts
- deep-sea trenches
- deep-sea corals
- polymetallic nodules
- cold seeps & "pockmarks"
- gas hydrates
- submarine canyons
- seabirds
- cetaceans
- high seas fish stocks[2]

There has also been substantial work done to explore the nature of the current international legal regime for the regulation of high seas activities.[3] While a number of advances have been made with respect to the availability of legal instruments applicable to the high seas, it is clear that the paucity of *enforceable* legal obligations respecting these areas remains a significant gap in the international regime for marine environmental protection, an issue that has been a central concern of the international community, including WWF and other organizations, for some time. For conservation actions to be more than symbolic, they must be supported by a legal infrastructure adequate to the task.

This study arose out of a specific request to identify the applicable legal regime governing conservation measures on the Grand Banks off the East Coast of Canada, and in particular the legal tools which might be available to further conservation objectives in that broad marine area. A preliminary review of the region and its conservation challenges (which are discussed further in section 4.1, below) highlighted a number of central characteristics of direct significance to the legal regime. First, the area encompasses multiple uses and users, each presenting unique threats to the rich biodiversity and habitat in the region.

Second, the geographic scope of the region, and the multiple uses which exist within it, mean that a number of different legal regimes will be engaged in any comprehensive conservation efforts. These include different *spatial* regimes (including Canadian jurisdictional zones and the high seas), as well as different *sectoral* regimes governing particular uses such as fishing and shipping (both within the Canadian zones, via national legislation, and on the high seas through international agreements).

Third, it is apparent that it will be difficult or impossible to create an effective conservation regime while operating entirely within the confines of any one jurisdictional zone. The

interrelated nature of the ecosystem, and the fact that the various industrial users range across zones, means that action will be required inside and outside national jurisdiction.

These legal implications which arise in the case of the Grand Banks are really reflective of three general issues which are by no means confined to this region. The first is the problem of implementing marine conservation efforts at the interface between areas of national jurisdiction and adjacent high seas. The long-running saga of straddling stocks is only the most high-profile example of the general difficulty encountered in achieving consistent and effective conservation and management measures for a single resource or ecosystem, when confronted with biologically meaningless jurisdictional boundaries. From a coastal state perspective, of course, the primary problem is seen as the lack of any serious management measures once outside the area of national jurisdiction, and it should be remembered that this problem is really a subset of the more general problem of a lack of effective conservation measures on the high seas, as referred to above. The conservation and management of biodiversity in areas beyond national jurisdiction has been well-documented as one of the major conservation challenges currently facing states.[4]

The second general problem represented by the Grand Banks situation is the difficulty encountered in the development and application of *integrated, area-based* conservation strategies, whether pursued via designation of marine protected areas (MPAs) or other means, in areas outside the internal and territorial waters of coastal states, a difficulty which has been noted by a number of observers:

> Furthermore, the effectiveness of environmental measures depends on their observance by all States, including third States. This particular issue is of little importance in the case of marine protected areas established within territorial waters, where any measure adopted by the coastal State in its sovereignty must be observed by all other States and can be enforced also in respect of foreign vessels, save the right of innocent passage. It is self-evident that major problems arise for protected areas located in waters beyond territorial seas, particularly within exclusive economic zones (EEZs) or on high seas.[5]

As will be argued in the following sections, the structure of the law of the sea tends to dictate that conservation measures are taken on a sectoral basis, whether dealing with shipping, fishing, hydrocarbon exploration or other activities. The limitations on coastal state jurisdiction in the 200 nautical mile (n.m.) Exclusive Economic Zone (EEZ), and the absence of any one unified institutional authority or legal instrument on the high seas, make it difficult to achieve broadly enforceable, integrated protection of a particular *area* of the seas, as opposed to regulation of separate *activities* in those areas.

Third, the experience in this region clearly indicates that the mere presence of formal legal measures, without the institutional and administrative capacities to undertake implementation, will not be sufficient to achieve conservation measures. The adoption of legal measures must be accompanied by the identification of a responsible institution (whether the coastal state or an international body) with the means (including, the monitoring and enforcement capabilities) to ensure compliance. As will be seen in the succeeding sections, this will be a particular challenge in high seas areas.

1.1 Purpose and Scope of This Study

Given the fact that the Grand Banks region provides a useful example of these broader issues of legal concern, it offers the opportunity to focus on a concrete example of the general legal problems which have been identified, but not yet solved, at a global level, and to move from the abstract to deal with a number of practical questions. This approach recognizes that legal regimes, as with conservation challenges, vary from region to region, and country to country, within the

general structure imposed by international law. As a result, any examination of the Grand Banks situation must proceed from an understanding both of the global legal regime, and the particularities of Canadian and regional legal structures. At both levels, similar questions arise: What legal tools are currently available to address the identified conservation challenges, in national jurisdiction and high seas areas? Where are the gaps and failings, and how might they be dealt with? It is also hoped that a consideration of these questions in the setting of the Grand Banks region will offer some guidance as to how organizations such as WWF might structure its advocacy efforts in other regions. That is, there may be lessons emerging from this particular case as to the approaches which might be used in developing programmes for similar areas of concern in other vulnerable marine regions.

It should be noted that the initial request for this study, arising out of a broader WWF conservation initiative on the Grand Banks, focused in part on the legal potential for a Marine Protected Area (MPA) or analogous measures covering areas of the Canadian EEZ and the adjacent high seas (encompassing portions of a significant feature known as the Southeast Shoal).[6] At the international level, the enhanced use of MPAs and similar techniques has been advocated for a number of years - the development of a global, representative network of MPAs, both inside and outside national jurisdiction, has been a long-term priority of many interested parties, including states, WWF and other organizations.[7] While there has been some success in the creation of MPAs within national jurisdiction, however, progress on the high seas has been far less encouraging. As will be seen in Part 3, the development of legal principles has taken place in a disconnected manner, relying heavily on inferences drawn from legal instruments which are not specific in their focus.[8] In the few cases where a number of states have laid the framework for development of high seas protected areas, albeit binding only upon themselves, the practical progress towards actual implementation of such areas has been minimal.

With respect to the present case study, as the Grand Banks initiative evolved it came to be concerned less with the specific issue of MPAs, and more with the establishment of conservation objectives and strategies for the area. Accordingly, this *legal* study is not limited to the application of one type of measure, such as protected areas, on the Grand Banks; but rather extends to include the availability of conservation and management tools in general, and the same approach has been taken to the global aspects of the study. Nonetheless, given the particular interest in the use of protected area measures, section 3.2 does explore this issue in more detail, and it is specifically addressed in the recommendations for future action.

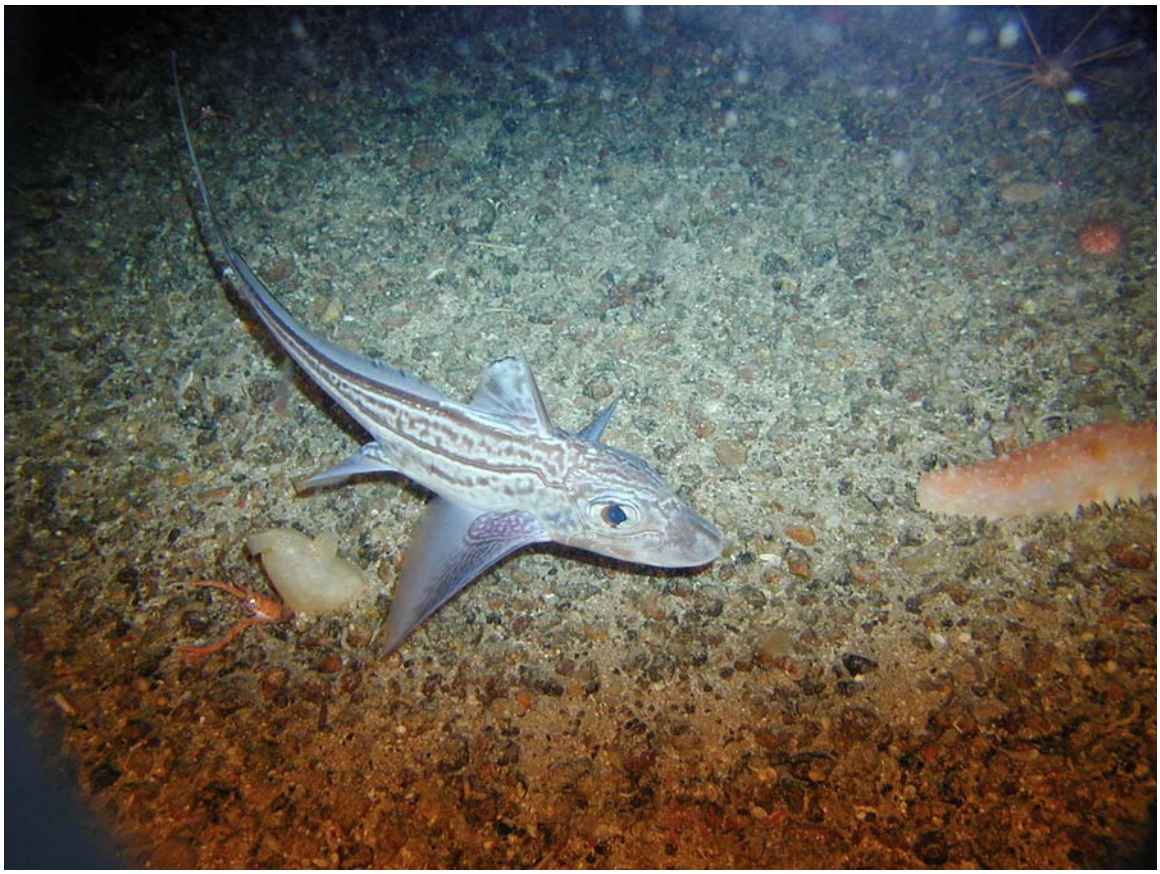
There are two presumptions underlying this study, both derived from the particular problems facing the Grand Banks area, which should be stated here. First, it is presumed that there is a need for action, sooner rather than later. The conservation challenges on the Grand Banks are neither hypothetical nor incipient – they are real, and they are of significant magnitude. Second, any conservation approach to this region must take into account the fact that there are and will continue to be dissenting states, and that any measures should, if possible, be *enforceable* against non-consenting states. In later sections some attention will be given to long term development of international law at the global level to support the implementation of conservation measures, including high seas protected areas, but the primary focus with respect to this case study dictates that long term solutions may not be solutions at all.

The broad questions set out above are addressed in this study under the following headings. Part 2 considers the legal status of marine areas and their natural resources, primarily as set out in the *1982 United Nations Convention on the Law of the Sea (*LOS 1982*)*,[9] and with particular reference to environmental protection. This includes consideration of the various zones of coastal state jurisdiction as well as areas beyond national jurisdiction (both the high seas and the deep seabed). Part 3 addresses the impact of other legal instruments, whether separate from or building upon the structure of the LOS 1982, which extend or modify the nature of jurisdictional

entitlements with respect to areas beyond national jurisdiction, including a review of measures which have been suggested as the basis for declaration of MPAs or similar types of protection. Considered together, Parts 2 and 3 provide a summary of the general structure of the international law of the sea as it relates to conservation actions and the potential for governmental action on marine biodiversity conservation.

Part 4 sets out the particular case of the Grand Banks, beginning with a general description of the conservation challenges posed by the region, and turning next to an outline of the legal regime applicable to the relevant area. This requires consideration of international law as it has been applied regionally, and the laws and regulations of Canada, as they are applied in its maritime zones of jurisdiction. The availability of necessary legal tools is assessed, and recommendations made for a possible way forward.

Section 5 turns back to the identification of gaps and strategies relevant to high seas issues at the global level, with a focus on the implications of this case study for the general activities of WWF in pursuit of enhanced measures for the conservation of high seas marine biodiversity.



Deep sea fish species of the genus *Chimera* at 400 meters, image taken by ROV in the North Atlantic.

2 The Legal Status of Marine Space and Resources under the Law of the Sea 1982

The LOS 1982 is the foundational legal instrument which provides the starting point for any discussion of the rights and responsibilities of states with respect to the oceans and it its resources, whether within national jurisdiction or on the high seas. It came into force in 1994, and at time of writing 148 states and other entities are parties – an extraordinarily high rate of participation. While some of its provisions may be seen as "mere" treaty obligations, binding only on states party to the convention, much of its content (particularly with respect to zones of jurisdiction and issues such as high seas navigational rights) is accepted as the best available statement of customary international law, binding on states in general. In this sense, it has come to be regarded as the "constitution for the oceans".[10] This "constitution" is by no means static, and the second section in this Part addresses the major additions and modifications which must be considered, especially with respect to the high seas. It does still provide, however, the general legal architecture within which other instruments operate, and, as will be seen below, many of those instruments specifically state that they are to be interpreted and applied in a manner consistent with the provisions of the LOS 1982.

The defining characteristic of the Convention is the extent to which it represents a carefully crafted compromise between the traditionally dominant concept of freedom of the high seas and the extension of coastal state jurisdiction, a pattern that was developing in state practice even as the Convention was being negotiated. This compromise is reflected in two general ways: the extent of coastal state jurisdiction over maritime zones is carefully defined and limited in important respects; and high seas freedoms are for the most part enshrined and protected for areas beyond national jurisdiction.

It should also be noted that the Convention was, at the time, the most ambitious example in international law of an attempt to *comprehensively* define management principles and institutional structures for the oceans, crossing over numerous sectoral activities (such as fishing, shipping and mining). The preamble to the Convention suggested a need to go beyond simply bringing the various ocean sectors together in one document, and recognized that "problems of ocean space are closely interrelated and need to be considered as a whole". The desire for such a broad, integrated approach had its limits, however, and in fact much of the Convention is devoted to dividing marine space into separate and distinct spatial jurisdictional regimes,[11] whether national or international, and it is here that any examination of the Convention must begin.

2.1 Zones of National Jurisdiction

The LOS 1982 provides a comprehensive and authoritative statement of the jurisdictional entitlements of coastal states with respect to the waters and seabed adjacent to their coasts, in the following zones: internal waters; the territorial sea; the contiguous zone; the exclusive economic zone (EEZ); the continental shelf; and archipelagic waters. These entitlements, which are shown graphically in Figure 1, are summarized in the following sections, although it should of course be noted that this is by no means a complete review of all aspects of these jurisdictional zones.

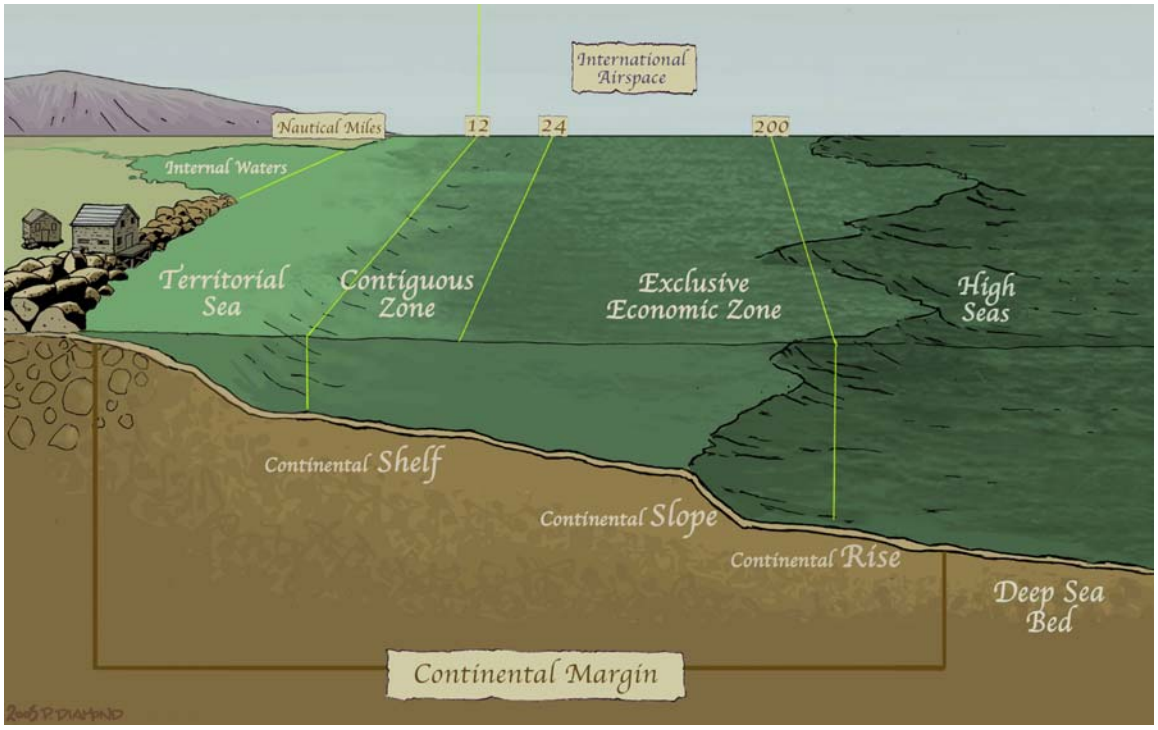


Figure 1: Jurisdictional zones under the Law of the Sea.
Illustration by P. Diamond

2.1.1 Internal Waters

Marine waters which are landward of the baselines from which the territorial sea is measured are considered to be within the territory of the state, and subject to its sovereignty in the same manner as the landmass. [12] Such waters, which would include ports and harbours, may also extend in some cases to so-called "historic" waters claims – areas which may be beyond the limits of acceptable baselines, but over which the coastal state may claim special interests and a longstanding exertion of sovereign control. While there may be some limited exceptions in customary and conventional law which affect the powers of coastal states in these areas,[13] in general these waters can be considered as equivalent to the landmass of the state and subject to its full sovereignty.

It should also be noted that, where a ship is voluntarily in port, a state acquires a degree of jurisdiction for purposes of *enforcement* of internationally agreed pollution prevention standards, even where the violations occurred outside of that state's territory or maritime zones. This jurisdiction is set out in Article 218(1):

> 218(1). When a vessel is voluntarily within a port or at an off-shore terminal of a State, that State may undertake investigations and, where the evidence so warrants, institute proceedings in respect of any discharge from that vessel outside the internal waters, territorial sea or exclusive economic zone of that State in violation of applicable international rules and standards established through the competent international organization or general diplomatic conference.

2.1.2 Territorial Sea

The next zone of coastal state jurisdiction, moving seaward, is the territorial sea, a zone with a maximum breadth of 12 n.m., measured from the coastal baselines.[14] Within the territorial sea, the coastal state exercises sovereignty over the seabed, subsoil, water column and airspace, with one important exception – ships of other states may exercise the right of innocent passage through the waters of the territorial sea to and from adjacent areas of high seas or EEZ, when engaged in continuous and expeditious passage. Innocent passage is defined in the LOS 1982, [15] and in customary law, but two aspects of this doctrine are most relevant to this study. First, innocent passage does not extend to the exploitation of the living or non-living resources of the territorial sea.[16] Second, while the coastal state has jurisdiction over environmental protection in the zone,[17] there are specific provisions which define the extent of that jurisdiction with respect to shipping.

As a starting point, acts of "wilful and serious pollution" contrary to the Convention are deemed to be outside the scope of innocent passage.[18] For incidents which do not meet the standard of "wilful and serious", the ship is still in innocent passage, but coastal state laws respecting environmental protection and pollution prevention may be applied to it.[19] These laws shall not, however, "apply to the design, construction, manning or equipment of foreign ships unless they are giving effect to generally accepted international rules or standards."[20] Furthermore, if a discharge contrary to coastal state laws occurs during passage (and assuming the ship is not voluntarily within a port, as addressed above), the ability of the coastal state to *enforce* its laws respecting pollution incidents in the territorial sea is limited, with respect to foreign vessels, by Art. 220 (2) of the LOS 1982. This provision allows the coastal state to "undertake physical inspection of the vessel" and to institute proceedings under its laws, but requires that the coastal state first have "clear grounds for believing that [*the vessel]*… has, during its passage … violated laws and regulations of that State adopted in accordance with this Convention or applicable international rules and standards for the prevention, reduction and control of pollution from vessels…".

The restriction here is twofold: where the standards being imposed are domestic, they must have been "adopted in accordance with the Convention or applicable international rules and standards"; and the interference with innocent passage must be supported by evidence rising to the level of "clear grounds" for believing a violation has occurred – routine preventative inspections, or acting on mere suspicion, would not be sufficient.

2.1.3 Contiguous Zone

Seaward of the outer limits of the territorial sea, the coastal state may claim a contiguous zone of 12 n.m., within which it may act to prevent or punish breaches of its fiscal, customs, immigration and sanitary laws which have occurred or may occur in the territorial sea or territory of the state.[21] While this jurisdiction could conceivably be used to deal with matters such as introduction of alien species through ballast water, under the rubric of sanitary control, the primary uses of this zone by states have not been directed to conservation, and as such the contiguous zone will not be considered further in this study.

2.1.4 Exclusive Economic Zone (EEZ)

The EEZ is the most significant jurisdictional innovation arising from the development of the law of the sea in recent decades, both in customary international law and in the LOS 1982. Coastal states may claim an EEZ to a maximum breadth of 200 n.m. seaward of the baselines from which the territorial sea is measured. Within the EEZ, the coastal state has a number of different

jurisdictional entitlements and corresponding obligations, which are primarily addressed in Part V of the LOS 1982, beginning with Article 55:

> 55. The exclusive economic zone is an area beyond and adjacent to the territorial sea, subject to the specific legal regime established in this Part, under which the rights and jurisdiction of the coastal State and the rights and freedoms of other States are governed by the relevant provisions of this Convention.

The essential point arising from Article 55 is that the EEZ is a "specific legal regime" within which the rights, obligations and freedoms of *both* coastal states and other states are defined by the Convention. There is no *general* presumption of territorial or quasi-territorial rights in the coastal state, except to the extent that these can be found in the Convention (see below).

The basic jurisdictional entitlements of the coastal state are set out in Art. 56 (1), and vary depending upon the resource or use involved:

> 56(1). In the exclusive economic zone, the coastal State has:
>
> (a) sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters superjacent to the seabed and of the seabed and its subsoil, and with regard to other activities for the economic exploitation and exploration of the zone, such as the production of energy from the water, currents and winds;
>
> (b) jurisdiction as provided for in the relevant provisions of this Convention with regard to:
>
> (i) the establishment and use of artificial islands, installations and structures;
>
> (ii) marine scientific research;
>
> (iii) the protection and preservation of the marine environment;
>
> (c) other rights and duties provided for in this Convention.

If these provisions are considered in turn, a hierarchy of entitlements is apparent. With respect to the living and non-living resources of the subsoil, seabed and the superjacent water column, the coastal state has "sovereign rights for the purpose of exploring, exploiting, conserving and managing" those resources. These sovereign rights extend as well to any other activities related to the economic exploration and exploitation of the zone. Sovereign rights are clearly not sovereignty, but they do signify a general entitlement to regulate for the enumerated purposes, and it is here that the Convention comes closest to a presumption in favour of coastal state rights, in the event of any ambiguity. The practical effect is to give relatively complete control over these matters, particularly for purposes of conservation and management of living resources, to the coastal state, a view which is reinforced by other provisions which delineate the scope of permissible regulation in very broad terms.[22] Nonetheless, there are provisions which place duties on coastal states as to the manner in which they exercise their management rights,[23] and according certain limited rights respecting living resources to other states.[24] The EEZ regime establishes particular rules applicable to a number of categories of stocks which involve necessary interactions with high seas rights of other states. These include: straddling stocks (which occur both within the EEZ and adjacent high seas areas); highly migratory species; and anadromous and catadromous species. Because of the high seas implications, these provisions are addressed in connection with high seas management, below.

Jurisdiction over marine mammals within the EEZ clearly falls within the competence of the coastal state. For greater clarity, Article 65 provides that coastal states may regulate "more strictly" than provided by the general provisions for living resources, and preserves the role of competent international organizations (in this case the International Whaling Commission – IWC). The high seas implications of this provision are addressed below.

For the matters referred to in Article 56(1)(b), including "the protection and preservation of the marine environment", the entitlement of the coastal state is limited to the lesser form of "jurisdiction as provided for in the relevant provisions of this Convention". These "relevant provisions" are found in Part XII of the Convention, and give the coastal state defined jurisdiction to legislate and enforce with respect to the following matters: dumping (defined as the "deliberate disposal of waste at sea" from vessels, aircraft and man-made structures[25]); pollution resulting from exploration and exploitation of the sea-bed; and pollution resulting from shipping. It is not necessary here to consider the dumping and seabed provisions in full detail, but the general effect can be summarized as follows:

- **Dumping** - The coastal state has not only the right, but the *duty* to "adopt laws and regulations to prevent, reduce and control pollution of the marine environment by dumping," and no dumping shall take place without the "express prior approval of the coastal State". In addition, states are to "endeavour" to establish global and regional rules and standards, and national laws are to be "no less effective" than the global standards.[26] The coastal state (as well as the flag state, and port states where loading occurs) has full powers to enforce where its laws and regulations are consistent with international standards.[27]

- **Seabed Activities** - The coastal state has a duty to adopt laws and regulations which "shall be no less effective than international rules, standards and recommended practices and procedures," and the general duty to further develop international standards also applies.[28] Both the duty and the jurisdiction to enforce the applicable rules fall to the coastal state.[29]

The extent of coastal state jurisdiction over shipping in the EEZ is more limited, and the enforcement provisions in particular are more carefully defined. As a starting point, of course, it is necessary to recall the high seas freedoms (from Art. 87), including that of navigation, which carry over to the EEZ by virtue of Art. 58(1):

> 58(1) In the exclusive economic zone, all States, whether coastal or land-locked, enjoy, subject to the relevant provisions of this Convention, the freedoms referred to in article 87 navigation and overflight and of the laying of submarine cables and pipelines, and other internationally lawful uses of the sea related to these freedoms, such as those associated with the operation of ships, aircraft and submarine cables and pipelines, and compatible with the other provisions of this Convention.

The general structure of the legislative jurisdiction over vessel-source pollution is summarized below (recalling, of course, that flag states retain both the power and the duty to legislate with respect to their own ships wherever they are):

- **General Legislative Jurisdiction** - Within the EEZ, the coastal state may, for the purposes of enforcement against foreign flag vessels, "adopt laws and regulations for the prevention, reduction and control of pollution from vessels conforming to and giving effect to generally accepted international rules and standards established through the competent international organization or general

diplomatic conference."[30] Thus, for the purposes of enforcing against the vessels of other states, the coastal state is generally limited to laws and regulations which accord with accepted international rules.[31]

- **Legislative Powers for Special Areas** – Article 211(6) provides that, where special circumstances dictate that the general rules are inadequate for the protection of a "particular, clearly defined area" of an EEZ, the coastal state may adopt laws and regulation which either give effect to international rules applicable to "special areas", or additional rules and measures, where justified. In either case, the coastal state must go through a defined process of submission and approval with the competent international organization (the International Maritime Organization - IMO). It should also be noted that under IMO, there are other forms of special area protection which are not restricted to EEZ areas – these are addressed below in section 3.1.

- **Legislative Powers for Ice-Covered Waters** - Article 234 provides that coastal states have the right to "adopt and enforce" laws and regulations respecting control of vessel source marine pollution in ice-covered areas within the EEZ, where "particularly severe climatic conditions and the presence of ice covering such areas for most of the year create obstructions or exceptional hazards to navigation, and pollution of the marine environment could cause major harm to or irreversible disturbance of the ecological balance."[32]

The jurisdiction of the coastal state to *enforce* its pollution legislation against foreign flag ships in the EEZ is subject to special limitations, beyond the significant general requirement (stated above) that enforcement in the EEZ must be pursuant to laws and regulations which are in accord with international standards. This is indicative of the concern with which this issue was regarded by the major shipping powers during the negotiation of the Convention. The structure of the specific enforcement provisions, summarized here, limits the potential for robust coastal state enforcement by application of a graduated approach to enforcement jurisdiction, depending on the nature of the evidence and the severity of the incident:

- Where a coastal state has "clear grounds" for believing that a vessel navigating in the EEZ has violated international rules and standards, or national laws giving effect to such standards, the coastal state may "require the vessel to give information regarding its identity and port of registry, its last and its next port of call and other relevant information required to establish whether a violation has occurred."[33]

- The coastal state may "undertake physical inspection of the vessel for matters relating to the violation" where there are "clear grounds" for believing that there has been a violation (as above) "resulting in a *substantial discharge* causing or threatening *significant pollution* of the marine environment" (emphasis added), or "if the information supplied by the vessel is manifestly at variance with the evident factual situation" and if the circumstances of the case justify such inspection.[34]

- The coastal state may detain a vessel and institute proceedings where it has "clear objective evidence" that there has been a violation "resulting in a discharge causing major damage or threat of major damage to the coastline or related interests of the coastal State, or to any resources of its territorial sea or exclusive economic zone".[35]

These provisions do not mean that a vessel cannot be prosecuted for the applicable violations, but the clear intention is to rely to a great extent on flag state enforcement with respect to violations committed by its vessels in the EEZs of other states, and indeed the Convention provides for the responsibility of flag states to do so when presented with the appropriate evidence. In the United States, under the Oil Pollution Act of 1990,[36] a stringent approach has been adopted and there has been a successful record of prosecution of pollution offences. Improved monitoring, control and surveillance measures to support legal actions include testing or "tagging" of discharges. In contrast, Canadian legislation has been comparatively ineffective, in terms of both prosecution rates and penalties upon conviction.[37]

It should also be noted that in cases of pollution from marine casualties, the coastal state has greater powers to intervene beyond national jurisdiction. Prior to the development of the EEZ, the 1969 International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties (Intervention Convention)[38] provided for the right of coastal states to take action respecting vessels on the high seas where oil pollution threatened serious damage to their coasts or resources. A 1973 protocol extended the effect of the Convention to incidents involving certain substances other than oil.[39] Article 221 of the LOS 1982 made it clear that this right was not affected by the introduction of the EEZ. In any event, the areas of greatest concern for pollution from casualties, from an operational perspective, would typically be closer to the coast. There has been little by way of efforts to ensure investigation and enforcement of violations of the relevant international agreement (MARPOL 73/78 – see below) in areas of the high seas.[40]

2.1.5 Continental Shelf

The continental shelf of a coastal state, for legal purposes, is defined by Art. 76(1) of the Convention as comprising

> …the seabed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance.

In any cases where the continental shelf extends beyond the 200 n.m. limit, therefore, the outer edge of the continental margin is the potential outer limit, and is defined as the "seabed and subsoil of the shelf, the slope and the rise", but not including the "deep ocean floor with its oceanic ridges."[41] This concept is, however, given practical definition by Art. 76(4)-(7), which applies a complicated set of criteria based on geology, geomorphology and distance to limit the legitimate outer extent of such claims.[42]

The substantive nature of coastal state jurisdiction over the shelf is more limited than its entitlements with respect to the EEZ. The coastal state has "sovereign rights" over the shelf, but *only* for the "purpose of exploring it and exploiting its natural resources."[43] The natural resources of the shelf are defined as "mineral and other non-living resources of the seabed and subsoil" as well as sedentary species, defined as "organisms which, at the harvestable stage, either are immobile on or under the seabed or are unable to move except in constant physical contact with the seabed or the subsoil."[44]

There are a few aspects of this jurisdictional entitlement which are of particular relevance here. First, the coastal state's jurisdiction does not extend to the water column, except to the extent necessary for the conduct of seabed activities. Otherwise, the legal status of the waters is

unaffected, as confirmed in Article 78, meaning that they would be for all other purposes part of the high seas and beyond the jurisdiction of the coastal state:

> 78(1). The rights of the coastal State over the continental shelf do not affect the legal status of the superjacent waters or of the air space above those waters.
>
> (2). The exercise of the rights of the coastal State over the continental shelf must not infringe or result in any unjustifiable interference with navigation and other rights and freedoms of other States as provided for in this Convention.

Second, while the coastal state has duties respecting the environmental impacts of seabed activities, it has no general jurisdiction over the protection or conservation of the marine environment of the seabed and subsoil of the shelf. The jurisdiction over sedentary species is the only aspect of its jurisdiction which extends to living resources, and even that is limited to jurisdiction for the purposes of "exploring and exploiting" those species.[45] Third, all states have rights to lay pipelines and cables on the shelf, as stated in Article 79, subject to a coastal state right to consent to the routing of pipelines.

2.1.6 Archipelagic Waters

Archipelagic waters are a special category of waters, created in cases where an archipelagic state (limited to states comprised entirely of islands) can draw straight archipelagic baselines joining the outermost points of the outermost islands and drying reefs of an archipelago (which may or may not comprise the entire state), subject to a number of conditions prescribed in Art. 47 of the Convention.[46] Archipelagic waters fall under the sovereignty of the archipelagic state, regardless of their distance from the coast, as long as they are enclosed within straight archipelagic baselines, and subject to the rights of innocent passage and a special form of passage rights known as archipelagic sea lanes passage, through designated lanes for international navigation.

It is possible that, depending on the configuration of the archipelago and the distance between the islands, the drawing of archipelagic baselines may encompass areas of the sea which would formerly have been high seas prior to the introduction of the archipelagic regime. Since those waters would be under the sovereignty of the archipelagic state and are not considered as high seas, the state may exercise full control and management jurisdiction over them, including full environmental jurisdiction, to the extent that rights of navigation granted to other states are not impeded.

2.1.7 Summary and Conclusions

The preceding examination of the general nature of coastal state jurisdiction under the law of the sea, albeit brief, does highlight at least four characteristics of direct relevance to the ability of a coastal state to apply effective conservation measures in the waters adjacent to its coast:

1. It is essential to remember that the broad structure of the regime provides for both *rights and responsibilities*. Coastal states have a number of rights to exploit the resources of the various zones, and to carry out a range of management tasks with respect to those zones. At the same time, they have a number of duties that must be fulfilled. These include a number of conservation–related duties such as protection and preservation of the marine environment from various threats, or the duty to manage living resources in a sustainable manner. Many of the duties, however, are focused on respect for the rights of other states in the different zones, whether through the (largely unenforceable) requirements for

allowing access to surplus fish stocks, or the more concrete duties to respect and avoid interference with navigation rights of other states.

2. It must be recognized that the nature of the coastal state's jurisdiction, once beyond the territorial sea, is limited in scope and functional and nature. That is, the coastal state is accorded *sovereign rights* or jurisdiction over certain resources and activities in the EEZ and on the shelf, tied to particular uses and purposes. It is not given any general territorial *sovereignty* over these areas which it might use to develop and extend new approaches to the conservation of marine resources. With respect to environmental protection, even where jurisdiction has been granted to the coastal state, it is not a broad plenary jurisdiction within which it can legislate for any measure it wishes. Rather, it is environmental jurisdiction only "as provided" in the Convention. Given that the Convention structures the jurisdiction in this area on a sectoral basis, this means that the power of a coastal state to impose broad, integrated measures of protection for a specific area may be hampered.
3. The distinction between legislative and enforcement jurisdiction is significant, especially for the EEZ. Even where the coastal state has the power to legislate (a power which may itself be limited, for example, by a requirement to comply with international standards), it may not have full power to enforce that legislation against the vessels and nationals of other states. This is particularly evident in the provisions dealing with navigation in the EEZ, as discussed above.
4. It is important to recognize the role played by flag state enforcement, and the corresponding flag state responsibility to ensure enforcement, for matters relating to vessels navigating in the EEZ of coastal states. Where flag state responsibility is not pursued in good faith, it may be difficult for coastal states to adequately enforce environmental protection measures impinging on navigation within its EEZ.

2.2 Areas Beyond National Jurisdiction

The LOS 1982 also addresses the status of ocean areas beyond the jurisdiction of any coastal state, under two categories: high seas, which are dealt with in this section; and the Area, defined as the seabed beyond national jurisdiction, which is addressed below.

2.2.1 High Seas

Legal Status of the High Seas

Part VII of the Convention deals with the status of the high seas, defined as follows in Art. 86:

> 86. The provisions of this Part apply to all parts of the sea that are not included in the exclusive economic zone, in the territorial sea or in the internal waters of a State, or in the archipelagic waters of an archipelagic State….

On the high seas, which by the definition in Art. 86 includes the water column over the extended continental shelf beyond 200 n.m., all states may invoke the six high seas freedoms, as specified in Art. 87(1):

> 87(1) The high seas are open to all States, whether coastal or land-locked. Freedom of the high seas is exercised under the conditions laid down by this Convention and by other rules of international law. It comprises, *inter alia*, both for coastal and land-locked States:

(a) freedom of navigation;

(b) freedom of overflight;

(c) freedom to lay submarine cables and pipelines, subject to Part VI; [*note – continental shelf provisions, supra*]

(d) freedom to construct artificial islands and other installations permitted under international law, subject to Part VI;

(e) freedom of fishing, subject to the conditions laid down in section 2;

(f) freedom of scientific research, subject to Parts VI and XIII.

It should be noted that this is not an exhaustive list (as indicated by the use of *"inter alia"* in the preambular paragraph), and activities such as bioprospecting could be added, or perhaps included under another use such as marine scientific research. For our purposes here, however, it is the freedoms of navigation and fishing that are the most significant in terms of their potential environmental impact. Neither of these freedoms is absolute, and the Convention itself specifies a number of duties incumbent upon flag states with respect to vessels flying their flag, as well as certain jurisdictional entitlements for coastal states.

Duties of General Effect

A number of environmental duties found in the Convention are of general effect, and apply as well to activities on the high seas. These include the obligations to "protect and preserve the marine environment", found in Art. 192, and to "take, individually or jointly as appropriate, all measures consistent with this Convention that are necessary to prevent, reduce and control pollution of the marine environment from any source", in Art. 194. Given their significance to the further development of high seas obligations, these will be addressed further under section 2.3.

Provisions Respecting Living Resources of High Seas

The Convention, in Part VII, section 2, imposes a number of duties on flag states with respect to control of their vessels fishing on the high seas. These include, *inter alia*, the following:

- Under Art. 117, all states have a duty to "take, or to cooperate with other States in taking, such measures for their respective nationals as may be necessary for the conservation of the living resources of the high seas."

- Art. 118 provides that states "shall cooperate with each other in the conservation and management of living resources in the areas of the high seas", and that states exploiting the same resources or resources in the same area "shall enter into negotiations with a view to taking the measures necessary for the conservation of the living resources concerned", and establish regional or sub-regional organizations to do so.

- Art. 119 specifies that states shall take measures to manage high seas resources so as to "maintain or restore populations of harvested species at levels which can produce the maximum sustainable yield, as qualified by relevant environmental and economic factors" and encourage data sharing via international organizations.

More specific obligations and entitlements are set out with respect to the following categories of living resources which may spend part of their life cycle in high seas areas: straddling stocks and

highly migratory species; anadromous and catadromous species; and marine mammals. As was noted earlier, the relevant provisions have implications both for the high seas and for jurisdiction within the EEZ.

Straddling Stocks and Highly Migratory Species

The Convention provides special rules for particular species that may be found within the EEZs of two or more coastal states (joint or shared stocks), or within the coastal state's EEZ and the high seas areas beyond and adjacent to it (straddling stocks). In cases of shared stocks, states are obligated to cooperate with each other and agree upon conservation measures through appropriate regional or sub-regional organizations. For straddling stocks, coastal states and states fishing for such stocks on the high seas are to seek to agree on measures in a similar manner:

> 65(1). Where the same stock or stocks of associated species occur within the exclusive economic zones of two or more coastal States, these States shall seek, either directly or through appropriate sub-regional or regional organizations, to agree upon the measures necessary to coordinate and ensure the conservation and development of such stocks without prejudice to the other provisions of this Part.2. Where the same stock or stocks of associated species occur both within the exclusive economic zone and in an area beyond and adjacent to the zone, the coastal State and the States fishing for such stocks in the adjacent area shall seek, either directly or through appropriate sub-regional or regional organizations, to agree upon the measures necessary for the conservation of these stocks in the adjacent area.

In the case of listed highly migratory species (which spend their life cycles both within the EEZs of coastal states and on the high seas), coastal states and states whose nationals fish for those species are obliged to likewise cooperate through appropriate regional or sub-regional organizations, and establish such organizations if there are none existing, as provided in Article 64:

> 64(1). The coastal State and other States whose nationals fish in the region for the highly migratory species listed in Annex I shall cooperate directly or through appropriate international organizations with a view to ensuring conservation and promoting the objective of optimum utilization of such species throughout the region, both within and beyond the exclusive economic zone. In regions for which no appropriate international organization exists, the coastal State and other States whose nationals harvest these species in the region shall cooperate to establish such an organization and participate in its work.
>
> (2) The provisions of paragraph 1 apply in addition to the other provisions of this Part.

The lack of clarity with respect to the interaction of coastal and fishing states' rights over highly migratory species and straddling stocks led to significant conflict and the subsequent negotiation of the United Nations Fish Stocks Agreement (UNFSA),[47] which is discussed further below. The essential point to note for both of these provisions is that, while they create a duty to cooperate for both coastal and fishing states, they do not provide the legal content of that duty. It is clear from the wording of Articles 63 and 64 that their substantive effect was to be determined in subsequent agreements and arrangements, and this is what has happened with the UNFSA and the associated developments in regional fisheries organizations. These issues are addressed further below, in connection with post-LOS 1982 developments.

Anadromous and Catadromous Stocks

Anadromous fish stocks, which spawn in rivers and then spend most of their life cycle at sea, are dealt with by Article 66 of the LOS 1982. The state of origin has "the primary interest and responsibility for such stocks" (66(1)), and such stocks are within the regulatory control of these states out to the limits of the EEZ (66(2)). The Convention provides that fisheries for these stocks "shall be conducted only in waters landward of the outer limits of exclusive economic zones, except in cases where this provision would result in economic dislocation for a State other than the State of origin" (66(3(a)). Where fishing beyond those limits occurs, Article 66 provides that the interested states are to cooperate in conservation and management, including cooperation through regional organizations (66(3), (5)). With respect to the possibility of high seas conservation enforcement, it is important to note that Article 66(3)(d) specifically precludes the unilateral *enforcement* of high seas measures by any state against the vessels of another state:

> 66(3)(d) Enforcement of regulations regarding anadromous stocks beyond the exclusive economic zone shall be by agreement between the State of origin and the other States concerned.

Catadromous fish stocks, which migrate to sea to spawn, are, by Article 67, subject to the jurisdiction of the coastal state within whose EEZ they spend the greater part of their life cycles. Where the stocks migrate or spend part of their life cycle in the EEZ of another state, regulation of the stocks is to be accomplished by agreement between the states concerned. With respect to the high seas, Article 67(3) appears to prohibit any harvesting of such species beyond the limits of EEZs:

> 67(3). Harvesting of catadromous species shall be conducted only in waters landward of the outer limits of exclusive economic zones. When conducted in exclusive economic zones, harvesting shall be subject to this article and the other provisions of this Convention concerning fishing in these zones.

This is an unusual example of a direct prohibition of a high seas activity, but it should be noted that the Article is silent on the question of enforcement, and no specific power is given to the state having jurisdiction over a catadromous stock to unilaterally enforce this provision on the high seas.

Marine Mammals

Article 120 of the LOS 1982 applies Article 65, which is an EEZ provision, to the high seas as well. The effect of this is threefold. First, states are not prohibited from regulating with respect to these species more strictly than is provided for in the Convention. In the absence of something more explicit, this presumably refers to the ability of states to regulate their own nationals and vessels on the high seas. Second, the competence of an international organization to regulate in this manner is not restricted, which is a reference to the IWC, and simply affirms the extent of that organization's competence proceeding from its own treaty. Third, the duty to cooperate in management of marine mammals, stated in Article 65, is extended to the high seas.

Summary

Most of the obligations respecting living resources are noteworthy for their generality, and for the extent to which they rely upon the duty to cooperate through international organizations (regional and global), and to develop further and more specific management measures. With respect to the

overall obligation to "protect and preserve" the marine environment (Art. 192), this was not greatly expanded upon in the Convention with respect to living resources, and much of the contemporary and subsequent development of the principle is found in the marine pollution regime, both in the Convention and under MARPOL 73/78. It is in the development of the law after the LOS 1982, and in particular after the United Nations Conference on Environment and Development (UNCED) in 1992, that the conservation and management of living marine resources returned to the forefront – some of these developments are addressed further in section 3.

Duties with Respect to Navigation on the High Seas

The duties of states with respect to navigation on the high seas are generally connected with the definition of the scope of a flag state's responsibility to administer and control the activities of vessels flying its flag. As set out in the Convention, these duties include the following:

- In general, every flag state "shall effectively exercise its jurisdiction and control in administrative, technical and social matters over ships flying its flag"[48]

- This general duty includes, e.g.: maintaining a register; ensuring safety at sea through requirements for construction and manning; ensuring proper surveys of vessels and training levels[49]

- With respect to the prevention of marine pollution, states shall adopt laws "for the prevention, reduction and control of pollution of the marine environment from vessels flying their flag or of their registry. Such laws and regulations shall at least have the same effect as that of generally accepted international rules and standards"[50]

- By Art. 217, flag states are required to "ensure compliance" by their vessels with the "applicable international rules and standards", and to "provide for the effective enforcement of such rules, standards, laws and regulations, irrespective of where a violation occurs"

It is apparent that the real substance of these obligations depends upon their good faith implementation by flag states, given that flag state responsibility is at the heart of the regime applicable to the high seas. It also seems clear that the collaborative goal of conserving and managing a global common resource must necessarily involve a degree of cooperative action by states, which is some ways antithetical to a strict view of flag state rights and responsibilities. This problem of flag state responsibility is, however, of broader concern, in that it also applies to issues such as high seas fishing, and control of activities undertaken within the jurisdiction of other states. Accordingly, this issue will be addressed separately below, following the consideration of provisions applicable to the seabed beyond national jurisdiction.

2.2.2 The Area

The Area is defined as the "seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction".[51] This effectively means the seabed area beyond the outer limits of all national claims to EEZ and/or continental shelf jurisdiction. Within the Area, the seabed mining regime created by Part XI of the Convention (and modified by the *Agreement Relating to the*

Implementation of Part XI,[52] in 1994) applies to govern the exploration for and exploitation of the "resources" of the Area, under the governance of the International Seabed Authority (ISA - created by Part XI). Given the current absence of any deep seabed mining under the Area regime, and in particular the fact that the breadth of the Canadian shelf is such that the ISA is unlikely to be relevant in or near the Grand Banks, it is not necessary to dwell on these provisions. There have, however, been suggestions that the ISA regime may have relevance to the development of a high seas protected area regime, so it is useful to outline the basic provisions of environmental significance.

Article 145 sets out the general obligations respecting environmental protection and activities in the Area:

> 145. Necessary measures shall be taken in accordance with this Convention with respect to activities in the Area to ensure effective protection for the marine environment from harmful effects which may arise from such activities. To this end the Authority shall adopt appropriate rules, regulations and procedures for *inter alia*:
>
> > (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.

The potential scope of this provision's impact, especially as it relates to the general application of environmental measures on the high seas, is limited by its own terms. When read in conjunction with other definitional provisions, it has the following effect:

- Art. 145 only refers to the adoption of "rules, regulations and procedures" to "ensure effective protection for the marine environment" from "activities in the Area" (i.e. "to this end")

- Art 1(3) defines "activities in the Area" as "all activities of exploration for, and exploitation of, the resources of the Area"

- Art. 133(a) defines "resources of the Area" as "all solid, liquid or gaseous mineral resources *in situ* in the Area at or beneath the seabed, including polymetallic nodules"

Thus, Art. 145 only provides for environmental protection regulations relating to the exploration for and exploitation of the mineral resources of the seabed beyond national jurisdiction. These regulations (which have now been put in place), can certainly encompass the impact of these activities on the flora and fauna of the seabed and the water column, but no environmental jurisdiction is accorded to the ISA with respect to any *other* activities which might similarly threaten those elements of high seas biodiversity, whether fishing, shipping or, in the future, bioprospecting.[53] This point is further emphasized by Article 135, which provides as follows:

> 135. Neither this Part nor any rights granted or exercised pursuant thereto shall affect the legal status of the waters superjacent to the Area or that of the air space above those waters.

2.3 Flag State Implementation and Duties to Cooperate

The examination of obligations respecting areas beyond national jurisdiction, above, makes it clear that there are two overarching issues which have implications for the fulfilment of conservation objectives, both inside and outside national jurisdiction: the enhancement of flag state responsibility and implementation of flag state obligations; and the importance of duties to cooperate.

2.3.1 Flag State Responsibility

For the various high seas duties of states, and for some shipping-related duties inside coastal state zones, the presumption is that *enforcement* against private actors will be the responsibility of the flag state. The proper response to a failure to enforce would therefore be a matter of international law, engaging state responsibility, but would not confer on any state enforcement jurisdiction over a flag state's vessels. The critical distinction is that between the existence of a substantive *obligation* incumbent upon a flag state and the ability of any other state to *enforce* it. This is somewhat analogous to the distinction between legislative and enforcement jurisdiction in the EEZ, but in this case the "violator" is not the vessel or individual, but the flag state itself, for failing to fulfil its obligations on the high seas. In such cases the next recourse is not enforcement by the coastal state, but resort to international dispute settlement to determine the state responsibility of the flag state.

There are exceptions to the general presumption of flag state enforcement jurisdiction, including cases of piracy and unauthorized broadcasting, and a limited right of visit and inspection by warships to determine nationality, or where there is suspicion of certain activities, including trading in slaves.[54] In addition, there is jurisdiction to intervene in cases of marine casualties threatening major pollution damage (as noted earlier).

The international community has, in particular after the accidents involving the oil tankers The Erika (1999) and The Prestige (2002), focused on the issue of flag State jurisdiction, the need for improved implementation of flag state obligations respecting marine safety and marine pollution. Similar concerns have been at the centre of developments related to the control of Illegal, Unregulated and Unreported (IUU) fishing (which is addressed further below), and there is an emerging understanding that improved implementation of flag State responsibilities under law of the sea is urgent and necessary to ensure maritime safety as well as the protection of the marine environment and conservation of marine resources.

In response to the issues raised following the Erika and the Prestige, and by the problems associated with IUU fishing, the UN set up an interagency task force to discuss flag State implementation of international obligations. The "Consultative Group on Flag State Implementation" includes representatives from IMO, the International Labour Organization (ILO), the Food and Agriculture Organization of the UN (FAO), the United Nations Environment Programme (UNEP), the Organization for Economic Cooperation and Development (OECD) and the UN Conference on Trade and Development (UNCTAD). It met in May 2003 and presented its report at the fourth meeting of the UN United Nations Open-ended Informal Consultative Process On Oceans And The Law Of The Sea (UNICPOLOS) in June 2004.[55] The report sets out and clarifies the duties and obligations of flag States and recognizes the need to strengthen international action to ensure flag state implementation, compliance and enforcement of international obligations. The report states that "the exercise of port State control as a remedy, however useful, cannot effectively counteract the failure of flag States to meet their obligations under international law" and that "full compliance with international rules and standards can only

be ensured through appropriate action of the flag State concerned and an adequate system of sanctions which primarily relies upon flag States".[56]

2.3.2 Duties to Cooperate

The Convention repeatedly affirms that all states have the duty to cooperate with respect to a large number of issues that cannot be addressed on a unilateral basis.[57] The duty to cooperate extends to the conservation and management of various marine resources on the high seas, and the formulation of international rules and standards for protecting the marine environment. A duty to cooperate may be fulfilled by some minimal requirement of negotiating in good faith,[58] but there may be circumstances in which more substance could be given to this obligation.

Although the Convention describes how the duty to cooperate may be fulfilled in different terms, depending on the issue, it has been noted by the International Tribunal on the Law of the Sea (ITLOS) that, with respect to the obligation to protect the marine environment from pollution, the duty to cooperate is sufficiently fundamental to give rise to certain rights, and could even justify the application of provisional measures to preserve those rights.[59] Opportunities may arise for further definition of the duties to cooperate under the Convention through international litigation, perhaps pursued by an affected coastal state or a group of like-minded states with similar interests at a regional level. This could, for example, arise in the context of disputes relating to the good-faith application of management measures and other obligations under regional fisheries organizations or arrangements, a point that has been noted by Satya Nandan (and which is explored further below with respect to the Grand Banks case):

> …[W]here there has been persistent failure by a particular flag State to perform its duties under the 1982 Convention and UNFSA the possibility of enforcing those duties through recourse to the International Tribunal for the Law of the Sea under Part XV of the 1982 Convention should be investigated further.[60]

3 Other High Seas Measures

As was noted earlier, the very structure of the LOS 1982 presumes that significant elements of the legal regime will be provided by other instruments, and by states cooperating bilaterally, regionally and globally to develop effective management mechanisms. This is evident both in the number of obligations which are, in fact, nothing more than a duty to cooperate in good faith towards some end, as well as in specific references to standards and criteria set by "competent international organizations" (as set out in LOS 1982) such as IMO. Furthermore, international law has not remained static with respect to the regulation of the high seas since 1982, and it is necessary to consider a number of measures which have allowed for some degree of increased control, or at least a refinement of the general obligations incumbent upon states, on the high seas. Some of these measures pre-dated the Convention itself, but others have emerged since 1982, and a number of factors help to explain this.

First, it was inevitable that the exclusion of a substantial portion of the world's fishing fleets from zones of national jurisdiction would drive them to exploit remaining high seas areas more intensively. Second, continuing research efforts have led to growing awareness, not only of the degree of exploitation and the resultant danger facing high seas commercial fish stocks, but also the rich and varied nature of biodiversity and habitats found in high seas areas.[61] Finally, it must be acknowledged that the high seas regime as set out in the Convention relied extensively on the uncertain foundations of undefined duties of cooperation and flag state enforcement. It was predictable that this would ultimately be untenable when the interests of some flag states conflicted with any genuine interest in preserving and protecting the environment of high seas areas.

It is not possible here to do more than survey some of the major legal instruments which purport to extend some degree of management control over high seas areas and resources. These are considered in the following sections under the following two general categories: sectoral agreements (including fisheries and related instruments, shipping, ocean dumping and more general environmental agreements); and specific protected area measures of various kinds.

3.1 Sectoral Measures

3.1.1 Fisheries and Related Agreements

The most intensive area of post-LOS 1982 legal development with respect to the high seas has been in the fisheries sector. As was noted above, the exclusion of fleets from the extended jurisdictional zones of coastal states certainly led to increased pressure on high seas areas, and in recent years increased scientific attention to these areas has led to greater awareness of the scale of the problem.

It should be remembered, of course, that attempts to govern high seas fisheries through international cooperation have been in existence for many years; prior to the extension of coastal state jurisdiction, any efforts at managing stocks beyond 3 or 12 n.m. territorial seas were of necessity the subject of international cooperation. While these agreements are still relevant, particularly where they still provide special measures for particular categories of stocks, such as anadromous species, the main concentration here will be on those agreements with a high degree of relevance to current high seas applications. The following section briefly reviews the major global, regional and unilateral initiatives of primary interest to this study.

Global

The UN Fish Stocks Agreement (UNFSA) [62]

The UNFSA represents the most extensive attempt at the regulation of high seas fisheries, although it is limited in application to straddling stocks and highly migratory stocks, and is further restricted by the fact that it only has 52 parties (at time of writing).[63] The overall purpose of the UNFSA is the conservation and sustainable use of straddling stocks and highly migratory species, within the context of implementation of the LOS 1982, as stated in Article 2 of UNFSA:

> 2. The objective of this Agreement is to ensure the long-term conservation and sustainable use of straddling fish stocks and highly migratory fish stocks through effective implementation of the relevant provisions of the Convention.

Much of the Agreement is concerned with setting out the mechanisms and legal status of Regional Fisheries Management Organizations (RFMOs) and similar "arrangements", and enhancing their ability to deal with compliance and enforcement issues. Part III of the Agreement, for example, defines the role and purpose of sub-regional and regional fisheries organizations, and provides further definition of their functions. Where there is an existing organization or arrangement with "the competence to establish conservation and management measures for a particular straddling stock", states are to give effect to their duty to cooperate under the LOS 1982 by "becoming members of such organization or participants in such arrangement, or by agreeing to apply the conservation and management measures established by such organization or arrangement." (Art. 8(3))

Part VI of the UNFSA deals with ensuring compliance with the management rules adopted by competent organizations and arrangements. The primary recourse is still to flag State enforcement, but provision is made for "international cooperation" in enforcement. This includes provision for flag States to request assistance in investigations, provision of information from investigations to interested States, and a flag State duty to cooperate in investigations. Where there are competent organizations in place, member States of the organization may board and inspect vessels of UNFSA member States, and possibly even compel their return to port, but only under limited circumstances and according to guidelines which protect the interests and primary jurisdiction of flag states.[64]

Part VIII of the UNFSA applies the dispute settlement provisions of the LOS 1982 to disputes respecting the interpretation or implementation of the UNFSA itself, and to disputes respecting the interpretation and *application* of the other agreements referred to.[65] This may open up new opportunities for the refinement and development of the concept of a "duty to cooperate" through litigation in ITLOS, or another adjudicative body with jurisdiction under the Convention (this matter is addressed further below). This is reinforced by Article 30(4), which mandates that dispute settlement bodies are to apply, in addition to international law, "generally accepted standards for the conservation and management of living marine resources". This broadly phrased requirement may make it possible for future tribunals to take more innovative approaches, not only to the definition of the duty to cooperate, but to the extent of obligations related to flag state responsibility.

In addition to the broad outline of the UNFSA's structure, as set out above, there are four other issues which require a brief review: the application of management measures and principles; flag state responsibility; port state rights and obligations; and high seas enforcement.[66]

Management Principles

In addition to the procedural aspects of the duty to cooperate, as set out above, the Agreement provides a list of management measures and principles which are to be applied by states in giving effect to their duty to cooperate. (Art. 5(1)) These include, *inter alia*, the following:

- Adoption of measures to "ensure long-term sustainability of straddling fish stocks and highly migratory fish stocks and promote the objective of their optimum utilization"

- Ensuring that measures are based on the "best scientific evidence available and are designed to maintain or restore stocks at levels capable of producing maximum sustainable yield, as qualified by relevant environmental and economic factors"

- Application of the precautionary approach (see below)

- Protection of biodiversity in the marine environment

- Implementation of measures through effective monitoring, control and surveillance[67]

These principles and measures may, along with the more generally worded obligations, provide further substantive content to the duties incumbent on states, particularly if they are pursued by tribunals as foreseen in Article 30(5) (above). Furthermore, in addition to the general duties to cooperate on the high seas, the Agreement defines some specific obligations which are applicable *within* the EEZs of member states. Article 3(1) provides that, "unless otherwise stated", the UNFSA applies only to stocks beyond areas of national jurisdiction, except that Articles 6 (precaution) and 7 (compatibility of measures) applies to areas of national jurisdiction. Furthermore, Article 3(2) provides that the coastal state, in exercising its sovereign rights in national jurisdiction, shall apply the principles found in Article 5(1).

Of particular interest is the obligation (found in Article 6 (1) and (2), coupled with Article 5(1)) to apply the precautionary approach within areas of national jurisdiction as well as on the high seas:

> 6(1). States shall apply the precautionary approach widely to conservation, management and exploitation of straddling fish stocks and highly migratory fish stocks in order to protect the living marine resources and preserve the marine environment.
>
> 2. States shall be more cautious when information is uncertain, unreliable or inadequate. The absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures.

It is important to note that, despite the general definition, the practical implementation of "precaution" for purposes of the UNFSA will be achieved by the obligation set out in Article 6(3)(b), which provides that States shall:

> …apply the guidelines set out in Annex II and determine, on the basis of the best scientific information available, stock-specific reference points and the action to be taken if they are exceeded.

Under Annex II, the following definitions are relevant to understanding what is meant by precaution in this context:[68]

- A precautionary reference point is "an estimated value derived through an agreed scientific procedure, which corresponds to the state of the resource and of the fishery" (Annex II, Art. 1)

- States are to use both "conservation" or "limit" reference points, representing the outer limit of biological parameters, and "management" or "target" points which may be used as management objectives (Annex II, Art. 2)

- Management strategies are to seek to "maintain or restore" stocks within "previously agreed" reference points, and include mechanisms to "trigger pre-agreed conservation and management action" (Annex II, Art. 4)

- Management strategies "shall ensure that the risk of exceeding limit reference points is very low", and that they are not exceeded "on average" (Annex II, Art. 5)

- The level of fishing mortality which "generates maximum sustainable yield should be regarded as a minimum standard for limit reference points" (Annex II, Art.7)

Once the qualifiers in Articles 5 and 6, and particularly in Annex II, have been fully understood, it is clear that States could adopt a range of management approaches and argue that they satisfied this aspect of UNFSA. The use of an objective of optimum utilization, and the application of Maximum Sustainable Yield (MSY) as a key starting point, would describe a properly managed fishery under the LOS 1982 regime for the EEZ. Nonetheless, the introduction of this obligation, and the possibility of its future application in RFMOs, is a positive step.

The question of compatibility of management measures inside and outside areas of national jurisdiction is dealt with in Article 7, which provides (in 7(2)), that the measures "established for the high seas and those adopted for areas under national jurisdiction shall be compatible in order to ensure conservation and management of the …straddling fish stocks and highly migratory fish stocks in their entirety." The obligation is to be fulfilled by cooperation, and among the considerations in carrying out this duty is the following, which appears to give a degree of primacy to coastal state measures:

> 7(2)…In determining compatible conservation and management measures, States shall:
>
> (a) take into account the conservation and management measures adopted and applied in accordance with article 61 of the Convention in respect of the same stocks by coastal States within areas under national jurisdiction and ensure that measures established in respect of such stocks for the high seas do not undermine the effectiveness of such measures…

One final point should be noted with respect to the range of available management measures set out in the UNFSA. While the Agreement does not specifically address the issue of protected areas as such, area-based measures including permanent or temporary no-take zones, or the designation of area restrictions on gear types, would certainly be within the range of permissible (though not mandatory) measures. In a more direct reference to the problem of vulnerable habitats, Article 6(3)(d) requires that states, in implementing the precautionary approach, shall "adopt plans which are necessary to ensure the conservation of such species and to protect habitats of special concern."

Flag State Responsibility

The UNFSA sets out a number of more direct and enforceable obligations with respect to flag states of vessels fishing for relevant stocks on the high seas (or in the EEZs of other states). The general obligations are stated in Articles 18(1) and (2):

> 18(1). A State whose vessels fish on the high seas shall take such measures as may be necessary to ensure that vessels flying its flag comply with sub-regional and regional conservation and management measures and that such vessels do not engage in any activity which undermines the effectiveness of such measures.
>
> 2. A State shall authorize the use of vessels flying its flag for fishing on the high seas only where it is able to exercise effectively its responsibilities in respect of such vessels under the Convention and this Agreement.

These duties not to authorize non-compliant fishing, and to *only* authorize high seas fishing where there is effective control, presuppose administrative and enforcement capability which may or may not be present. Article 18(3) adds a long list of measures which are required to be taken by flag states in fulfilment of the general obligations, including, *inter alia*, the following:

- Provision for "licences, authorizations or permits, in accordance with any applicable procedures agreed at the sub-regional, regional or global level"

- Creation of regulations to "apply terms and conditions to the licence, authorization or permit sufficient to fulfil any sub-regional, regional or global obligations of the flag State" and to "prohibit fishing on the high seas by vessels which are not duly licensed or authorized to fish" or fishing which is not in accordance with a licence

- Ensuring that "vessels flying its flag do not conduct unauthorized fishing within areas under the national jurisdiction of other States"

- Establishment of a "national record of fishing vessels authorized to fish on the high seas and provision of access to the information contained in that record on request by directly interested States, taking into account any national laws of the flag State regarding the release such information

- Provision for "requirements for marking of fishing vessels and fishing gear for identification in accordance with uniform and internationally recognizable vessel and gear marking systems"

- Provision for "requirements for recording and timely reporting of vessel position, catch of target and non-target species, fishing effort and other relevant fisheries data in accordance with sub-regional, regional and global standards for collection of such data"

- Monitoring, control and surveillance of "vessels and their fishing operations and related activities by, *inter alia*" the implementation of national and regional inspection schemes and regional schemes for "cooperation in enforcement"

- Requirements "for such vessels to permit access by duly authorized inspectors from other States"

- Implementation of national and regional observer programmes

- "Development and implementation of vessel monitoring systems", including satellite systems

- Regulation of high seas trans-shipment

This partial list gives a sense of the breadth of the obligations assumed by a flag state with respect to the implementation of its registry and other systems for the control of its vessels operating on the high seas. In addition, Article 19(1) requires that a flag state "shall ensure compliance by vessels flying its flag with sub-regional and regional conservation and management measures for straddling fish stocks and highly migratory fish stocks", and sets out a number of specific obligations, including: cooperating in investigations; ensuring vessels provide information to investigating authorities; and acting expeditiously to deal with violations brought to its attention by the investigations or inspections of other states.

Port State Rights and Obligations

Article 23 of the Agreement deals with the rights and obligations of port states, with emphasis on the former. A port State "has the right and the duty to take measures, in accordance with international law, to promote the effectiveness of sub-regional, regional and global conservation and management measures." Otherwise, Article 23 provides that a port State *may* inspect vessels voluntarily in port, and *may* "adopt regulations empowering the relevant national authorities to prohibit landings and trans-shipments" of catch "taken in a manner which undermines the effectiveness of sub-regional, regional or global conservation and management measures on the high seas."

High Seas Enforcement

Apart from the general provisions respecting flag States, Part VI of the UNFSA (Compliance and Enforcement) provides (in Article 21(1)) for the acceptance of boarding and inspection by authorized inspectors from member States, where a regional agreement or arrangement is in place. Furthermore, it requires, in Article 21(2) and (3), for development of boarding and inspection procedures by such organizations, or for adoption of default procedures set out in the UNFSA where they are not agreed. The lack of unilateral high seas enforcement powers for coastal states, or RFMO members in general, has been identified as a particular weakness in the UNFSA regime, and it has been suggested that the law may be developing in state practice to expand the possibilities for non-flag enforcement.[69] At the present time, however, it seems that the UNFSA regime, as applied in RFMOs, represents the limits of non-flag state enforcement powers.

Compliance Agreement[70]

The 1993 FAO Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (Compliance Agreement) is intended to address issues related to flag state responsibility for the activities of their fishing vessels.[71] It is generally directed at requiring Parties to control the fishing activities of their flag vessels, in particular so as to ensure that they do not "undermine" international fisheries conservation efforts.

The Agreement puts in place a number of obligations related to international cooperation[72] and monitoring and information sharing,[73] but the central requirements for the purposes of this study centre on the problem of flag state responsibility, including the following:[74]

- Art. III(1)(a) states the general obligation that every Party "shall take such measures as may be necessary to ensure that fishing vessels entitled to fly its flag do not engage in any activity that undermines the effectiveness of international conservation and management measures"

- Art. III(2) provides that no Party shall "allow any fishing vessel entitled to fly its flag to be used for fishing on the high seas unless it has been authorized to be so used by the appropriate authority or authorities of that Party"

- By Art. III(3), Parties are obligated *not* to authorize fishing on the high seas by a fishing vessel of their flag *unless* they are "satisfied that it is able, taking into account the links that exist between it and the fishing vessel concerned, to exercise effectively its responsibilities under this Agreement in respect of that fishing vessel

The Compliance Agreement clearly represents a step forward in terms of enforceable obligations related to flag state responsibility, but there are weaknesses that lessen its immediate impact. The small number of Parties (29 at time of writing[75]), coupled with the reliance on international conservation measures which may in fact not exist, will both work to limit the practical effect of the Agreement.[76]

FAO Code of Conduct

The Code of Conduct for Responsible Fisheries, adopted at the 28th Session of the FAO Conference in 1995,[77] is a voluntary code which:[78]

> 1.3…provides principles and standards applicable to the conservation, management and development of all fisheries. It also covers the capture, processing and trade of fish and fishery products, fishing operations, aquaculture, fisheries research and the integration of fisheries into coastal area management.

A full review of the Code is beyond the scope of this study, but it is useful to note some of the main provisions:

1. Art. 6 sets out general principles for the management of fisheries, including, *inter alia*: the conservation of aquatic ecosystems (6.1); promotion of the "maintenance of the quality, diversity and availability of fishery resources in sufficient quantities for present and future generations" (6.2); prevention of overfishing and rehabilitation of depleted stocks (6.3); application of the precautionary approach to fisheries management (6.5); protection of critical fisheries habitat, including protection from "destruction, degradation, pollution and other significant impacts resulting from human activities that threaten the health and viability of the fishery resources. (6.8).

2. In addition, Arts. 6.10 – 6.12 mandate respect for and cooperation with international fisheries conservation measures adopted by regional and other organizations, as well as the maintenance of effective control over fishing vessels (obligations given mandatory effect within the Compliance Agreement, discussed above).

3. Art. 7 deals in more detail with fisheries management practices, including a recognition of the need to protect critical habitats (7.2.2(d)) and to integrate consideration of other human impacts on the marine environment (7.2.2(f)).

4. Art. 8 provides guidelines on the conduct of fishing operations, including consideration of port and flag state duties (8.2, 8.3), fishing gear selectivity (8.5) and the protection of the aquatic environment (8.7).

The Code of Conduct has been supplemented by the development of further documents under its general framework. In addition to the FAO Technical Guidelines on Responsible Fisheries (discussed further below), the Code has led directly to the development of voluntary International Plans of Action (IPOAs) on specific issues identified in the Code. To date, four IPOAs have been formulated, for: seabirds;[79] sharks;[80] management of fishing capacity;[81] and IUU fishing.[82] The IPOA-IUU reinforces the obligation of states under the Compliance Agreement to ensure that fishing vessels operating in the high seas have the requisite authorization to fish in such areas, and elaborates on such issues as the requirement for effective control of flag vessels, economic measures, control of nationals, port state measures, international cooperation and the implementation of existing obligations at international law.

The overall purpose of the UN Fish Stocks Agreement is the conservation and sustainable use of straddling stocks and highly migratory species. © WWF-Canon / Quentin BATES

Regional Agreements

As was noted earlier, the UNFSA gives RFMOs a central role in the conservation and management of the two categories of stocks dealt with by the Agreement: straddling stocks and highly migratory stocks.[83] In general, RFMOs are established to prevent the over-exploitation of designated stocks, dealing both with the establishment of management measures and the allocation of stocks among parties.[84] The following table lists those RFMOs with mandates respecting such stocks, although there are other fisheries organizations with mandates respecting other stocks.[85]

Table 1: Regional Fisheries Management Organizations[86]

RFMO	Date of Convention	In force
International Commission for the Conservation of Atlantic Tuna (ICCAT) www.iccat.es	1966	1969
Northwest Atlantic Fisheries Organization (NAFO) www.nafo.org	1978	1979
Commission for the Conservation of Antarctic Living Marine Resources (CCAMLR) www.ccamlr.org	1980	1982
Northeast Atlantic Fisheries Commission (NEAFC) www.neafc.org	1980	1982
Commission for the Conservation of Southern Bluefin Tuna (CCSBT) www.csbt.org	1993	1994
Indian Ocean Tuna Commission (IOTC) www.iotc.org	1993	1996
General Fisheries Commission for the Mediterranean (GFCM) www.faogfcm.org	1997	2004
Commission for the Conservation and Management of Highly Migratory Stocks in the Western and Central Pacific Ocean (WCFPC) www.wcfpc.org	2000	2004
South-East Atlantic Fisheries Organization (SEAFO) www.nfmr.gov/seafo/seafo.htm	2001	2004
Inter-American Tropical Tuna Commission (IATTC) – 1949[87] www.iattc.org	1949	1950
Inter-American Tropical Tuna Commission (IATTC) – 2003	2003	Not in force
Southeast Pacific Fisheries Organization (SEAFPO)	2000	Not in force

Remaining Gaps and Issues

The difficulties encountered with respect to the performance of RFMOs, and more broadly with the UNFSA structure within which they operate, have been the subject of extensive commentary,[88] and a full discussion of these issues is beyond the scope of this study. It is, however, possible to summarize[89] the major problem areas and areas for improvement which have been identified:

- **Participation in UNFSA** – High priority should be accorded to increasing the level of adherence to UNFSA which, as noted earlier, is inadequate to bring sufficient numbers of fishing nations within the scope of its provisions, limited though they might be

- **Improved performance of RFMOs** – This category covers a number of significant problems, including, *inter alia*: decision-making structures which permit opting-out or require consensus for action;[90] bringing pre-UNFSA RFMOs into full compliance with the provisions of the Agreement; enhancing the level of member State compliance with RFMO measures

- **Precaution and Ecosystem Approaches** – The sectoral, stock-centred approach of RFMOs does not adequately take into account broader questions of ecosystem health. Furthermore, the limited application of the precautionary approach in UNFSA (see above) could be further developed to ensure that RFMO activities are oriented more to conservation, and less to exploitation. (The particular issue of *area-based* measures in RFMOs is dealt with below.)

- **Accountability** – There is no method of achieving a higher degree of accountability for RFMOs for their performance against stated objectives. Although this will be difficult to attain, given the autonomous nature of the organizations, effort should be made to pursue some form of oversight, or at least periodic review[91]

- **Developing Countries** – A number of RFMOs include significant numbers of developing and small-island states, and efforts must be made (in accordance with the mandate given under UNFSA) to offer assistance in ensuring that they are financially and technically capable of participating fully in the work of the organizations

- **Discrete High Seas Stocks** – As was discussed earlier, the failure of UNFSA to address discrete high seas stocks leaves a significant gap in the coverage of potential areas for IUU fishing to take place with little or no possibility of control. Inclusion of these stocks in the Agreement may, however, be a long-term project

- **Coordination of Activities** – There is substantial room for improving the level of coordination and cooperation among RFMOs, in order to more effectively deal with fleets that may move freely from one region to another. A particular area of priority is the enhancement of monitoring, control and surveillance (MCS) information sharing, beyond that which already occurs[92]

- **Flag State Responsibility** – This issue has been addressed more generally above, and is of particular importance with respect to high seas fisheries, where re-flagging is common, and flag state control over fishing vessels is often minimal or non-

existent. Measures discussed by the Consultative Group on Flag State Responsibility (discussed in section 2.3) are also of relevance here

Bilateral Options

States are, of course, free to develop bilateral arrangements respecting the management of areas within and adjacent to their zones of jurisdiction, even though these may not be enforceable on other states outside those zones. In one example related primarily to national jurisdiction, in 2003 Australia and France concluded a treaty of maritime cooperation in respect of their EEZs around their possessions in the southern portions of the Indian Ocean.[93] The treaty entered into force on 26 January 2005, and establishes a regime designed to combat the difficult problem of IUU fishing in the region. The treaty applies to the territorial seas and EEZs around Heard and the McDonald Islands for Australia, and Kerguelen, Crozet, Saint-Paul and Amsterdam Islands for France.[94] It provides for cooperative surveillance by one State in the treaty area applicable to the other, and cooperation in scientific research in the treaty area.[95] There may be, upon request, cooperation in respect of hot pursuit from the waters of one State to the next in respect of fisheries matters, to the extent that logistical support may be provided to allow for the continuation of the pursuit[96], and that pursuit will not be deemed to have ended simply by the passage of a suspect vessel through the territorial sea of the other State.[97] This would seem to be potentially inconsistent with Article 111 of the LOS 1982, and therefore the first case where it occurs is almost certain to lead to international litigation.

The Treaty is designed to allow for future discussions on the coordination of activities against IUU fishing. This includes working on common measures to curb such activities, for example common approaches to vessel monitor systems (VMS), maintain surveillance of the region and providing intelligence gathered in relation to IUU fishing, including details of prosecutions and relevant fisheries registers.[98] Regular exchange of information is to take place, and the information concerned is to remain privy between the parties.[99]

There are a number of reasons for the development of the treaty. First, the southern portions of the Indian Ocean have since the mid-1990s, come under increasing pressure from IUU fishing. The region of concern is extremely remote from both parties' metropolitan territories, and therefore difficult to patrol and monitor. Australian vessels approach the Heard Island EEZ from Fremantle, some 4500 kilometres away, and there are no foul weather anchorage or support facilities at Heard. Kerguelen has an all-weather port, but has no permanent population, and is not well suited for a permanent patrol present to be based there. As such, coordinating efforts make sense in dealing with a rising problem.

Second, Australia has undertaken a series of high profile hot pursuits through the region, chasing vessels engaged in IUU fishing. While these pursuits have not passed through the territorial seas of third States, there is some likelihood that a pursued vessel will take this option in the future. Since the only States with territory in the region are Australia, France and, more remotely, South Africa, the difficulty such evasion might cause is substantially addressed.

Third, the treaty formalizes existing cooperation to a significant extent. Both Australia and France are members of CCAMLR, and therefore have an ongoing international legal interest in cooperating on management measures. In addition both have cooperated with each other in respect of patrol efforts and intelligence, and the effectiveness of these efforts has led to this treaty.

In addition to the success enjoyed here, there have been negotiations between Australia and New Zealand with respect to their adjacent EEZs and proximate high seas areas, to better coordinate

fisheries protection. Matters have not advanced as far as in the Australia-France case, for a number of reasons. First, the fisheries in this region have not come under as great pressure from IUU as the waters in the southern Indian Ocean. Some activity took place in the late 1990s in the South Tasman Rise area, south of Tasmania, but this was dealt with through diplomatic action by Australia, in concert with the relevant flag States, South Africa and Belize. Second, Australia and New Zealand had, until very recently, to delimit a maritime boundary between their EEZs in the Southern Ocean, between Macquarie Island and Campbell Island. Pending the resolution of this boundary, cooperation had to be without prejudice to the final boundary arrangement. Now the boundary is concluded, the chances for more formalized cooperation would seem to have improved.

3.1.2 Shipping

MARPOL 73/78

The MARPOL Convention,[100] administered and developed over time through the International Maritime Organization (IMO), is the most significant global agreement dealing with the prevention of vessel-source pollution, including both accidental and operational discharges. The Convention includes a number of regulations, and incorporates six technical Annexes: Annex I - Regulations for the Prevention of Pollution by Oil ; Annex II - Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk; Annex III - Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Form; Annex IV - Prevention of Pollution by Sewage from Ships; Annex V - Prevention of Pollution by Garbage from Ships; Annex VI - Prevention of Air Pollution from Ships (in force 19 May 2005). Of these annexes, only the first two are mandatory for parties to MARPOL.[101] It is not possible here to cover the provisions of MARPOL in detail, or to review all of the conventions under the IMO which may be relevant to marine pollution (although the Intervention Convention has been mentioned earlier, and the London Convention is dealt with below).

What is particularly relevant about this regime in the current context is that the MARPOL agreement itself and further IMO guidelines incorporate provisions and procedures that may result in additional protection measures for designated areas of the sea, including areas of the high seas. “Special areas” are provided for under MARPOL,[102] as areas that require the adoption of special mandatory methods for the prevention of sea pollution, due to recognized technical reasons relating to their oceanographic and ecological condition and to the particular character of their sea traffic.[103] To date, under MARPOL 73/78 and Annex I, as amended, the following “special areas” have been designated, with higher levels of protection against oil discharges: Mediterranean Sea, Black Sea, Baltic Sea, the Red Sea, the Gulf areas, Gulf of Aden, Antarctic, Northwest European Waters, and Oman Sea.[104] Annex V has stricter requirements for garbage disposal in some special areas such as the North Sea, Antarctic, and Wider Caribbean.[105] MARPOL provisions on special areas are sufficiently broad to encompass parts of the territorial sea, exclusive economic zone, and high seas.

The “particularly sensitive sea areas” (PSSAs) designation is provided for under Guidelines developed by the IMO Marine Environmental Protection Committee, and set forth in IMO Resolution No. A.927 (22).[106] PSSAs are areas that are identified as requiring special protection through action by the IMO, because of their significance for ecological, socio-cultural and economic, or scientific and educational reasons, [107] and which may be vulnerable to damage by international maritime activities.[108] These criteria relate to areas within and beyond the limits of the territorial sea, and may straddle different state zones of jurisdiction.[109] A 2003 IMO report described the range of measures which might be approved for a PSSA under the Guidelines as follows:

> Among the kind of special mandatory measure which may be adopted to protect a PSSA the Guidelines mention the adoption of specific routeing measures, including the possibility of declaring part or the whole of a PSSA as an area to be avoided by ships. The adoption of routeing measures for PSSA should take into account the IMO General Provisions on Ships' Routeing (resolution A.572(14)), as amended. Other possible measures are compulsory pilotage schemes or vessel traffic management systems. The Guidelines indicate that a proposed PSSA may include a buffer zone, which would be justified only once it is demonstrated how it would contribute to the adequate protection of the core area identified as particularly sensitive.[110]

The criteria for PSSAs and special areas are not mutually exclusive, and PSSAs may be located inside special areas.[111] In such cases, in addition to the relevant vessel discharge restrictions applicable to the special area as a whole, additional protective measures may be applied to the PSSA, such as designations of areas to be avoided, traffic separation schemes, voluntary or compulsory pilotage, and vessel traffic services; these protective measures are voluntary and designed to accommodate rather than prohibit safe navigation of the areas by international shipping.[112] To date, seven PSSAs have been established: the Great Barrier Reef in Australia, the Sabana-Camaguey Archipelago in Cuba, Malpelo Island in Colombia, the Florida Keys in the US, the Wadden Sea off Denmark, Germany, and Netherlands, the Paracas National Reserve in Peru, and the Western European Waters PSSA.[113]

The MARPOL Convention, administered and developed over time through the IMO, is the most significant global agreement dealing with the prevention of vessel-source pollution, including both accidental and operational discharges. Tijanjin harbour, China. © WWF-Canon / Michael GUNTHER

Security-Related Activities

Although the enhancement of security for international shipping is only peripherally related to environmental concerns (in that, for example, improved suppression of criminal activities may assist in avoiding marine casualties in some circumstances), such measures are nonetheless of interest as examples of how states can, when the political will exists, take steps which deal with problems arising in part from exclusive flag state jurisdiction. The 1988 Convention for the Suppression of Unlawful Acts of Violence Against the Safety of Maritime Navigation (SUA Convention)[114] designates a number of categories of crimes for which States Party must establish penalties and cooperate respecting prosecution and/or extradition of offenders.[115] A diplomatic conference in October 2005 will consider amendments to the SUA Convention respecting the inclusion of offences related to international terrorism, and providing for new boarding and inspection powers respecting non-flag vessels (including on the high seas) where such activity is suspected.[116]

While this extension of control over non-flag vessels may be an encouraging step, and one which may provide openings in other areas (where security concerns with identification of vessels may apply equally to fishing vessels), it must be remembered that these partial steps have required the impetus of a political issue on the order of terrorist activity. Moreover, even given the priority assigned to this issue by some governments, in the discussions of the proposed amendments some states still expressed concerns related to the effect on freedom of navigation:

> Most delegations expressed support for the revision and strengthening of the SUA Convention in order to provide a response to the increasing risks posed to maritime navigation by terrorism. Nevertheless, several delegations drew attention to the need to ensure that the prospective SUA Protocols did not jeopardize the principle of freedom of navigation and the right of innocent passage as prescribed in UNCLOS [LOS 1982] nor the basic principles of international law and the operation of international commercial shipping.[117]

Recent IMO Actions

There are other recent actions under the auspices of IMO which should be noted. In December 2003, IMO agreed to accelerate the target date for the phase-out of single hull tankers, and to a ban on the carriage of heavy fuel oils in single hull ships.[118] This followed the European Union's (EU) unilateral implementation of new phase out requirements in response to the *Prestige* incident. The rules will be reviewed by IMO in 2005. In addition, n February 2004 IMO adopted the International Convention for the Control of Ship's Ballast Water and Sediments.[119]

Emerging European Actions

The grounding of the Erika in 1999, and the loss of the Prestige three years later, resulted in oil spills that led the EU to consider significant new measures to combat the threat of marine pollution. A review of the liability, compensation, and insurance regimes for marine pollution began in 2003. Finding that there were a number of regulatory gaps between the applicable regimes at the international and European Community levels, the European Commission adopted a proposal for a directive on ship-source pollution and the introduction of sanctions, including criminal sanctions, for violations of MARPOL 73/78. In the proposed directive, affected discharges into the ocean, including the high seas, would have been declared a criminal offence under EU law, and Member States would be obliged to enact legislation penalizing them as such. The proposed directive would apply to all discharges wherever they may have been committed, and would be enforced only against ships that are within a port or offshore terminal of a Member State of the EU. The proposed directive was amended at the European Parliament to remove the

mandatory requirement for criminal charges, and as of May 2005 this change had been accepted by the Commission (with expressed "regrets"), and was awaiting a decision by the Council.[120] Even if this amended proposal is accepted, it will be interesting to see if some Member States press on with the original approach under national law, even though it is no longer mandatory.

Industry Actions

It should also be noted that the maritime industry has taken action to reduce the impacts of its operations. Measures such as voluntary codes of conduct, and the implementation of environmental audits (whether on their own initiative or to meet certification standards), can serve as important adjuncts to regulatory measures. This is particularly so when the lack of effective state control over operations at sea is taken into account – a practical, industry-based response may fill an important gap in the current regime.[121]

The Importance of Port State Control

One issue which should be noted with respect to the regulation of international shipping is the importance of port state control over vessels. That is, once a vessel has entered the port of a state the possibilities for enforcement of international standards become much more extensive. IMO Conventions often include provisions for port state enforcement, and the organization has encouraged the development of a network of regional memoranda of understanding to enhance the extent to which port states carry out inspection and enforcement under the international agreements.[122] The relevance of this experience will be considered below in relation to fisheries.[123]

3.1.3 Dumping of Wastes at Sea

The 1972 London Convention (LDC) [124] was the "first global convention to control and regulate the deliberate disposal at sea of wastes and other material."[125] The essence of the LDC is that it "prohibits the dumping of certain hazardous materials, requires a prior special permit for the dumping of a number of other identified materials and a prior general permit for other wastes or matter."[126] By Article 3, the LDC binds parties with respect to dumping in all marine waters other than internal waters, thus including high seas.[127] A 1996 Protocol to the LDC, which is not in force at time of writing,[128] substantially revises the LDC, with a number of important provisions. For example, Article 3 of the Protocol introduces the precautionary approach, as follows:

> 3. In implementing this Protocol, Contracting Parties shall apply a precautionary approach to environmental protection from dumping of wastes or other matter whereby appropriate preventative measures are taken when there is reason to believe that wastes or other matter introduced into the marine environment are likely to cause harm even when there is no conclusive evidence to prove a causal relation between inputs and their effects.

Furthermore, Article 4 of the Protocol, which is more restrictive than the 1972 agreement, states that all dumping is prohibited, excluding, e.g., cases of *force majeure*, and with the exception of the following list of materials found in Annex I:

- dredged material
- sewage sludge
- fish waste, or material resulting from industrial fish processing operations

- vessels and platforms or other man-made structures at sea
- inert, inorganic geological material
- organic material of natural origin
- bulky items, primarily consisting of iron, steel, concrete and similarly harmless materials for which the concern is physical impact, limited to those circumstances where such wastes are generated at locations…having no practicable access to disposal options other than dumping

3.1.4 Other Agreements of Potential Interest

World Heritage Convention (UNESCO) 1972

The World Heritage Convention [129] (WHC) provides for the listing and protection of sites of natural and cultural heritage. The Convention extends to terrestrial and marine sites, and there has been an effort on the part of UNESCO and member states to develop a strategy to increase the range and quality of marine site representation.[130] While it has been suggested that MPAs beyond national jurisdiction should be considered for development under the WHC,[131] given that the Convention only applies within the territories of member States,[132] presumably this would require amendment of the Convention.

Convention on the Protection of Underwater Cultural Heritage 2001

The Convention on the Protection of Underwater Cultural Heritage, opened for signature in 2001,[133] seeks to "ensure and strengthen the protection of underwater cultural heritage", defined as "all traces of human existence having a cultural, historical or archaeological character which have been partially or totally under water, periodically or continuously, for at least 100 years."[134] The duties on member states apply both inside and outside national jurisdiction, as is made clear by its application to the Area (see below). The Convention is not in force, and given that it does not deal with natural resources, its usefulness in the context of the present study will be limited, but it does introduce some useful new approaches to consultation and reporting of activities, including those on the high seas.[135]

First, the Convention (Arts. 11, 12) seeks to amplify the meaning of Art. 149 of the LOS 1982 (which required such objects to be dealt with for the benefit of mankind),[136] through a system of notification and designation of a "coordinating state." Second, with respect to the EEZ and continental shelf of coastal states, the Convention provides for a system of consultation and authorization (Arts. 9, 10) with a greater role for the coastal state than in the LOS 1982 (which limited jurisdiction over such artefacts to the outer limits of the contiguous zone). Art. 3 does provide that the coastal state "has the right to prohibit or authorize any activity directed at such heritage to prevent interference with its sovereign rights or jurisdiction as provided for by international law including the United Nations Convention on the Law of the Sea", but this may be a limited entitlement. First, the right to prohibit or authorize is "to prevent interference" with sovereign rights provided at international law, including LOS 1982. If no such rights are impinged, the power may be moot. Second, Arts. 2(8) and 3 require that the Convention be applied and interpreted so as not to prejudice rights of other states in these zones under the LOS 1982.

Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) 1973

The 1973 Convention on International Trade in Endangered Species of Wild Flora and Fauna,[137] (CITES) "concentrates on preventing and controlling international trade when commercial demand contributes to the threat of a species' extinction or over-exploitation."[138] The appendices to CITES set out three categories of risk, which are subject to different degrees of control: species under threat of extinction;[139] species which may become so if trade is not carefully regulated;[140] and species protected in one member State which require the cooperation of other Parties in order to ensure regulation of the trade in the species or products.[141] CITES is implemented through a system of licensing and import and export controls.[142] Currently, over 30,000 species of wild flora and fauna are subject to CITES, including a number of cetaceans,[143] sharks[144]and other fish,[145] and corals.[146]

CITES protection is established on a species basis, although decisions of the Conference of Parties have broadened the range of criteria for designation to include such factors as degradation of habitat.[147] The species orientation allows for application of CITES to species which spend all or part of their life cycle on the high seas, but the practical application comes not on the high seas, but rather as the species or products pass into international trade. It is possible, therefore, for CITES to be used as an adjunct to high seas management and conservation efforts, in that the designation of species of concern will provide for significant means of controlling commercial trade, and therefore reducing pressure on the species.[148]

Convention on Migratory Species 1979

The 1979 Convention on the Conservation of Migratory Species of Wild Animals[149] (the Bonn Convention) is a framework convention that "aims to conserve terrestrial, marine, and avian migratory species throughout their range."[150] The "range" of a species is defined as "all areas of land or water that a migratory species inhabits, stays in temporarily, crosses or overflies at any time on its normal migration route."[151] The Convention specifies a number of obligations for "range states" to conserve and protect species and habitats of species identified as endangered in Appendix I.[152] "Range states" for purposes of the Convention include not only states that "exercise jurisdiction over any part of the range of a migratory species", but also any State party "flag vessels of which are engaged outside national jurisdictional limits in taking that migratory species." [153]

The Bonn Convention also lists, in Appendix II, species "which have an unfavourable conservation status and which require international agreements for their conservation and management."[154] The Convention in this respect relies on the conclusion of formal Agreements or less formal Memoranda of Understanding between and among relevant states, although it does provide a set of guidelines for the conclusion of such agreements.[155] Several such Agreements and Memoranda have been concluded, and a number deal with marine species, including the following:[156]

1. Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area
2. Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas
3. Agreement on the Conservation of Seals in the Wadden Sea
4. Memorandum of Understanding concerning Conservation Measures for Marine Turtles of the Atlantic Coast of Africa

5. Memorandum of Understanding on the Conservation and Management of Marine Turtles and their Habitats of the Indian Ocean and South-East Asia

3.2 High Seas Marine Protected Areas: Legal Issues

The various high seas instruments and measures discussed above are primarily sectoral in nature, and even though they may (as in the case of PSSAs, or fisheries closures under a RFMO) offer protection to specified areas of high ecological value, they are not premised on protection of such areas from most or all threats, as would be expected from MPAs. A number of organizations and international conferences[157] have in recent years called for progress to this next stage, through the development of system of representative networks of high seas MPAs (HSMPAs). Despite relatively ambitious prescriptions for action in this area,[158] however, actual progress in practice has been limited. It is generally acknowledged that there is no specific legal instrument which enables the creation of protected areas, or even integrated management on an area-specific basis, on the high seas:

> At present there is no single conventional law instrument or set of soft law principles which defines the international law basis for declaring marine protected areas beyond national jurisdiction, provides a system for global identification for such areas and mechanisms to implement their protection.[159]

Despite this, advocates have looked to a number of sources to find support for the concept, and to press the point that the creation of such protected areas on the high seas is not only desirable, but legally feasible. These previous analyses have tended to turn towards four general sources to support this argument: general obligations found in the LOS 1982 and customary international law; soft law principles emerging out of UNCED and later processes; certain species-specific measures applicable to the high seas; and regional efforts at developing the framework for implementation of HSMPAs. It should be noted that the development of *sector-specific* protected areas, as under the IMO special area and PSSA provisions, have also been drawn on in this context, but these have already been addressed above.

3.2.1 General Obligations under LOS and Customary Law

A number of observers have pointed out that the LOS 1982, as well as customary international law, set forth a number of legal obligations which would undoubtedly support the creation of marine protected areas beyond national jurisdiction, in some manner.[160] Article 192 of the LOS 1982 states the general obligation with reference to the marine environment in general, including areas beyond national jurisdiction:

> 192. States have the obligation to protect and preserve the marine environment.

This obligation, the generality of which is modified and weakened by numerous provisions in the Convention, in particular those dealing with coastal state powers over marine pollution, is given further content in Article 194, which provides, *inter alia*, as follows:[161]

> 194(1). States shall take, individually or jointly as appropriate, all measures consistent with this Convention that are necessary to prevent, reduce and control pollution of the marine environment from any source, using for this purpose the best practicable means at their disposal and in accordance with their capabilities, and they shall endeavour to harmonize their policies in this connection.

…

> 4. In taking measures to prevent, reduce or control pollution of the marine environment, States shall refrain from unjustifiable interference with activities carried out by other States in the exercise of their rights and in pursuance of their duties in conformity with this Convention.
>
> 5. The measures taken in accordance with this Part shall include those necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life.

Both Articles apply generally to the marine environment, and not just to areas within national jurisdiction. This obligation is further supported by Article 197, which calls for states to cooperate in the development of rules, standards and practices for the protection and preservation of the marine environment:

> 197. States shall cooperate on a global basis and, as appropriate, on a regional basis, directly or through competent international organizations, in formulating and elaborating international rules, standards and recommended practices and procedures consistent with this Convention, for the protection and preservation of the marine environment, taking into account characteristic regional features.

Taken at their most extensive, it could be argued that these obligations, coupled with a general principle of customary law requiring cooperation in the prevention of pollution of the marine environment, lead to the following conclusion:

> It can thus be concluded that acting in good faith in discussions and negotiations on how to address the threats and risks to vulnerable marine ecosystems and biodiversity beyond national jurisdiction is the content of a true legal obligation incumbent on all states.[162]

The question is, however, what practical significance can be attributed to this principle. Setting aside for the moment the caveat in Article 194(4), that States are to refrain from unjustifiable interference with the exercise of other States' rights (including high seas rights), caution must be exercised with respect to the actual content of the obligation. The provision with the greatest direct relevance to the potential for high seas MPAs appears to be Article 194(5), which refers to ecosystem and habitat protection. This reference appears in an article which deals primarily with prevention and control of "pollution", which is a narrower concern than would be dealt with by MPAs. Paragraph 5 itself does refer, possibly more broadly, to "measures taken in accordance with" Part XII of the Convention, and to an obligation to "protect and preserve" such habitats and ecosystems. Nonetheless, the bulk of the provisions in Part XII are concerned with prevention and control of marine pollution, rather than area-based protection from exploitation and other uses.

Furthermore, the obligation in Article 194(5) refers to measures "necessary" to protect and preserve the habitats and ecosystems, but it does not in fact require that these include MPAs. That is, the obligation in Art. 194(5), and the other principles and provisions discussed above, may lead to a conclusion that high seas MPAs are not prohibited by the law of the sea - at least insofar as they are consented to by states - but these obligations do not extend to any mandatory duty to create MPAs. High seas MPAs represent one of the ways by which states could fulfil their duty to cooperate, but this approach is not accorded any priority. In sum, then, the structure of the law of the sea beyond national jurisdiction does allow for the possibility of creating high seas MPAs in some form, but this could only come about through a cooperative exercise and the consent of

states to be bound. For any such development to be binding on non-participant states, further legal development would be required.[163]

3.2.2 Soft Law Principles

A number of "soft law" instruments, which may be influential in the development of the law but which are not binding upon states, offer more direct support for the creation of MPAs beyond national jurisdiction.[164] Leaving aside the resolutions of various NGO conferences and workshops, which do not in themselves rise even to the level of "soft law", the most important examples, in part because of the large number of states which engaged in the process, are found in the various UNCED documents, and in particular in Agenda 21. Chapter 17 sets out general duties to protect and preserve the marine environment, and to adopt a "precautionary and anticipatory rather than a reactive approach."[165] This extends to a need to preserve "habitats and other ecologically sensitive areas."[166] More particularly, paragraph 17.85 offers the following endorsement of a marine protected area approach:

> States should identify marine ecosystems exhibiting high levels of biodiversity and other critical habitat areas and should provide necessary limitations on use in those areas, through, *inter alia*, designation of protected areas.

The Plan of Implementation arising out of the 2002 World Summit on Sustainable Development also returned to issue stated in Chapter 17, and recommended, *inter alia*, that states should act as follows:

> 31. In accordance with chapter 17 of Agenda 21, promote the conservation and management of the oceans through actions at all levels, giving due regard to the relevant international instruments to:
>
> (a) Maintain the productivity and biodiversity of important and vulnerable marine and coastal areas, including in areas within and beyond national jurisdiction;
>
> …
>
> (b) Develop and facilitate the use of diverse approaches and tools, including the ecosystem approach, the elimination of destructive fishing practices, 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, proper coastal land use; and watershed planning and the integration of marine and coastal areas management into key sectors

It is worth noting that the reference to areas beyond national jurisdiction only appears in sub-paragraph (a), dealing with the general issue of maintenance of productivity and biodiversity, and not in (c), which specifically addresses the establishment of protected area networks. In any event, these instruments, while influential, are explicitly non-binding. As such, they offer important guidance to States in the fulfilment of their obligations to cooperate, and may contribute to the progressive development of international law (as with the development of the UNFSA, which arose in part out of recommendations made at UNCED). What they cannot do, however, is to serve as the legal basis for present action which would be legally binding on non-participant states, given that states have chosen to leave them as non-binding statements.[167]

3.2.3 The Convention on Biological Diversity (CBD)[168]

The CBD has attracted interest as a possible means of promoting the development of HSMPAs, given its concentration on the conservation and sustainable use of biodiversity, and the fact that it does make particular mention of both protected area measures and areas beyond national jurisdiction.[169] The objectives of the CBD include "conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources."[170] In Article 8 of the CBD, states are mandated to carry out a number of tasks, including the following:[171]

> 8. Each Contracting Party shall, as far as possible and as appropriate:
>
> (a) Establish a system of protected areas or areas where special measures need to be taken to conserve biological diversity;
>
> (b) Develop, where necessary, guidelines for the selection, establishment and management of protected areas or areas where special measures need to be taken to conserve biological diversity;
>
> (c) Regulate or manage biological resources important for the conservation of biological diversity whether within or outside protected areas, with a view to ensuring their conservation and sustainable use;
>
> (d) Promote the protection of ecosystems, natural habitats and the maintenance of viable populations of species in natural surroundings;
>
> (e) Promote environmentally sound and sustainable development in areas adjacent to protected areas with a view to furthering protection of these areas;
>
> (f) Rehabilitate and restore degraded ecosystems and promote the recovery of threatened species, inter alia, through the development and implementation of plans or other management strategies…

The potential impact of this article on high seas areas is, however, significantly lessened by a number of provisions in the CBD. First and most important, Article 4 sets out distinct approaches to the obligations of states inside and outside national jurisdiction:

> 4. Subject to the rights of other States, and except as otherwise expressly provided in this Convention, the provisions of this Convention apply, in relation to each Contracting Party:
>
> (a) In the case of components of biological diversity, in areas within the limits of its national jurisdiction; and
>
> (b) In the case of processes and activities, regardless of where their effects occur, carried out under its jurisdiction or control, within the area of its national jurisdiction or beyond the limits of national jurisdiction.

The effect of this article is clear. Within national jurisdiction, the obligations on a State apply with respect to the actual "components" of biological diversity, as well as to "processes and activities". Outside the limits of national jurisdiction, the obligations only extend to "processes and activities", and specifically those carried out under the "jurisdiction or control" of the State, which would focus on the *activities* of its nationals rather than on any jurisdiction over the natural resources involved. Coupled with this is the effect of Article 22, which reinforces the rights and obligations of States under the law of the sea and other international agreements:

> 22(1). The provisions of this Convention shall not affect the rights and obligations of any Contracting Party deriving from any existing international agreement, except where the

> exercise of those rights and obligations would cause a serious damage or threat to biological diversity.
>
> (2). Contracting Parties shall implement this Convention with respect to the marine environment consistently with the rights and obligations of States under the Law of the Sea.

Finally, Article 5 gives a more direct statement of the limited nature of the obligation upon States with respect to the areas beyond national jurisdiction, which is in part a duty to cooperate:

> 5. Each Contracting Party shall, as far as possible and as appropriate, cooperate with other Contracting Parties, directly or, where appropriate, through competent international organizations, in respect of areas beyond national jurisdiction and on other matters of mutual interest, for the conservation and sustainable use of biological diversity.

The combined impact of these provisions has been succinctly stated in the 2004 Report of the Secretary-General on the Law of the Sea:

> Because they have no sovereignty or jurisdiction over the resources located in areas beyond the limits of national jurisdiction, Contracting Parties have no direct obligation with regard to the conservation and sustainable use of specific components of biological diversity in those areas. Consequently, the Convention underlines the need for cooperation among Contracting Parties "in respect of areas beyond national jurisdiction … for the conservation and sustainable use of biological diversity".[172]

The impact of the CBD has not yet been fully felt, and the decisions of the Conference of Parties (COP) may have an impact on the interpretation and application of the CBD by Parties. At its 7th meeting (in 2004), the COP adopted a Decision which endorsed and elaborated on the need for creation of networks of national MPAs, and which went on to deal specifically with the issue of marine protected areas beyond national jurisdiction, in the following terms:

> [*The Conference of Parties…*] 29. Notes that there are increasing risks to biodiversity in marine areas beyond national jurisdiction and that marine and coastal protected areas are extremely deficient in purpose, numbers and coverage in these areas;
>
> 30. Agrees that there is an urgent need for international cooperation and action to improve conservation and sustainable use of biodiversity in marine areas beyond the limits of national jurisdiction, including the establishment of further marine protected areas consistent with international law, and based on scientific information, including areas such as seamounts, hydrothermal vents, cold-water corals and other vulnerable ecosystems;
>
> 31. Recognizes that the law of the sea provides a legal framework for regulating activities in marine areas beyond national jurisdiction and requests the Executive Secretary to urgently collaborate with the Secretary-General of the United Nations and relevant international and regional bodies in accordance with their mandates and their rules of procedure on the report called for in General Assembly resolution 58/240, paragraph 52, and to support any work of the General Assembly in identifying appropriate mechanisms for the future establishment and effective management of marine protected areas beyond national jurisdiction…[173]

Beyond the ringing *endorsement* given to the concept of marine protected areas beyond national jurisdiction (if "consistent with international law"), the phrasing of this portion of the Decision is

both limiting and instructive. It is recognized that the law of the sea, complete with its provisions on freedom of the high seas, is the applicable legal framework, and future progress is seen as depending upon collaboration with the UN and "relevant international and regional bodies in accordance with their mandates…". At the global level, such organizations are primarily sectoral, although (as noted in section 3.2.4) some regional agreements are more holistic in approach. Furthermore, it is implicitly recognized that much of the work will be involved in "identifying appropriate mechanisms for the future establishment" of these areas, in that no one applicable legal framework or institutional home for such endeavours currently exists.

COP 7 also established an ad hoc open ended working group, set up to "explore options for cooperation for the establishment of marine protected areas in marine areas beyond the limits of national jurisdiction, consistent with international law, including the United Nations Convention on the Law of the Sea, and based on scientific information…"[174] The first meeting of the ad hoc working group is scheduled to take place in June 2005. In addition, COP 7 requested the Executive Secretary, in consultation with the ISA, and in collaboration with other relevant international organizations, to compile further information on seabed genetic resources in areas beyond national jurisdiction, as well as the identification of threats to genetic resources and technical options for their protection. States party to CBD were requested to identify "activities and processes" under their jurisdiction or control which might have a significant adverse impact on deep seabed ecosystems and species beyond a national jurisdiction.[175]

3.2.4 Regional Measures

Some of the most important steps towards the creation of MPAs in high seas areas (and towards coherent networks within national jurisdiction) have been taken in the context of regional agreements. While it is not possible in this study to review all such regional developments in detail, the following are some of the more important examples which may offer guidance on future initiatives: action under UNEP Regional Seas Agreements; the Antarctic; and the OSPAR Convention.

UNEP Regional Seas

Of the eight regional conservation conventions adopted under the UNEP Regional Seas umbrella, four have protocols dealing specifically with marine protected areas: East Africa, the South East Pacific, the Wider Caribbean and the Mediterranean.[176] There are a number of common features of these protocols, including the provision of buffer zones and calls for cooperation in boundary areas,[177] and with respect to their overall objectives and significance:

> The principal value of the Protocols lies in their elaboration of the objectives of specially protected marine areas and examples of the protective measures to be applied within such areas. All four Protocols accord some recognition to the principle that the implementation of marine protected areas, even within national jurisdiction, should be consistent with the law of the sea and accommodate ocean uses such as navigation.[178]

The Mediterranean case provides a useful example of these arrangements, both because the principles and criteria are similar in many ways to the others, and because it is the only one of the four which provides for *some* effect beyond areas of national jurisdiction. This 1995 Protocol to the Barcelona Convention,[179] entitled *Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean*[180] (SPA Protocol) replaced an earlier protocol dealing with the same matter. The geographical application of the SPA Protocol is defined as the area of the Mediterranean Sea as defined in the Barcelona Convention, which therefore encompasses all

areas in the Mediterranean, whether inside or outside of national jurisdiction. The general obligations of the parties are stated in Article 3, which provides, *inter alia*:

> 1. Each Party shall take the necessary measures to:
>
> (a) protect, preserve and manage in a sustainable and environmentally sound way areas of particular natural or cultural value, ***notably by the establishment of specially protected areas***.
>
> (b) protect, preserve and manage threatened or endangered species of flora and fauna.
>
> 2. The Parties shall cooperate, directly or through the competent international organizations, in the conservation and sustainable use of biological diversity in the area to which this Protocol applies.
>
> …
> 6. Each Party shall apply the measures provided for in this Protocol without prejudice to the sovereignty or the jurisdiction of other Parties or other States. Any measures taken by a Party to enforce these measures shall be in accordance with international law.
>
> [Emphasis added]

The intent behind the establishment of the "specially protected areas" is given further content by Article 4, which provides as follows:

> The objective of specially protected areas is to safeguard:
>
> (a) representative types of coastal and marine ecosystems of adequate size to ensure their long-term viability and to maintain their biological diversity.
>
> (b) habitats which are in danger of disappearing in their natural area of distribution in the Mediterranean or which have a reduced natural area of distribution as a consequence of their regression or on account of their intrinsic restricted area.
>
> (c) habitats critical to the survival, reproduction and recovery of endangered, threatened or endemic species of flora or fauna.
>
> (d) sites of particular importance because of their scientific, aesthetic, cultural or educational interest.

This is a comprehensive list which, as Warner has noted, shows the distinct influence of the CBD,[181] and additional articles provide more detail on protection measures (Article 6) and planning and management tasks (Article 7). In addition to the obligations on parties to carry out the functions suggested by Article 3 and 4, however, the Protocol also provides, in Section 2, for the creation of a List of Specially Protected Areas of Mediterranean Interest (which may be much smaller than the number of areas under national legislation), with consequences for the status and protection accorded these areas. Article 8 (2) sets out the essential criteria for inclusion on the SPAMI list:

> 8(2). The SPAMI List may include sites which:
>
> - are of importance for conserving the components of biological diversity in the Mediterranean
> - contain ecosystems specific to the Mediterranean area or the habitats of endangered species

- are of special interest at the scientific, aesthetic, cultural or educational levels

Further detail on selection criteria is provided in Annex I to the SPA Protocol, added in 1996, which stresses such factors as uniqueness, "representativeness" of natural features, diversity, "naturalness" (lack of human disturbance), habitats of threatened or endangered species and cultural heritage value.[182] Selection of SPAMI candidate sites is provided for in Article 9 of the Protocol, and involves submissions by a party or parties, a process of study and review by national "focal points", and recommendation for acceptance by the Parties. Special procedures are applicable to high seas areas; these are addressed below.

Once accepted and designated, a SPAMI site is subject to the special obligations set out in Article 8(3):

> 3. The Parties agree:
>
> (a) to recognize the particular importance of these areas for the Mediterranean;
>
> (b) to comply with the measures applicable to the SPAMIs and not to authorize nor undertake any activities that might be contrary to the objectives for which the SPAMIs were established.

Furthermore, Article 28 provides for some degree of interaction with non-parties to the Protocol, to encourage their respect for measures taken under protected areas (and other parts of the protocol):

> 28(1). The Parties shall invite States that are not Parties to the Protocol and international organizations to cooperate in the implementation of this Protocol.
>
> (2). The Parties undertake to adopt appropriate measures, consistent with international law, to ensure that no one engages in any activity contrary to the principles or purposes of this Protocol.

The second paragraph of this Article might be seen as authorizing Parties to take action against non-parties to ensure compliance, even with respect to high seas areas. This is, however, to be "consistent with international law", and as will be discussed below, the Protocol itself sets limits on its own applicability to the high seas.

The issue of the high seas application of this Protocol is one that requires closer examination. As was noted earlier, the SPA Protocol is applicable to all marine areas in the Mediterranean, including areas of high seas. However, the creation of protected areas by individual States is limited, by Article 5(1), to areas within national jurisdiction:

> 5(1) Each Party may establish specially protected areas in the marine and coastal zones subject to its sovereignty or jurisdiction.

The only provision for inclusion of areas on the high seas deals with sites that are placed on the SPAMI list, and even here, special procedures apply which are not used for other SPAMI sites within national jurisdiction. First, the requirements for putting forth a proposal vary with the zone in question:

> 9(2) Proposals for inclusion in the List may be submitted:

> (a) by the Party concerned, if the area is situated in a zone already delimited, over which it exercises sovereignty or jurisdiction;
>
> (b) by two or more neighbouring Parties concerned if the area is situated, partly or wholly, on the high sea;
>
> (c) by the neighbouring Parties concerned in areas where the limits of national sovereignty or jurisdiction have not yet been defined.

Given the constricted geographical situation of the Mediterranean, coupled with the lack of EEZ declarations and boundary delimitations, many of the "high seas" areas covered by potential SPAMIs, including the Ligurian Sea sanctuary (see below), most likely fall in category (c) – areas where national sovereignty or jurisdiction will be in place, but where it has not yet been determined.

The second restriction on designation of high seas SPAMIs is found in Article 9(4)(c), in which it is provided that any SPAMI designation must be made by the consensus decision of all Parties, *and* that the Parties must also approve management measures adopted for the area. Added to this, of course, is the overarching provision found in Article 2(2), which applies to the interpretation and application of every provision in the Protocol:

> 2(2) Nothing in this Protocol nor any act adopted on the basis of this Protocol shall prejudice the rights, the present and future claims or legal views of any State relating to the law of the sea, in particular, the nature and the extent of marine areas, the delimitation of marine areas between States with opposite or adjacent coasts, freedom of navigation on the high seas, the right and the modalities of passage through straits used for international navigation and the right of innocent passage in territorial seas, as well as the nature and extent of the jurisdiction of the coastal State, the flag State and the port State.

While one observer has described this provision, and a similar statement in Article 2(3) dealing with claims to jurisdiction, as primarily designed to "overcome the difficulties arising from the fact that many maritime boundaries have yet to be agreed"[183] in the region, this ignores the clear words which protect the status of high seas freedoms, an entirely different issue. The better view is that the combined effect of the special procedures for high seas areas and the disclaimer in Article 2(2) is to emphasize the requirement for consent in any such action:

> It appears evident that protected areas in maritime zones beyond territorial waters can only be established on the grounds of States' consent and co-operation, also involving the competent global and regional organizations.[184]

The Ligurian Sea Marine Mammals Sanctuary originated in a 1999 tripartite agreement among France, Italy and Monaco (in force in 2002). It covers a large area, of almost 100,000 km^2, between Corsica, Sardinia and the mainland of the parties (see Map 1, below). In 2001 it was accepted for inclusion on the SPAMI list. Its general effect, as summarized by Scovazzi, is for the parties to "undertake to adopt measures to ensure a favourable state of conservation for every species of marine mammal and to protect them and their habitat from negative impacts, both direct and indirect."[185]

Map 1: Ligurian Sea Marine Mammals Sanctuary.
Coordinates for this map were drawn from http://www.tethys.org/sanctuary_text.htm. Digital data from ESRI Geography Network (ESRI_Satellite

With respect to the critical issue of enforcement against other states, the original agreement provided the following, very carefully phrased, wording in Article 14:

> 14(1). In the part of the sanctuary located within the waters subject to its sovereignty or jurisdiction, each of the State Parties to the present Agreement is responsible for the application of the relevant provisions.
>
> (2) In the other parts of the sanctuary, each of the State Parties is responsible for the application of the provisions of the present Agreement with respect to ships flying its flag as well as, within the limits provided for by the rules of international law, with respect to ships flying the flag of third States.

The portions of this provision which deal with application within national jurisdiction and with respect to the parties' flag vessels are unexceptional, but the additional reference to application "within the limits of international law, with respect to ships flying the flag of third states", raises further questions. Does this mean that virtually no enforcement is possible outside the territorial seas (the only zones defined in the area), in recognition of high seas freedoms? Or is it intended

to accord some enforcement possibilities over what are not yet, but certainly could be, parts of the EEZs of the three states?

Scovazzi has considered this question, and notes that, had EEZs been established, the three states would each have jurisdiction, under Article 65 of the LOS 1982, giving the coastal state certain powers with respect to marine mammals. He concludes that, even though the EEZs have not been declared, the three states would be justified in enforcing these limited measures on the basis that they would, in effect, simply be asserting *part* of their jurisdictional entitlement under the LOS 1982. [186] While this argument has its attractions, the difficulty is that different portions of the sanctuary are presumably within the zones of each of the three states. If Article 14(2) is generously interpreted as a form of reciprocal enforcement arrangement, permitting each state to enforce in the others' zones (as yet undefined), this might be feasible, but it would seem that more precise wording, along the lines of an interim arrangement pending boundary delimitation, would be a sounder approach. In the absence of such clarity, the following statement would appear to be correct:

> [W]ith regard to third states, a coastal state may only enforce measures adopted for the protection of designated special areas in their territorial sea and EEZ. As a result, measures adopted for SPAMIs which are established, partially or totally, on the high seas, are binding only on states party to the SPA Protocol and cannot be enforced against third states.[187]

In any event, this aspect of the Ligurian Sea Sanctuary example highlights the special nature of its "high seas" effect – the very justification for the high seas aspect is tied up in part in the fact that these waters will inevitably be within the combined jurisdiction of the three parties, and as Scovazzi argues, the exercise of jurisdiction in those areas is only a high seas matter in a formalist sense.

The Antarctic

Some of the more extensive and useful proposals for the adoption of various protected area strategies have emerged under the *Antarctic Treaty System*, which comprises a number of interconnected agreements around the central structure of the Antarctic Treaty itself.[188] One of the agreements, the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR)[189] could equally be included as an example of an RFMO, but given the role of the Commission in exercising powers relating to protected areas under the Antarctic Treaty; it has been included here for ease of reference.

Annex V of the 1991 *Protocol on Environmental Protection to the Antarctic Treaty*[190] (the Madrid Protocol) deals specifically with Area Protection and Management, and contains a number of provisions of specific interest to the high seas. Annex V envisages two types of protected areas, Antarctic Specially Protected Areas and Antarctic Specially Managed Areas, both of which can include marine areas outside of national jurisdiction (i.e. "any" marine area):

> 2. For the purposes set out in this Annex, any area, including any marine area, may be designated as an Antarctic Specially Protected Area or an Antarctic Specially Managed Area. Activities in those Areas shall be prohibited, restricted or managed in accordance with Management Plans adopted under the provisions of this Annex.

The two categories are given more substance in Articles 3 and 4 of Annex V. Antarctic Specially Protected Areas (ASPAs) are to be designated to protect outstanding environmental, scientific, historic, aesthetic or wilderness values, any combination of those values, or ongoing or planned

scientific research", and entry is prohibited without a permit. The objectives with respect to these areas are quite far-reaching, as shown by Art. 3:

> 3(2) Parties shall seek to identify, within a systematic environmental-geographical framework, and to include in the series of Antarctic Specially Protected Areas:
>
> (a) areas kept inviolate from human interference so that future comparisons may be possible with localities that have been affected by human activities;
>
> (b) representative examples of major terrestrial, including glacial and aquatic, ecosystems and marine ecosystems;
>
> (c) areas with important or unusual assemblages of species, including major colonies of breeding native birds or mammals;
>
> (d) the type locality or only known habitat of any species;
>
> (e) areas of particular interest to on-going or planned scientific research;
>
> (f) examples of outstanding geological, glaciological or geomorphologic features;
>
> (g) areas of outstanding aesthetic and wilderness value;
>
> (h) sites or monuments or recognized historic value; and
>
> (i) such other areas as may be appropriate to protect the values set out in paragraph 1 above.[191]

The Antarctic Specially Managed Areas (SPMAs) are more limited in purpose, as set out in Article 4 of Annex V:

> 4(1) Any area, including any marine area, where activities are being conducted or may in the future be conducted, may be designated as an Antarctic Specially Managed Area to assist in the planning and co-ordination of activities, avoid possible conflicts, improve co-operation between Parties or minimize environmental impacts.
>
> 2 Antarctic Specially Managed Areas may include:
>
> (a) areas where activities pose risks of mutual interference or cumulative environmental impacts; and
>
> (b) sites or monuments of recognized historic value.
>
> 3 Entry into an Antarctic Specially Managed Area shall not require a permit. …

Proposals for designation, which must include a management plan based on set criteria, may come from any Party, the Committee for Environmental Protection (CEP) under the Madrid Protocol, the Scientific Committee for Antarctic Research (SCAR) or the Commission for the Conservation of Antarctic Marine Living Resources (the Commission - established under the CCAMLR Convention).[192] The designation procedure provides that proposals must be submitted to the CEP and the SCAR, and the Commission where appropriate (see below). The CEP will take into account the advice of SCAR, and make recommendations to the Antarctic Treaty Consultative Meeting. The proposal is deemed to be adopted if, within 90 days, no Consultative Party objects.[193]

The approval procedures are interesting in at least three respects. First, state parties and constituent bodies of the treaty arrangement are equally entitled to propose areas. Second, the approval process is slightly weighted in favour of approval, in that it is based on a no-objection

procedure. Third, by Article 6(2) the approval of designations in *marine* areas requires the prior approval of the Commission established under CCAMLR (a separate but related agreement):

> 6(2) Having regard to the provisions of Articles 4 and 5 of the Protocol, no marine area shall be designated as an Antarctic Specially Protected Area or an Antarctic Specially Managed Area without the prior approval of the Commission for the Conservation of Antarctic Marine Living Resources.

A number of partially or fully marine sites have been designated as ASPAs or ASMAs under the Madrid Protocol. As of 2004, six fully marine sites had been designated as ASPAs, but five of these were "carry-overs" from earlier designations, and only one, Terra Nova Bay, was a new designation (2003).[194] Further 11 partially-marine ASPAs have been designated, with 10 of these carried over from earlier designations. One partially marine ASMA has been identified.[195] Most of these sites appear to be near-shore areas.[196]

With respect to the high seas application of ASPAs and ASMAs, the following provisions must be kept in mind. First, Article 4(1) of the Madrid Protocol specifically provides that it "shall supplement the Antarctic Treaty and shall neither modify nor amend that treaty." Second, Article 1 of the Protocol provides that "…'Antarctic Treaty Area' means the area to which the provisions of the Antarctic Treaty apply in accordance with Article VI of that Treaty…" Finally, Article 6 of the Antarctic Treaty makes it clear that any exercise of functions under the Treaty, and by reference the Protocol, cannot interfere with the high seas rights of any state:

> 6. The provisions of the present Treaty shall apply to the area south of 60° South latitude, including all ice shelves, but nothing in the present Treaty shall prejudice or in any way affect the rights, or the exercise of the rights, of any State under international law with regard to the high seas within that area.

The CCAMLR Convention, of course, has its own objectives and purposes, primarily the "conservation of Antarctic marine resources."[197] The Commission established under the convention is empowered to "formulate, adopt and revise conservation measures on the basis of the best scientific evidence available"[198] And these measures can include "the designation of the opening and closing of areas, regions or sub-regions for purposes of scientific study or conservation, including special areas for protection and scientific study."[199]

To date, area protection under CCAMLR itself has been accorded by the Commission around identified CCAMLR Ecosystem Monitoring Program (CEMP) sites. The CEMP was established in 1985 in order to fulfil the requirement for an ecosystem approach in Article II of the Convention, and is intended to carry out the following functions:

> 1. Detect and record significant changes in critical components of the marine ecosystem within the Convention Area, to serve as a basis for the conservation of Antarctic marine living resources.
> 2. Distinguish between changes due to harvesting of commercial species and changes due to environmental variability, both physical and biological.[200]

At a recent meeting of the CCAMLR Scientific Committee (SC), there was discussion respecting the possible establishment of MPAs. The meeting agreed to convene a workshop and draft terms of reference were agreed upon, tasking the workshop to:[201]

- Review current principles and practices related to the establishment of Marine Protected Areas

- Discuss how the use of Marine Protected Areas could be used to contribute to furthering the objectives of CCAMLR

- Consider proposals that are currently under development or in a conceptual phase that relate to Marine Protected Areas in the Convention Area

- Discuss the types of scientific information that may be required for the development of Marine Protected Areas to further the objectives of CCAMLR, including the identification of biophysical regions across the Convention Area

At CCAMLR XXIII in Oct.-Nov. 2004, the Commission noted the draft terms of reference prepared by the SC, urged the SC to proceed with the work "as a matter of priority", and "reaffirmed the need to develop advice on MPAs…"[202]

OSPAR

The 1992 Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention)[203] is administered by the OSPAR Commission and applies to defined maritime areas of the North-East Atlantic and Arctic, including "internal waters and the territorial seas of the Contracting Parties, the sea beyond and adjacent to the territorial sea under the jurisdiction of the coastal state to the extent recognized by international law, and the high seas, including the bed of all those waters and its sub-soil…".[204] The general obligations of the Parties are stated in Article 2(a):

> 2(a) The Contracting Parties shall, in accordance with the provisions of the Convention, take all possible steps to prevent and eliminate pollution and shall take the necessary measures to protect the maritime area against the adverse effects of human activities so as to safeguard human health and to conserve marine ecosystems and, when practicable, restore marine areas which have been adversely affected.

Annex V to the OSPAR Convention, which was adopted in 1998, imposes a duty on the Commission to "draw up programmes and measures for the control of the human activities identified by the application of the criteria in Appendix 3".[205] In addition, the Commission is given a specific mandate with respect to protected area programmes, and is to:

> …develop means, consistent with international law, for instituting protective, conservation, restorative or precautionary measures related to specific areas or sites or related to particular species or habitats.[206]

In June 2003, the OSPAR Commission adopted the first legal instruments under Annex V to the Convention: (i) the *Initial List of Threatened and Declining Species and Habitats*,[207] and (ii) the *OSPAR Recommendation 2003/3 on a Network of Marine Protected Area*.[208] The purpose of this Recommendation is to establish the OSPAR Network of Marine Protected Areas and to ensure that by 2010 it is an ecologically coherent network of well-managed marine protected areas which will:

- Protect, conserve and restore species, habitats and ecological processes which have been adversely affected by human activities

- Prevent degradation of, and damage to, species, habitats and ecological processes, following the precautionary principle
- Protect and conserve areas that best represent the range of species, habitats and ecological processes in the area[209]

The main focus of the initiative is on areas within the jurisdiction of the parties, but Annex V and the subsequent documents do allow for protected areas to be established in high seas areas within the OSPAR "maritime area". In the *2003 Strategies of the OSPAR Commission for the Protection of the Marine Environment of the North-East Atlantic*,[210] the question of high seas areas is specifically addressed, as follows:

> 4.4 In developing the OSPAR Network of Marine Protected Areas, the Commission will undertake the following actions to complement the actions of the Contracting Parties under the OSPAR Recommendation on a Network of Marine Protected Areas
>
> …
> d. consider reports and assessments from Contracting Parties and observers on possible components of the OSPAR network and on the need for protection of the biodiversity and ecosystems in the maritime area outside the jurisdiction of the Contracting Parties, in order to achieve the purposes of the network as described in paragraph 2.1 of OSPAR Recommendation 2003/3;
>
> e. if appropriate, and in accordance with UNCLOS [*note* – LOS 1982], consider, in consultation with the international organizations having the necessary competence, how such protection could be achieved for areas identified under (d) and how to include such areas as components of the network…

There are a number of points of interest in this recommendation, and in Annex V itself. First, in Annex V, Art. 3 (1) (b)(ii), there is a requirement that the development of protected areas be "consistent with international law", which would require respect for high seas freedoms as identified earlier. Second, Annex V, Article 4(1) provides that no fisheries management measures are to be adopted pursuant to the Annex, but that desirable measures would be referred to the competent fisheries organization. Third, Annex V, Article 4(2) requires that shipping-related measures be referred to IMO (and parties to OSPAR should cooperate within IMO to secure an "appropriate response"). Finally, in para. 4.4 (e) of the 2003 Strategies document (above), it is anticipated that necessary measures will, where appropriate, be sought through the relevant competent organization.

It is as yet too early to assess the OSPAR initiative, given that no high seas areas have yet been recommended or declared.[211] It is, however, a useful example in the sense that the OSPAR Commission has, where other organizations have management mandates, adopted a role in identifying and planning appropriate sites and measures, while deferring actual action to the other bodies where they exist.

The OSPAR MPA network will be established in conjunction with the MPA network to be established under the Helsinki Convention covering the adjacent Baltic Sea.[212] In June 2003, the OSPAR and Helsinki Commissions (HELCOM) held a joint meeting at which they discussed ways and means of improving the protection of the marine environment in the North-East Atlantic and Baltic Sea.[213] Among a wide range of measures discussed was the establishment of a network of MPAs in the two areas; both Commissions committed to the task, as follows: [214]

> 17. The marine protected areas will be an important tool to protect the species and habitats identified as threatened, declining or in need of protection. We reaffirm our

> commitments to establish a network of well- managed marine protected areas. Based on the progress made by HELCOM in establishing a system of coastal and marine Baltic Sea Protected Areas, and OSPAR's agreement to a Recommendation and guidelines for selecting and managing an OSPAR Network of marine protected areas, working with the European Community, we shall have identified the first set of such areas by 2006, and shall then establish what gaps remain and complete by 2010 a joint network of well-managed marine protected areas that, together with the NATURA 2000 network, is ecologically coherent.
>
> 18. To this end, HELCOM and OSPAR have adopted a joint Work Programme to ensure that this work is done consistently across their maritime areas. They will also seek to cooperate with the Arctic Council and the Barcelona Convention in this work. In 2010, and periodically thereafter, we shall assess whether an ecologically coherent network of well managed marine protected areas has been achieved and maintained in both the North East Atlantic and the Baltic Sea

However, it should be noted that as the average width of the Baltic Sea is only 230 kilometres, or less than 130 nautical miles, and there are no high seas areas remaining. Although the independent OSPAR programme can extend to high seas areas, the Work Programme adopted by the two Commissions contemplates only marine protected areas in waters under the jurisdiction of the EU Member States.[215] It should also be noted that HELCOM and OSPAR have stated that the network of MPAs shall be established together with the NATURA 2000 network of protected areas (see above).

RFMO Area-Based Measures

Although the typical management approaches of RFMOs have involved the establishment of total allowable catches (TACs) and quotas, a number of RFMOs have used a wider variety of measures to a avoid over-exploitation, including area and seasonal closures, by-catch limits, limitations on fleet capacity and limitations on fishing effort (whether numbers of vessels or fishing days).[216] Some of these practices are area-based, in the sense that they effectively designate areas in which certain activities are closed, restricted, or more closely regulated than elsewhere within the area of coverage of the RFMO. Variations have included, for example:

- Prohibition of directed fishing in specifically defined areas[217]
- Prohibition of specific types of fishing within a defined area and for a specific time period[218]
- Prohibition of all fishing within a defined area, and for a specific time period[219]

While it might be conceivable that "conservation and management measures", as part of the mandate of RFMOs, could include the establishment of MPAs, fisheries organizations have not established full-fledged MPAs in their management areas, nor would this be within what is still a distinctly sectoral mandate (analogous to PSSAs in the shipping context). The Commission established under CCAMLR has a *role* in the definition of such areas, in cooperation with other components of the Antarctic Treaty system, but generally it must be recognized that sectorally-based organizations, with a mandate addressed specifically to fisheries, are not in the best position to adopt more integrated area-based measures, which would cross over into areas outside their competence.[220]

Nonetheless, area-based measures for habitat protection may still be important tools for such organizations.[221] Where the major threat to an identified habitat or ecosystem is in fact from fishing activity, which is probably the most common situation in vulnerable high seas areas, a closed area, whether for all purposes or for specific gear types, is capable of achieving the conservation and management objectives that would justify an MPA, even though the formal designation is different. An important recent example of such a measure is the November 2004 decision of NEAFC, at its 23rd meeting, to close five seamounts and a portion of a sub sea ridge to all fishing using bottom fishing gear, for the stated purpose of habitat protection.[222]

3.2.5 Species Specific

International Whaling Convention 1946

The International Whaling Convention is intended both to conserve the affected species, and to provide for "the orderly development of the whaling industry"[223] (although the Commission established a moratorium on commercial whaling effective 1985/1986). By Article I.2, the Convention applies without reference to national waters, but rather to those engaged in whaling, to ships and facilities and to all "waters" where whaling is conducted, presumably including high seas:

> I.2 This Convention applies to factory ships, land stations, and whale catchers under the jurisdiction of the Contracting Governments and to all waters in which whaling is prosecuted by such factory ships, land stations, and whale catchers.

The Commission (IWC) can create whale sanctuaries, including high seas areas, based on proposals to the Commission, which are referred to the Scientific Committee for review, and must obtain the support of three-quarters of the Commission members (although members may still object and not respect the provisions, as they may with other measures of the Commission). Sanctuary measures are established for ten years, with subsequent reviews and renewals. The two sanctuaries currently in effect are in the Indian Ocean and Southern Ocean, and both include high seas areas.[224]

3.2.6 Conclusions – HSMPAs and Area-Based Measures

This review of the legal bases for advancing the concept of HSMPAs gives rise to at least four observations of significance to this study. First, the general obligations to protect and preserve the marine environment, and to cooperate in this effort, certainly support the creation of high seas marine protected areas, but they cannot be seen as *mandating* such measures. In sum, the creation of protected areas is not prohibited by international law, but neither is it required.

Second, while the creation of protected areas on the high seas is not specifically prohibited by international law, the lack of any mandatory obligation means that any resultant interference with high seas freedoms of non-participant states, including activities such as fishing and navigation, is likely to be considered an "unjustifiable" interference and thus prohibited. As a result, any imposition of such protected areas under the current legal regime must either: a) be based on consent, and binding only on the parties to the agreement creating the area; **or**, b) be constructed out of sectoral measures imposed via other agreements and institutions (and therefore also based on consent). This point has been made by Mossop (responding to the argument that high seas MPAs are at least consistent with the obligations of states at international law), who additionally noted that the lack of ability to enforce compliance against a dissenting state is a critical gap:

> This author agrees that… a high seas MPA is consistent with the legal duties to protect the environment contained within the LOSC [LOS 1982], the Convention on Biological Diversity, and customary international law. However the papers [*which argue* this] often obscure one of the most important requirements for an MPA to be successful: the effective enforcement of the area's prohibitions. It will be extremely difficult to ensure the success of the MPA if a number of dissenting states continue the activities that the MPA is designed to prohibit. And yet, under international law, supporters of a high seas MPA may be required to allow just that.[225]

Third, the existing examples of high seas protected areas, or framework agreements for their later establishment, are all consistent with this approach. The Ligurian sanctuary provisions are only binding upon the parties to the agreement, and the various regional seas provisions, as well as other regional agreements which extend to the high seas presume that they will only be binding upon participants in the arrangements. The strongest support for the creation of high seas protected areas, outside of NGO fora,[226] has come in the context on non-binding, or soft law instruments. It is not encouraging that states are most willing to expand their commitment to such measures in documents to which they explicitly decline to be bound.

3.3 Summary and Conclusions – High Seas

A consideration of conservation measures developed on the high seas, including the limited attempts at development of high seas marine protected areas, presents a picture that is at once hopeful, in that much progress has been made in recent years, but at the same time a matter for concern, given the lack of movement on integrated protective measures on the high seas. By way of summary, the following points should be noted:

- Despite the progress that has been made, the dominant features of the high seas regime remain essentially the same: high seas freedoms and flag state enforcement. Derogations from those principles have been made by consent of the parties involved.

- Where the greatest incursions on these principles have been made, as with UNFSA and other fisheries agreements, and with MARPOL, they have focused on the development of *sectoral* measures to deal with particular identified issues.

- Moreover, such measures have tended to be most achievable where there were identified conflicts with the exploitation interests of coastal states, rather than for purely conservation purposes. This is true, for example, of the UNFSA and associated actions via RFMOs – distant water fishing activities directly conflicted with interests of coastal and other fishing states in straddling stocks and highly migratory species.[227]

- Even where formal legal measures have been put in place, the difficulty of ensuring flag state implementation of conservation obligations remains a real obstacle. This may occur either due to a failing of political will in implementation, or a lack of adequate capacity to monitor and control the activities of a state's flag vessels.

- Where substantive principles and obligations have been developed for the high seas, states have continued to guard the prerogatives of flag state enforcement. That is, while many states have been prepared to assume new obligations respecting high

seas resources, they have been reluctant to give up the sole right to enforce those obligations against their own vessels. Where they have done so, as in UNFSA and some RFMOs, they have negotiated careful restrictions on the circumstances in which other states might exert such control.

- Some progress has been made towards the development of high seas protected areas, as discussed above, but these have primarily been at the regional level, and have been stated in such a way as to require the consent of other states, and to not interfere with high seas freedoms of other states.

This assessment of the *legal* obstacles confronting enhanced conservation efforts on the high seas may appear to be somewhat discouraging, particularly with respect to the realistic prospects for more integrated approaches to the high seas, whether through protected areas or otherwise. What is important, however, is how this assessment might be used to refine and further develop the strategies employed to advocate for improved conservation of high seas biodiversity. This issue will be addressed further following a consideration of the specific legal regime applicable to the Grand Banks.

The International Whaling Convention applies to those engaged in whaling, to ships and facilities, and to “waters” where whaling is conducted. © WWF-Canon / Morten LINDHARD

4 Legal Regime Applicable to the Grand Banks

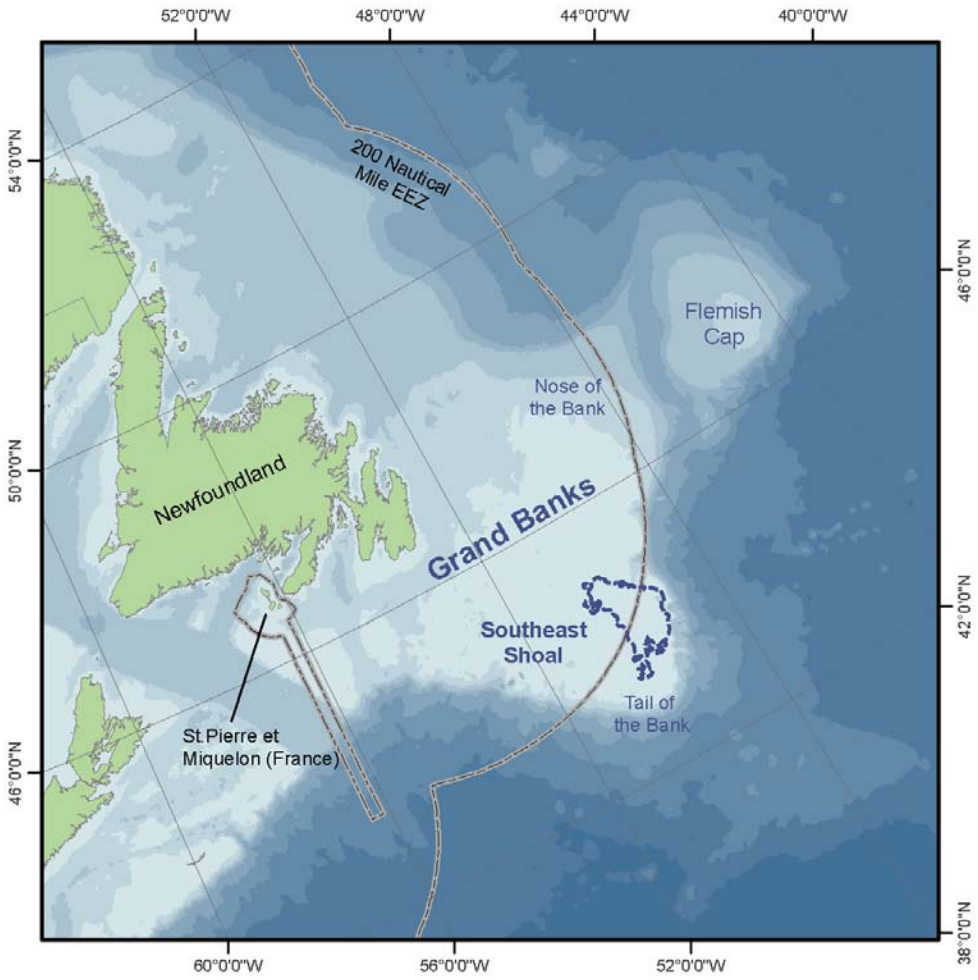
The global legal framework is applied in the Grand Banks through both Canadian and international legal measures. In order to understand the implications of the global regime for this region, it is necessary to briefly review the main legal instruments which have been put in place – or which could be put in place – in the Grand Banks. This part will deal with the exercise of Canadian jurisdiction over the area in question, and then turn briefly to the regional application of the international instruments discussed to this point. First, however, it is necessary to briefly describe the Grand Banks initiative, within which this study was developed.

4.1 The Grand Banks Initiative

As was noted at the outset of this paper, the Grand Banks region (see Map 2, below) encompasses multiple uses and users of the marine environment, including, *inter alia*, the following:

- Canadian and distant-water fishing targeting various species and operating with a range of gear types
- Canadian and foreign shipping, both to and from Canadian ports and in transit between Europe and other North American destinations
- hydrocarbon exploration and production
- submarine cables (and potentially pipelines in future)
- marine tourism and recreation
- security activities, whether naval or coast guard/police activities

The Grand Banks, once home to a robust Northern cod fishery, is now better known for what may be the most famous large-scale fishery collapse ever witnessed. The collapse also signalled similar pending disasters in other parts of the world. While the Grand Banks ecosystem has become the global example of mismanaged ocean resources, it still retains a high degree of productivity. The WWF initiative on the Grand Banks aims at giving this ecosystem every opportunity to recover as a reservoir of marine life that is second to none on the planet.



Map 2: The Grand Banks Region

The central elements of the WWF initiative in the region may be briefly summarized as follows:

- **Long-range** goal setting that is framed by an adaptive management approach

- **A combination of protection, management and restoration strategies** that need to be employed to ensure a successful comprehensive management regime based on zoning and best practices

- **New and coordinated institutional arrangements** that take into account the fact that such an ambitious conservation effort will require dramatically larger investment than is currently being made, and that no single jurisdiction is capable of acting alone

While there are important identified impacts from shipping (e.g. bilge oil dumping resulting in seabird mortalities) and oil and gas development (e.g. seismic activity impacts on marine mammals, and discharges related to exploration and production), it must be recognized that

fishing has been and continues to be the dominant activity, economic driver, and pressure on the species and habitats of the Grand Banks. Threats from fishing in the region can be broken into three key categories:

- **IUU fishing** in the area beyond Canada's EEZ

- **Bycatch** - This is an issue both inside and outside Canada's EEZ, and is a key concern for species at risk. For example, for every tonne of shrimp caught, as much as ten tonnes of other marine life are dumped overboard as waste. Several species of wolfish are now considered at risk in Atlantic Canada, despite never having experienced a directed fishery

- **Unsustainable or unenforceable quotas** - This is a concern both inside and outside the EEZ. Beyond the EEZ, even when set appropriately, quotas are often disregarded by the nations or the ships that fish the Grand Banks

Beyond the control of fishing effort and techniques, attention must be paid to the protection of critical habitat, whether from fishing or other activities, and this requires the systematic identification of such areas and the relevant threats. One area of particular interest is the Southeast Shoal (see Map 2, above), "a shallow, sandy plateau where many species of fish, birds and marine mammals congregate to spawn and feed",[228] which encompasses portions of the Canadian EEZ and extended continental shelf. The Southeast Shoal has been the focus of proposals for an MPA or similar form of protection on a number of occasions, with the justification centring on the specific ecological values represented, as well as the various activities (including fishing and shipping), which threaten the marine biodiversity found in the region.[229]

4.2 Canadian Jurisdiction

4.2.1 Declaration of Zones

The starting point for Canadian jurisdictional entitlements over the Grand Banks region is found in the declaration of various zones of jurisdiction, as found in the *Oceans Act*.[230] Canada has declared a full suite of zones available under the law of the sea, including a territorial sea and contiguous zone, but given the relevant areas the two zones of particular importance are the EEZ and the continental shelf.

EEZ

The *Oceans Act* provides for an EEZ extending seaward from the outer limits of the territorial sea, to a maximum of 200 n.m. from the baselines from which the territorial sea is measured. Within this zone, Canada asserts jurisdiction almost exactly as provided in the LOS 1982:

> 14. Canada has
>
> (a) sovereign rights in the exclusive economic zone of Canada for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters superjacent to the seabed and of the seabed and its subsoil, and with regard to other activities for the economic exploitation and exploration of the exclusive economic zone of Canada, such as the production of energy from the water, currents and winds;
>
> (b) jurisdiction in the exclusive economic zone of Canada with regard to:

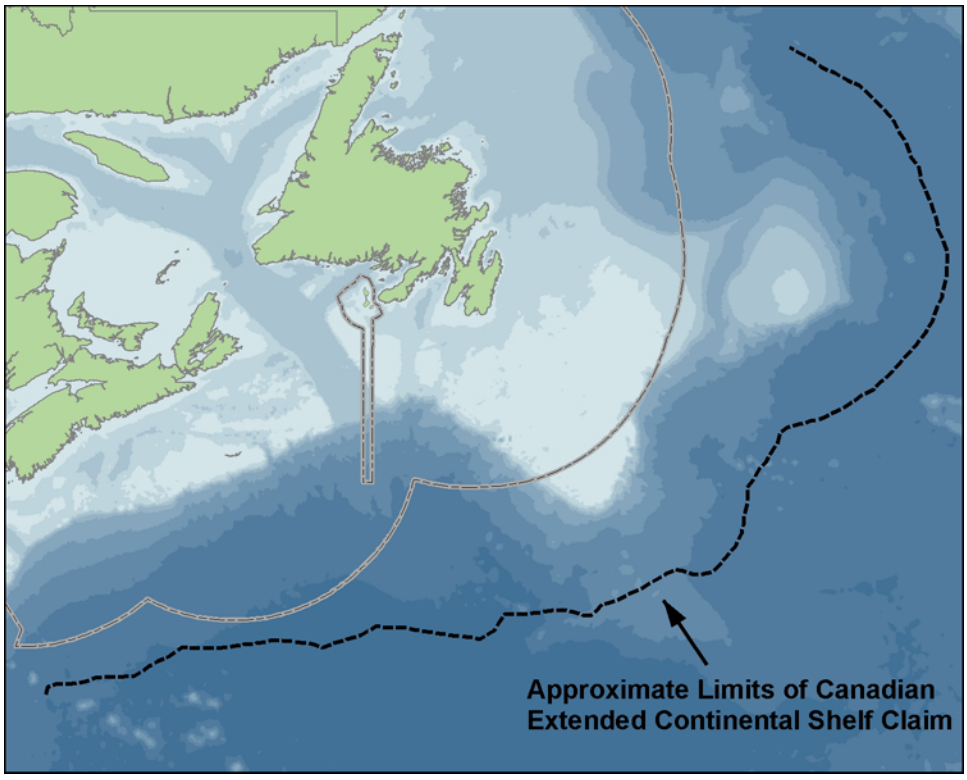
(i) the establishment and use of artificial islands, installations and structures,

(ii) marine scientific research, and

(iii) the protection and preservation of the marine environment; and

(c) other rights and duties in the exclusive economic zone of Canada provided for under international law.

It should be noted that the reference to "jurisdiction" over protection and preservation of the marine environment does not include the qualifying words "as provided for in the relevant provisions" of the Convention, but given that Canada is a party to the LOS 1982, it is clearly bound by the full provisions of the Convention, as discussed earlier.



Map 3: Approximate Limits of Canadian Extended Continental Shelf Claim.
This approximation was drawn from a version used in the arbitration which determined the offshore boundary between Nova Scotia and Newfoundland and Labrador in 2002: see Arbitration Between Newfoundland and Labrador and Nova Scotia Concerning Portions of the Limits Of Their Offshore Areas as Defined in the Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act and the Canada-Newfoundland Atlantic Accord Implementation Act, Award of the Tribunal in the Second Phase, Ottawa, 17 March 26, 2002.

Continental Shelf

By s. 17 of the *Oceans Act* Canada claims a continental shelf to the maximum limits permissible under international law, which would be determined by the criteria in Article 76 of the LOS 1982. No submission has yet been prepared for the Commission on the Limits of the Continental Shelf, so that, while Canada's jurisdictional claim is in effect, the outer limits of the area have not been

precisely set out. Map 3 provides an unofficial representation of the general parameters of the claim in the area.

The substantive jurisdiction claimed, under s. 18 of the *Oceans Act*, is entirely consistent with that set out in the Convention:

> 18. Canada has sovereign rights over the continental shelf of Canada for the purpose of exploring it and exploiting the mineral and other non-living natural resources of the seabed and subsoil of the continental shelf of Canada, together with living organisms belonging to sedentary species, that is to say, organisms that, at the harvestable stage, either are immobile on or under the seabed of the continental shelf of Canada or are unable to move except in constant physical contact with the seabed or the subsoil of the continental shelf of Canada.

4.2.2 Integrated Planning and Ocean Policy

Part II of the *Oceans Act* addresses the development of an oceans management strategy for Canada. The Minister of Fisheries and Oceans is mandated, in section 29, to "lead and facilitate the development and implementation of a national strategy for the management of estuarine, coastal and marine ecosystems in waters that form part of Canada or in which Canada has sovereign rights under international law." Under s. 30, the strategy is to be based upon the following principles:

> 30. The national strategy will be based on the principles of
>
> a) sustainable development, that is, development that meets the needs of the present without compromising the ability of future generations to meet their own needs;
>
> b) the integrated management of activities in estuaries, coastal waters and marine waters that form part of Canada or in which Canada has sovereign rights under international law; and
>
> c) the precautionary approach, i.e., erring on the side of caution.

In addition, under s. 31, the Minister is to "shall lead and facilitate the development and implementation of plans for the integrated management of all activities or measures in or affecting estuaries, coastal waters and marine waters…" An Oceans Strategy released in 2002, although notable for its generality as a "framework" document, provided the basis for moving forward to the development of integrated management plans on Canada's three coasts, as planned in the document.[231] It is worth noting that a central element of the Policy and Operational Framework for Integrated Management is the concept of Management by Areas, which recognizes the necessity for an ecosystem-based approach to planning, rather than a purely sectoral perspective.[232] This model is based on the identification of Large Ocean Management Areas (LOMAs), such as the Eastern Scotian Shelf and the Grand Banks. The approach is to set broad, ecosystem-based objectives, identify habitat and species in need of protection, and "move down" to the level of areas of specific interest which may be protected by MPAs or other means.[233] While this is only a partial description of the overall strategy, this particular aspect, with its focus on a zoning approach, may eventually provide the basis for a more integrated approach to ocean management, [234] similar to that attempted on a pilot basis in the Eastern Scotian Shelf Integrated Management (ESSIM) initiative.[235]

4.2.3 Fisheries

The Fisheries Act

Under the *Fisheries Act*,[236] the federal government has the power to regulate and manage virtually all aspects of marine fisheries, stemming from a fundamental power, within the full discretion of the Minister, to issue licences for fishing:

> 7. (1) Subject to subsection (2), the Minister may, in his absolute discretion, wherever the exclusive right of fishing does not already exist by law, issue or authorize to be issued leases and licences for fisheries or fishing, wherever situated or carried on.
>
> (2) Except as otherwise provided in this Act, leases or licences for any term exceeding nine years shall be issued only under the authority of the Governor in Council.

The general powers of the Minister are extended by the broad power to make regulations, as set out in section 43, including, *inter alia* the following:

> 43. The Governor in Council may make regulations for carrying out the purposes and provisions of this Act and in particular, but without restricting the generality of the foregoing, may make regulations
>
> (a) for the proper management and control of the sea-coast and inland fisheries;
>
> (b) respecting the conservation and protection of fish;…
>
> (e) respecting the use of fishing gear and equipment;
>
> (f) respecting the issue, suspension and cancellation of licences and leases;
>
> (g) respecting the terms and conditions under which a licence and lease may be issued; …
>
> (h) respecting the obstruction and pollution of any waters frequented by fish;
>
> (i) respecting the conservation and protection of spawning grounds; …
>
> (m) where a close time, fishing quota or limit on the size or weight of fish has been fixed in respect of an area under the regulations, authorizing persons referred to in paragraph (l) to vary the close time, fishing quota or limit in respect of that area or any portion of that area.

It is clear from this provision that the Minister, acting through the Governor in Council, has the regulatory power necessary to carry out the full range of management tasks necessary to most conceivable actions respecting fisheries management and conservation. Of particular interest in the present context are the powers to: set terms and conditions of fishing, including, by implication in paragraph (i), the power to close given areas to fishing (a power which is exercised in fact); control gear types (e.g. if particular techniques are to be prohibited in a given area); and conserve and protect spawning grounds. There is also reference to the "obstruction and pollution" of waters frequented by fish, which requires reference back to other provisions of the Act dealing with pollution and protection of fish habitat.

Section 36 of the *Fisheries Act* sets out a number of prohibitions respecting the deposit of substances deleterious[237] to fish in waters frequented by fish, or on fishing grounds. The broadest of these provisions is found in s. 36(3), which prohibits the deposit of deleterious substances generally, except where explicitly permitted:

> 36 (3) Subject to subsection (4), no person shall deposit or permit the deposit of a deleterious substance of any type in water frequented by fish or in any place under any

> conditions where the deleterious substance or any other deleterious substance that results from the deposit of the deleterious substance may enter any such water.
>
> (4) No person contravenes subsection (3) by depositing or permitting the deposit in any water or place of:
>
> (a) waste or pollutant of a type, in a quantity and under conditions authorized by regulations applicable to that water or place made by the Governor in Council under any Act other than this Act; or
>
> (b) a deleterious substance of a class, in a quantity or concentration and under conditions authorized by or pursuant to regulations applicable to that water or place or to any work or undertaking or class thereof, made by the Governor in Council under subsection (5).

This provision, which is administered by Environment Canada, has formed the basis for much of the federal government's efforts to control marine pollution. It is beyond the scope of this study to examine the jurisprudence and enforcement practice which has developed with respect to this provision, but it is sufficient to note that it provides the government with the power to deal with various types of incidents which may emerge with respect to protection of particular areas.

Section 35 provides for the power to protect fish habitat from a wider range of effects than pollution, in the following terms:

> 35. (1) No person shall carry on any work or undertaking that results in the harmful alteration, disruption or destruction of fish habitat.
>
> (2) No person contravenes subsection (1) by causing the alteration, disruption or destruction of fish habitat by any means or under any conditions authorized by the Minister or under regulations made by the Governor in Council under this Act.

Perhaps more important from the perspective of area protection and forward planning, s. 37 builds on ss. 35 and 36, adding a requirement that anyone who does or *proposes* to do any of the things prohibited by the two sections must provide plans and specifications of the proposed activities:

> 37. (1) Where a person carries on or proposes to carry on any work or undertaking that results or is likely to result in the alteration, disruption or destruction of fish habitat, or in the deposit of a deleterious substance in water frequented by fish … the person shall, on the request of the Minister or without request in the manner … provide the Minister with such plans, specifications, studies, procedures, schedules, analyses, samples or other information relating to the work or undertaking and with such analyses, samples, evaluations, studies or other information relating to the water, place or fish habitat that is or is likely to be affected by the work or undertaking as will enable the Minister to determine
>
> (a) whether the work or undertaking results or is likely to result in any alteration, disruption or destruction of fish habitat that constitutes or would constitute an offence… and what measures, if any, would prevent that result or mitigate the effects thereof; or
>
> (b) whether there is or is likely to be a deposit of a deleterious substance by reason of the work or undertaking that constitutes or would constitute an offence … and what measures, if any, would prevent that deposit or mitigate the effects thereof.

The section goes on to provide that the Minister, upon review of the material, may require that the activity be altered or restricted so as to bring it into compliance. While the exact parameters of

this power may not yet have been fully explored, the combined effect of ss. 35, 36 and 37 could, if rigorously applied to an area of interest, provide a means of controlling or at least reviewing potentially harmful activities as a matter under the *Fisheries Act*, with or without reference to other actions such as creation of a MPA.

Coastal Fisheries Protection Act

The *Coastal Fisheries Protection Act*,[238] in addition to generally prohibiting foreign fishing from Canadian waters except where explicitly permitted, makes a number of provisions for the more effective implementation of the UNFSA and fishing conservation measures imposed by NAFO. The general purposes of the critical provisions are described, in somewhat declaratory tone, in section 5.1:

> 5.1 Parliament, recognizing that:
>
> (a) straddling stocks on the Grand Banks of Newfoundland are a major renewable world food source having provided a livelihood for centuries to fishers,
>
> (b) those stocks are threatened with extinction,
>
> (c) there is an urgent need for all fishing vessels to comply in both Canadian fisheries waters and the NAFO Regulatory Area with sound conservation and management measures for those stocks…
>
> (d) some foreign fishing vessels continue to fish for those stocks in the NAFO Regulatory Area in a manner that undermines the effectiveness of sound conservation and management measures,
>
> declares that the purpose of section 5.2 is to enable Canada to take urgent action necessary to prevent further destruction of those stocks and to permit their rebuilding, while continuing to seek effective international solutions to the situation referred to in paragraph (d).

The remainder of section 5 then goes on to make a number of specific provisions as to the extent of control to be exerted, and over which vessels. The broadest provision is found in 5.2, which provides as follows:

> 5.2 No person, being aboard a foreign fishing vessel of a prescribed class, shall, in the NAFO Regulatory Area, fish or prepare to fish for a straddling stock in contravention of any of the prescribed conservation and management measures.

The effect of this section is further defined by s. 6(b.1)-(b.3), which gives the power to prescribe, by regulation, which stocks are "straddling stocks", which vessels are subject to this power, and which management measures are within the scope of the section. This power was used, during the "Turbot War" (the 1994/1995 fishing dispute with Spain and the EU) to prescribe vessels subject to the unilateral enforcement action of Canada within the NAFO Regulatory Area outside the Canadian EEZ. Further specific powers in section 5 are included in 5.3-5.5, and provide for the following:

- Making it an offence for vessels of "participating states" in areas regulated by an RFMO from certain activities prohibited by that RFMO

- Providing in a similar way for vessels of states which are party to any international fisheries arrangement to which Canada is party, which would extend to bilateral agreements

- Prohibiting any fishing vessel without nationality from fishing in areas defined by an RFMO operating under UNFSA, or in any area designated under other agreements to which Canada is a party

Participating states, straddling stocks and applicable agreements (including NAFO) have been prescribed by regulation.[239] The Act further specifies the limits of enforcement powers, in general in a manner intended to bring the Canadian search, inspection and arrest powers into compliance with NAFO and UNFSA approaches. With respect to the purpose of this study, the implication of these measures, outside 200 n.m. and within the NAFO Regulatory Area, would be the potential for at least limited Canadian enforcement of any moratorium or closed areas imposed by authority of NAFO.

4.2.4 Shipping

Canada Shipping Act

The *Canada Shipping Act*[240] (CSA) provides generally for the regulation of Canadian flag vessels, but also for a degree of control over the activities of foreign flag vessels in Canadian waters. Of particular interest here are the powers under Part XV of the Act, dealing with the control of vessel source pollution. Section 656 gives the power to make regulations for the prohibition or control of vessel discharges:

> 656. (1) The Governor in Council may make regulations prohibiting the discharge from ships, except as thereby authorized for the purposes of this Part, of any one or more pollutants specified in the regulations.
>
> (2) Notwithstanding any regulation made under subsection (1), a discharge of a pollutant from a ship is permitted if done in accordance with a permit granted under Division 3 of Part 7 of the Canadian Environmental Protection Act, 1999.

Section 664 makes it an offence, punishable by a fine of up to $1 million (and possible imprisonment for individuals), to violate such regulation, and also allows for other measures such as publication of the facts of the offence, and contributions to research into the ecological use and disposal of the pollutant in respect of which the offence was committed." A number of regulations have been enacted, including the *Pollutant Substances Pollution Prevention Regulations*,[241] which prescribes with respect to discharges of a wide range of substances. Perhaps the most significant regulations in this respect are the *Oil Pollution Prevention Regulations*,[242] which put in place the terms of MARPOL 73/78 dealing with permissible standards of oil and oily water discharges, and regarding equipment and record-keeping requirements.

There are a number of difficulties which may make these provisions less useful for purposes of protected areas. The approach, as might be expected with respect to pollution incidents, is largely reactive in nature. While it might be desirable, for example, to impose a ban on shipping in a particular area, or at least higher standards than the normal for discharges, this power does not exist in general in the EEZ. As was explained earlier, such measures would depend in the

identification of a special area or particularly sensitive sea area, and compliance with the necessary IMO procedures, before it could be effective. Furthermore, the restrictions on enforcement capacities when dealing with foreign vessels, an issue discussed in section 2.1.4 above, apply by virtue of Canada being bound to both LOS 1982 and MARPOL, and may weaken the ability to deal with foreign vessels.

The CSA does provide, pursuant to the *Collision Regulations*,[243] for the creation of vessel traffic separation schemes, which would be approved by IMO in order to obtain international recognition. Recent alterations to such a routing scheme in the Bay of Fundy were undertaken for the express purpose of reducing the level of strikes on right whales by large vessels,[244] but it is unclear whether this could be extended to a general use of the routing system to avoid, for example, protected areas in the EEZ, given that the primary purpose is ship safety. The particular case in the Bay of Fundy dealt with an area that is partly or entirely in internal waters.

4.2.5 Oil and Gas Development

Regulation of continental shelf activities, including exploration for and exploitation of oil and gas, is clearly a matter of federal jurisdiction.[245] However, with respect to the continental shelf off both Newfoundland and Nova Scotia, the federal and provincial governments have entered into cooperative agreements[246] providing for aspects of the governance of such activities to be placed with a jointly appointed board – in the case of Newfoundland and Labrador, the Canada-Newfoundland Offshore Petroleum Board. Included in the mandate of the Board is the primary responsibility for approval of offshore projects, an approval process that now mandates an environmental assessment under the *Canadian Environmental Assessment Act (CEAA)*.[247] Federal regulatory requirements under other legislation still apply, but the Nova Scotia and Newfoundland Boards have both entered into MOUs with affected departments to harmonize certain criteria and standards. Where an MPA has been designated under the *Oceans Act* (as in the Sable Gully), the cooperation of the affected Board (Nova Scotia) has been obtained to ensure that oil and gas activities are not allowed in areas where there would be an unacceptable impact.

In the long term, it may be possible to pursue more advanced planning and zoning for oil and gas activities, but at the present time the process has been largely reactive to industry identification of exploration areas of interest, rather than attempting to plan ahead for control of development in sensitive areas. The exceptions have been the coordination with the Sable Gully MPA (above), and the moratorium on exploration on Georges Bank. The latter example, however, was based on specific legislative authority of an extraordinary nature.

4.2.6 Ocean Dumping

Canadian Environmental Protection Act

The provisions of the London Convention are brought into Canadian law in Part 7, Division 3 of the *Canadian Environmental Protection Act* (CEPA).[248] The broad power to control the dumping of wastes at sea, and the focus on site selection and assessment, clearly gives sufficient power to regulate, and indeed prevent, the dumping of wastes in any identified area of interest or in need of protection.

4.2.7 Species Specific Protection

Migratory Birds Convention Act (MBCA)

The *Migratory Birds Convention Act*[249] (MBCA) provides for the implementation of the *Migratory Birds Convention*, through protection of certain designated birds and their habitat. Recent amendments to the Act[250] apply it explicitly to the EEZ of Canada, and add new offences of direct relevance here, including the following:

> 5.1 (1) No person or vessel shall deposit a substance that is harmful to migratory birds, or permit such a substance to be deposited, in waters or an area frequented by migratory birds or in a place from which the substance may enter such waters or such an area.
>
> (2) No person or vessel shall deposit a substance or permit a substance to be deposited in any place if the substance, in combination with one or more substances, results in a substance — in waters or an area frequented by migratory birds or in a place from which it may enter such waters or such an area — that is harmful to migratory birds.

The effect of these sub-sections is modified by ss. 3, which provides that they do not apply if the deposit is authorized under the CSA or another Act, or if it is authorized by the Minister for scientific purposes. As a result, a deposit of oily substances within the concentrations permitted by the CSA would still be allowed. Nonetheless, the two sub-sections do open the possibility, first, that any deposit in the EEZ in excess of the CSA provisions could be prosecuted under the MBCA if in waters frequented by migratory birds. Second, the deposits of other substances not covered by the CSA could be prosecuted here. This is particularly broad given the impact of s. 5.1(2), which does not require that the deposit made by the violator be independently harmful, but rather that it might combine with other substances to create something harmful to birds.

Regulations under the MBCA provide for the creation of migratory bird sanctuaries, and presumably the recent amendments could have the effect of allowing for their creation within the EEZ as well. This might create opportunities for the application of the prohibitions in those regulations to the EEZ, but at present the prohibitions apply to hunting, and any disturbance of *nests*, which would not seem to be of any utility at sea.

Species at Risk Act

The *Species at Risk Act*[251] (SARA), 2002, is part of Canada's implementation of its obligations under the *CBD*. The overall objective of the Act is to "prevent endangered or threatened wildlife from becoming extinct or lost from the wild, and to help in the recovery of these species." The Act is also "intended to manage species of special concern and to prevent them from becoming endangered or threatened."[252] Much of the effect of the Act is to put in place a process for the designation of different categories of species at risk, and providing for cooperation and collaboration of different levels of government to put in place protection and recovery programmes.

The relevant areas of the Grand Banks will fall within federal jurisdiction, and thus will be subject to the protections provided in the Act without further action by provinces. However, a number of the prohibitions in the Act relate to taking or destruction of species, and may not be of direct concern to the creation of protected areas. The provisions relating to habitat protection, on the other hand, offer a number of provisions concerning the protection of critical habitat, including a requirement for regulation of specified areas, under certain circumstances:

> 59. (1) The Governor in Council may, on the recommendation of the competent minister after consultation with every other competent minister, make regulations to protect critical habitat on federal lands.
>
> (2) The competent minister must make the recommendation if the recovery strategy or an action plan identifies a portion of the critical habitat as being unprotected and the competent minister is of the opinion that the portion requires protection.
>
> (3) The regulations may include provisions requiring the doing of things that protect the critical habitat and provisions prohibiting activities that may adversely affect the critical habitat.

This power could conceivably be used to regulate a range of activities in an identified area of critical habitat in marine areas, although the interaction with freedom of navigation in the EEZ is not yet clear. It should also be noted that s. 58(2) assumes an interaction between this Act and other protected area measures, in that, e.g., where measures are taken with respect to an MPA (see below), the relevant Minister is to be informed.

The SARA applies, by virtue of s. 4(1), to "sedentary living organisms" on the continental shelf, which would take its effect beyond 200. Section 58(1) further applies the prohibition on destruction of critical habitat to the EEZ and the continental shelf. It is as yet untested, but it could be expected that the application of this provision, dealing with habitat rather than the species itself, could be beyond Canadian jurisdiction on the continental shelf, in that jurisdiction over sedentary species beyond 200 n.m. extends to sovereign right for "exploring and exploiting" the natural resources, but does not explicitly extend to conservation.

4.2.8 Protected Areas

There are at least three pieces of legislation with more direct relevance to the creation of area-based protective measures in the EEZ or elsewhere.

National Marine Conservation Areas Act

The *National Marine Conservation Areas Act*[253] (NMCA), in force in 2002, provides for the creation of national marine conservation areas under the Minister of Canadian Heritage:

> 4. (1) Marine conservation areas are established in accordance with this Act for the purpose of protecting and conserving representative marine areas for the benefit, education and enjoyment of the people of Canada and the world.
>
> (2) Reserves are established in accordance with this Act for the purpose referred to in subsection (1) where an area or a portion of an area proposed for a marine conservation area is subject to a claim in respect of aboriginal rights that has been accepted for negotiation by the Government of Canada.
>
> (3) Marine conservation areas shall be managed and used in a sustainable manner that meets the needs of present and future generations without compromising the structure and function of the ecosystems, including the submerged lands and water column, with which they are associated.
>
> (4) Each marine conservation area shall be divided into zones, which must include at least one zone that fosters and encourages ecologically sustainable use of marine resources and at least one zone that fully protects special features or sensitive elements of ecosystems, and may include other types of zones.

Although the Act applies to the EEZ, section 2(3) makes it clear that designation of an area implies no claim to the area beyond that allowed for the EEZ under the *Oceans Act*. The process of establishment is cumbersome, in that section 2(1) defines a marine conservation area as an area named and described in a Schedule to the Act, which would require amendment of the legislation. Under section 9, within 5 years of designation, a management plan for the area is to be prepared and tabled in Parliament. The level of protection in these areas is intended to be high, as indicated by the prohibition against any hydrocarbon exploration or development, and against any alienation or occupation of the lands.

The only areas currently referred to by Parks Canada as NMCAs are in Georgian Bay, in freshwater, and in the Saguenay area of the St. Lawrence. There does not appear to be any immediate likelihood of establishing such areas in the offshore waters, given that the purpose and level of protection seem to be more analogous to that of a national park (though not as complete).

Canadian Wildlife Act

The *Canada Wildlife Act*[254] provides, in an amendment from 1994, for the creation of protected marine areas in Canadian waters, including the EEZ:

> 4.1 (1) The Governor in Council may establish protected marine areas in any area of the sea that forms part of the internal waters of Canada, the territorial sea of Canada or the exclusive economic zone of Canada.
>
> (2) The Minister may provide advice relating to any wildlife research, conservation and interpretation carried out in protected marine areas and may carry out measures for the conservation of wildlife in those areas.

The Governor in Council may also make regulations governing activities in such declared areas, as follows:

> 12. The Governor in Council may make regulations
>
> …
>
> (i) prescribing measures for the conservation of wildlife
>
> (i) on public lands the administration of which has been assigned to the Minister pursuant to any federal law,…
>
> (iii) in any protected marine areas established pursuant to subsection 4.1(1); and
>
> (j) respecting the establishment of facilities or the construction, maintenance and operation of works for wildlife research, conservation and interpretation …
>
> (iii) in any protected marine areas established pursuant to subsection 4.1(1).

This very broad power, with little in the way of direct criteria, may offer room for future action on parts of the Grand Banks. At present, the first marine wildlife area (distinct from previous wildlife areas with marine components) is in the process of consultation and planning. It is, however, in a near-shore area and the application of this provision to offshore waters is yet to be tested.

Oceans Act – MPAs

The *Oceans Act* provides for the creation of marine protected areas by regulation, and indeed mandates the Minister to develop a national system of such areas. The general purpose of MPAs, and their potential geographic application, is set out in section 35:

> 35. (1) A marine protected area is an area of the sea that forms part of the internal waters of Canada, the territorial sea of Canada or the exclusive economic zone of Canada and has been designated under this section for special protection for one or more of the following reasons:
>
> > (a) the conservation and protection of commercial and non-commercial fishery resources, including marine mammals, and their habitats;
> >
> > (b) the conservation and protection of endangered or threatened marine species, and their habitats;
> >
> > (c) the conservation and protection of unique habitats;
> >
> > (d) the conservation and protection of marine areas of high biodiversity or biological productivity; and
> >
> > (e) the conservation and protection of any other marine resource or habitat as is necessary to fulfil the mandate of the Minister.
>
> (2) For the purposes of integrated management plans referred to in sections 31 and 32, the Minister will lead and coordinate the development and implementation of a national system of marine protected areas on behalf of the Government of Canada.

As can be seen from s. 35, the MPA concept as applied in this Act is highly flexible, with a wide range of purposes, including the conservation and protection of "marine areas of high biodiversity", and potentially including regulated uses and commercial exploitation. This perception is confirmed by section 35(3), which sets out the power to designate and regulate such areas:

> (3) The Governor in Council, on the recommendation of the Minister, may make regulations
>
> > (a) designating marine protected areas; and
> >
> > (b) prescribing measures that may include but not be limited to
> >
> > > (i) the zoning of marine protected areas,
> > >
> > > (ii) the prohibition of classes of activities within marine protected areas, and
> > >
> > > (iii) any other matter consistent with the purpose of the designation.

This section opens up the possibility for *zoning*, and thus forward planning, of MPAs, and for the development of measures which allow, but control, uses of the area and its resources in a manner consistent with the demonstrated need for protection. As such, this mechanism is likely to be the most suitable for an area such as the Southeast Shoal or other areas of the Grand Banks, where conservation measures will have to coexist with important economic uses.

The key to any MPA designation under the *Oceans Act*, given the flexibility and site-specific nature of the approach, will be the process of planning and consultation which defines, first, the specific conservation requirements of the area and, second, the particular regulatory actions needed to meet those goals. These are clearly not intended to be full-exclusion or no-take zones in principle, but rather are meant to respond to real conservation needs while taking account of other

interests. As such, the process of definition and designation in areas of economic significance is likely to be a somewhat time-consuming process.

The Department of Fisheries and Oceans has established a National MPA Policy and a Framework for Implementation which sets out in some detail the process of establishing an MPA, utilizing the following steps[255]:

> Step 1: Identification of Areas of Interest (AOIs)
>
> Step 2: Initial Screening of AOIs
>
> Step 3: AOI Evaluation and Recommendation
>
> Step 4: Development of a Management Plan for Candidate MPA Site
>
> Step 5: Designation of MPA
>
> Step 6: Management of MPA

Two Marine Protected Areas – the Sable Gully and the Endeavour Hydrothermal Vents - have been established to date.[256] This process, and the criteria which might be applied for management of portions of the Southeast Shoal within the EEZ, are of sufficient interest to require more detailed consideration in the near future as a matter of priority. One matter of particular concern is the apparent inability of the MPA designation to deal with issues of foreign shipping, except via the appropriate IMO designations, as discussed above.

4.3 International – Regional and Global

The international instruments discussed earlier require brief mention in that they will apply to those areas of the Grand Banks beyond 200 n.m., and will as well modify or limit the application of some instruments inside 200. The following essential points should be noted.

The LOS 1982 and MARPOL 73/78 provide the limits on Canada's ability to regulate foreign shipping navigating through the EEZ, or to seek international regulation of shipping beyond that zone. In particular, Canadian enforcement of pollution control standards inside 200 n.m. must be in conformity with international standards or be validated under the IMO processes discussed earlier.

With respect to living resources, NAFO, established by Convention in 1979,[257] is the regional fisheries organization with regulatory authority in the region. The NAFO Regulatory Area extends, as shown in Map 4, over all of the area relevant to this study beyond the 200 n.m. EEZ. Any attempt to deal with non-sedentary species on the continental shelf beyond 200 n.m. must, at present, be pursued via that organization. The role of NAFO, and its various shortcomings, has been extensively canvassed in recent years, and it is beyond the scope of this study to provide a full review of the organization's performance. A few general points should, however, be noted. First, the objective NAFO is stated in Article III of the Convention:

> The Contracting Parties agree to establish and maintain an international organization whose object shall be to contribute through consultation and cooperation to the optimum utilization, rational management and conservation of the fishery resources of the Convention Area.

NAFO deals with both straddling and discrete stocks[258] (although measures respecting discrete stocks would affect only Parties, and could not be considered as falling within the scope of UNFSA with respect to parties to that Agreement who are not members of NAFO). Through its

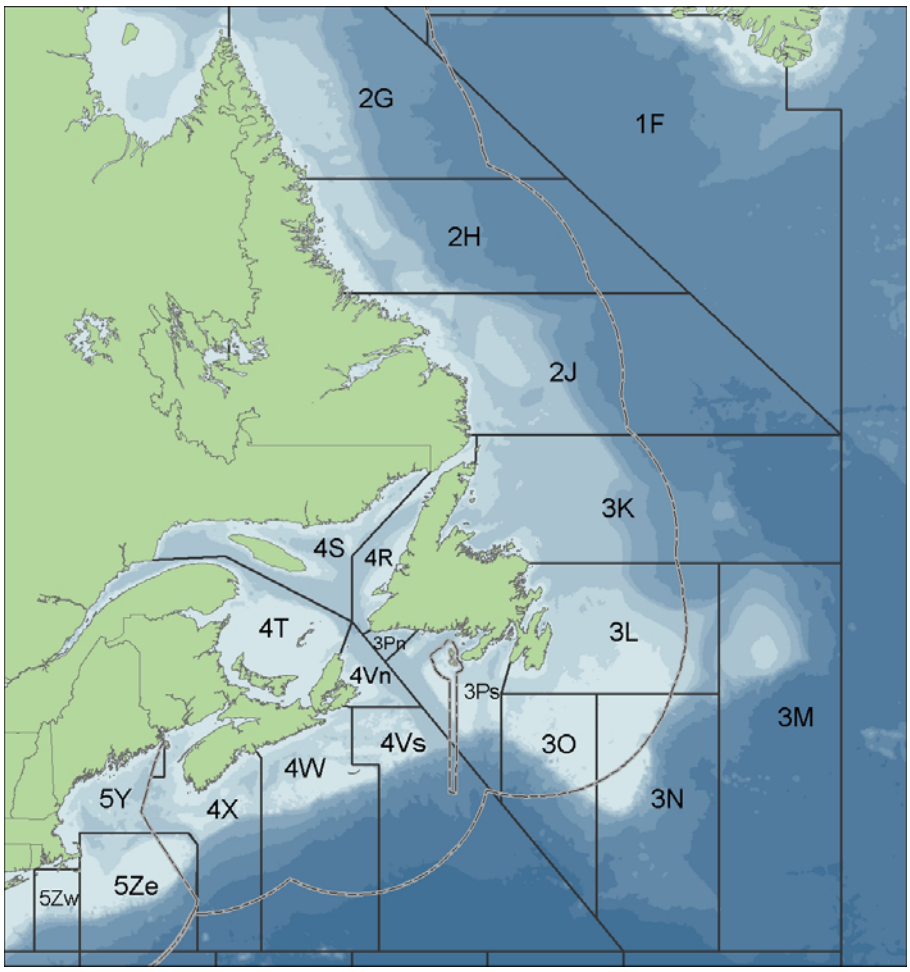
constituent bodies (the General Council, the Scientific Council, the Fisheries Commission and the Secretariat), NAFO carries out the following general functions:

- The conduct of stock assessments based on scientific data, and the establishment of stock-by-stock Total Allowable Catches (TACs)

- The allocation of quotas to the parties to the Convention

- The prescription of conservation management measures, including, *inter alia*, minimum fish or mesh sizes, bycatch criteria, and species moratoria

- Conduct surveillance, coordination of inspections, observer and other monitoring programmes and dockside inspections, under the Joint International Inspection and Surveillance system[259]



Map 4: NAFO Convention Area. This map does not cover all areas of the Convention area to the north, which are outside the scope of this study.
Coordinates for this map were obtained from the NAFO website: www.nafo.ca

The difficulties with NAFO are well known, and have been summarized as follows:

- A failure to adhere to the best available scientific advice in the adoption of management measures. This includes, but is not limited to, perceived misuse of NAFO's objection procedures in the setting of quotas, which allows unilateral disregard of allocations

- Serious gaps in enforcement, which is based largely on flag state control, with some fishing states being willing to countenance routine violations of agreed management measures (including quotas, species moratoria and gear restrictions, and late or non-submission of reports)

- The growing use of bycatch allowances to mask directed fisheries for prohibited species[260]

Options for reform of NAFO will be addressed below, but one proposal which must be mentioned here is the potential assertion by Canada of "custodial management"- a limited form of control, short of sovereign rights, and for purposes of ensuring conservation - over waters and/or stocks beyond 200. This concept, which originated at the provincial level in Newfoundland and Labrador, and within the debates of federal parliamentary committees,[261] has not been recognized in international law, and its successful implementation is an unlikely prospect. Accordingly, this proposal will not be pursued here, except to note the conclusions of a previous assessment: assertion of custodial management would be in violation of Canada's international obligations, and would in any event carry considerable risks, in that the inevitable dissolution of NAFO would leave no management regime in place at all, should the Canadian unilateral action fail.[262]

4.4 Summary of Jurisdictional Entitlements – Grand Banks

The review to this point leads to the following summary of the status of jurisdictional entitlements and available measures within the various jurisdictional zones on the Grand Banks, with particular reference to the application of area-based conservation measures.

4.4.1 Within the EEZ

Within the Canadian EEZ, sufficient jurisdictional entitlements exist under the law of the sea to permit a wide range of conservation and management activities. There are some restrictions on the use of fully restrictive MPAs insofar as they interfere with shipping and some other activities, such as pipelines and cables, that are lawful activities carried out by other states within the EEZ. Furthermore, these entitlements have been implemented domestically in the various regulatory instruments discussed above. Many actions which might be anticipated in the relevant area have, in fact, already been taken in various forms in the region or in other Canadian marine areas, albeit not in the context of an integrated planning exercise. These include, for example:

- The development of marine parks and MPAs

- Fisheries closure areas and gear restrictions (both for fisheries management and environmental protection)

- Moratoria on oil and gas development in specific areas

- Vessel traffic schemes tailored to marine mammal locations
- Requirements for environmental impact assessment for offshore developments
- Site planning and assessment for ocean dumping

Identifiable gaps include the potential requirement for enhanced control of shipping in particular areas, if it should be justified by further study. The power to declare an MPA in the Canadian EEZ cannot override navigational rights of other states, absent a successful application to IMO for special area or PSSA status. In summary, while there are some jurisdictional issues which may limit the ability of the Canadian government to act without reference to the rights of other states, for the most part the jurisdiction exists and the core regulatory tools are in place to permit the initiation of a comprehensive set of management measures, including the development of protected areas.

4.4.2 Canadian Extended Continental Shelf

Canada's jurisdiction over its continental shelf jurisdiction beyond is limited under the law of the sea to "sovereign rights for the purpose of exploring it and exploiting its natural resources" (including non-living resources and sedentary species). Jurisdiction does not extend to the water column, except for matters incidental to shelf activities. While it seems clear that the coastal state does not have a general power to take conservation measures or create MPAs in this area, some options do exist. For those activities which fall within the jurisdiction of the coastal state (exploration and exploitation of shelf resources) it is fully within the power of the coastal state to carry out planning exercises with a view to conservation of all resources of the shelf and the water column - indeed, the protection of these resources from damage by shelf activities is an *obligation* under the LOS 1982. Thus, Canada can implement the management approach suggested above over its extended continental shelf, but this power is limited to those activities over which it has jurisdiction, and cannot be extended to a comprehensive spatial approach dealing with other activities.

As with the EEZ, the essential regulatory tools are in place to carry out the conservation functions permitted under international law. There may, however, be a requirement to adapt the planning requirements of existing legislation (particularly that dealing with offshore oil and gas) to accommodate zoning and ensure that it takes place according to well-defined and predictable criteria (given the scale of investments involved in this industry), and that it is adequately coordinated with conservation interests such as MPAs.

4.4.3 High Seas

In the high seas areas in question, including for this purpose the water column above the continental shelf, there is neither an over-arching legal regime for conservation, nor any one international institution with the jurisdictional competence to fulfil all of the functions which may be required. There are, however, particular legal instruments and institutions which could be employed to carry out some the required activities. For example, NAFO as a regional institution has a mandate that includes some, though not all, of the fisheries management functions that would be part of this exercise. Legally, this is supported both by the NAFO Convention and the obligations to cooperate enshrined in UNFSA. At the global, level, there may be some role for

FAO, at least in the development of policies and criteria. Similarly, the IMO provisions for the creation of special areas and PSSAs could be utilized to deal with ship routing issues.

Despite the availability of partial solutions such as regional fisheries management organizations, however, there is still no legal regime or international organization that brings the comprehensive planning and conservation mandate that would be required to implement a conservation regime in these areas of the high seas.

With respect to Canada's potential role in the high seas areas, there are some avenues for coastal state action that *are* anticipated in the LOS 1982 and other documents such as the CBD. First, all states have a general obligation to protect and preserve the marine environment of the high seas. Second, in furtherance of this obligation, the coastal state can regulate the environmental impacts resulting from the activities of its own nationals and flag vessels (including fishing vessels) on the high seas. Thus, for example, the Canadian government could unilaterally regulate to prohibit or limit certain activities by its own nationals in a defined zone beyond national jurisdiction, even though it would not be able to exert similar power over nationals of other states.

While there are some possibilities for action at the national and international levels (both regional and global), there is nonetheless a fundamental gap in both the jurisdictional and institutional structures that might support conservation actions in the high seas portions of the target area. Apart from the direct implications for the high seas areas, this creates real difficulties at the intersection between national jurisdiction and the high seas. The effectiveness of habitat and species protection within national jurisdiction can be compromised by the lack of a complementary legal regime and institutional capacity in adjacent high seas areas.

4.4.4 The Need for Agreed Management and Conservation Objectives

This discussion of how the existing legal regime might be more effectively utilized in the Grand Banks region is still at a rather broad level of generality. The reason for this is straightforward: the adequacy of the available legal tools to the conservation tasks can only be fully assessed when those tasks have been set out in detail. It is possible, as here, to indicate the range of actions which might be taken under the available legal mechanisms inside and outside Canadian jurisdiction, but the first essential step must be the definition of practical objectives and tasks, against which the suitability of the legal instruments can be evaluated. Only then can gaps be properly identified, along with remedial actions.[263] This determination of the management tasks can only be undertaken in consultation with a wide range of interested parties in Canada and elsewhere.

The identification of specific challenges, supported by scientific evidence, is the necessary precursor to action undertaken under the auspices of international instruments. Any application under IMO for designation of Special Areas or PSSAs, for example, will have to meet rigorous requirements for the description of the particular threats and the necessity for the measures proposed to deal with them. The requirement for clear scientific and managerial justifications before actively pursuing protected status is also a feature of the Antarctic and Mediterranean regimes discussed above, and is supported by the general provisions of the CBD. It is recommended that WWF Canada, in cooperation with its partners, continue to pursue the development of such objectives for the Grand Banks.

Even within the particular area of the South East Shoals, the protection of which was the subject of the enquiry which resulted in this study, it appears that there is not at present a sufficient consensus as to which values and resources require protection, to what extent, and for what time periods. The development of such a consensus would be a necessary precursor to the development of proposal for legal protection under the existing instruments identified here.

4.4.5 Planning and Integration

A closely related gap which emerges from the examination to this point is the lack of any one legal and institutional locus for any overall planning exercise that would permit an integrated approach to the conservation and management effort on the Grand Banks. That is, the various legal instruments and institutions tend to operate on a sectoral basis, without a specific mandate to carry out the integrative exercise within which a range of management tools – potentially including protected areas – could be placed. This is of course particularly true of areas beyond national jurisdiction, as the only international organizations with mandates of relevance to the region are sectoral in their approach (e.g. NAFO for fisheries, and IMO for shipping). Within national jurisdiction, there is some capability for integrated planning via the *Oceans Act*, but the impact is limited by the lack of any mandatory power to put such plans in place (in that the Minister is limited to leading and facilitating their development), and by the fact that the key industries are still regulated independently.

The effective use of the various legal tools identified above will depend on their mobilization within an integrated approach to the ecosystem as a whole. The challenge is to structure a *regime* of principles and conservation measures out of the disparate mix of available legal instruments and institutions. In the absence of any one body with the power or mandate to plan for the ecosystem at large, organizations such as WWF could play a useful role by assisting in the development of the overall conservation strategy, which could then be the basis for advocacy with the relevant institutions.

4.4.6 Further Development of Legal Principles and Measures

Area-Based Conservation Measures

Although priority should be given to the full utilization of existing legal tools, where there are identified gaps it may still be necessary to pursue the development of new legal instruments or options for the Grand Banks. One such gap relates to the power to establish area-based, integrated conservation measures analogous to MPAs beyond the limits of the Canadian EEZ. Canada could act at the regional level to develop new legal instruments, and potentially new institutions, to pursue the development of such conservation measures in designated areas of the Grand Banks, consistent with the models set forth earlier, dealing with the Antarctic, OSPAR and the Mediterranean. This is a longer term project, and will depend upon the development of a strong scientific base for the argument, but the greatest progress made to date in respect of protected area development on the high seas has been under regional agreements, where it is possible to develop a higher degree of common interest than is feasible at the global level. There is experience in dealing with fisheries on a regional scale, and it might ultimately be possible to develop a similar approach to environmental protection in the wider region.

If this option is pursued, experience in other regions would suggest that it could happen in one of two general ways:

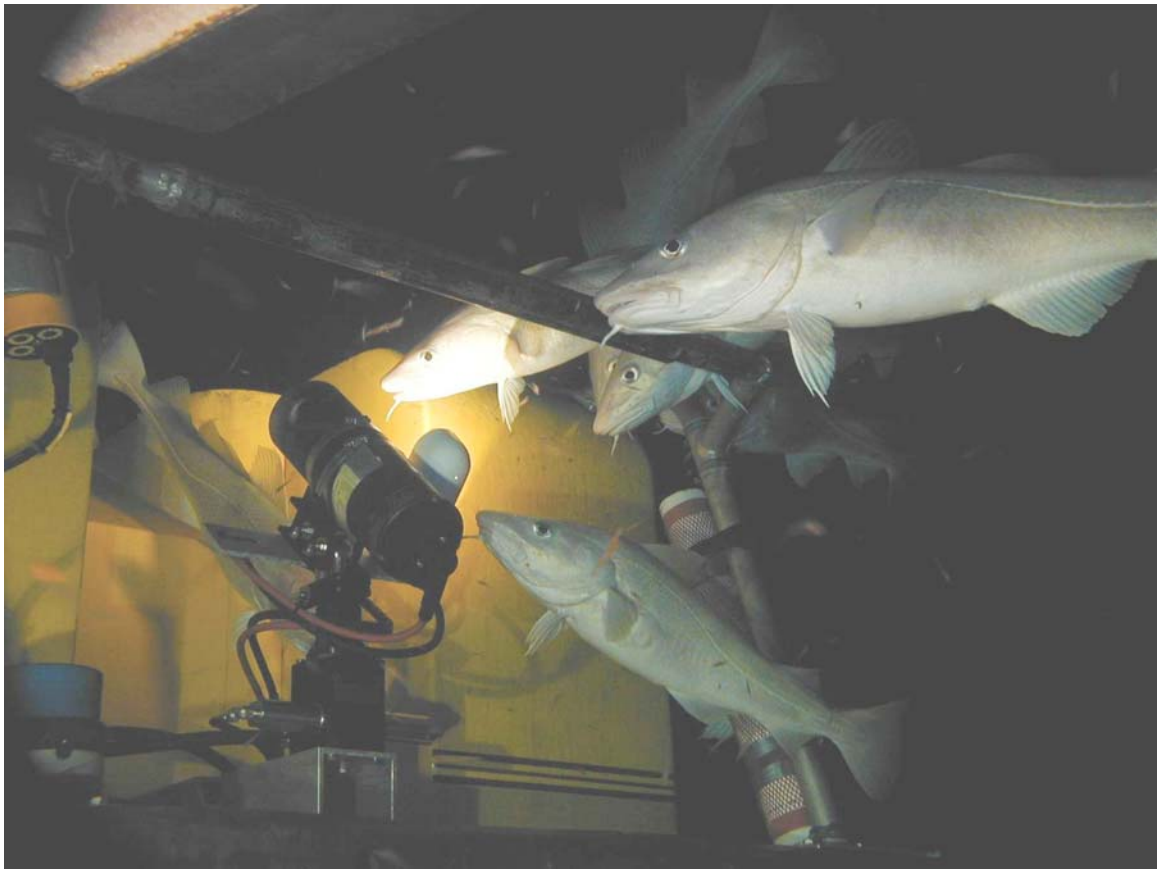
1. A bilateral or multilateral agreement among like-minded states, binding only on the parties, to establish a particular protected area in an area of identified need (as with the original Ligurian Sea agreement, prior to the SPAMI designation).

2. Development of a broader institutional framework for designation of protected areas *as required over time* in a wider region, and not tied to one particular site. This is a more ambitious project, and where the approach has worked in the past,

as in the Antarctic and the Mediterranean SPAMI regime, it has been within the context of a pre-existing legal and institutional structure. No such structure exists for the Grand Banks and the surrounding region.

Litigation Strategies

Although litigation should not be undertaken lightly, particularly at the international level, there should be some consideration given to the use of dispute settlement under the LOS 1982 and UNFSA to clarify the legal principles applicable to the high seas, with particular reference to the content of the duty to cooperate (in both agreements) and the application of internationally agreed conservation standards (in UNFSA). One issue which may give rise to such an option is the question of flag state enforcement of UNFSA and NAFO obligations. If Canada were to find that, through continued enforcement under NAFO, that despite the repeated identification of violations, particular states failed to follow through in good faith on their enforcement obligations, this might provide the basis for a "test case" on the substantive content of duties to cooperate under UNFSA, as reflected by the specific obligations in NAFO. This would presume the ability to establish a clear pattern of conduct, and would of course not preclude the simultaneous pursuit of negotiations and forms of facilitated dispute settlement, such as conciliation and mediation.



While the Grand Banks ecosystem has become the global example of mismanaged ocean resources, it still retains a high degree of productivity. The WWF initiative on the Grand Banks aims at giving this ecosystem every opportunity to recover as a reservoir of marine life. Here, cod feeding on krill next to a deep sea research vessel. © WWF-Canon / Ian HUDSON

4.5 Priorities for Action

It is clear from the preceding sections that the development of a conservation strategy based on an MPA or similar area-based conservation measures, applicable both inside and outside national jurisdiction, is a long-term project facing considerable legal obstacles, and one which may not yet have adequate scientific basis. Allowing for the recommendations made above with respect to improved planning and integration of sectoral mandates, it should still be recognized that the most immediate and significant problems facing the conservation and management of marine biodiversity in this region relate to fisheries, and in particular fisheries at the intersection of high seas and the EEZ. It has been argued above that the extension of any form of Canadian jurisdiction, including "custodial management", is unlikely to achieve the desired results. Accordingly, the highest priority, both for governments and NGOs in support of their efforts, should be the pursuit of reforms to NAFO, the only available organization with a relevant legal mandate, particularly with reference to those gaps identified in section 4.3 above. These include, in particular, the following:

- Reform of the decision-making structure to prevent avoidance of mandated management measures, and possibly to allow for weighted voting in recognition of varying interests

- Improved transparency and accountability

- Exploration of the means by which NAFO could impose area-based closures for protection of habitat, similar to measures undertaken by NEAFC (see above)

- Improved implementation of precaution and ecosystem management within the management structures of NAFO

- Continued efforts by Canada to fully utilize the boarding and inspection powers available under NAFO

- Ensuring modernization and compatibility with UNFSA

- Continuing to press for adequate acceptance of flag state responsibility and for enhancements to the *agreed* enforcement powers to allow member States to enforce against flag vessels of NAFO States

5 Conclusions

5.1 High Seas Conservation and Management: Legal Issues

The analysis to this point, and the experience on the Grand Banks, allows for some broader conclusions and recommendations with respect to the legal regime for high seas conservation and management in general, and the development of area-based conservation approaches on the high seas in particular. Before turning to a consideration of these two issues, however, it is important to highlight six observations about the current legal regime, emerging from the preceding sections, which will significantly affect the range of effective options available to states and other interested parties. These are:

1. It must be remembered that the consent of relevant states will be necessary for serious improvements in the high seas conservation and management regime, and it will be politically problematic to obtain such consent in many cases. Economic and strategic concerns of states will determine whether the necessary level of cooperation and political will in support of regulation of high seas activities, such as fishing and navigation, can be found.[264]

2. New legal initiatives should proceed from the identification of existing problems and specific solutions wherever possible, and these will vary from region to region and site to site. The current legal regime of the high seas, with its emphasis on flag state jurisdiction and high seas freedoms as a "default" position, is not conducive to the development of generic solutions without a very particular purpose, as is indicated by the cases in which success has been achieved in regulation of high seas activities (e.g. UNFSA, Compliance Agreement).[265]

3. It must be remembered that just as the conservation issues vary from region to region, so do the regional and national legal regimes, albeit within the general framework provided by international law. It is essential to assess the available legal instruments in each case, and no one general template will be accurate everywhere. This type of scoping exercise will permit identification of major legal and institutional gaps on regional and/or national basis.

4. As noted at the outset of this study, the current legal regime is primarily *sectoral* in structure, particularly with respect to activities outside areas of national jurisdiction.[266] Both the legal instruments and the institutions which administer them are often designed to deal with one industry or activity, such as shipping or living resource exploitation.

5. As a matter of strategy, existing legal instruments should be utilized wherever possible.[267] This case study suggests that the existing tools are not yet fully utilized or implemented.[268] It is unlikely that the simple creation of new legal agreements will solve problems that fall within the scope of an existing agreement, but which nonetheless have not been fully dealt with due to a lack of political will or other factors.[269]

6. In the pursuit of further legal development, the identification of like-minded groups of states with a high degree of interest in these issues may permit the

> more rapid development of legal principles at the international level. At the regional level, such groupings may also assist in the development of coordinated litigation strategies to develop new international jurisprudence directed at defining and enhancing the extent of cooperative and conservation duties.[270]

With these general points in mind, the following sections turn, first, to the question of area-based protection measures (whether MPAs or similar approaches), followed by a consideration of broader aspects of the high seas legal regime for marine conservation and management.

5.1.1 Area-Based Conservation Measures

With respect to the particular question of protected areas or analogous measures on the high seas, what are the legal prospects and options? Despite the relatively ambitious objectives set out in a number of conferences and workshops, the likelihood of success must be considered in the context of the overall legal regime discussed in this study. It must be emphasized that the development of high seas area-based protective measures, even in regions where there were existing relevant institutions, has had to confront significant legal obstacles. This is understandable, given that the existing law clearly protects the exercise of high seas freedoms, so that the default position in law favours inertia with respect to intrusions on those freedoms. These obstacles are also a clear indication that interested states, including distant water fishing nations (DWFNs) and others, are simply reluctant to allow any significant changes in a regime from which they benefit. Whatever the source of this resistance to change, the point is that realistic, long-term objectives will be essential, as will a firm basis in science, and extensive consultation with the affected parties.

It should also be remembered that the most identifiable *current* threats to high seas biodiversity are primarily concentrated within a very few sectors, primarily shipping and fishing, and it seems clear that the most significant from a conservation perspective is fishing.[271] Furthermore, as noted above, most of the existing law with direct application to the high seas is sectoral in approach. Given these conditions, a number of conclusions emerge respecting future work towards the development of high seas marine protected areas or similar measures.

First, as noted more generally above, it will be most practicable to proceed first via existing agreements, to achieve what might be done under their sectoral mandates. A number of the existing legal regimes with potential application have been addressed in the preceding sections (including e.g., MARPOL, UNFSA and the various RFMO agreements). This is consistent with a methodology endorsed at the 2001 Vilm Workshop (addressed above), which set out sequential steps for moving to new instruments where necessary. This approach has, however, been criticized as "reactive" and inadequate to the demands of integrated management:

> The methodology's orientation around "the problem", however, means that it is primarily addressed at improving the efficiency of "reactive" conservation…. By contrast, proposals for the creation of high seas MPAs, like most current new developments in international oceans conservation, are more directly based on the concepts of integrated natural resource management. Particularly in addressing protected areas, it is important to consider conservation issues in a comprehensive proactive manner.[272]

While it is true that the use of existing instruments where possible may tend to be sectoral and reactive, the difficulty in proceeding otherwise is that the current legal regime does not provide the necessary support, in particular as against dissenting states,[273] for the more holistic approach.

The criticism, in this context, is really a call for further legal development, but this should not mean that less ambitious, sectoral measures should not be advocated in the interim.

A second issue which emerges from the review of the Grand Banks, and of the legal regime in general, is the need for some institution or agency with an overall planning and coordination mandate, so that sectoral measures can be pursued in concert, and towards more comprehensive protection strategies. For example, an area of vulnerable habitat might be closed to fisheries under an RFMO, and subject to a special areas or PSSA designation under IMO, all with the same purpose of protecting an identified area. In some regions there are institutions or legal regimes which provide for this central coordinating role, as with the Antarctic regime, the Barcelona Convention structure and OSPAR. Where there is no such overall conservation framework or regime, however, NGOs may fill the role through the provision of the strategic integration and planning. The purpose, as was suggested with respect to the Grand Banks, would be to bring together elements from a number of legal instruments in pursuit of a broader set of defined conservation objectives for an area. If this role is fulfilled effectively, single-sector actions under a number of instruments might, in the aggregate, form an integrated protective strategy for a given area.

Nonetheless, in some cases where there is no existing broad-based conservation instrument or institution, *and* where it can be shown that the management challenges require action on a multi-sectoral, area-based approach, it will still be necessary to advocate for the development of high seas protected areas. It must, however, be recognized that while individual states or groups of states can certainly create such areas outside national jurisdiction, the measures prescribed for their protection will only be enforceable against parties to the agreement which provides for their establishment. Agreement by like-minded states will at least allow implementation of measures for the nationals and vessels of those states, and persuasion might be applied to other states, but these could not be mandatory for non-participating states.

This model is the basis of activities in the Antarctic and the Mediterranean, where the greatest progress on these issues has been made. In these regions and elsewhere, experience to date suggests the most productive route for real action may indeed be at the regional level.[274] Regional arrangements have the distinct advantage of permitting focus on management issues in a defined geographical context. As was suggested above, management challenges and legal regimes will vary significantly from region to region, so it is likely to be at the regional level that it is most possible to move from the abstract to the identification of real needs and concrete actions, which will enhance the likelihood of gathering support for area-based measures, including MPAs.

Finally, as a complementary measure, it will be useful to continue to pursue global development of new legal principles in support of protected area management approaches on the high seas, whether through the UNICPOLOS process or other avenues such as General Assembly resolutions. It must be remembered, however, that while such global developments can provide useful support to regional and local efforts, they are not likely to represent the primary solution in and of themselves. It is difficult to imagine a global agreement that departs so far from current legal approaches to the high seas that it would permit coastal state declaration of enforceable protected area approaches. At most, it might be hoped to develop an implementing agreement along the lines of the UNFSA, which relies on regional arrangements and encourages or mandates respect by other states for those arrangements. Even if such an agreement were achievable, it would be the work of many years and could not be expected to provide results in the foreseeable future.

This should not be seen as abandoning efforts at continued international legal development in support of protected areas on the high seas. Rather, it would support continuation of that work, but with a recognition that the most productive avenues for real action in the short term will be,

first, through the improved application of existing legal instruments and, second, through the expansion and continued development of such activities at the regional level.

5.1.2 Development of the High Seas Legal Regime in General

The fundamental point to be recalled with respect to MPAs, as noted earlier in this study, is that they are a methodology by which conservation objectives might be attained – they are not an objective in and of themselves. Given that numerous other regulatory approaches have been identified here, what other areas of priority exist for the development of the high seas legal regime for biodiversity conservation and management in general, and for NGO action in furtherance of such development? While this has by no means been a comprehensive survey of the law respecting the governance of high seas areas, the criteria and characteristics suggested above do permit the identification both of general strategies, and priority areas for action. It should be noted, of course, that this analysis takes place from an explicitly legal perspective – that is, it is based largely on what is most achievable and feasible within the identified legal framework, or within a framework which might realistically be achieved in the future.

Strategic Issues

For reasons similar to those discussed at the beginning of this section, it is suggested that some broad strategic approaches can be identified:

1. As noted earlier, priority should be given to the implementation and enhancement of existing legal instruments, given the imperfect application of those that already exist (such as UNFSA), with a complementary focus on the long-term development of new legal mechanisms where necessary.

2. The focus should be primarily (though not exclusively) on sectors and geographic areas where there is actual current activity. More speculative industries (such as deep- sea-bed mining and bio prospecting on an industrial scale) will require attention, but the urgency of legal development is less clear.

3. The activities and areas concerned should, so far as possible, engage the particular interest of a State or States likely to take a pro-conservation stance with respect to conserving biodiversity in the area. Other areas distant from coastal states should not be forgotten, but given that actual regulatory action requires the participation of states, progress is more likely to be achieved where some states see their interests as affected.

4. Action should be encouraged at both the global and regional levels, but it should be recognized that the regional level is most suited to the actual implementation phase, while the global is more amenable to the development of broad principles and frameworks.

Issues of Practical Application

If the strategic elements suggested above are considered in the light of the present case study, it is possible to make a number of suggestions for priorities in the implementation and development of the legal regime. First, high seas fisheries, as the most prevalent *current* threat to the marine

biodiversity on the high seas, should continue to be the top priority for action. This is further supported by the fact that there are a number of legal instruments, most notably the UNFSA and the various RFMOs, which are either not fully implemented, or which could benefit from further development. The areas for improvement in these agreements and supporting measures were outlined earlier, but some of the most pressing concerns include the following:

- Increasing the rate of ratification of UNFSA, and of participation in the various RFMOs

- Supporting interested states in the creation of new RFMOs to cover the significant marine areas and stocks which are not currently subject to any legal regime beyond the limited principles found in the LOS 1982

- Pressing for improvements in the record of flag state enforcement, through implementation of the provisions on flag state responsibility and by advocating for enhancement of the inspection and enforcement regime under UNFSA and in the various RFMOs

- Improving the decision-making structures of the RFMOs, to ensure a conservation ethic and an inability to "opt out" without consequence

- Developing, perhaps through negotiation and amendment, a modernized approach to the management principles under UNFSA and in RFMOs, with a greater focus on ecosystem and habitat protection, and less concern with single-species stock-management

- Expansion of the mandate of RFMOs under UNFSA to discrete high seas stocks

- Encouraging states to fully utilize their powers under port state jurisdiction to control and sanction persistent offenders, whether by seizures in port (if possible), or banning vessels from port supply and other facilities;[275]

- Increasing the level of support for developing states in the implementation of their rights and responsibilities under UNFSA and LOS 1982

- Improving coordination, including sharing of monitoring and enforcement data, between and among RFMOs

- Considering the possibility for targeted litigation or other forms of dispute settlement (as discussed earlier), to further clarify principles found in the LOS 1982 and UNFSA, including, *inter alia*, the content of the duty to cooperate, and the meaning of "generally accepted standards for the conservation and management of living marine resources", as referred to in UNFSA

- Expanding on the use of trade measures, such as catch documentation schemes and prohibitions of trade in illegally-caught fish, to deal with the trade in fish originating from IUU fisheries[276]

This list of areas for action, a number of which have been identified as priorities by the HSTF,[277] couple short and medium term efforts to improve the implementation *and* the content of the legal

regime for fisheries at the global and regional levels. It should be noted that the concentration on UNFSA and related measures ensures that actual state interests are engaged. UNFSA deals with two categories of stocks, straddling stocks and highly migratory stocks, which have been subject to action precisely because they represent the intersection of coastal state and high seas jurisdictions. But while these priorities may have the advantage of being more readily achievable (at least for those that do not depend on new obligations), they may leave aside issues which are of significant concern, but which are not readily identified with any particular state's self-interest.

The first of these issues is the need for development of broad-based regional environmental organizations or agreements (similar to OSPAR or the Barcelona Convention regime), with a capacity for integrating planning and action across the various sectoral agreements that already exist. As Kimball has noted,[278] this is a critical element in bridging the gap between sectoral legal mandates, which permit real regulatory action, and integrated approaches to the management of large marine ecosystems. In some cases, the cooperation has been formalized, so that, for example, an RFMO might have a direct role in the designation of certain protected areas under another agreement.[279] Where such organizations and agreements exist they provide an avenue for targeted NGO proposals for action,[280] and where they do not, there is (as suggested earlier) an important opportunity to assist in filling that role through research and advocacy devoted to providing the integrated perspective which can inform the individual management decisions of the separate organizations. This crucial planning role, identified in the Grand Banks case, should not be underestimated in cases where multiple organizations are attempting to manage the same marine space for different purposes.

The focus on the priorities suggested to this point does not mean that the development of entirely new legal principles and instruments – should be set aside, but rather that it should proceed in a manner complementary to these activities. Objectives such as the institution of a moratorium on seamount fisheries, whether a total ban or a measure specific to bottom-trawling, can still be pursued, but it should be recognized that under the law of the sea this requires the consent of states to new legal obligations. Pursuit of those new obligations should not distract from the fact that there are numerous existing obligations, which, if they were fully and effectively implemented, might have a more significant and immediate effect on the management and conservation of marine biodiversity on the high seas.

Endnotes

[1] For an excellent survey of the environmental values at stake and a listing of the existing literature, see C.M. Baker, B.J. Bett, D.S.M. Billett and A.D. Rogers, "An environmental perspective" in WWF/IUCN, eds., *The status of natural resources on the high-seas* (WWF/IUCN, Gland, Switzerland, 2001), Part 1. On the scientific justification, see also S. Gubbay, *Protecting the Natural Resources of the High Seas – Scientific Background Paper* (WWF/IUCN, Gland, 2003).

[2] Baker *et al*, *ibid* at 9-11. While this study refers to the final category as "transboundary fish stocks", it is more accurate for the purpose of this study to deal with these as high seas stocks – both discrete stocks restricted to high seas areas and straddling stocks which occur inside and outside of national jurisdiction – with the distinguishing feature being that they spend all or part of their life cycle in waters beyond the national jurisdiction of any coastal state.

[3] See, e.g., S.C. de Fontaubert, "Legal and Political Considerations", in WWF/IUCN, eds., *supra* note 1, Part 2. See also, Lee Kimball, *International Ocean Governance: Using International Law and Organizations to Manage Marine Resources Sustainably* (IUCN, Gland: 2003), and the papers presented at the Workshop on the Governance of High-Seas Biodiversity Conservation, Cairns, 2003 (hereinafter "Cairns Workshop 2003"), available online at http://www.highseasconservation.org/documents.php.

[4] See, e.g., Alfonso Ascencio and Michael Bliss, "Conserving the biodiversity of the high seas and deep oceans: Institutional gaps in the international system", Paper presented at Cairns Workshop, 2003, online at http://www.highseasconservation.org/documents/bliss-ascencio.pdf.

[5] O. Ferrajolo, "Specially Protected Areas And Biodiversity In The Mediterranean", in S. Marchisio, G. Tamburelli, and L. Pecoraro, eds., *Sustainable Development And Management Of Water Resources : A Legal Framework For The Mediterranean*, (Rome : Institute for Legal Studies on the International Community – CNR) 1999, at 70.

[6] For a discussion of this proposal, see S. D. Fuller and R.A. Myers, *The Southern Grand Bank: A Marine Protected Area for the World* (WWF Canada, Halifax, 2004), sections 2 and 6.

[7] See the overview and discussion in K.M. Gjerde and C. Breide, Towards a Strategy for High Seas Marine Protected Areas: Proceedings of the IUCN, WCPA and WWF *Experts Workshop on High Seas Marine Protected Areas* 15-17 January 2003, Malaga, Spain (IUCN, Gland, 2003). See also: K. Gjerde, "High Seas Marine Protected Areas: Participant Report of the Expert Workshop on Managing Risks to Biodiversity and the Environment on the High Seas, Including Tools Such as Marine Protected Areas: Scientific Requirements and Legal Aspects", (2001) 16 International Journal of Marine and Coastal Law 515 [Vilm Report]; K. Gjerde, "Summary Report of the Vilm Expert Workshop on Managing Risks to Biodiversity and the Environment on the High Sea, Including Tools such as Marine Protected Areas -- Scientific Requirements and Legal Aspects -- Isle of Vilm, Germany, 27 February – 4 March 2001", Paper presented to Cairns Workshop 2003, available online at http://www.highseasconservation.org/documents/gjerde.pdf [Vilm - Report to Cairns Workshop]; WWF/IUCN/WCPA, *Ten-Year High Seas Marine Protected Area Strategy: A ten-year strategy to promote the development of a global representative system of high seas marine protected area networks* (Summary Version As agreed by Marine Theme Participants at the 5th IUCN World Parks Congress, Durban, South Africa 8 -17 September 2003), online at http://iucn.org/themes/marine/pdf/10-Year_HSMPA_Strategy_SummaryVersion.pdf. [hereinafter: Durban Report].

[8] Robin Warner, "Marine Protected Areas beyond National Jurisdiction: Existing Legal Principles and a Future International Law Framework", in M. Haward, ed., Integrated Oceans Management: Issues in Implementing Australia's Oceans Policy (Research Report, Cooperative Research Centre for Antarctica and the Southern Ocean, Hobart, 2001), at 75.
[9] United Nations Convention on the Law of the Sea, 10 December 1982 (entered into force 16 November 1994), available online at http://www.un.org/Depts/los/convention_agreements/convention_overview_convention.htm (Hereinafter LOS 1982 or the Convention].
[10] See de Fontaubert, *supra* note 3 at 77; see also R. Churchill & V. Lowe, *The Law of the* Sea (Manchester Univ. Press, 199), at Chap. 1.
[11] In practice, there are uses and activities which states have tended to organize without adhering strictly to national jurisdictional zones. These include, for example, naval control of shipping in times of conflict, search and rescue, and air traffic control zones. This tendency does not, however, extend to resource use and management.
[12] LOS 1982, Art. 8(1). The rules on drawing of baselines, including "normal" baselines following coastal contours and straight baselines, which may be drawn from point-to-point along the coast, are found at Arts. 5-7 and 9-14.
[13] For example, there may be an entitlement to entry with a lesser degree of potential interference in cases of *force majeure*, as when a ship is in distress. In any event, most states in practice do not exercise the full level of control over ships in port which is theoretically available to them. See Churchill & Lowe, *supra* note 10, at Chap. 3. In addition, it should be noted that Art. 8(2) of the LOS 1982 provides that, where new straight baselines enclose areas which were formerly not internal waters, the right of innocent passage will continue.
[14] Allowance must be made for the impact of the special baseline rules which in some cases allow for the use of base points on the seaward low water line of fringing reefs for atolls and islands with such reefs: LOS 1982, Art. 6.
[15] LOS 1982, Arts. 17-32.
[16] The LOS 1982, Art. 19(2)(i) includes "fishing activities" in the list of actions deemed prejudicial to the interests of the coastal state, and therefore excluded from innocent passage. Art. 19(2)(l) similarly excludes "any other activity not having a direct bearing on passage", which would include fishing and related activities.
[17] LOS 1982, Art. 21(1)(f).
[18] LOS 1982, Art. 19(2)(f). The inclusion of the words "wilful" and "serious" are clearly intended to limit this to the more egregious cases, but if an incident rises to this standard, the vessel is not entitled to any of the protections which come with innocent passage. The restriction to acts in contravention of the Convention also serves as a limitation, as is explained below.
[19] LOS 1982, Art. 21(1)(f).
[20] LOS 1982, Art. 21(2).
[21] LOS 1982, Art. 33.
[22] See LOS 1982, Art. 62(4), which sets out a long, and non-exhaustive, list of regulatory powers which may be exercised by the coastal state, including: licensing; closed seasons; observers; data collection requirements; conditions for landing of catch; fees; joint venture requirements; and enforcement procedures.
[23] For example, LOS 1982, Art. 61(2) provides as follows:
The coastal State, taking into account the best scientific evidence available to it, shall ensure through proper conservation and management measures that the maintenance of the living resources in the exclusive economic zone is not endangered by over-exploitation. As appropriate, the coastal State and competent international organizations, whether sub-regional, regional or global, shall cooperate to this end.

See also: Art. 62(1), which requires promotion of the objective of optimum utilization; Art. 62(2), which calls on coastal states to allocate portions of the total allowable catch (TAC) which cannot be exploited to other states; and Art. 56(3), which requires coastal states to have "due regard to the rights and duties of other States" and to "act in a manner compatible with the provisions of this Convention."

[24] By LOS 1982, Art. 62, provision is made for access to surplus stocks, beyond the capacity of the coastal state to harvest, to other states (as noted above). However, this provision is not subject to mandatory dispute settlement, and is largely unenforceable

[25] LOS 1982, Art. 1(5). This includes the disposal of ships, aircraft and structures, but does not extend to disposal in connection with the normal operations of vessels, aircraft and structures.

[26] LOS 1982, Art. 210

[27] LOS 1982, Art.216. The most widely adopted standards for ocean dumping are found in the 1972 Convention on the Prevention of Marine Pollution from Dumping of Wastes and Other Matter (the London Convention – in force 1975); available online at http://www.londonconvention.org/documents/lc72/LC1972.pdf. At time of writing, there are 80 parties to the London Convention. The 1996 Protocol to the London Convention, which is not in force, is dealt with below.

[28] LOS 1982, Art. 208.

[29] LOS 1982, Art. 214.

[30] LOS 1982, Art. 211.

[31] The most significant of which are those adopted under the auspices of the International Maritime Organization (IMO), some of which are dealt with further below.

[32] In Canada, this provision is implemented by the *Arctic Waters Pollution Prevention Act*, R.S.C. 1985 c. A-12.

[33] LOS 192, Art 220(3).

[34] LOS 1982, Art. 220(5).

[35] LOS 1982, Art. 220(6).

[36] Oil Pollution Act of 1990, Pub. L. No. 101-380, 104 Stat. 484 (codified as 33 U.S.C. 2701 et seq).

[37] F. Wiese, Seabirds and Canada's Ship-source Oil Pollution: Impacts, Trends and Solutions (WWF Canada, Halifax, 2002), at 16-25.

[38] In force, 1975. Available online at: http://sedac.ciesin.org/entri/texts/intervention.high.seas.casualties.1969.html.

39 See the discussion at Miranda Wecker and Dolores Wesson, "Seaborne movements of hazardous materials," in Jon Van Dyke, Durwood Zaelke, and Grant Hewison, eds., "Freedom for the Seas in the 21st Century: Ocean Governance and Environmental Harmony," (Island Press, 1993), at 203.

[40] See generally E.J. Molenaar, *Coastal State Jurisdiction over Vessel-Source Pollution* (The Hague: Kluwer Law International, 1998), and in particular the discussion, at 25-26, of how the lack of flag state enforcement has led in part to the development of memoranda of understanding on port state enforcement.

[41] LOS 1982, Art 76(3).

[42] Furthermore, such claims by coastal states are only regarded as "final and binding" when made in conformity with the recommendations of the Commission on the Limits of the Continental Shelf, established under Annex II of the Convention. LOS 1982, Art. 76(8).

[43] LOS 1982, Art 77(1).

[44] LOS 1982, Art. 77(4).

[45] It has been argued that this jurisdiction over sedentary species might be "leveraged" into a broader means of regulating *other* fishing activities which incidentally affect sedentary species. However, there are difficulties with this argument, arising in part from the fact that the

jurisdiction of the coastal state is limited to exploration and exploitation (not conservation and management as in the EEZ), and in part from the fact that attempts to sanction *de minimis* violations would be seen as an abuse of rights. For discussions of this issue, see: P. M. Saunders, "Policy Options for the Management and Conservation of Straddling Fisheries Resources" in *Collected Research Papers of the Royal Commission on Renewing and Strengthening our Place in Canada*, vol. 3 (Govt. of Newfoundland and Labrador, St. John's, 2003), at 219-220. See also E. J. Molenaar, "New Areas and Gaps: How to Address Them" (Paper presented to the Conference on the Governance of High Seas Fisheries and the UN Fish Stocks Agreement, May 2005), online: Canadian Department of Fisheries and Oceans http://www.dfo-mpo.gc.ca/fgc-cgp/documents/molenaar_e.htm> at 16.

[46] These conditions relate to the ratio of land and water enclosed by the baselines, and the maximum length of individual baselines.

[47] 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, 1995 (In force 2001), online at: http://daccessdds.un.org/doc/UNDOC/GEN/N95/274/67/PDF/N9527467.pdf?OpenElement [hereinafter UNFSA or the Agreement].

[48] LOS 1982, Art. 94(1).

[49] LOS 1982, Art. 94(2)-(4).

[50] LOS 1982, Art. 211(2).

[51] LOS 1982, Art. 1(1).

[52] Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982, 1994 (in force, 1996), online at http://www.un.org/Depts/los/convention_agreements/texts/unclos/closindxAgree.htm.

[53] It has been suggested that the mandate of the ISA could be adapted, at least in part, to take on a greater conservation role with respect to deep seabed areas. For a discussion of the role of the ISA, see S. Nandan, "The International Seabed Authority And The Governance Of High Seas Biodiversity" paper presented to the Cairns Workshop, 2003, online at http://www.highseasconservation.org/documents/nandan.pdf. It seem clear, however, that a full assertion of jurisdiction by the ISA over living resources or their habitats would require amendment of the Convention, or negotiation of a new implementing agreement. It is also at least arguable that an organization with decision-making and other structures designed to satisfy a mix of seabed and land-based mining states would not be the most appropriate organization to take on this task.

[54] LOS 1982, Arts. 105, 107, 109, 110. For drug trafficking, the LOS 1982 only provides that states are to cooperate in the suppression of the drug trade, and that states may request other states to assist with respect to its flag vessels. Another example of this limited approach is found in the 1988 United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, online at http://www.ecad.net/un/unen88.html. Art. 17 of this Convention provides for states to consent to the interdiction of their vessels on the high seas where they are suspected of narcotics trafficking. This example is not really an exception to the general rule, however, as it is still based on the consent of the flag state.

[55] Consultative Group on Flag State Implementation: Report of the Secretary General (2004), UNGA A/59/63, online at http://daccessdds.un.org/doc/UNDOC/GEN/N04/261/59/PDF/N0426159.pdf?OpenElement [Hereinafter "Flag State Implementation Report"]

[56] *Ibid at* para. 221.

[57] See, e.g.: LOS 1982 Arts. 117 & 118 (high seas resources); Art. 197 (rules and standards for protection and preservation of the marine environment); Art. 199 (cooperation in minimizing damage through pollution); Arts. 242 & 243 (marine scientific research).

[58] T. Scovazzi, "Marine Protected Areas on the High Seas: Some Legal and Policy Considerations", Paper presented to the World Parks Congress, Governance Session (Durban, 2003), at 5. Scovazzi identifies this as a minimum possibility, based on customary law.
[59] See *The MOX Plant Case* (Ireland v. United Kingdom) (Provisional Measures), International Tribunal for the Law of the Sea, 3 December 2001. reported at http://www.itlos.org, at paras. 81-82. See also the discussion at Scovazzi, *ibid*, at 5.
[60] S. Nandan, "Current Fisheries Governance", (Paper presented to Conference on the Governance of High Seas Fisheries and the UN Fish Stocks Agreement, May 2005), online: Canadian Department of Fisheries and Oceans http://www.dfo-mpo.gc.ca/fgc-cgp/documents/presentations/nandan_e.htm at 9.
[61] See Baker *et* al, *supra* note 10 and D.E.J. Currie, *Protecting the Deep Sea Under International Law: Legal Options for Addressing High Seas Bottom* Trawling (Greenpeace, 2004), online at: http://www.savethehighseas.org/publicdocs/duncan_execsum.pdf, at 3-8.
[62] *Supra* note 47. For longer versions of the following discussion of UNFSA, see: P. Saunders, "And Now That The War Is Over: Looking Back At The Canada-European Fisheries Confrontation of 1995", (1996) 31 The Canadian Law Newsletter 15, at 26-30; and P. Saunders, "Jurisdiction and Principle in the Law of the Sea: The Case of Straddling Stocks", in C. Carmody *et al*, eds., Trilateral Perspectives on International Legal Issues: Conflict and Coherence (ASIL, 2003), at 393-397
[63] See UN Online http://www.un.org/Depts/los/convention_agreements/convention_overview_fish_stocks.htm>.
[64] See Articles 21, 24. The inspecting State's power to order to port only arises where a flag state has been notified of a "serious violation", and has not acted to enforce itself.
[65] For a review of the UNFSA dispute settlement regime, see T.L. McDorman, "The Dispute Settlement Regime of the Straddling and Highly Migratory Fish Stocks Convention" (1997) 36 Cdn. Yearbook of International Law 57.
[66] The Agreement also imposes some obligations with respect to conservation duties inside the EEZs of Parties, but this is beyond the scope of this study.
[67] See the discussion at Saunders, *Jurisdiction and Principle*, *supra* note 62 at 396.
[68] *Ibid* at 397.
[69] For a general review of the status of non-flag state enforcement, see R. Rayfuse, *Non-Flag State Enforcement in High Seas Fisheries* (Martinus Nijhof, Boston 2004).
[70] Agreement To Promote Compliance With International Conservation And Management Measures By Fishing Vessels On The High Seas, 1993 (In force April 2003), available at FAO Online: http://www.fao.org/Legal/treaties/012t-e.htm.
[71] The Compliance Agreement is also integrally connected to the voluntary *Code of Conduct* (see next section), in that the Code specifically incorporates it, and because obligations in the Code are given enforceable effect in the Compliance Agreement.
[72] Compliance Agreement, Arts. V., VII. And VIII.
[73] Compliance Agreement, Art. VI.
[74] See the summary of these obligations at Currie, *supra* note 61 at 12-13.
[75] FAO online: http://www.fao.org/Legal/treaties/012s-e.htm.
[76] See Currie, *supra* note 61 at 13.
[77] Food and Agriculture Organization , Code of Conduct For Responsible Fisheries, 1995. Available at FAO Online: <http://www.fao.org/DOCREP/005/v9878e/v9878e00.htm>.
[78] Code of Conduct, Art.1.3.
79 Food and Agriculture Organization, "International plan of action for reducing incidental catch of seabirds in longline fisheries," FAO Online, <http://www.fao.org/docrep/006/x3170e/x3170e02.htm>.

80 Food and Agriculture Organization, "International plan of action for conservation and management of sharks," FAO Online, <http://www.fao.org/docrep/006/x3170e/x3170e03.htm>.
81 Food and Agriculture Organization, "International plan of action for management of fishing capacity," FAO Online <http://www.fao.org/docrep/006/x3170e/x3170e04.htm>.
82 Food and Agriculture Organization, "International plan of action to prevent, deter, and eliminate illegal, unreported, and unregulated fishing," FAO Online <http://www.fao.org/DOCREP/003/y1224e/y1224e00.HTM.
[83] E. J. Molenaar, E.J., "Participation, allocation and unregulated fishing: the practice of regional fisheries management organizations." (2003) 18 International Journal of Marine and Coastal Law 458.
[84] Molenaar, *supra* note 83 at 466.
[85] The International Baltic Sea Fisheries Commission (IBSFC) and the North Atlantic Salmon Conservation Organization (NASCO), for example.
[86] The information on date of conventions and list of websites is drawn from T.L. McDorman, "Decision-making Processes of Regional Fisheries Management Organizations", Paper presented to the Conference on the Governance of High Seas Fisheries and the UN Fish Stocks Agreement, May 2005), online: Canadian Department of Fisheries and Oceans, http://www.dfo-mpo.gc.ca/fgc-cgp/documents/mcdorman_e.htm at 1, 19.
[87] The 2003 IATTC Convention, which will replace the 1949 agreement, was not in force at time of writing: see *ibid* at 1, note 3.
[88] For useful discussions of the role of RFMOs see, e.g. R Rayfuse, "To Our Children's Children's Children: From Promoting To Achieving Compliance In High Seas Fisheries", (Paper presented to the Conference on the Governance of High Seas Fisheries and the UN Fish Stocks Agreement, May 2005), Department of Fisheries and Oceans online at: http://www.dfo-mpo.gc.ca/fgc-cgp/documents/rayfuse_e.pdf; Molenaar, "New Areas and Gaps", *supra* note 45; R. Barston, "The Law of the Sea and Regional Fisheries Organisations" (1999) 14:3 International Journal of Marine and Coastal Law 333. A.K. Sydnes, "Regional Fisheries Organisations: How and Why Organisational Diversity Matters" (2001) 32 Ocean Development and International Law 349; C. Hedley, E. Molenaar & A. Elferink, *The Implications of the UN Fish Stocks Agreement (New York, 1995) For Regional Fisheries Organisations and International Fisheries Management*, (European Parliament Working Paper FISH 112 EN, 2003).
[89] The following summary is based on the categorizations suggested by Nandan, supra note 60 at 4-10. It also reflects the work of the High Seas Task Force (HSTF), an *ad hoc* group established under the auspices of the OECD, described as "a group of fisheries ministers and international NGOs working together to develop an action plan designed to combat illegal, unregulated and unreported fishing on the high seas." HSTF online at: http://www.high-seas.org/. The working papers collected at this website include a number of issue-specific papers, as well as the July 2004 document which set out the top priorities for consideration by the HSTF: High Seas Task Force, *Consolidated List Of Legal, Science, Economics And Trade, And Enforcement Issues For Consideration By The High Seas Task Force*, (HSTF/01 – July 2004). For a summary of the work of this group see: M. Lodge, "The High Seas Task Force", (Paper presented to the Conference on the Governance of High Seas Fisheries and the UN Fish Stocks Agreement, May 2005), available online at http://www.high-seas.org/docs/The_High_Seas_Task_Force_-_Paper_for_St_Johns_Conference.pdf.
[90] For a review of issues related to decision-making processes, see McDorman, *supra* note 86.
[91] Nandan, *supra* note 60 at 6-7.
[92] For a discussion of this issue, see High Seas Task Force, *Better High Seas Monitoring, Control And Surveillance – An Improved Network* (HSTF/04 – February 2005).
[93] Treaty between the Government of Australia and the Government of the French Republic on cooperation in the maritime areas adjacent to the French Southern Ocean and Antarctic

Territories (TAAF), Heard Island and the McDonald Islands, done at Canberra 24 November 2003, entered into force 26 January 2005: [2005] Australian Treaty Series No.6
[94] Art. 1(1), Australia/France Maritime Cooperation Treaty
[95] Arts. 2 and 3, Australia/France Maritime Cooperation Treaty.
[96] Art. 3(3), Australia/France Maritime Cooperation Treaty
[97] Art. 4, Australia/France Maritime Cooperation Treaty
[98] Art. 3 and 5, Australia/France Maritime Cooperation Treaty
[99] Art. 5, Australia/France Maritime Cooperation Treaty
[100] International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78), available at IMO online <http://www.imo.org/Conventions/contents.asp?doc_id=678&topic_id=258#2>.
[101] IMO Online: http://www.imo.org/home.asp (follow links to "Marine Environment").
[102] The concept of special areas in a more general sense is also provided for in the LOS 1982, Article 211(6), as noted earlier. The distinction between these provisions has been summarized as follows by IMO:

> A comparison between areas requiring special mandatory measures mentioned in article 211(6) of UNCLOS and provisions on Special Areas under MARPOL indicates that, while the former are restricted in jurisdictional scope to the EEZ, MARPOL Special Area provisions cover enclosed or semi-enclosed areas which may include parts of the territorial sea, the EEZ and the high seas.

IMO Circular Letter No. 2456, Feb. 17, 2003, "Implications of UNCLOS for the Organization", IMO Ref. A1/B/1.31, at 47 .

[103]MARPOL Annex I, Regulation 10: Regulation for the Prevention of Pollution by Oil, as amended. IMO, MARPOL 73/78 Consolidated Edition, 2002. IMO (London: 2002), at 47.
[104] Regulation 10, *ibid*., at p. 60-61.
[105] MARPOL Annex V, Regulation 5: Regulations for the Prevention of Pollution by Garbage from Ships, as amended. *ibid*., at 387-388.
[106] At its 52nd session, in Oct. 2004, the MEPC considered the issue of revising the PSSA guidelines and agreed to "establish a correspondence group to review, with the objective of clarifying, and, where appropriate, strengthening" the guidelines. The group is to report back to MEPC, and if revisions are proposed they may be considered in later 2005. IMO online at: http://www.imo.org/home.asp (follow links to Marine Environment and MEPC). For a discussion of PSSAs and recent developments, see N. Ünlü, "Particularly Sensitive Sea Area: Past, Present and Future", (2004) 3:2 World Maritime University Journal of Maritime Affairs 152.
[107] "Guidelines for Designation of Special Areas and the Identification of Particularly Sensitive Sea Areas," IMO Doc. A 17/Res.720 of January 9, 1992, at Para. 3.3.4-7.
[108] IMO, "Special areas and Particularly Sensitive Sea Areas," IMO online <http://www.imo.org/Environment/mainframe.asp?topic_id=760>.
[109] *Guidelines for Designation of Special Areas* , *supra* note 107 at Para. 3.3.3.
[110] *Implications of UNCLOS for the Organization*, supra note 102 at 47.
[111] Ibid.
[112] Ibid.
[113] IMO online: http://www.imo.org/home.asp.
[114] In force 1992. 1993 Can. T.S. 10. A 1998 Protocol extended the agreement to cover offshore platforms. The SUA Convention is complemented by the International Ship and Port Facility Security Code (ISPS Code), adopted in 2002, in force 2004, as a Chapter of the 1974 International Convention for the Safety of Life at Sea (SOLAS – in force 1980); 1980 Can T.S. 45. The ISPS code establishes standards for ensuring port security-related measures.

[115] For a summary of developments respecting this Convention, see Centre for Nonproliferation Studies online at: http://cns.miis.edu/pubs/inven/pdfs/maritime.pdf.
[116] IMO online at: www.imo.org/home.asp; follow link to Legal and SUA treaties.
[117] Centre for Nonproliferation Studies, *supra* note 115.
[118] See report at: http://www.oceanconserve.info/articles/reader.asp?linkid=27560. The rules are to be reviewed in 2005.
[119] Not in force. Available online at http://www.sjofartsdir.no/upload_attachment/37Final_Act___Ballast_Water_Treatment.pdf.
[120] Proposal COM(2002)0092 for a Directive on Ship-Source Pollution, initiated by the European Commission on May 3, 2003. For a summary of the progress on this directive, see the following report online: http://www.british-shipping.org/news/Parliamentay%20reports/05%20May/05%2005%2022%20EU%20Proposal%20for%20a%20Directive%20on%20Ship-Source%20Pollution%20.htm.
[121] See, e.g., the summary of the Environmental Policy of Wallenius Marine, online at http://www.walleniuslines.com/doc_upload/environmental_policy05.pdf. See also: *Environmental Report 2002: Wallenius Lines*, online at: http://www.walleniuslines.com/doc_upload/environmental_report02.pdf, for an example of environmental audit activities. The potential role of organizations such as INTERTANKO (the International Association of Independent Tanker Owners) and ITOPF (International Tanker Owners' Pollution Federation, Inc.), as a means of encouraging best practices in environmental protection should also be noted. For information see: www.intertanko.com and www.itopf.com.
[122] IMO online at: http://www.imo.org/Safety/mainframe.asp?topic_id=159.
[123] Nandan, *supra* note 60, at 8, has identified the relative success in utilizing port state control in the shipping sector, and the extent to which it is instructive for fisheries. He also notes, however, that the success with respect to shipping has been reliant on factors such as the wide adherence to IMO conventions, and the recent increased salience of security issues at the international level.
[124] *Supra* note 27.
[125] Molenaar, E.J. (1997). "The 1996 Protocol to the 1972 London Convention," 12 International Journal of Marine and Coastal Law 396, at 396
[126] Online at: http://www.imo.org/home.asp (follow links to Marine Environment and London Convention). See also Molenaar, *ibid*, for a review of this Protocol.
[127] Although enforcement, under Art. 6, would still rest with the flag state.
[128] 1996 Protocol To The Convention On The Prevention Of Marine Pollution By Dumping Of Wastes And Other Matter, 1972 And Resolutions Adopted By The Special Meeting, Available online at: http://www.londonconvention.org/documents/lc72/PROTOCOL.pdf.
[129] Convention Concerning the Protection of the World Cultural and Natural Heritage, 1972 (In force 1975). Online at http://whc.unesco.org/world_he.htm.
[130] See, e.g., A.M. Wilson, UNESCO World Heritage Marine Strategy, (UNESCO March 2003); A. Hillary, M. Kokkonen and L. Max, eds., *Proceedings of World Proceedings of the World Heritage Marine Biodiversity Workshop*, 2002 (UNESC, Paris, 2003)
[131] See, e.g., Recommendation 9 from the 2002 *World Heritage Marine Biodiversity Workshop*, *ibid* at 18: "The unique biodiversity attributes of areas of the high seas and threats to which they are subject need to be recognized by a program to identify and establish World Heritage sites that represent these attributes."
[132] The Convention is based on sites being listed for protection, and nominations for listing must be made by each State Party with respect to sites "situated on its territory" (Article 3). See also: T. Young, *Developing A Legal Strategy for High Seas Marine Protected Areas: Legal Background Paper* (IUCN/WWF, 2003) at 11; Kimball, *supra* note 3 at 36-37.
[133] Not in force. Online at: http://www.unesco.org/culture/laws/underwater/html_eng/convention.shtml.

[134] *Ibid* at Arts. 2, 1.
[135] See S. Dromgoole, "2001 UNESCO Convention on the Protection of the Underwater Cultural Heritage", 18:1 International Journal of Marine and Coastal Law 59 (2003).
[136] LOS 1982, Art. 149:
All objects of an archaeological and historical nature found in the Area shall be preserved or disposed of for the benefit of mankind as a whole, particular regard being paid to the preferential rights of the State or country of origin, or the State of cultural origin, or the State of historical and archaeological origin.
[137] In force 1975. Available online at: http://www.cites.org/eng/disc/text.shtml.
[138] Kimball, *supra* note 3 at 33. CITES, Preamble.
[139] CITES, Appendix I.
[140] CITES, Appendix II.
[141] CITES, Appendix III.
[142] CITES, Arts. III – VII.
[143] "The CITES Species Gallery: Mammals", CITES online <http://www.cites.org/gallery/species/mammal/mammals.html>.
[144][144] "The CITES Species Gallery: Fish", CITES online <http://www.cites.org/gallery/species/fish/fishes.html>.
[145] Ibid.
[146] "The CITES Species Gallery: Invertebrates", CITES online <http://www.cites.org/gallery/species/invertibrate/invertebrates.html>.
[147] Kimball, *supra* note 3 at 33.
[148] See the reference to this possibility at: HSTF: Consolidated list of Issues, *supra* note 89 at 10.
[149] In force 1983 (as amended). Available online at: http://www.cms.int/documents/convtxt/cms_convtxt.htm.
[150] Online at http://www.cms.int/about/intro.htm.
[151] Bonn Convention, Art. I.(f).
[152] Bonn Convention, Art. III. (4).
[153] Bonn Convention, Art. I. (h). The use of the term "jurisdiction" rather than "territory" means that areas such as the EEZ would be included.
[154] Bonn Convention, Art. IV (1).
[155] Bonn Convention, Art. V.
[156] Available online at: http://www.cms.int/species/index.htm. Some of these agreements, however, appear to limit the application of obligations to areas within national jurisdiction. For a discussion of the marine applications of the Bonn Convention, see Kimball, *supra* note 3 at 33-34.
[157] See, e.g. the following reports: *Durban Report*, *supra* note 7; Gjerde and Breide (Malaga Workshop), *supra* note 7*; Vilm Report supra* note 7. See also A. Kirchner, *Legal Basis for Marine Protected Areas on the High Seas* Paper Presented by Germany to OSPAR meeting on MPAs, Vilm, April 2005; OSPAR ICG-MPA 05/8/1-E; Ascensio and Bliss, *supra* note 4.
[158] See, e.g., the call for development of a global representative system of high seas MPAs, beginning with seamounts and other vulnerable habitats, as put forward at the 5th IUCN World Parks Congress in 2003: Durban Report, *ibid*. See also the discussion at: WWF, "The status of natural resources on the high-seas: environmental, legal and political considerations", Report presented to Cairns Workshop, 2003, available online at http://www.highseasconservation.org/documents/cripps.pdf, which includes a summary of recommendations from the World Summit on Sustainable Development in Johannesburg in 2002.
[159] See: Warner, *supra* note 8 at 75. See also the discussion of legal obstacles to high seas conservation measures in general at S. Kaye, "Implementing High Seas Biodiversity Conservation: Global Geopolitical Considerations" (2004) 28 Marine Policy 221.

[160] See Scovazzi, *supra* note 58; see also Young, *supra* note 132 .
[161] See the discussion in Warner, *supra* note 8, at 61-62.
[162] Scovazzi, supra note 58, at 4-6. See also Kirchner, *supra* note 157 at 6-7.
[163] See comments *supra* section 2.3.2, respecting judicial recognition of the status and content of the duty to cooperate.
[164] On the relevance of soft law to this issue in general, see: Young, *supra* note 132 at 22-23; Currie, *supra* note 61 at 20-24.
[165] For fuller discussion of issues set out here, see Warner, 7-8
[166] Agenda 21, para 17.46 (e), as quoted by Scovazzi, *supra* note 58, at 1.
[167] The importance of these emerging soft law principles, and others such as the precautionary approach, may lay partly in the extent to which they can assist in interpreting and modernizing principles found in the LOS 1982 and other documents. On the general problem of the somewhat anachronistic status of the Convention with respect to environmental matters, see P. Birnie, "Are Twentieth Century Marine Conservation Conventions Adaptable To Twenty First Century Goals And Principles? – Part I" 12:3 International Journal of Marine and Coastal Law 307 (1997), and "Part II", 12:4 International Journal of Marine and Coastal Law 488 (1977).
[168] *Convention on Biological Diversity, with Annexes (I and II)*, 5 June 1992, (In force 1993). Online at: http://www.biodiv.org/default.shtml.
[169] CBD, Art. 4.
[170] CBD Art. 1.
[171] "Protected area" is defined in Art. 2 as a "geographically defined area which is designated or regulated and managed to achieve specific conservation objectives."
[172] Report of the Secretary-General on the Law of the Sea, 2004, UNGA A/59/62/Add.1, at para. 255.
[173] COP 7, Decision V, 2004, at paras. 30-31. Online at: http://www.biodiv.org/decisions/default.aspx?m=COP-07&id=7742&lg=0. For a more optimistic view of this decision, see Kirchner, *supra* note 157 at 16, where it is argued that this decision "recognizes that the law of the sea provides a legal framework for regulating activities in marine areas beyond national jurisdiction...". The problem, of course, is that no details of this "framework" are specified.
[174] COP 7 Decision 28, 2004 para. 29(a). Online at: http://www.biodiv.org/decisions/default.aspx?m=COP-07&id=7765&lg=0.
[175] COP 7, Decision 5, *supra* note **Error! Bookmark not defined.**, at paras. 54, 57. One other option which may be available in the long-term is to develop an implementing agreement to clarify and expand upon the duty (in Art. 5 of the CBD) to cooperate in the conservation and sustainable use of biological diversity. Such an effort might be analogous to the use of UNFSA to develop the duty to cooperate on straddling and highly migratory fish stocks found in the LOS 1982.
[176] For an overview of these agreements, see: http://www.unep.ch/regionalseas/. As Warner has noted, the South Pacific Convention "contains an article recommending the designation of such areas but does not specify the extent of the areas or the measures to be taken." R. Warner, "Marine Protected Areas Beyond National Jurisdiction: Existing Legal Principles and Future Legal Frameworks", Paper prepared for Vilm Workshop, 2001, at 13.
[177] Warner, *ibid* at 14.
[178] Ibid.
[179] Convention For The Protection Of The Marine Environment And The Coastal Region Of The Mediterranean, 1976 (In force 1978) (Barcelona Convention). Available Online at: http://www.oceanlaw.net/texts/unepmap.htm

[180] Protocol Concerning Specially Protected Areas And Biological Diversity In The Mediterranean1982 (In force 1986) (SPA Protocol). Available online at: http://www.oceanlaw.net/texts/unepmap2.htm.
[181] Warner, *supra* note 176 at 13.
[182] SPA protocol, Annex I, B.2.
[183] Scovazzi, *supra* note 58, at 10.
[184] Ferrajolo, supra note 5 at 71. Note that the use of the term "territorial waters" presumably refers to the specific situation of the Mediterranean as discussed above, and that declaration of MPAs within EEZs would certainly be possible, within the limits imposed by the law of the sea.
[185] Scovazzi, *supra* note 58 at 12.
[186] *Ibid*, at 14-15.
[187] Kirchner, *supra* note 157 at 23. Citations omitted.
[188] Antarctic Treaty, 1959 (In force 1961), Available online at: http://www.ats.org.ar/treaty.htm.
[189] Convention On The Conservation Of Antarctic Marine Living Resources, 1980 (In force 1982). Available online at http://www.ccamlr.org/pu/e/e_pubs/bd/pt1.pdf.
[190] The Protocol on Environmental Protection to the Antarctic Treaty 1991 (In force 1998). Available online at: http://www.cep.aq/default.asp?casid=5074.
[191] By Article 3(3), designations of Specially Protected Areas and Sites of Scientific Interest declared under earlier guidelines are carried forward and renamed as ASPAs.
[192] Madrid Protocol, Annex V, Art. 5
[193] Madrid Protocol, Annex V, Art. 6.
[194] S. Grant, *Summary Table of Current and Proposed Antarctic Marine Protected Areas*, (Scott Polar Research Institute, University of Cambridge, Jan. 2004).
[195] Ibid.
[196] Such areas may be seen as high seas by other states, but the Antarctic Treaty regime does not purport to confirm or deny possible territorial claims of states in the area, so the point may be moot within the treaty regime. See below, on the limitations incorporated in the Antarctic Treaty with respect to high seas application.
[197] CCAMLR, Art. II.1.
[198] CCAMLR, Art. IX.1(f).
[199] CCAMLR, Art. IX.2(g). These measures are separate from the mandated role of the Commission in designation of ASPAs and ASMAs, which is noted above.
[200] See the discussion At CCAMLR Online: http://www.ccamlr.org/pu/E/sc/cemp/intro.htm
[201] Minutes of CCAMLR Scientific Committee SC-CCAMLR XXIII 25-29 October, 2004, at para. 3.52-3.53. CCAMLR online at: http://www.ccamlr.org/pu/e/e_pubs/sr/04/i03.pdf. .
[202] Record of the Twenty-third Meeting Of CCAMLR, 25 October – 5 November, 2004, CCAMLR-XXIII at Para. 4.13. Available online at Excerpt from the Minutes of CCAMLR-XXIII, *Ibid*.
[203] In force 1998. Available online at: http://www.ospar.org/eng/html/welcome.html. The Convention replaced the earlier 1972 Oslo Dumping Convention and the 1974 Paris Convention on land based sources of marine pollution.
[204] *Ibid*, Art. 1(a).
[205] OSPAR, Annex V, The Protection and Conservation of the Biodiversity of the Maritime Area, Art. 3(1)(a). OSPAR, Appendix 3 lists the following criteria:

"a) the extent, intensity and duration of the human activity under consideration;
b) actual and potential adverse effects of the human activity on specific species, communities and habitats;
c)actual and potential adverse effects of the human activity on specific ecological processes;
d)irreversibility or durability of these effects."

[206] OSPAR, Annex V, Art. 3(1)(b)(ii). At the same meeting, a Ministerial statement (the "Sintra Statement", which confirmed the mandate given to the Commission to "promote the establishment of a network of marine protected areas to ensure the sustainable use and protection and conservation of marine biological diversity and its ecosystems." Online at http://www.ospar.org/eng/html/welcome.html.
[207] The List was updated in 2004; online at: http://www.ospar.org/documents/dbase/decrecs/agreements/04-06E_List%20of%20threatened-declining%20species-habitats.doc It covers a number of features that are characteristic of the international waters of the North-East Atlantic such as seamounts and hydrothermal vents.
[208] Online at: http://www.ospar.org/documents/dbase/decrecs/recommendations/or03-03e.doc.
[209] *Ibid* at para. 2.1.
[210] Online at: *http://www.ospar.org/eng/html/sap/welcome.html*.
[211] In autumn 2005, WWF will file a proposal for the hydrothermal vent fields of Rainbow and Saldana as the first OSPAR high seas MPA. This proposal, which will require the support of some contracting parties, is meant as the first pilot case on which to develop management, surveillance and enforcement in the absence of international legal regulations. Therefore the emphasis will be on a voluntary management scheme.

[212] Convention: Website. See *Joint HELCOM/OSPAR Work Programme on Marine Protected Areas*, June 2003, online at: http://www.ospar.org/documents/02-03/JMMC03/SR-E/JMM%20ANNEX07_Joint%20MPA%20Work%20Programme.doc.
[213] "Atlantic and Baltic join forces," Press release dated 06/26/2003, Helsinki Commission online <http://www.helcom.fi/helcom/news/256.html> Date accessed: 01/11/2005
[214] Declaration of the First Joint Ministerial Meeting of the Helsinki and OSPAR Commissions, Bremen, 25-26 June 2003, available at the Helsinki Commission online <http://www.helcom.fi/helcom24/JMMANNEX08_Ministerial_Declaration.pdf>.
[215] Joint HELCOM/OSPAR Work Programme on Marine Protected Areas, Para. 2(e), available at the Helsinki Commission online:<http://www.helcom.fi/helcom24/JMMANNEX07_Joint_MPA_Work_Programme.pdf>.
[216] Molenaar, *supra* note 83 at 469-470.
[217] See CCAMLR Conservation Measure Nos. 32-02 through 32-17, 33-02 to 33-03, 41-01 through 41-11, 42-01 to 42-02, and 52-01, CCAMLR Schedule of conservation measures in force 2004/2005, available at CCAMLR online <http://www.ccamlr.org/pu/e/e_pubs/cm/04-05/toc.htm>. CCAMLR has also closed areas designated as CEMP sites: see Conservation Measure No. 91-01 through 91-03.
[218] ICCAT Resolution No. C-03-12 (2003), available at IGIFL online <http://www.intfish.plus.com/docs/2003/iattc/C-03-12.pdf>.
[219] Ibid.
[220] One more comprehensive example is that of the 1985 Pacific Salmon Salmon Treaty between Canada and the United States, which commits the parties to actions for protection and restoration of habitat. See discussion at Kimball, *supra* note 3 at 63. These actions, however, would not involve high seas areas.
[221] For a comment on the potential of RFMOs to act in this manner, but their general reluctance to do so (with some exceptions), see Kirchner, *supra* note 0 at 24.
[222] NEAFC Press Release, Nov. 15, 2004. NEAFC online at: http://www.neafc.org/news/docs/2004press_release_final.pdf.
[223] Preamble, International Convention for the Regulation of Whaling, 1946, in force 1949 (International Whaling Convention); online at http://www.iwcoffice.org/commission/convention.htm#convention.

[224] See the summary of the sanctuary measures, as provided by the Commission online at: http://www.iwcoffice.org/conservation/sanctuaries.htm.
[225] J. Mossop, "Legal Challenges to the Establishment of High Seas Marine Protected Areas", Paper presented to 4th Fisheries Congress (Vancouver, 2004), at 1-2.
[226] With respect to the prominence of NGO viewpoints, Warner has noted:

> "At the global level, the establishment of marine protected areas both within and beyond national jurisdiction has been addressed principally by non governmental organizations such as the International Union for the Conservation for Nature and Natural Resources (IUCN) and the World Wide Fund for Nature (WWF)."

Warner, *supra* note 8 at 58-59, (citations omitted).
[227] The major exception to this pattern – the ISA and the creation of the Area – was achieved with respect to a resource and an area which, at the time, was exploited by no one. Even then, the provisions of this Part of the Convention remained a major stumbling block for some states in their attitude to the Convention, and led to the additional agreement on Part XI – *supra* note 52.
[228] Fuller and Myers, *supra* note 6 at 3.
[229] See *ibid* at 12-69 for a full discussion of the conservation and management justifications for an MPA in this area, and for a description of the evolution of the proposals over time.
[230] *Oceans Act*, R.S.C. 1996, c. 31. Note that the areas in question are all within the jurisdiction of the federal government, although a legislative compromise has resulted in a greater provincial role in offshore oil and gas. This is addressed further below.
[231] For the full Strategy, which incorporates both a strategy document and an operational and policy framework for integrated management, see the ocean strategy online at: http://www.cos-soc.gc.ca/doc/publications_e.asp.
[232] Online at: http://www.cos-soc.gc.ca/doc/pdf/IM_e.pdf, at 15-16.
[233] *Ibid* at 19.
[234] At time of writing, it is planned that ecosystem reviews will be conducted for six priority LOMAs in the 2005-2006 period, including the Grand Banks and the Eastern Scotian Shelf. Fisheries and Oceans online at: http://www.dfo-mpo.gc.ca/sds-sdd2005-06/sds0506_e.htm.
[235] For a description of the ESSIM initiative, see Fisheries and Oceans online at: http://www.mar.dfo-mpo.gc.ca/oceans/e/essim/essim-intro-e.html.
[236] *Fisheries Act*, R.S.C. 1985, c. F-14.
[237] "Deleterious" is defined in s. 34 (a) as: "any substance that, if added to any water, would degrade or alter or form part of a process of degradation or alteration of the quality of that water so that it is rendered or is likely to be rendered deleterious to fish or fish habitat or to the use by man of fish that frequent that water…". The section goes on to include water rendered deleterious by the addition of substances, and to provide for the designation of deleterious substances.
[238] Coastal Fisheries Protection Act, R.S.C. 1985 c. C-33.
[239] Coastal Fisheries Protection Regulations, C.R.C., c. 413.
[240] *Canada Shipping Act* R.S.C. 1985, c. S-9. The Act has been updated by *Canada Shipping Ac* 2001, S.C. 2001, c. 26, which will come fully into force only once a number of associated regulations are reviewed and updated (expected 2006 for full implementation).
[241] Pollutant Substances Pollution Prevention Regulations, S.O.R./2002-276.
[242] Oil Pollution Prevention Regulations, S.O.R./1993-3.
[243] Collision Regulations, C.R.C. c. 1416.
[244] Transport Canada Press Release AO17/02, Dec. 19, 2002, online at: http://www.tc.gc.ca/atl/marine/fundy_20021219.htm.
[245] Reference Re Newfoundland Continental Shelf, [1984] 1 S.C.R. 86, (sub nom. Reference Re Seabed & Subsoil of Continental Shelf offshore Newfoundland) 5 D.L.R. (4th) 385.

[246] Canada-Newfoundland Atlantic Accord Implementation Act, R.S.C. 1987, c. 3. Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act, R.S.C. 1988, c. 28. Each of these Acts is "mirrored" by provincial legislation.
[247] Canadian Environmental Assessment Act, R.S.C. 1992, c. 37.
[248] Canadian Environmental Protection Act, 1999, R.S.C. 1999, c. 33.
[249] Migratory Birds Convention Act, 1994, R.S.C. 1994, c. 22.
[250] *Migratory Birds Convention Act, 1994*, R.S.C. 1994, c. 22, as am. by S.C. 2005, c. 23, ss. 1-16, 43-48. At time of writing, ss. 1-16 not in force.
[251] *Species at Risk Act*, R.S.C. 2002, c. 29.
[252] SAR Registry: Environment Canada Online at: http://www.sararegistry.gc.ca/faq/default_e.cfm
[253] Canada National Marine Conservation Areas Act, R.S.C. 2002, c. 18.
[254] *Canada Wildlife Act*, R.S.C. 1985, c. W-9, as am. by S.C. 1994, c. 23.
[255] National Framework for Establishing and Managing Marine Protected Areas, Fisheries and Oceans Canada Work Document (March 1999); Online at http://www.dfo-mpo.gc.ca/canwaters-eauxcan/infocentre/publications/docs/newmpa/index_e.asp.
[256] *Gully Marine Protected Area Regulations*, S.O.R./2004-112; *Endeavour Hydrothermal Vents Marine Protected Area Regulations*, S.O.R./2003-87. At time of completion of this study, the Department of Fisheries and Oceans has announced four additional sites being considered for designation as MPAs: DFO Press Release of June 10, 2005, http://www.dfo-mpo.gc.ca/media/newsrel/2005/hq-ac61_e.htm?template=print.
[257] Convention on Future Multilateral Cooperation in the North West Atlantic Fisheries, 1978, (entered into force provisionally 1 January 1979) [NAFO Convention]; online at http://www.nafo.ca/About/FRAMES/AbFrMand.html.
[258] Saunders, *supra* note 0 at 184, citing NAFO and Department of Fisheries and Oceans Canada.
[259] *Ibid* at 185-186.
[260] *Ibid* at 186 (citations omitted). The additional problem of non-member states fishing in the region has declined in recent years.
[261] See, e.g., House of Commons Standing Committee on Fisheries and Oceans, "Report on Foreign Overfishing: It's Impacts and Solutions" (11 June 2002); Newfoundland, Legislative Assembly, Newfoundland and Labrador All Party Committee on the 2J3KL and 3Pn4RS Cod Fisheries "Stability, Sustainability and Prosperity: Charting a Future for the Northern and Gulf Cod Stocks (17 March 2003)
[262] Saunders, *supra* note 45 at 202.
[263] For example, any recommendation to seek a special area or PSSA designation must be preceded by a comprehensive assessment of the justification for such a measure.
[264] Kaye has argued, for example, that DWFNs are unlikely to support any proposal that would require international cooperation to protect high seas marine protected areas as it could have a negative impact on freedom of fishing in such areas, depending on the management measures in put in place:

> The DWFNs [*Distant Water Fishing* Nations] are likely to react negatively or at best in an unsupportive fashion to any proposal that would require international cooperation to protect high seas marine parks. Logically protection in some form must impact upon the freedom of fishing.

Kaye, supra note 159 at 222.
[265] Furthermore, *binding* legal instruments tend to be designed to respond to current issues, and to incorporate concrete criteria and standards: it is difficult to legislate or enforce in the abstract.
[266] Although, as shown earlier, even with national zones the powers of a coastal state will vary depending upon the sector involved (*e.g.* fishing versus shipping).

[267] This is consistent with the strategy adopted at the Vilm Workshop, as noted above: *Vilm Report*, *supra* note 7.
[268] This point has been noted by others, including, e.g. Kimball, *supra* note 3, and Ascencio and Bliss, *supra* note 4. Ascencio and Bliss additionally note (at 40-41) that the lack of inter-sectoral coordination among the various organizations with high seas mandates is critical to achieving fully effective implementation.
[269] An important example of this is the problem of flag state implementation. The negotiation of formal legal obligations has proven to be a sterile exercise where flag states fail to actively pursue those obligations in the management of their own fleets.
[270] At a minimum, of course, such arrangements may simply form the basis for limited actions which will ameliorate a conservation problem through acceptance by *some* states, even in the absence of universal observance by others.
[271] As noted by Kaye, supra note 159 at 222: "The most significant use of the high seas today is fishing. No high seas areas are presently being exploited in terms of mining or other activities with the exception of fishing."
[272] Young, *supra* note 0 at 25.
[273] Mossop, *supra* note 0 at 58-59.
[274] The significance of the regional level of action has been noted, *e.g.*, in the recommendations A point noted in the Durban recommendations of the 2003 World Parks Congress in Durban: *Durban Report*, *supra* note 0, at 9-12, *passim*.
[275] For a discussion of the possibilities of port state control measures, see High Seas Task Force, *Promoting Responsible Ports* (HSTF/06 – February 2005).
[276] HSTF, Consolidated list of Issues, *supra* note 89 at 10.
[277] Ibid.
[278] Kimball, *supra* note0, at 82-84, where it is also noted that numerous organizations, including IMO and FAO, have attempted to fill this role at times.
[279] See the discussion of the Antarctic, above.
[280] As, for example, in the case of NGO suggestions for MPA designation via OSPAR.

WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by:

- conserving the world's biological diversity
- ensuring that the use of renewable natural resources is sustainable
- promoting the reduction of pollution and wasteful consumption

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