

FILLING REGULATORY GAPS IN HIGH SEAS FISHERIES:
DISCRETE HIGH SEAS FISH STOCKS, DEEP-SEA FISHERIES
AND VULNERABLE MARINE ECOSYSTEMS

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**Filling Regulatory Gaps in High Seas Fisheries:
Discrete High Seas Fish Stocks, Deep-sea Fisheries and
Vulnerable Marine Ecosystems**

**De opvulling van tekortkomingen in het regime
van de visserij op de volle zee:
Alleen op volle zee voorkomende bestanden, visserijen
in de diepzee en kwetsbare mariene ecosystemen**

(met een samenvatting in het Nederlands)

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It goes without saying that any possible error or omission is my responsibility. The present manuscript is up to date as of 1 September 2008 unless otherwise indicated.

New York, October 2008

List of Abbreviations

AEPS	Arctic Environmental Protection Strategy
<i>BFSP</i>	<i>British and Foreign State Papers</i>
CBD	Convention on Biological Diversity
CBS Convention	Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources
CECAF	Fisheries Committee for the Eastern Central Atlantic
CHM	Common Heritage of Mankind
CLCS	Commission on the Limits of the Continental Shelf
COFI	Committee on Fisheries
CPPS	Permanent Commission for the South Pacific
CRFM	Caribbean Regional Fisheries Mechanism
CSC	Convention on the Continental Shelf
DHSFS	Discrete high seas fish stocks
DOALOS	Division for Ocean Affairs and the Law of the Sea
EEZ	Exclusive economic zone
EIA	Environmental impact assessment
<i>ENB</i>	<i>Earth Negotiations Bulletin</i>
FAO	Food and Agriculture Organization of the United Nations
FSA	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
Galapagos Agreement	Framework Agreement for the Conservation of Living Marine Resources on the High Seas of the South Pacific
GFCM	General Fisheries Commission for the Mediterranean
HSC	Convention on the High Seas
HSFC	Convention on Fishing and Conservation of the Living Resources of the High Seas
ICES	International Council for the Exploitation of the Sea
ICJ	International Court of Justice
ICNAF	International Commission for the Northwest Atlantic Fisheries
ICP	Informal Consultative Process
ICRW	International Convention for the Regulation of Whaling
ICSP	Informal Consultations of States Parties
ILA	International Law Association
ILC	International Law Commission
<i>ILM</i>	<i>International Legal Materials</i>
IMO	International Maritime Organization

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IPOA	International Plan of Action
ISA	International Seabed Authority
ISNT	Informal Single Negotiating Text
ITLOS	International Tribunal for the Law of the Sea
IUU	Illegal, unreported and unregulated
IWC	International Whaling Commission
JPOI	Johannesburg Plan of Implementation
<i>LNTS</i>	<i>League of Nations Treaty Series</i>
<i>LOS</i>	<i>Law of the Sea Bulletin</i>
LOSC	United Nations Convention on the Law of the Sea
MoU	Memorandum of Understanding
MPA	Marine protected area
MSR	Marine scientific research
MSY	Maximum sustainable yield
NAFO	Northwest Atlantic Fisheries Organization
NEAFC	North East Atlantic Fisheries Commission
PECMAS	Permanent Committee on Management and Science
RFMO	Regional fisheries management organization
RFMO/A	Regional fisheries management organization or arrangement
<i>RIAA</i>	<i>Reports of International Arbitral Awards</i>
<i>RILC</i>	<i>Report of the International Law Commission</i>
SAI	Significant adverse impact
SEAFO	South East Atlantic Fisheries Organization
SIOFA	Southern Indian Ocean Fisheries Agreement
SPRFMO	South Pacific Regional Fisheries Management Organization
TAC	Total allowable catch
UNCLOS III	Third United Nations Conference on the Law of the Sea
UNGA	United Nations General Assembly
<i>UNTS</i>	<i>United Nations Treaty Series</i>
VCLT	Vienna Convention on the Law of Treaties
VME	Vulnerable marine ecosystem
WCPFC	Western and Central Pacific Fisheries Commission
WECAFC	Western Central Atlantic Fishery Commission
<i>YILC</i>	<i>Yearbook of the International Law Commission</i>

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Introduction

Background

The state of marine capture fisheries is in crisis in many parts of the world's oceans. It was estimated that in 2003, among the stocks monitored, only 3% were underexploited and 21% were moderately exploited, while 52% were fully exploited and 23% were overexploited or depleted.¹ In 2005, the overall situation did not change (underexploited: 3%, moderately exploited: 20%, fully exploited: 52%, overexploited: 17%, depleted: 7% and recovering from depletion: 1%).² Overall, fisheries management has so far maintained a poor record concerning its effectiveness in the conservation and management of marine living resources. Furthermore, according to the Food and Agriculture Organization of the United Nations (FAO):

[t]he situation seems more critical for some highly migratory, straddling and other fishery resources that are exploited solely or partially in the high seas [and] the state of straddling stocks and of other high seas fishery resources is even more problematic than for highly migratory species, with nearly two-thirds of the stocks for which the state of exploitation can be determined being classified as overexploited or depleted.³

Problems of high seas fisheries have been complicated by a multitude of causes. According to Agenda 21, the main problems affecting high seas fisheries are 'unregulated fishing, overcapitalization, excessive fleet size, vessel reflagging to escape controls, insufficiently selective gear, unreliable databases and lack of sufficient cooperation between States'.⁴ These factors were again identified in the 2006 UN Secretary-General's Report on Oceans and the Law of the Sea when it considered the factors limiting the contribution of fisheries to sustainable development.⁵

Particularly pressing are the problems of deep-sea fisheries on the high seas and the protection of marine ecosystems from damage caused by destructive fishing practices.⁶ Deep-water species include orange roughy, oreo dory, alfonsino, toothfish, pelagic armourhead and hoki, yet they are not limited to these species: an important

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- 1 See FAO Fisheries Department, *The State of World Fisheries and Aquaculture 2004* (SOFIA 2004), at p. 32.
 - 2 FAO Fisheries and Agriculture Department, *The State of World Fisheries and Aquaculture 2006* (SOFIA 2006), at p. 29.
 - 3 *Ibid.*, at p. 33.
 - 4 Agenda 21, Rio de Janeiro, 13 August 1992, para. 17.45.
 - 5 *Oceans and the Law of the Sea*, Report of the Secretary-General, A/60/63, 4 March 2005, at pp. 57-58, paras 210-211.
 - 6 For example, Gjerde identified three major challenges to the legal regime for high seas fisheries under the United Nations Convention on the Law of the Sea (LOSC), namely, declining high seas fish stocks, biodiversity concerns and IUU fishing. Under the first and second concerns, she specifically refers to deep-sea fisheries as examples. K.M. Gjerde, 'High Seas Fisheries Management under the Convention on the Law of the Sea', in D. Freestone, R. Barnes and D.M. Ong (eds.), *The Law of the Sea: Progress and Prospects* (2006), at p. 281.

feature of deep-water fishes is that new discoveries continue.⁷ Deep-sea fisheries first developed off New Zealand and Australia in the late-1970s and 1980s, and rapidly developed elsewhere in the 1990s.⁸ The development of deep-sea fisheries has been prompted by three factors: (1) reduced fishing opportunities in shallower waters due to the depletion of species and stocks and extended maritime jurisdiction; (2) the high value of some deep-water species; and (3) advances in technology that make fishing in deep water possible and commercially viable.⁹ The development of deep-sea fisheries has outpaced fisheries management and, in recent years, these problems have come under the increasing attention of the international community for the following reasons.

First, serious doubts have been cast on the sustainability of fish stocks targeted in deep-sea fisheries. Deep-water species are particularly vulnerable to overexploitation and depletion because of their slow growth and late maturity. Besides, since deep-water fisheries often exploit aggregations associated with specific features (e.g., seamounts, ocean ridges and canyons), they do not last presumably because of a localized depletion of the fishery resource.¹⁰ In this type of operation, fishing vessels fish down a particular stock to depletion in one area, and then quickly explore new aggregations in another area and easily transfer fishing efforts there. In this way, some commercially attractive deep-sea species were already depleted during quite a short period before any effective conservation and management measures were put in place.¹¹ In addition, concerns are amplified by the fear that, to the extent that demersal species are linked to pelagic species through the food chain, the degradation of the stock status of demersal species may lead to a decline in the populations of pelagic species in the same ecosystem through predator-prey relationships.

Second, mounting concerns for the marine environment arose because species targeted in deep-sea fisheries often aggregate around seamounts, which are vulnerable

7 J.-J. Maguire *et al.*, *The State of World Highly Migratory, Straddling and Other High Seas Fishery Resources and Associated Species*, FAO Fisheries Technical Paper No. 495, at pp. 49-55.

8 *Ibid.*, at p. 50. It can be noted, however, that during the 1960s-1990s, many regions of the world's oceans and areas beyond national jurisdiction were explored, fished and researched by distant water fishing nations although much of these historical data are not reported in FAO catch statistics. Report and Documentation of the Expert Consultation on Deep-sea Fisheries in the High Seas, Bangkok, Thailand, 21-23 November 2006, Fisheries Report No. 838, FIEP/R838 (En), at para. 113.

9 Maguire *et al.*, *The State of World Highly Migratory, Straddling and Other High Seas Fishery Resources and Associated Species*, at pp. 50 and 64. See also FAO Fisheries Report No. 838, at paras 46 and 50-51.

10 Maguire *et al.*, *The State of World Highly Migratory, Straddling and Other High Seas Fishery Resources and Associated Species*, at p. 49. See also Gjerde, 'High Seas Fisheries Management under the Convention on the Law of the Sea', at p. 284.

11 See M. Lack *et al.*, *Managing Risk and Uncertainty in Deep-sea Fisheries: Lessons from Orange Roughy* (2003), at p. 47. See also FAO Fisheries Report No. 838, at para. 57.

to, *inter alia*, bottom trawl fishing.¹² Other vulnerable marine ecosystems (VMEs) such as cold-water corals, sponges and hydrothermal vents could also be subject to threats from deep-sea fisheries.

Last but not least, attention has been drawn to the problem of deep-sea fisheries also by the fact that fish stocks targeted in deep-sea fisheries on the high seas are often ‘discrete high seas fish stocks’ (DHSFS). This category of fish stocks only occur in the high seas. The exploitation of DHSFS is relatively recent and less is known about their biology and stock structure.¹³ As deep-sea fisheries developed, target species of high seas fisheries came to include DHSFS since deep-sea species are more likely to be DHSFS than straddling fish stocks due to, *inter alia*, their localized population distribution; most of the currently known DHSFS are deep-water species, but several others may be pelagic.¹⁴ In addition, recent advancements in fisheries research have improved our understanding of the biological structure of fish stocks. It appears that some aggregations of fish which were previously considered as a single stock occurring both in areas under national jurisdiction and on the high seas are, in fact, composed of two or more stocks.¹⁵ This may lead to a situation where some of these stocks turn out to be DHSFS. All in all, as the latest SOFIA states, ‘[t]he attention of the international community has focused increasingly on [discrete high seas] stocks’.¹⁶

It has been argued that major regulatory gaps in the regime of high seas fisheries currently exist. First, shortcomings in (or the weakness of) the existing international legal framework have been pointed out in relation to DHSFS.¹⁷ The United Nations Convention on the Law of the Sea (LOSC) is the basic instrument covering all activities in the oceans, including fisheries. It provides for various areas where coastal states may exercise jurisdiction to a varied degree, whether on the basis of their sovereignty or sovereign rights,¹⁸ while the rest of the oceans remains high seas where no state may exercise jurisdiction over vessels or nationals of other states unless otherwise expressly provided for.¹⁹ While the LOSC explicitly recognizes sovereign

12 See UNGA Resolution 59/25, Sustainable Fisheries, Including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and Related Instruments, 17 November 2004, paras 66-71.

13 Maguire *et al.*, The State of World Highly Migratory, Straddling and Other High Seas Fishery Resources and Associated Species, at p. 5.

14 See Report Submitted in Accordance with Paragraph 17 of General Assembly Resolution 59/25 of 17 November 2004, to Assist the Review Conference to Implement Its Mandate Under Paragraph 2, Article 36 of the United Nations Fish Stocks Agreement, A/CONF.210/2006/1, 4 January 2006, at para. 104.

15 For example, see the example of the management of redfish in the North-East Atlantic Fisheries Commission in Chapter 4.

16 FAO Fisheries and Agriculture Department, SOFIA 2006, at p. 125.

17 See also FAO Fisheries Report No. 838, at para. 53.

18 See, for example, United Nations Convention on the Law of the Sea, Montego Bay, 10 December 1982, Articles 2, 49 and 56.

19 See *ibid.*, Article 92.

rights of coastal states over fisheries in areas under national jurisdiction, high seas fisheries remain subject to the principle of freedom of fishing and other general principles. Lacking precise rules for implementation, these general principles by themselves do not necessarily ensure the effective conservation and management of fisheries resources of the high seas.²⁰ The 1995 Fish Stocks Agreement (FSA), which was concluded to implement general provisions of the LOSC, is aimed at the conservation and management of straddling fish stocks and highly migratory fish stocks and is not applicable to DHSFS.²¹

Second, institutional gaps are found in the coverage of high seas with regional fisheries management organizations or arrangements (RFMO/As). No RFMO/As with the competence to adopt conservation and management measures for DHSFS and straddling fish stocks exist in the North-East Pacific, the West and Central Pacific, the South-West Atlantic, the Northern Indian Ocean, part of the Arctic Ocean and the Central Atlantic.²² Under these circumstances, fisheries may be regarded as unregulated fishing if ‘conducted in a manner inconsistent with State responsibilities for the conservation of living marine resources under international law’,²³ unless necessary conservation and management measures are taken individually by flag states. Such fisheries could become a major threat to the sustainability of the stocks concerned.

Even if appropriate conservation and management measures are in place in relation to the members of regional fisheries management organizations (RFMOs), illegal, unreported and unregulated fishing (IUU fishing) may undermine the effectiveness of the conservation and management measures of these RFMOs.²⁴ In other words, IUU fishing constitutes a serious impediment to achieving sustainable fisheries.²⁵

20 See R.R. Churchill and A.V. Lowe, *The Law of the Sea*, 3rd edition (1999), at pp. 296-297; F. Orrego Vicuña, *The Changing International Law of High Seas Fisheries* (1999), at pp. 51-52; T. Scovazzi, ‘The Evolution of International Law of the Sea: New Issues, New Challenges’, 286 *Recueil des Cours* (2000), at p. 146 (‘A régime is needed to [...] fill the persistent legal vacuum’). See also FAO Fisheries Department, SOFIA 2004, at p. 96 (indicating that high seas conservation and management regimes under the LOSC are ‘limited to transboundary stocks, marine mammals and the use of driftnets’).

21 See Section 2.1.3.2 below. The full title of the FSA is: Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, New York, 4 August 1995.

22 See Sustainable Fisheries, Including through the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and Related Instruments, Report of the Secretary-General, A/59/298, 26 August 2004, at para. 151.

23 International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU), Rome, approved by the FAO Committee on Fisheries on 2 March 2001, para. 3.3.2.

24 See *ibid.*, para. 3.3.1.

25 IUU fishing may affect high seas fisheries, including DHSFS, not only because of its economically unfair practices but also because it causes ecological damage. See D.G.M. Miller, ‘Management and Governance Conventions and Protocols: SEAFC, WCPFC and SADC’, in

While a number of measures against IUU fishing are stipulated in the IPOA-IUU, the range of measures available to non-flag states has been controversial. In addition, there are ambiguities in the scope of unregulated fishing against which states can take action. Certain unregulated fishing is not considered as being in violation of applicable international law and does not require the application of the measures envisaged under the IPOA-IUU.²⁶ Faced with ambiguities in the scope of unregulated fishing, states might hesitate in taking necessary measures allowed under the IPOA-IUU.

Research Questions

States have been addressing the problems formulated above in a variety of settings. For example, successive Resolutions on sustainable fisheries of the United Nations General Assembly (UNGA) have called for actions addressing deep-sea fisheries.²⁷ However, the regulatory gaps in the regime of high seas fisheries have not yet been completely filled.²⁸ The UNGA has urged responses at the global, regional and national levels, both in the short term and in the long term, to achieve sustainable fisheries by filling the regulatory gaps.²⁹ The international community is now faced with the urgent question of what further action should be taken in addressing the regulatory gaps in high seas fisheries. In search of an answer to this question, it is essential to the development of future strategies that the current state of the issue is thoroughly examined with a view to identifying the remaining regulatory gaps. On the basis of the above, the main research questions for this study are formulated as follows:

R. Shotton (ed.), *Deep Sea 2003: Conference on the Governance and Management of Deep-sea Fisheries: Part 1: Conference Reports. Queenstown, New Zealand, 1-5 December 2003* (2005), at p. 630.

- 26 IPOA-IUU, para. 3.4. See also Chairperson's Draft Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, Article 9(1)(c).
- 27 UNGA Resolution 59/25; UNGA Resolution 60/31, Sustainable Fisheries, Including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and Related Instruments, 29 November 2005; UNGA Resolution 61/105, Sustainable Fisheries, Including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and Related Instruments, 8 December 2006.
- 28 Impacts of Fishing on Vulnerable Marine Ecosystems: Actions Taken by States and Regional Fisheries Management Organizations and Arrangements to Give Effect to Paragraphs 66 to 69 of General Assembly Resolution 59/25 on Sustainable Fisheries, Regarding the Impacts of Fishing on Vulnerable Marine Ecosystems, Report of the Secretary-General, A/61/154, 14 July 2006, at pp. 39-40, paras 201-209.
- 29 UNGA Resolution 62/177, Sustainable Fisheries, Including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and Related Instruments, 18 December 2007, para. 80.

1. What general principles are applicable to high seas fisheries?
2. What implications do these general principles have for new challenges in the conservation and management of the living resources of the high seas, including deep-sea fisheries?
3. How have states, collectively or individually, addressed alleged regulatory gaps in the regime of high seas fisheries at the global, regional and national levels?

When the study looks into these main research questions, a number of sub-questions should be addressed.

A point of departure is the LOSC as it is the basic instrument dealing with law of the seas issues. While it is not without controversy whether and to what extent the LOSC provides a framework for addressing new regulatory gaps in high seas fisheries, a presumption could reasonably be made that the LOSC underlies the current international legal framework for the conservation and management of all marine living resources in the high seas.³⁰

The general principles of high seas fisheries reflected in the LOSC are not new; the LOSC is the culmination of decades of efforts to codify and develop the law of the sea. During that process many of these general principles of high seas fisheries were devised, agreed upon and elaborated. It is because of this historical context that the study first needs to look at the evolution of the general principles: how, when and why were these principles framed and developed? Putting these principles into historical perspective contributes to revealing the objectives underlying these principles and to better understanding what is meant by them.

The LOSC presents general principles of high seas fisheries, including the freedom of fishing on the high seas, the duty of cooperation between states and the conservation of marine living resources. While the existence of (at least some of) these principles was recognized, *inter alia*, by the judgments of the International Court of Justice (ICJ) in the *Fisheries Jurisdiction* cases, the LOSC is the first (almost) universally accepted multilateral treaty articulating these principles. Are the general principles articulated in the LOSC different from those identified as rules of customary international law in the period before the adoption of the LOSC? The study needs to establish the content of the general principles of high seas fisheries under the LOSC in the light of the negotiating history of the LOSC and contemporary developments in the law of the sea and other fields of international law. In particular, one new aspect that emerged in the 1970s is the protection of the marine environment, now constituting an important element of the law of the sea. The content of the general principles could be affected by this aspect of the development of the law. Other questions are whether the general principles of high seas fisheries articulated under the LOSC are applicable to sedentary species beyond the outer limit of the continental shelf and

30 Nandan points out that, despite perceptions to the contrary, the LOSC 'does cover' DHSFS. Conference Report, Conference on the Governance of High Seas Fisheries and the UN Fish Agreement: Moving from Words to Action, St. John's, Newfoundland and Labrador, May 1-5 2005 (St. John's Conference Report), 1 June 2005, at p. 12.

whether these principles need to be applied to DHSFS in the same manner as to straddling fish stocks.

The LOSC is not a static instrument: the general principles contained in the LOSC have been further elaborated during the period following the adoption of the LOSC through treaties and a variety of other normative instruments. The most notable of those are the FSA, the FAO Compliance Agreement and UNGA Resolutions. Have these instruments affected, developed or modified the general principles of high seas fisheries in the LOSC?

Observations on the content of the general principles lead to the second research question: what implications do these general principles have for new issues in high seas fisheries, including deep-sea fisheries? This can be considered through the analysis of what could or could not be achieved by the general principles. For example, are the provisions of the FSA applicable to DHSFS although it was specifically intended to implement the LOSC provisions with regard to straddling and highly migratory fish stocks? If not, are there any impacts on the framework of the conservation and management of DHSFS through other means? Do the general principles indicate a particular course of action to be taken in fisheries management?

It is against this background that the practice of states addressing, collectively or individually, new challenges in high seas fisheries needs to be examined in this study. States have been addressing the regulatory gaps in high seas fisheries at the global, regional and national levels, although actions are linked to each other. For example, while action at the regional level is aimed at implementing commitments at the global level, a uniform trend in practice at the regional level may contribute to the formation of rules of customary international law at the global level.

At the global level, states have been addressing the regulatory gaps in high seas fisheries in three different ways. First, the inapplicability of the provisions of the FSA to DHSFS was considered to be an obstacle to the conservation and management of DHSFS. The method chosen to fill this gap was to recognize that principles of the FSA should be applicable to DHSFS. Is it now generally agreed that (at least, some of) the principles of the FSA should be applicable to DHSFS? If so, which provisions are considered to be applicable? Second, states have attempted to regulate deep-sea fisheries, especially bottom trawling, by prescribing actions to be taken by states and RFMO/As. What actions are called for, and how and to what extent are they implemented? In addition, it should be noted that the boom and bust cycle of deep-sea fisheries has caused some scientists to characterize them as mining activities, vastly different from harvesting a renewable resource.³¹ If sustainable fisheries are feasible in deep-sea fisheries, a question could be raised: does the same legal regime apply to deep-sea fisheries as other high seas fisheries, or are deep-sea fisheries governed by a different regime due to their special characteristics? Third, area-based management tools such as high seas marine protected areas (MPAs) have been advocated as useful tools to address the conservation of marine biodiversity in general and problems of

31 See Gjerde, 'High Seas Fisheries Management under the Convention on the Law of the Sea', at p. 304.

high seas fisheries in particular. But, what is meant by ‘MPAs’ at the international level? Since different states may be using the term with different intentions, this question may not be as easy as it appears to be; conceptions could be influenced by the use of the term in areas within their national jurisdiction. More importantly, doubts have been cast on the use of area-based management tools, notably high seas MPAs. Are they compatible with international law? Is the establishment of MPAs for fisheries purposes influenced by other considerations?

Cooperative mechanisms at the regional level are one of the options for cooperation explicitly mentioned in the LOSC, and subsequent international fisheries instruments stipulate a major role to be played by RFMOs. Five RFMOs appear to have the competence to regulate straddling fish stocks and DHSFS. The analysis of the constitutive instruments of these RFMOs and the Southern Indian Ocean Fisheries Agreement (SIOFA), which is not yet in force, allows measuring the extent to which modern approaches to fisheries management elaborating the general principles are incorporated. Are these approaches sufficiently reflected in the instruments? How are they to be implemented under these instruments? The five RFMOs have taken conservation and management measures, addressing deep-sea fisheries and/or the protection of VMEs such as seamounts and corals. The standards applied in adopting these measures could be used to take stock of the effectiveness of addressing regulatory gaps at the regional level.

As indicated at the beginning of the study, not all oceans are covered by RFMO/As. In some areas, initiatives have been launched to establish RFMO/As, while in other areas no formal initiatives exist. What principles are employed in these negotiations to establish RFMOs? How do interim measures adopted in these processes implement commitments made at the global level? In areas where no initiatives are launched, is the establishment of RFMO/As required under international law?

Despite the primary role played by regional cooperative mechanisms, may national legislation affect the regime of high seas fisheries? One way is for flag states to enact domestic laws and regulations governing high seas fisheries by their vessels. Another way is to enact laws and regulations that have impacts on activities of third state vessels and nationals. The EU and the US are the cases in point.³² The EU has started an initiative to regulate deep-sea fisheries by its vessels in a comprehensive way in order to protect VMEs. The recent US legislation and policy on IUU fishing may potentially affect deep-sea fishing activities on the high seas by vessels of other states. The present study needs to investigate the content of these laws and regulations as well as their potential impacts on the regime of high seas fisheries.

This study consists of two Parts. Part I deals with the development of the general principles of high seas fisheries in two chapters: the evolution of the general principles up to the adoption of the LOSC (Chapter 1), and the general principles in the LOSC in the light of subsequent developments (Chapter 2). Part II consists of Chapters 3-5. This Part first examines the practice within international organizations at the

32 For the purposes of this study, the EU is dealt with in the same category as ‘states’. Therefore, the regulations of the EU are examined as if they were national legislation.

global level (Chapter 3). The next chapter of this Part focuses on the practice of RFMO/As (Chapter 4). The final substantive chapter examines other practices at the regional and national levels (Chapter 5). The study is concluded with a synthesis of the analysis of the substantive chapters and some suggestions on action for the international community to address regulatory gaps in high seas fisheries (Chapter 6).

Following the explanation of what is covered by this study, it is appropriate to comment on what is *not* addressed in this study. First, since the study focuses on analyzing new challenges, it does not look into long-standing problems such as compliance with and enforcement of conservation measures. Violations of conservation measures, which now constitute part of the larger problem of 'IUU fishing', are found in virtually all fisheries, whether high seas fisheries or fisheries conducted in areas under national jurisdiction.³³ Second, a particular focus should be put on the problem which is distinct in addressing new regulatory gaps. For this reason, Part II of this study focuses on the conservation of marine living resources. Issues such as participatory rights in high seas fisheries are, in principle, not dealt with in Part II, but are briefly examined in Part I.

Approaches

The present study attempts to articulate answers to the research questions formulated above by way of a systematic analysis from the perspective of international law. The study is intended to result in a comprehensive legal analysis of the topic so as to contribute to its further discussion in the international community.

The adopted perspective implies that the study addresses the research questions, among others, in three (related) ways: (1) to articulate rights granted to, and duties assumed by, states under international law; (2) to observe the processes in which states develop, invoke, interpret and comply with (or violate) rules of international law in a variety of settings including within international organizations; and (3) to expose the adequacy or inadequacy of the current international legal framework in addressing new regulatory gaps. While the first and second approaches are employed throughout the study, an attempt to take the third approach is briefly made in the Conclusions.

Regarding the first approach, materials enumerated in Article 38(1) of the Statute of the ICJ constitute a useful (yet non-exhaustive) list to look at. Among others, treaties are one of the most important materials to find rules of contemporary international law. Similarly, the value of customary international law is obvious from the fact that the assertion that a rule is general international law often takes the form of the invocation of the customary status of a given rule. Other materials are also important in the sense that the behaviour of states could be influenced by them. Recommendations of international organizations such as UNGA Resolutions, declarations recording political commitments obtained at international conferences, memoranda of understanding, international plans of action and technical guidelines are among those materials potentially constituting a basis for rules of international law. One way to

³³ See, e.g., IPOA-IUU, para. 1.

recognize legal significance is to link these instruments to the process of the formation of customary international law. In fora outside adjudicatory institutions, these instruments have been often invoked in asserting action to be taken by states. In a high seas fisheries context, the awkwardness of forging connections between Article 38(1) of the ICJ Statute and such instruments is mitigated by two factors. First, Article 119(1) of the LOSC stipulates that generally recommended international minimum standards shall be taken into account in determining conservation and management measures. The FAO Code of Conduct is the result of the efforts to produce such standards. Although they are not legally-binding, the content of the Code as well as instruments made within its framework should be taken into account in interpreting the provisions of the LOSC.³⁴ Second, the subsequent agreement and practice of states parties to a treaty are factors to be taken into account in interpreting a treaty. From this perspective, the practice of the UNGA concerning high seas fisheries, most notably its annual Resolutions, could be a relevant factor, given the fact that all parties to the LOSC (except for the European Community) are members of the UN. The critical role of the UNGA in the implementation of the LOSC has been widely recognized while the review function of the meeting of states parties to the LOSC has proven to be controversial: the latter's role has been mainly confined to procedural and administrative aspects.³⁵

As regards the second approach, although the analysis of environmental regimes established under framework treaties offers a useful comparison, there are difficulties with taking the same approach in the present case since the LOSC cannot be described as having the typical characteristics of the framework treaties often used in multilateral environmental agreements. For one thing, the LOSC does not specify which institution(s) shall implement provisions concerning high seas fisheries except for the implementation through cooperation between states.³⁶ In fact, the regime of high seas fisheries after the adoption of the LOSC developed in a multitude of ways, including unilateral action, multilateral treaty-making at the global and regional levels, inside and outside the UN system, as well as through recommendations and other normative instruments adopted at international conferences. Thus, the processes to be analyzed include discussions in international organizations, fora established under multilateral treaties, bilateral and multilateral negotiations, international litigation, unilateral action taken by states individually or jointly through national legislation and other

34 See Chapter 2.

35 See, generally, A.G. Oude Elferink, 'Reviewing the Implementation of the LOS Convention: The Role of the United Nations General Assembly and the Meeting of States Parties', in A.G. Oude Elferink and D.R. Rothwell (eds.), *Oceans Management in the 21st Century: Institutional Frameworks and Responses* (2004), at pp. 295-312; T. Treves, 'The General Assembly and the Meeting of States Parties in the Implementation of the LOS Convention', in A.G. Oude Elferink (ed.), *Stability and Change in the Law of the Sea: The Role of the LOS Convention* (2005), at pp. 55-74.

36 For example, Article 319(2) provides for, among other things, reporting on issues of a general nature that has arisen with respect to the LOSC and the convening of necessary meetings of states parties in accordance with the LOSC, but it is silent on the potential supervisory role with respect to the LOSC.

governmental actions as well as reactions by other states against such unilateral action.

With regard to the third approach, it is necessary to gauge whether and to what extent the international legal framework has achieved or has a potential to achieve its goals (which are expounded in Chapter 3). This assessment requires putting the issue of high seas fisheries in a broader context, including the conservation of marine biodiversity. For example, it examines whether an implementation agreement to the LOSC is necessary from the point of view of high seas fisheries regulation.

Terminology

The term ‘discrete high seas fish stock’ is not a term of art, although in recent international fisheries instruments this term has often been used. Therefore, this term is used throughout the study. Other terms used in international fisheries instruments to denote the same or similar concepts include ‘purely high seas stock’,³⁷ ‘other high seas fish stocks’,³⁸ and ‘high-seas discrete stock’.³⁹

The term ‘discrete high seas fish stock’ began to be used recently as interest in the conservation and management of this type of fish stocks grew. Conceptually, fish stocks in the high seas that do not fall within the categories of anadromous stocks, catadromous species, marine mammals or highly migratory species defined in the LOSC are all classified either as straddling fish stocks or DHSFS. In other words, if such a fish stock is not a straddling fish stock, it is a discrete high seas fish stock. However, although the term ‘straddling fish stock’ is generally used to refer to stocks that occur both in the exclusive economic zone (EEZ) and an area of the high seas adjacent to and beyond the zone,⁴⁰ the term is neither used in Article 63(2) or any other provision of the LOSC, nor defined in the FSA.

The phrase ‘occur both within the exclusive economic zone and in an area beyond and adjacent to the zone’ is ambiguous. What does the word ‘occur’ mean? In fact, discussions took place when the FSA was negotiated, and delegations made proposals for a definition. For example, Russia proposed to classify fish stocks into five categories, and it advised the UN Fish Stocks Conference to exclude issues of both (i) stocks which basically are constituted in and inhabit high seas areas and migrate into the

37 FAO Fisheries Department, World Review of Highly Migratory Species and Straddling Stocks, FAO Fisheries Technical Paper No. 337.

38 See FSA Review Conference Preparatory Report, at para. 14. See also Maguire *et al.*, The State of World Highly Migratory, Straddling and Other High Seas Fishery Resources and Associated Species.

39 See, e.g., Report of the Review Conference on the 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 (FSA Review Conference Report), A/CONF.210/2006/15, 5 July 2006.

40 Orrego Vicuña, *The Changing International Law of High Seas Fisheries*, at p. 41. But, for a more restrictive use, see E.D. Brown, *The International Law of the Sea*, vol. I (1994), at p. 320; C.C. Joyner and P.N. De Cola, ‘Chile’s Presential Sea Proposal: Implications for Straddling Stocks and the International Law of Fisheries’, 24 *Ocean Development and International Law* (1993), at p. 103.

EEZ only at a specific period of their life-cycle and (ii) stocks which for the duration of their entire life-cycle inhabit only areas of the high seas. It appears that Russia considered that the conservation and management of the former type of stocks should not form part of the discussion of straddling fish stocks at that conference ('this issue can become the subject of consideration by future forums').⁴¹ Faced with complex definitions as found in this Russian proposal, efforts to define the term 'straddling fish stock' were soon abandoned because of the potential difficulties to reach agreement.⁴² One FAO paper argues that usage seems to indicate that as long as there is some directed fishing effort exerted to catch the stock on either side of the outer limit of the EEZ, it is considered to be straddling.⁴³ This way of classification could imply that DHSFS include fish stocks for which no fisheries exist in the EEZ even if small amounts of biomass exist within the EEZ.

Another factor that could influence discussions on the scope of the terms is what is included in 'fish' stocks. As explained in Chapters 2, 4 and 5, constitutive instruments of RFMOs deal with marine living resources widely and the legislation of states indicates that the term 'fish' could be interpreted broadly, including invertebrates and corals and sponges. For this reason, the term 'DHSFS' is used for the purposes of this study as not limited to finfish but as including invertebrates and coral and sponges unless otherwise indicated. In the same vein, 'fishery' is used to mean 'harvesting' of finfish as well as invertebrates, corals and sponges.

Throughout the present study, the terms 'deep-sea fisheries' and 'bottom fisheries' are used interchangeably. Certainly, there is a difference in the connotation of these terms. On the one hand, the term 'deep-sea fisheries' has been often used in connection with certain depths.⁴⁴ On the other hand, the term 'bottom fisheries' concerns contact with the seabed, as seen in the definition of the term in the recent EU Regulation.⁴⁵ Nevertheless, such trends have by no means resulted in a rigid distinction: the FAO Technical Consultation on the International Guidelines for the management of *deep-sea fisheries* in the high seas agreed to use the criterion of likely contact with the seafloor during the normal course of fishing operations.⁴⁶ For this reason, the present study does not distinguish between the two terms.

41 Conceptual Approach to the Conservation of Straddling Fish Stocks by Improving Their Management (Submitted by the Delegation of the Russian Federation), A/CONF.164/L.38, 2 March 1994, at p. 2.

42 See Orrego Vicuña, *The Changing International Law of High Seas Fisheries*, at p. 140.

43 Maguire *et al.*, *The State of World Highly Migratory, Straddling and Other High Seas Fishery Resources and Associated Species*, at p. 4. For discussions, see E.J. Molenaar, 'The South Tasman Rise Arrangement of 2000 and Other Initiatives on Management and Conservation of Orange Roughy', 16 *International Journal of Marine and Coastal Law* (2001), at pp. 86-87.

44 See Section 3.2 below.

45 See Section 5.5.1 below.

46 See Section 3.2 below.

Part I

CHAPTER 1

The Evolution of the General Principles of High Seas Fisheries

This chapter examines how general principles of high seas fisheries evolved from the late nineteenth century to the adoption of the LOSC in 1982. The chapter is divided into three sections. The first section depicts the background and developments up to the 1940s. With a view to examining the continued dominance of the principle of freedom of fishing on the high seas, this section looks at two types of developments: instances of multilateral regulatory regimes in which high seas fishing states chose to regulate the fishing activities of their own vessels; failed attempts by coastal states to challenge the dominant principle, freedom of fishing, through the (proposed) extension of their fisheries jurisdiction to adjacent high seas areas. This is followed by an account of developments between 1945 and 1960 with a special emphasis on the analysis of the codification process under the auspices of the United Nations between 1950 and 1958. This section constitutes the bulk of the current chapter: during this period, general principles of high seas fisheries were established. The concept of freedom of fishing was elaborated and other general principles were framed. The third section focuses on the competing claims concerning the proposed legal framework for fisheries beyond the limits of national jurisdiction as part of the process of establishing a new legal order for the oceans during the period from the aftermath of the 1960 Geneva Conference on the Law of the Sea to the conclusion of the LOSC in 1982.

As elaborated in Section 1.2 below, the development of the general principles of high seas fisheries during this period mainly concerns the area adjacent to the territorial sea, which is included in the EEZ/EFZ under the contemporary international law of the sea; the concept of ‘high seas’ now relates to the area beyond 200 nautical miles from the baseline, except for the area where coastal states have not established the 200-mile EEZ/EFZ. In this sense, the discussions on the regime of high seas fisheries during this period did not primarily concern the area now called high seas under the contemporary international law of the sea. Nevertheless, it is necessary to examine the development of the general principles of high seas fisheries in the area which was considered ‘high seas’ at that time because the general principles developed in relation to that area also influenced the general principles applicable in the area now considered high seas under the LOSC.

1.1 FREEDOM OF FISHING ON THE HIGH SEAS CHALLENGED: LATE 19TH CENTURY TO WORLD WAR II

Freedom of the high seas, including freedom of fishing on the high seas, is an established principle in international law. Although the doctrine of freedom of the high seas did not attract broad support in state practice during the seventeenth century in

the face of the desire for trade monopolies, the concept became a prevalent principle, at the latest, by the beginning of the nineteenth century.¹

Freedom of fishing on the high seas consists of, first and foremost, the recognition that all states have the right to engage in fishing operations on the high seas, that is, free access to fishery resources.² In addition, freedom of the high seas stipulates the principle that the flag state has exclusive jurisdiction over ships on the high seas.³

Technological developments gave rise to conflicts over fisheries in some parts of the world in the nineteenth century. One of the assumptions on which freedom of the high seas, including freedom of fishing, was based was the inexhaustibility of the resources of the sea.⁴ When the possibility of the exhaustion of fish came to be perceived, the fear of depletion gradually led to a conceptual change.⁵ Nevertheless, the fear was neither as strong as the present-day concerns of depletion, nor shared all the time by the fishing states concerned. The need for the conservation of marine living resources was not yet recognized by states except for limited circumstances.⁶

There were two strands in attempts to regulate fisheries on the high seas: (1) multilateral regulatory regimes established by high seas fishing states; (2) unilateral measures by coastal states in areas adjacent to their territorial sea.

First of all, a corollary of freedom of fishing on the high seas was the proposition that regulations of each state were binding on its own nationals. The joint regulation of high seas fisheries could be pursued by agreement among the interested states; if a state would refuse to participate in the resultant agreement, regulations agreed among participants in the agreement were not applicable to the nationals of the non-participant.⁷

1 See, e.g., 'Mémorandum présenté par le Secrétariat, Regime of the High Seas', *Yearbook of the International Law Commission 1950*, at p. 69; A.P. Daggett, 'The Regulation of Maritime Fisheries by Treaty', 28 *American Journal of International Law* (1934), at p. 704 (arguing that freedom of the high seas was firmly established at around the beginning of the nineteenth century); G. Gidel, *Le Droit International Public de la Mer: Le Temps de Paix*, vol. I (1932), at pp. 197-200; R.G. Rayfuse, *Non-Flag State Enforcement in High Seas Fisheries* (2004), at p. 20.

2 Other elements of the principle include the following: (1) states must actually engage in such operations in order to share in the resources; (2) the resources are not subject to ownership until they are captured; (3) the fishing operations are not subject to regulations except for those of the flag state. See, e.g., A.W. Koers, *International Regulation of Marine Fisheries: A Study of Regional Fisheries Organizations* (1973), at p. 19.

3 See *The Case of the S.S. 'Lotus'*, Judgment, 7 September 1927, *PCIJ, Recueil des Arrêts, Série A, No. 10*, p. 3, at p. 25.

4 For a classical statement of this, see H. Grotius, *The Freedom of the Seas, or the Right Which Belongs to the Dutch to Take Part in the East Indian Trade* (1916), at p. 57. It is noted that as late as 1955 it was believed by marine scientists that fishing efforts could never reach the maximum sustainable yield (MSY). S.M. Kaye, *International Fisheries Management* (2001), at p. 54.

5 'Mémorandum présenté par le Secrétariat, Regime of the High Seas', at p. 73.

6 *Ibid.*, at p. 77.

7 See *ibid.*, at p. 85.

Among the earliest attempts to provide for a regulation on fisheries on the high seas through multilateral conventions was the 1882 North Sea Policing Convention,⁸ which was the first multilateral convention to regulate high seas fisheries.⁹ In the North Sea, fishermen from various countries competed so that conflicts arose regarding the fisheries employing different gears. A solution to maintain order in the area was sought through a multilateral treaty among the states concerned.

The object of the Convention was formulated as regulating the policing of the fisheries in the North Sea outside territorial waters.¹⁰ To this end, technical provisions were made to avoid conflicts between fishermen, including the prohibition of interference with other existing operations and of damage to other gears.¹¹ In particular, the protection of drift-net fishermen was contemplated by keeping trawl fishermen away from them.¹² Besides, the Convention explicitly provided for control by non-flag states, while enforcement remained with the flag state's navy vessels.¹³

This Convention and modern fisheries management mechanisms differ in two important respects. First, its narrow focus on policing shows that there was no need to attempt conservation of the fisheries resources as such even in an area where considerable fishing efforts were concentrated such as the North Sea. The French delegation even proposed a clause providing that '[i]n the extra-territorial part of the North Sea, fishery shall be free at all seasons, and with all kinds of implements, without any sort of distinction'.¹⁴ In fact, it has been pointed out that there were many policing treaties intending to protect fishermen, including multilateral conventions,

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- 8 Convention Between Belgium, Denmark, France, Germany, Great Britain and the Netherlands, for Regulating the Police of the North Sea Fisheries, The Hague, 6 May 1882. For the history of the conflicts and the negotiation, see T.W. Fulton, *The Sovereignty of the Sea: An Historical Account of the Claims of England to the Dominion of the British Seas, and of the Evolution of the Territorial Waters: With Special Reference to the Rights of Fishing and the Naval Salute* (1911), at p. 630 *et seq.* For a recent account of the Convention, see, e.g., K. Bangert, 'The Effective Enforcement of High Seas Fishing Regimes: The Case of the Convention for the Regulation of the Policing of the North Sea Fisheries of 6 May 1882', in G.S. Goodwin-Gill and S. Talmon (eds.), *The Reality of International Law: Essays in Honour of Ian Brownlie* (1999), at pp. 1-20.
- 9 Gidel, *Le Droit International Public de la Mer*, vol. I, at p. 422. Bilateral treaties concluded before 1882 include the Convention between France and Great Britain, concluded on 2 August 1839, executed by the Regulation signed on 24 May 1843, and the Convention between France and Great Britain, signed on 11 November 1867. For these and other bilateral treaties regulating high seas fisheries, see Gidel, *Le Droit International Public de la Mer*, vol. I, at pp. 447-449 and 489-490.
- 10 Convention Between Belgium, Denmark, France, Germany, Great Britain and the Netherlands, for Regulating the Police of the North Sea Fisheries, Article I.
- 11 *Ibid.*, Articles XV and XXII.
- 12 *Ibid.*, Articles XIV and XIX.
- 13 *Ibid.*, Articles XXVI-XXVIII and XXXIV.
- 14 This proposal was not adopted because 'it was generally agreed that the question was not ripe for decision by that conference, which was moreover concerned with the police of the fisheries, and not with the reproduction of fish, in the North Sea'. Fulton, *The Sovereignty of the Sea*, at pp. 636-637.

but few treaties for the conservation of fish.¹⁵ Second, while the division of operational areas between different gears served as a sort of conservation measure,¹⁶ the concept of conservation was not elaborated. In fact, only in 1902 was the International Council for the Exploitation of the Sea created to carry out a programme of investigation of the sea; at that time, marine science was still in its infancy.

Another multilateral regulatory regime for high seas fisheries was the whaling regime. Whaling was one of the few fisheries where the need for conservation was so widely recognized that the fishery was rendered subject to regulation by a multilateral treaty during the era of the League of Nations. Whaling in this period was very destructive and the decline in the number of whales was easily established. In fact, some species were considered to be in danger of depletion.¹⁷ Nonetheless, the efforts in 1924 and 1927 to create a regime for protection did not succeed. The first agreement was reached in 1931 and was replaced by a new agreement in 1937.

The whaling regime established by these Agreements contained the following elements. First, the Agreements did not explicitly state their objectives. Nevertheless, economic considerations were the prevalent factor, as exemplified in the preamble to the 1937 Agreement: ‘desiring to secure the prosperity of the whaling industry and, *for that purpose*, to maintain the stock of whales’ (emphasis added). Second, the Agreements did not place any limits on the total number of catch, but rather prohibited the taking or killing of certain species and small individual specimens and restricted operations in certain areas.¹⁸ Third, the Agreements explicitly limited the taking of measures and the punishment of infractions of their provisions within the respective jurisdictions of parties.¹⁹ Fourth, the Agreements required parties to collect and report statistical information.²⁰

The regime established by these Agreements did not, however, result in an effective protection of whales.²¹ The regime could not attract some of the major players in the fishery such as Japan and Germany; therefore, the elements embodied in the regime could not be regarded as reflecting existing or emerging trends at that time.

The unilateral extension of coastal state fisheries jurisdiction to adjacent high seas areas was attempted, among others, in the dispute between the United States and

15 Gidel, *Le Droit International Public de la Mer*, vol. I, at p. 438.

16 Bangert, ‘The Effective Enforcement of High Seas Fishing Regimes’, at p. 17.

17 See L. Juda, *International Law and Ocean Use Management* (1996), at p. 69.

18 Convention for the Regulation of Whaling, Geneva, 24 September 1931, Articles 4-5; International Agreement for the Regulation of Whaling, London, 8 June 1937, Articles 4-9. The total catch was eventually set in 1944.

19 1931 Whaling Convention, Article 1; 1937 Whaling Convention, Articles 1 and 3.

20 1931 Whaling Convention, Articles 11-12; 1937 Whaling Convention, Articles 16-17.

21 Reasons include the non-participation of Japan in the 1937 Agreement as well as the failure to agree on the total allowable catch due to the conflict between traditional whaling states and new entrants. See Koers, *International Regulation of Marine Fisheries*, at p. 87; M.S. McDougal and W.T. Burke, *The Public Order of the Oceans: A Contemporary International Law of the Sea* (1962), at pp. 950 and 965.

Great Britain over the protection of fur seals in the Bering Sea.²² The controversy is worth noting here for two reasons: first, it illustrates the prevalence of the concept of freedom of high seas fisheries despite the emerging perception of the need for regulation at that time; second, some of the findings in the controversy had implications for the development of the general principles of high seas fisheries in the subsequent period.

The United States sought to regulate sealing outside its territorial sea in the Bering Sea in order to protect herds frequenting its islands. This gave rise to a dispute between the United States and Great Britain on behalf of Canada, which was referred to arbitration.²³ The arbitral tribunal rejected the American claims, and ruled that freedom of fishing is applicable on the high seas and the United States had neither exclusive jurisdiction nor rights in the area concerned, nor did it have the right of protection or property for the stock found outside of its territorial sea.²⁴

Some argue that the tribunal did admit the need to prevent overexploitation and recognized restraints on the exercise of freedom of fishing and thus set a precedent for later conservation measures.²⁵ However, the dispute was unique in the sense that the decline in stock was to a certain extent perceived by both parties although Great Britain did not admit the necessity of American protection measures and requested that the matter be referred to a commission of experts.²⁶ Furthermore, according to American claims, the pelagic sealing was indiscriminate and wasteful, resulting in the significant decrease of the stock concerned caused by massive taking of female seals while pregnant or nursing.²⁷ These features were not seen in other contemporary fisheries so that it can be said that the vulnerability of seals to the fishery concerned in this case was exceptional.

Upon the request of the parties, the tribunal presented a model treaty for conservation measures.²⁸ The recommended Regulations stipulated, *inter alia*, area closure (Article 1), season closure (Article 2), vessel type restrictions (Article 3), the require-

22 Other major instances include: (1) US attempts to extend jurisdiction over salmon fisheries off the Alaskan coast aimed at restricting fishing by Japanese vessels on the high seas; (2) coastal state claims to fisheries jurisdiction in areas adjacent to their territorial sea in discussions at the 1930 Hague Codification Conference and in its preparatory work; (3) control of sedentary fisheries outside the territorial sea by Great Britain and some Commonwealth states. See, e.g., Juda, *International Law and Ocean Use Management*.

23 *Bering Sea Fur-Seals Case*, Award of the Tribunal of Arbitration Constituted under the Treaty Concluded at Washington, the 29th of February 1892, Between the United States of America and Her Majesty the Queen of the United Kingdom of Great Britain and Ireland 15 August 1893, *International Environmental Law Reports (IELR)*, Vol. 1 (Cairo A.R. Robb ed.), p. 67, at pp. 67-77. For a description of the facts, see *IELR*, Vol. 1, at pp. 43-62.

24 *IELR*, Vol. 1, at pp. 69-70.

25 See P.W. Birnie and A.E. Boyle, *International Law and the Environment*, 2nd edition (2002), at p. 650. See also Orrego Vicuña, *The Changing International Law of High Seas Fisheries*, at pp. 14-15.

26 *IELR*, Vol. 1, at p. 51.

27 *Ibid.*, at p. 55.

28 *Ibid.*, at pp. 70-73.

ment of a special permit (Article 4), logbooks (Article 5) and fishing gear and method restrictions (Article 6).

The proposed regime was ineffective, partly because of the reflagging to non-parties such as Japan.²⁹ To meet this challenge, the Convention for the Preservation and Protection of Fur Seals was concluded between all the states concerned, namely, Great Britain, Japan, Russia and the United States.³⁰ The provisions of the Convention were primarily concerned with the prohibition of pelagic sealing, non-flag state seizure and detention of violating persons and vessels, and arrangements for the distribution of benefits between the coastal states concerned.³¹

1.2 GENERAL PRINCIPLES ESTABLISHED: CODIFICATION EFFORTS AND STATE PRACTICE DURING THE PERIOD 1945-1960

During the period 1945-1960, ever increasing efforts in offshore fisheries caused by, among others, advancements in technology and rising demand for food supplies gave rise to the need for regulation in many parts of the world's oceans. In response to these developments, a number of coastal states successively challenged freedom of fishing on the high seas in various ways.

Codification efforts started again under the auspices of the United Nations. The International Law Commission (ILC) was entrusted with the task of promoting the progressive development of international law and its codification.³² The ILC chose the regime of the high seas as one of the priority topics for codification in 1949 and appointed J.P.A. François as Special Rapporteur.³³ During this period, the ILC laid the groundwork for the development of the general principles of high seas fisheries.

The existing position of international law with regard to high seas fisheries was summarized by the ILC as follows: first, regulations issued by a state were binding only upon the nationals of that state; second, if two or more states agreed upon regulations affecting a particular area, the regulations were binding only upon the nationals of the states concerned; third, in treaties concluded by states for the joint regulation of fisheries, the authority created for the purpose had been, as a rule, entrusted merely with the power to make recommendations.³⁴ In the light of the recognition that the existing law on the subject provided no adequate protection of marine fauna against extermination, the Commission attempted to go beyond the

29 See McDougal and Burke, *The Public Order of the Oceans*, at p. 949; L.L. Leonard, *International Regulations of Fisheries* (1944), at p. 90.

30 Convention between Great Britain, the United States, Japan, and Russia, respecting Measures for the Preservation and Protection of the Fur Seals in the North Pacific Ocean, Washington, 7 July 1911. For the actions aimed at protecting seals in European waters, see Gidel, *Le Droit International Public de la Mer*, vol. I, at pp. 461-462.

31 See, e.g., Articles 1 and 10-14.

32 Statute of the International Law Commission, Article 1(1).

33 *Yearbook of the International Law Commission (YILC) 1949*, at p. 238.

34 See, e.g., commentary to draft articles on fisheries in *YILC 1953*, vol. II, at p. 218, para. 95.

codification of existing law. While some of the innovative ideas adopted at the early stages were abandoned later, general principles formulated in the ILC during this period constituted a basis for subsequent discussions on this issue at the 1958 and 1960 Geneva Conferences and beyond.

The ILC adopted draft articles in 1951 and 1953, but these draft articles received strong criticism from governments. The United Nations General Assembly (UNGA) decided not to deal with any aspect of the regime of the high seas until all the problems involved had been studied by the ILC.³⁵ At the same time, in its resolution 900 (IX) of 14 December 1954, it requested the Secretary-General to convene an international technical conference of all member states in Rome to study the problem of the international conservation of the living resources of the sea and to make appropriate scientific and technical recommendations.³⁶ The result of the Conference covered not only technical issues but also such important issues as the extent of coastal states' rights and responsibility, problems involved in reaching agreement on conservation measures and procedures, and new entrants into a fishery already subject to conservation measures.³⁷

The result of the Rome Conference was brought before the ILC in its 1955 session. Garcia-Amador, a member of the ILC and the vice-chairman of the Rome Conference, proposed new articles on fisheries taking into account the result of the Rome Conference.³⁸ The ILC produced 10 new draft articles on fisheries, most of which originated in the draft articles presented by Garcia-Amador.³⁹ On the basis of the comments received from governments, the ILC adopted 12 articles (Articles 49-60) in 1956.

The United Nations Conference on the Law of the Sea held in Geneva in 1958 discussed the ILC draft articles and succeeded in adopting four conventions concerning the law of the sea, three of which, namely the Convention on Fishing and Conservation of the Living Resources of the High Seas (HSFC), the Convention on the High Seas (HSC) and the Convention on the Continental Shelf (CSC), were concerned with high seas fisheries.⁴⁰

Two years after the adoption of the four Geneva Conventions, the Second United Nations Conference on the Law of the Sea was held in 1960 with a view to the determination of the breadth of the territorial sea, on which states had not been able

35 See UNGA Resolution 899(IX), 14 December 1954.

36 UNGA Res. 900(IX), 14 December 1954, para. 1.

37 See Report of the International Technical Conference on the Conservation of the Living Resources of the Sea, 18 April to 10 May 1955, Rome. For a detailed account of the Conference and its preparatory work as well as its implications for subsequent discussions at the ILC, see Garcia-Amador, *The Exploitation and Conservation of the Resources of the Sea: A Study of Contemporary International Law* (Second and enlarged edition, 1963), at pp. 134-200.

38 *YILC 1955*, vol. II, at p. 76 *et seq.*

39 *Report of the International Law Commission 1955 (RILC)*, at pp. 20-21, para. 15.

40 Convention on Fishing and Conservation of the Living Resources of the High Seas, Geneva, 29 April 1958; Convention on the High Seas, Geneva, 29 April 1958; Convention on the Continental Shelf, Geneva, 29 April 1958; Convention on the Territorial Sea and Contiguous Zone, Geneva, 29 April 1958.

to agree at the 1958 Conference.⁴¹ The 1960 Conference again failed to reach agreement on the breadth of the territorial sea despite support for a compromise proposal combining the 6-mile territorial sea and the 6-mile exclusive fishing zone contiguous to the territorial sea by an almost two-thirds majority. It was evident that many states were considering a departure from the regime which adopted a dichotomy between the narrow territorial sea and the high seas fishing freedom combined with special interests of coastal states in adjacent high seas areas. The high seas fisheries regime based on the jurisdictional framework established under the Geneva Conventions was not widely accepted by the international community. In fact, the HSFC attracted only 38 parties.⁴² On this account, many authors call into question the significance of the HSFC.⁴³

Notwithstanding the small number of parties to the HSFC, it is during this period that the general principles of high seas fisheries were framed and developed.⁴⁴ In fact, the ICJ ruled in 1974 that some principles formulated during this process of codification were rules of general international law.⁴⁵ To identify general principles established during this period, it is indispensable to look into the codification process in the 1950s.⁴⁶ Thus, the current section closely examines the rules of high seas fisheries as codified in this process, taking account of the contemporaneous practice of states and international organizations.

Before proceeding to the examination of the development of the general principles, a warning should be made with regard to the limited implications of the discussion during this period for the regime of fisheries for DHSFS. The following comments made by Special Rapporteur François exemplify where the concerns of the members of the ILC lay at the time when the high seas fisheries regime was discussed in the Commission:

‘[T]he whole question of protection of the products of the sea (marine resources) was closely bound up with the problems of the continental shelf and contiguous zones. If the

41 See, generally, McDougal and Burke, *The Public Order of the Oceans*, at pp. 962-964.

42 Information on the status of multilateral treaties deposited with the Secretary-General is available at the website of the UN Treaty Collection. For the HSFC, see <<http://untreaty.un.org/ENGLISH/bible/englishinternetbible/partI/chapterXXI/treaty3.asp>> (last visited 19 December 2007).

43 See, e.g., Churchill and Lowe, *The Law of the Sea*, at p. 287; Birnie and Boyle, *International Law and the Environment*, at p. 651; W.T. Burke, *The New International Law of Fisheries: UNCLOS 1982 and Beyond* (1994), at pp. 13-14.

44 See also Kaye, *International Fisheries Management*, at pp. 66 and 74; Orrego Vicuña, *The Changing International Law of High Seas Fisheries*, at p. 19.

45 *Fisheries Jurisdiction Case (United Kingdom of Great Britain and Northern Ireland v. Iceland)*, Judgment (Merits), 25 July 1974, *I.C.J. Reports 1974*, p. 3, at p. 24, para. 54 *et seq.*; *Fisheries Jurisdiction Case (Federal Republic of Germany v. Iceland)*, Judgment (Merits), 25 July 1974, *I.C.J. Reports 1974*, p. 175, at p. 193, para. 46 *et seq.* On the history of the cases, see *I.C.J. Reports 1974*, at pp. 4-22; *I.C.J. Reports 1974*, at pp. 176-191. The analysis of the relevant part of the judgments of the Court will be conducted in the next chapter.

46 See R. Bernhardt, ‘Custom and Treaty in the Law of the Sea’, 205 *Recueil des Cours* (1987-V), at p. 275.

Commission could reach conclusions on those two problems, the whole question of protection of marine resources would be settled too.⁴⁷

As illustrated by the above comments, when it discussed the ‘Protection of the Products of the Sea’ as part of the regime of the high seas, the Commission was principally, if not exclusively, interested in the protection of marine living resources in areas adjacent to the territorial sea. In other words, the regime of fisheries in high seas areas not adjacent to the territorial sea (whatever criteria are employed to assess adjacency) was not the main concern for the Commission. The subsequent discussion in the Commission, as well as the 1958 and 1960 Conferences on the Law of the Sea, therefore, focused on the question of how to solve the conflicts of interest between coastal states and high seas fishing states.

In fact, during this period, most high seas fisheries took place within areas adjacent to the territorial sea and most international fisheries commissions incorporated interests of coastal states in the region. Some commissions whose mandate covered the high seas were established without the participation of distant water fishing states; notably, the commission in the South-East Pacific was established to strengthen the assertion of coastal state interests in adjacent high seas areas.⁴⁸ One of the few regimes of high seas fisheries that did not develop along the lines of resolving conflicts between coastal states and high seas fishing states was the whaling regime. The International Whaling Commission (IWC) was competent to regulate whaling in all oceans of the world; no particular state or group of states were considered to be coastal state(s) under the Convention. In fact, there is no specific provision for coastal states in the International Convention for the Regulation of Whaling (ICRW). Even for whaling, however, claims to coastal state interests gave rise to disputes between coastal states and high seas fishing states.⁴⁹

As the main purpose of the present section is to explore the general principles of high seas fisheries, the special status of coastal states with regard to fisheries in the adjacent high seas area as well as those for sedentary species and fisheries employing fishing gear embedded in the seafloor is not dealt with in this chapter.⁵⁰ The remainder of this section attempts to analyze general principles applicable to high seas fisheries in general, whether or not adjacent to the territorial sea.

47 *Yearbook of the International Law Commission 1950*, vol. I, at p. 204, para. 103. A similar view was implicit in the secretariat study prepared for the Commission. See ‘Mémorandum présenté par le Secrétariat, Regime of the High Seas’, at pp. 77-78 and 82-87.

48 See Koers, *International Regulation of Marine Fisheries*, at pp. 100-101.

49 See especially the conflicts between high seas whaling states and Chile and Peru. In fact, it has been pointed out that the desire to gain increased control over profits from whaling in offshore areas was one of the reasons for Chile, Ecuador and Peru to establish their 200-mile maritime zone. See McDougal and Burke, *The Public Order of the Oceans*, at p. 951.

50 On these issues, there are a number of monographs and articles, including: Garcia-Amador, *The Exploitation and Conservation of the Resources of the Sea: A Study of Contemporary International Law*; D.M. Johnston, *The International Law of Fisheries: A Framework for Policy-Oriented Inquiries* (1965); McDougal and Burke, *The Public Order of the Oceans*; S. Oda, *International Control of Sea Resources* (1963).

1.2.1 Freedom of Fishing on the High Seas

Throughout the period under consideration, freedom of fishing remained a basic principle of high seas fisheries. The HSC confirms the freedom of the high seas; among the four enumerated freedoms was freedom of fishing.⁵¹ The concept of freedom of fishing was elaborated during the codification process, and the HSFC articulated the right of fishing on the high seas, as seen below.

The comment on Article 2 of the 1955 ILC Draft on the Regime of the High Seas contained a statement that states were ‘bound to refrain from any acts which might adversely affect the use of the high seas by nationals of other States’. Moreover, it stated that ‘the law of the high seas contains certain rules, most of them already recognized in positive international law, which are designed, not to limit or restrict the freedom of the high seas, but to safeguard its exercise in the interests of the entire international community’, enumerating, among other things, the right of states concerning the conservation of the living resources of the high seas.⁵² In 1956, the Special Rapporteur sought to introduce the reasonableness test for scientific research and the testing of new weapons.⁵³ Although intense discussions took place within the Commission with regard to the atomic bomb tests,⁵⁴ the above-mentioned statements on the freedom of the high seas were retained in the Commentary to Article 27 of the 1956 Draft.⁵⁵

At the 1958 Geneva Conference, discussions on the legality of the weapons tests led to proposals to explicitly recognize limitations on the freedom of the high seas. For example, a proposal incorporating the commentary of the ILC was put forward by Poland, reading ‘States are bound to refrain from any acts which might adversely affect the use of the high seas by nationals of other States’.⁵⁶ On the other hand, some states were reluctant to include such a clause in the HSC. For example, the UK proposed an amendment to Draft Article 27 to employ the test of reasonableness. Another proposal by Mexico in part stipulated that the freedom of the high seas was exercised under the conditions laid down ‘by the other rules of international law’.⁵⁷ Incorporating the UK and Mexican proposals, the HSC provides that the freedom shall be ‘exercised under the conditions laid down by these articles and by the other rules of international law’ and ‘shall be exercised by all States with reasonable regard to the interests of other States in their exercise of the freedom of the high seas’.⁵⁸ In other words, Article 2 of the HSC was formulated to balance the exercises of freedom of the high seas, whether in fisheries by two or more states or between different uses

51 HSC, Article 2.

52 *RILC 1955*, at pp. 21-22 (Comment on Article 2).

53 See *YILC 1956*, vol. II, at p. 10.

54 *YILC 1956*, vol. I, at p. 11 *et seq.*

55 *RILC 1956*, Commentary on Article 27.

56 A/CONF.13/C.2/L.29.

57 A/CONF.13/C.2/L.3.

58 HSC, Article 2.

of the high seas, despite the original intention to restrict the use of the high seas for nuclear tests.⁵⁹

Restrictions on the freedom of the high seas were also discussed for each freedom, including freedom of fishing, during this period. In fact, among the most important contributions of the ILC at the early stage of its work was the explicit recognition that, contrary to the concept of absolute freedom, freedom of fishing on the high seas had limitations under general international law. The comment on Article 3 in the 1953 draft referred to the concept of abuse of rights in the context of the competence of the proposed international organization. The commentary stated that when a state arbitrarily and without good reason, in rigid reliance upon the principle of the freedom of the seas, declines to play its part in the reasonably necessary conservation measures, it is considered to abuse a right conferred upon it by international law.⁶⁰ This clear articulation of the inherent restriction on freedom of fishing on the high seas underlies subsequent general provisions in the HSFC such as the obligations of taking conservation measures.

Freedom of fishing was elaborated by its clarification as a 'right' of states. The HSFC formulates the right of fishing in line with the previous ILC draft.⁶¹ All states have the right for their 'nationals' to engage in fishing on the high seas under Article 1 of the HSFC. The formulation as a 'right' necessarily implies that it is restrained by corresponding obligations. The right was made subject to several restrictions as provided for in Article 1 of the HSFC. In line with the ILC draft, the right is subject to treaty obligations and other articles of the HSFC. Moreover, 'the interests and rights of the coastal states' were added during the Conference as a new restriction.⁶² Given the fact that 'the interests and rights of coastal states as provided for' in the HSFC (subparagraph (b)) are covered by 'provisions contained in the following articles' (subparagraph (c)), this provision is redundant; it seems that the phrase was intended to emphasize the importance of the interests and rights of coastal states.⁶³ One commentator observes that the insertion of that phrase in Article 1 'has weakened or even altered the original intent of the authors of this provision', which was, ac-

59 In fact, the ICJ applied the reasonableness test to high seas fisheries in the *Fisheries Jurisdiction* cases. For details of the Court's statements on this issue, see Chapter 2.

60 *RILC 1953*, at pp. 218-219, para. 100.

61 ILC Draft Articles (1956), Article 49

62 A/CONF.13/C.3/L.49.

63 In fact, in discussing a proposal to insert the words 'subject to the interests and rights of the coastal State as provided for in this convention' (A/CONF.13/C.3/L.49), Castañeda of the Mexican Delegation, one of the four sponsors of that proposal, observed as follows: 'It might, indeed, be argued from the strictly legal point of view that the addition proposed jointly by the four delegations was not absolutely necessary [...]. It was for them merely a question of emphasis.' *United Nations Conference on the Law of the Sea, Geneva, 24 February-27 April 1958, Official Records (UNCLOS I Official Records)*, vol. V, at p. 45, para. 27.

According to him, an enunciation of the fundamental principle, namely, the freedom of nationals of all states to fish in the high seas.⁶⁴

As states have the right ‘for their nationals’, the scope of the right depends on the definition of ‘nationals’. On the one hand, the draft articles of the ILC dealing with fishing consistently employ ‘nationals’, rather than ‘fishing vessels’ or ‘ships’. This is understandable in view of the fact that what was in mind was fishing engaged by the fishing skipper-owner, rather than modern floating fish factories.⁶⁵ In other words, members of the ILC were thinking of the behaviour of fishermen, i.e., of crews.⁶⁶ On the other hand, it has been suggested that when members of the ILC discussed the draft articles on the nationality of ‘ships’, they usually had merchant vessels in mind and thought of shipowners and operators.⁶⁷ Only in 1956 did the ILC seek to diminish the lack of clarity in the formula and to employ the same objective; in its comment on article 49 (Right to fish) it stated that the term ‘nationals’ means fishing boats having the nationality of the state concerned, irrespective of the nationality of the members of their crews.⁶⁸ With this new formula, which was adopted after minor changes⁶⁹ as a separate article in the HSFC,⁷⁰ it became clear that articles concerning high seas fisheries were to regulate the behaviour of fishing vessels flying the flag of parties to the HSFC, rather than that of crews on board.

1.2.2 Cooperation between States

The discussions in the Commission on the general framework for a high seas fisheries regime were led by two groups among the members of the ILC. The first position was based on the concept of exclusive flag-state jurisdiction. According to this position, high seas fisheries should be regulated only by the fishing states concerned. If only one state was engaged in the fishery, that state was to take conservation measures by itself; if two or more states were engaged in fishing in an area, measures should be

64 D. Nelson, ‘The Development of the Legal Regime of High Seas Fisheries’, in A. Boyle and D. Freestone (eds.), *International Law and Sustainable Development: Past Achievements and Future Challenges* (1999), at pp. 117-118.

65 H. Meyers, *The Nationality of Ships* (1967), at p. 288, note 2.

66 *Ibid.*, at p. 287.

67 *Ibid.*

68 *RILC 1956*, in *YILC 1956*, vol. II, at p. 286.

69 The words ‘fishing boats’ were replaced by the words ‘fishing vessels, boats or craft’ and the words ‘according to the law of that State’ were added after the word ‘concerned’. According to Meyers, this change does not mean that that article gives precedence to national law over international law for the determination of the nationality to fishing vessels, but that these words were inserted to achieve no more than the assurance that the state concerned might decide for itself what vessels to include in the category of ‘fishing boats’. Meyers, *The Nationality of Ships*, at pp. 287-289. Summary records of the plenary meeting support this view: Mr Sikri (India) ‘said that many delegations found the term ‘fishing boats’, used in that article, too restrictive. He therefore proposed an amendment [...]’. *United Nations Conference on the Law of the Sea, Geneva, 24 February-27 April 1958, Official Records*, vol. II, at p. 46.

70 Article 14 of the HSFC defines the term ‘nationals’ as fishing boats or craft having the nationality of the state concerned, irrespective of the nationality of the members of their crews.

taken by those states in concert, that is, the duty of cooperation between high seas fishing states would apply. The position acquired a certain degree of support in the Commission and was reflected in the draft articles.⁷¹ It was eventually incorporated as Articles 3 and 4(1) in the HSFC.⁷²

Those who took the second position argued in favour of a special position of coastal states, recognizing their special interests in high seas areas adjacent to their territorial sea. This principle was, first and foremost, advanced by Special Rapporteur François. In his second report, he proposed a concept of a zone of up to 200 miles for the protection of resources of the sea in which coastal states would have exclusive rights relating to fisheries conservation, although they would not be entitled to preferential treatment in allocation.⁷³

The ILC recognized the need for the involvement of coastal states, but it rejected the proposal by François.⁷⁴ Instead, throughout its deliberations during the period between 1951 and 1956, it recognized that coastal states were entitled to take part *on an equal footing* in regulation even though their nationals were not engaged in the fishery concerned, while the area was not to be closed to nationals of other states.⁷⁵ Article 6(1) of the HSFC repeats the concept of a special interest of all coastal states provided in Article 54(1) of the 1956 ILC draft verbatim.

In short, the regime formulated during the process of codification between 1950 and 1958 was based on the principle of cooperation: on the one hand, in the high seas area adjacent to the territorial sea, high seas fishing states and coastal states were required to cooperate on an equal footing in the regulatory system; on the other hand,

71 See ILC Draft (1951), draft articles on the continental shelf and related subjects, Part II (Related subjects), Article 1; ILC Draft (1953), draft articles on fisheries, Article 1; ILC Draft (1955), Draft articles relating to the conservation of the living resources of the sea, Article 2(1); ILC Draft (1956), Articles concerning the law of the sea, Article 52(1).

72 For the theoretical basis underlying the duty of cooperation in the context of shared natural resources, see also E. Hey, *The Regime for the Exploitation of Transboundary Marine Fisheries Resources: The United Nations Law of the Sea Convention Cooperation between States* (1989), at p. 35; R. Rayfuse, 'Countermeasures and High Seas Fisheries Enforcement', *LI Netherlands International Law Review* (2004), at p. 54.

73 Second report of the *Special Rapporteur*, Mr J.P.A. François (1951), at para. 81.

74 *YILC 1951*, vol. I, at p. 309.

75 Draft articles on the continental shelf and related subjects, Part II, Article 1 (1951); ILC Draft (1953), draft articles on fisheries, Article 2; 1955 Draft, Article 29(1); 1956 Draft, Article 29(1). The distance of 100 miles was specified in the 1951 and 1953 Drafts, but the figure was eliminated in the 1955 Draft. According to Garcia-Amador, 'the sub-committee had abandoned the limit of 100 miles adopted by the Commission [...] because in some cases it was inadequate and in others excessive'. *YILC 1955*, vol. I, at p. 105. Note also that, on the one hand, the 1955 Draft allowed non-fishing coastal states' entitlement to participation on an equal footing in any research and regulation system only to a coastal state *having* a special interest in the maintenance of the productivity of the living resources in the adjacent high seas areas. On the other hand, the 1956 Draft introduced a new concept that all coastal states were vested with a special interest for the sole reason that they were coastal states: it stipulated that a coastal state had a special interest in the maintenance of the productivity of the living resources in any area of the high seas adjacent to its territorial sea.

in other areas of the high seas, high seas fishing states were obliged to cooperate to take conservation measures by agreement among themselves.

The rejection by the ILC of the idea that coastal states could have regulatory authority in the high seas area adjacent to their territorial sea left the fundamental question unanswered: who finally determines conservation measures if no agreement has been reached? Up to 1953, the ILC took the position that regulatory gaps caused by the lack of agreement between the states concerned should be filled by an institution serving the interests of the international community as a whole. The prohibition of abuse of rights was, according to its commentary, to provide a satisfactory legal basis for the prescription of a binding conservation measure by an international organization to be established under the auspices of the United Nations.⁷⁶ In addition to research on fisheries, the organization was to be empowered to adopt regulations in cases where the states concerned did not agree on a necessary measure to be taken.⁷⁷

The idea to establish an international organization under the auspices of the United Nations competent to deal with the conservation measures, however, was not well received by governments: 'some were not prepared to delegate their powers on fishery regulation to an international body, while others were sincerely convinced that conservation problems, being regional and even local in character, called for an *ad hoc* system'.⁷⁸ After the Rome Conference, the idea of a universal organization was abandoned. For the high seas area adjacent to the territorial sea of coastal states, it was replaced by the recognition of unilateral measures of coastal states in the area combined with the safeguard that such unilateral measures are subject to third party dispute settlement procedures;⁷⁹ where the fishery took place beyond that area, any of the fishing states concerned was entitled to have recourse to compulsory dispute settlement procedures.⁸⁰

In addition to the special interests of coastal states, it was proposed during the discussion on the Special Rapporteur's draft articles in the ILC in 1955 to recognize the special interests of non-coastal states whose nationals were not engaged in the fishery concerned. Scelle proposed an amendment to the draft article dealing with special interests of coastal states by adding an equal right of any other state by analogy.⁸¹ It is not clear what Scelle intended to include within the category of 'special interests of non-coastal states'. He pointed out that regulation by coastal states may have impacts on species such as eels and whales because of their migratory range. François sought to revise Scelle's proposal by differentiating between the positions of coastal and non-coastal states and granting to non-coastal states only the right to take part in (or initiate) any system of regulation if proved that 'the extermina-

76 *RILC 1953*, at *YILC 1953*, vol. II, pp. 218-219, para. 100.

77 ILC Draft (1951), draft articles on the continental shelf and related subjects, Part II (Related subjects), Article 2; ILC Draft (1953), draft articles on fisheries, Article 3.

78 *YILC 1955*, vol. I, at p. 78.

79 See ILC Draft 1955, Articles 31-33. See also HSFC, Article 7.

80 See ILC Draft 1955, Article 26(2). See also HSFC, Article 4(2).

81 *YILC 1955*, vol. I, at p. 107, para. 7.

tion of a given species in that area would affect its interests elsewhere'.⁸² The commentary to Article 30 in the 1955 draft stated that '[t]his case may arise, for example, if the exhaustion of the resources of the sea in the area would affect the results of fishing in another area in which the nationals of the State concerned do engage in fishing'. In response to the request to clarify the concept, Scelle also stated that states with a large fishing fleet such as France, the Netherlands, the Soviet Union and the United Kingdom might have an interest in introducing conservation measures in certain areas not adjacent to their territorial sea.⁸³

It is doubtful whether there was any common understanding in the Third Committee of the Geneva Conference on the situations covered by ILC Draft Article 56. Some states even argued that there was no situation covered by this article.⁸⁴ Some participants still held the position that the article covered species in the high seas migrating to the territorial sea or internal waters,⁸⁵ but, in view of the amendment to Draft Article 52, Draft Article 56 no longer appeared necessary to address impacts of one fishery on another fishery for the same stock in a different part of the high seas.⁸⁶ One possibility involving a new category of states was suggested by the UK, which stated that Draft Article 56 was meant to relate to consumer states whose nationals were not engaged in the fishery concerned. In response to this suggestion, Canada considered it somewhat exaggerated to extend the article to consumer interests since nearly all states were consumers of marine resources.⁸⁷

During the discussions at the Conference, it was proposed to entitle non-coastal and non-fishing states having a special interest to participate in the regulatory system on an equal footing, like coastal states.⁸⁸ The proposal was rejected and, in the end, the ILC Draft Article was adopted with only minor amendments.⁸⁹ Article 8 of the HSFC provides for a special interest of non-coastal states not engaged in the harvesting of a stock in question: that state may request fishing states to take necessary conservation measures.

In summary, the duty of cooperation was recognized in two ways. On the one hand, in the high seas area adjacent to the territorial sea, the fishing states needed to cooperate with the coastal state if the coastal state so wished even though its nationals were not engaged in the fishery concerned; only if agreement was not achieved among the states concerned, was the coastal state entitled to take unilateral conservation

82 In the end, a proposal by Gerald Fitzmaurice to subject such interests to arbitration led to concessions on the part of opponents, and the proposal was accepted by the ILC. *YILC 1955*, vol. I, at pp. 110-111.

83 *YILC 1955*, vol. I, at p. 107, para. 10.

84 See *UNCLOS I, Official Records*, vol. V, at pp. 51-54.

85 E.g., J.H.W. Verzijl, 'The United Nations Conference on the Law of the Sea, Geneva, 1958 II', 6 *Nederlands Tijdschrift voor Internationaal Recht* (1959), at p. 126. See also J.L. Brierly, *The Law of Nations: An Introduction to the International Law of Peace*, 6th edition (1963), at p. 316; Oda, *International Control of Sea Resources*, at p. 118.

86 *UNCLOS I, Official Records*, vol. V, at p. 52.

87 *Ibid.*

88 A/CONF.13/C.3/L.30.

89 *UNCLOS I, Official Records*, vol. V, at p. 54.

measures. On the other hand, in areas outside the area of the high seas adjacent to the territorial sea, it was implicitly recognized that the duty of cooperation only concerned high seas fishing states *inter se*. Non-coastal and non-fishing states having a special interest were not entitled to participate in the regulatory system on an equal footing, but were allowed to request fishing states to take necessary conservation measures.

1.2.3 Conservation

Pre-World War II international fisheries agreements tended to have general and vague objectives.⁹⁰ In contrast, international fisheries commissions established after the Second World War were given explicit management goals.⁹¹

On the one hand, the ICRW referred to the objective of the Convention ‘to provide for the proper conservation of whale stocks and thus make possible the orderly development of the whaling industry’.⁹² Considering the history of overfishing of whales, the Convention also recognized that it was in the common interest to achieve the optimum level of whale stocks without causing widespread economic and nutritional distress.⁹³ In other words, the Convention made the economic proficiency of whaling operations as the primary objective without expressing biological or scientific criteria of conservation.⁹⁴

On the other hand, it was in 1949 that the International Convention for the Northwest Atlantic Fisheries referred to maximum sustained catch, setting out an objective to achieve the MSY for the first time.⁹⁵ This objective was pursued by subsequent treaties and became prevalent in the constitutive instrument of fisheries commissions during the period until 1958.⁹⁶

90 Koers, *International Regulation of Marine Fisheries*, at p. 179. One notable exception was the 1911 Fur Seals Convention whose objective was to gather the optimum economic yield once effective control was established.

91 However, the 1946 North-East Atlantic Fishing Convention did not provide management goals at all in terms of stock biomass. See Convention for the Regulation of the Meshes of Fishing Nets and the Size Limits of Fish, London, 5 April 1946, entered into force on 5 April 1953.

92 International Convention for the Regulation of Whaling, Washington, 2 December 1946, Preambular paragraph 7.

93 Ibid., Preambular paragraphs 2 and 4. See also Article V(2)(a) and (d). It is noted that the Convention recognized ‘the interest of the nations of the world in safeguarding *for future generations* the great natural resources represented by the whale stocks’ (emphasis added). ICRW, Preambular paragraph 1.

94 But this does not mean that scientific information was not considered important. For example, the Convention stipulates that the amendment of the Schedule shall be based on scientific findings. ICRW, Article V(2)(b).

95 International Convention for the Northwest Atlantic Fisheries, Washington, 8 February 1949, Preamble.

96 Koers, *International Regulation of Marine Fisheries*, at p. 180; McDougal and Burke, *The Public Order of the Oceans*, at pp. 945-946. However, the 1957 Fur Seals Convention went beyond this by providing that the goal was maximum sustainable productivity with due regard to the relation of the fur seals to the productivity of the other living marine resources of the

At the early stages of the work of the ILC, the meaning of ‘conservation’ was not discussed in detail. For example, the 1951 draft simply provided for regulation and control by fishing states ‘for the purpose of preserving its resources from extermination’.⁹⁷ In contrast, the Rome Conference contributed to the elaboration and clarification of the concept of conservation in a number of ways, and the subsequent work of the ILC and the Geneva Conference followed the framework adopted at the Rome Conference.

First, the Rome Conference confirmed that conservation is ‘essential in the development of a rational exploitation of the living resources of the seas’.⁹⁸ On the other hand, it was made clear that conservation measures were not always necessary and it was considered that they should be based on scientific information. According to the report of the Conference, ‘conservation measures should be applied when scientific evidence shows that fishing activity adversely affects the magnitude and composition of the resources’.⁹⁹

In fact, despite general agreement that conservation of the living resources of the high seas was necessary, the ILC did not explicitly set out conservation as a ‘duty’ of fishing states in general terms by 1956. Where two or more states were engaged in a fishery in the same area, they were required to take conservation measures by agreement as ‘it [was] clear that the concurrence of [other fishing States] [was] essential for the effective adoption and enforcement of the regulations in question’.¹⁰⁰ If only nationals of one state were engaged in fisheries in an area of the high seas, the state was allowed to take conservation measures. On this point, there were intensive discussions in the ILC over whether that state should assume an obligation to take conservation measures for its nationals. In 1955, the Commission rejected the suggestions by Douglas L. Edmonds and Georges Scelle to replace the word ‘may’ by the word ‘shall’.¹⁰¹ Scelle explained the rationale behind his proposal, stating that ‘it was not merely the right of a state to adopt conservation measures in an area where its nationals alone fished; it was a duty of the State towards the international community [...] It was the duty of every State to fill gaps in international regulation’;¹⁰² ‘In his view, the right to fish in the high seas must be coupled with the duty to conserve resources’.¹⁰³ At that point in time, many of the members of the Commission were opposed to the imposition of a duty in this respect. For example, Garcia-Amador observed that Article 1 enunciated a right and Article 2 a duty, while Sir Gerald Fitzmaurice stressed that fishing by nationals of one state alone was unlikely to lead to overfishing in the area concerned and even if it did, that state would probably adopt

area. Interim Convention on Conservation of North Pacific Fur Seals, Washington, 9 February 1957, Preamble.

97 ILC Draft (1951), Part II, Article 1.

98 1955 Rome Conference Report, at para. 16.

99 Ibid.

100 *YILC 1953*, vol. II, at p. 218 (Commentary on draft articles on fisheries).

101 *YILC 1955*, vol. I, at pp. 103-105.

102 Ibid., p. 104, para. 52.

103 Ibid., p. 105, para. 71.

in its own interests the necessary measures for conservation.¹⁰⁴ Although the Commission rejected the proposal to replace ‘may’ by ‘shall’ and insert ‘if necessary’ in 1955, similar amendments to use ‘shall’ and insert ‘when necessary’ were adopted (by 7 votes to 0, with 7 abstentions) in 1956 after lengthy discussions.¹⁰⁵ In other words, it was only through this change at the final stage of the work of the Commission that the duty to take necessary conservation measures for all high seas fisheries, rather than an entitlement to do so, was formally recognized by the Commission. At the 1958 Geneva Conference, the duty to take conservation measures was embodied in Articles 1(2) (with the qualifying wording ‘as may be necessary for the conservation of the living resources of the high seas’), 3 and 4(1) of the HSFC on the basis of 1956 ILC draft articles.¹⁰⁶

Second, the Rome Conference articulated that effective conservation requires scientific information. The Conference considered it essential that ‘any nation engaging in sea fishing collect adequate statistical records of fishing and catch’ and should conduct pertinent biological and other investigations. The Report of the Conference specified types of scientific information required for a fishery conservation programme.¹⁰⁷ While the HSFC does not expressly require states to collect scientific information (and neither did the ILC draft articles), it is obvious that states have to collect sufficient scientific information since the special commission to be established under the HSFC is to employ appropriate scientific findings as a basis for its determination on the legitimacy of requests and the validity of measures.¹⁰⁸

Third, taking into account not only scientific and technical aspects but also socio-economic aspects, the Rome Conference formulated the objectives of fishery conservation in the following way:

The immediate aim of conservation is to conduct fishing activities so as to increase, or at least to maintain, the average sustainable yield of products, and the principal objective is to obtain the optimum sustainable yield so as to secure a maximum supply of food and other marine products.¹⁰⁹

104 *YILC 1955*, vol. I, at p. 104.

105 *YILC 1956*, vol. I, at p. 117.

106 The general duty to take conservation measures in Article 1(2) of the HSFC was inserted based on the proposal by the United Kingdom at the 1958 Geneva Conference. A/CONF.13/C.3/L.72.

107 1955 Rome Conference Report, at paras 19-22.

108 Kaye, *International Fisheries Management*, at p. 73. Articles of the HSFC not related to dispute settlement procedures do not make reference to scientific advice. As pointed out by Kaye, ‘[n]o guidance is given how those measures are to be formulated consistent with the Convention’s objective, except in the event of a dispute or where a coastal State attempts to unilaterally prescribe measures in the absence of agreement between parties’. Kaye, *International Fisheries Management*, at pp. 70-71.

109 1955 Rome Conference Report, at para. 17. Although the term ‘optimal sustainable yield’ is used, there is no suggestion that this term (used in the Rome Conference Report, 1956 ILC Draft Article 50 or Article 2 of the HSFC) is different from ‘maximum sustainable yield’. See also Kaye, *International Fisheries Management*, at p. 69. See also section 2.1.3.

This definition reflected the economic consideration to maximize the yield to be harvested by fisheries. The use of this reference point marked a major departure from the previously prevailing negative objectives such as preventing extermination, and higher levels of stock biomass were set to be maintained or restored. In addition, the biological wealth of living resources was considered as a means to meet the end of maximizing the supply of food and other marine products. Put differently, the utilization aspect of marine living resources was the principal element of the concept of conservation. This concept of conservation was also adopted in the ILC draft articles.

At the Geneva Conference, some coastal states proposed to introduce the recognition of the special interests of coastal states in the definition of conservation.¹¹⁰ However, other states opposed the mixture of scientific criteria and the recognition of coastal state interests within the definition of conservation. Article 2 of the HSFC reiterates the ILC Draft for the most part.¹¹¹ The only change in the definition of conservation was the amendment based on a Swedish proposal with a view to emphasizing the priority of securing a supply of food for human consumption.¹¹² In addition, reference to the conservation of the living resources ‘affected’ in Articles 3 and 4 of the HSFC broadened the scope of conservation. By virtue of this phrase, fishing states also have to take into account resources not exploited by their nationals but belonging to the same ecosystem.¹¹³

110 See *UNCLOS I, Official Records, vol. V*, at pp. 38-40.

111 Article 2 reads: ‘As employed in this Convention, the expression ‘conservation of the living resources of the high seas’ means the aggregate of the measures rendering possible the optimum sustainable yield from those resources so as to secure a maximum supply of food and other marine products. Conservation programmes should be formulated with a view to securing in the first place a supply of food for human consumption.’ As pointed out by Kindt and Wintheiser, the ‘definition clearly emphasizes utilization and leaves little room for aesthetic and moral values’. J.W. Kindt and C.J. Wintheiser, ‘The Conservation and Protection of Marine Mammals’, 7 *University of Hawaii Law Review* (1985), at p. 358.

112 See A/CONF.13/C./L.8.

113 See the comments by Chile, El Salvador and Peru and the proposal by the United Kingdom accommodating the views of these states. The Peruvian comments are indicative of the concerns of these states: ‘It should be remembered that fishing for one species in many cases affected stocks of other species [...] No conservation measure was complete unless the ecology of the species affected by that measure was taken into account. [...] He could not vote in favour of the proposal unless it were modified so as to state specifically that those adopting conservation measures of the kind in question should take into account the ecology of the species to which they applied.’ See *UNCLOS I, Official Records, vol. V*, at pp. 44-46. See also Oda, *International Control of Sea Resources*, at pp. 112-113. On the other hand, some commentators consider that the HSFC does not apply to species caught incidentally. Kindt and Wintheiser, ‘The Conservation and Protection of Marine Mammals’, at p. 358.

1.3 TOWARDS A NEW REGIME FOR HIGH SEAS FISHERIES UNDER THE LOSC

By the mid-1960s, 12-mile exclusive fishing rights were generally accepted even by major maritime powers.¹¹⁴ While European states adopted the European Fisheries Convention providing for 12-mile limits for exclusive fisheries jurisdiction combined with the recognition of historical rights,¹¹⁵ the US established the 12-mile exclusive fisheries zone.¹¹⁶ This was, however, not a uniform trend among maritime states. Japan, for example, still adhered to the 3-mile territorial sea. It was only in 1971 that Japan accepted the 12-mile limit for fisheries jurisdiction in its proposal for the 12-mile territorial sea.¹¹⁷

During the period between 1967 and 1982, competing claims were made to establish a new law of the sea: distant water fishing nations sought to maintain the freedom of high seas fishing while coastal states attempted to extend their control of marine resources seawards. Agreement on a new general framework of high seas fisheries as part of the new law of the sea was not secured either in the Committee on the Peaceful Uses of the Sea-Bed and the Ocean Floor beyond the Limits of National Jurisdiction (the Seabed Committee) or during the early sessions of the Third United Nations Conference on the Law of the Sea (UNCLOS III). During that time, it was suggested that a new treaty should not refer to freedom of fishing or should not even use the term 'high seas'. For example, in the Seabed Committee, various proposals used such terms as 'international ocean space', 'international sea area' and 'international seas';¹¹⁸ these proposals did not list freedom of fishing as one of the freedoms exercised in such areas.¹¹⁹ During this transitional period, the ICJ passed two important judgments on fisheries disputes. It confirmed some principles of high seas fisheries established during the preceding period.

The rest of this section focuses on the analysis of various proposals relating to the management of fisheries beyond the territorial sea, including those beyond the 200-mile zone, during the period 1967-1982.

1.3.1 The Seabed Committee and Contemporary Developments: 1967-1973

In the rapidly changing circumstances as highlighted by the acceptance of the concept of the common heritage of mankind (CHM), distant water fishing states sought to

114 See Juda, *International Law and Ocean Use Management*, at p. 176. See also Kaye, *International Fisheries Management*, at p. 86.

115 Fisheries Convention, London, 9 March 1964. The parties included Belgium, Denmark, France, Ireland, Italy, Poland, Portugal, Spain, Sweden and the UK.

116 Public Law 89-658, 14 October 1966, cited in Juda, *International Law and Ocean Use Management*, at p. 176.

117 See S. Oda, 'Proposals Regarding a 12-mile Limit for the Territorial Sea by the United States in 1970 and Japan in 1971: Implications and Consequences', 22 *Ocean Development and International Law* (1991), at pp. 192-193.

118 See S.N. Nandan and S. Rosenne (eds.), *United Nations Convention on the Law of the Sea 1982: A Commentary (Virginia Commentary)*, vol. III (1995), at p. 75.

119 *Ibid.*, at pp. 75-76.

counter coastal state claims to fisheries jurisdiction beyond 12 miles. The United States proposed a fisheries regime based on the division between the 12-mile territorial sea and the area beyond as the high seas. On the high seas, it argued, fisheries should be regulated by international (including regional) organizations, in which coastal and other states should have an equal right to take part, and no fishing state should be allowed to refuse cooperation with such organizations.¹²⁰ The proposal admitted preferential rights of coastal states to straddling stocks and of spawning states to anadromous stocks, while highly migratory species were excluded from the ambit of the preferential rights.¹²¹ This proposal was later modified to allow regulatory authority for coastal states and spawning states in respect of straddling stocks and anadromous species, respectively (but, again, not in respect of highly migratory species).¹²² Another proposal was later launched by Japan.¹²³ According to the proposal, beyond the 12-mile territorial sea all states should have the right for their nationals to engage in fishing subject to existing and future treaty obligations.¹²⁴ Developing coastal states should be granted preferential rights in accordance with their fishing capacity, while non-developing coastal states should be allowed to maintain their locally conducted small-scale coastal fisheries taking into account traditional fisheries by non-coastal states.¹²⁵ Such preferential rights, Japan further argued, should be determined by agreement between the states concerned and could be referred to a binding decision of a special commission.¹²⁶

On the other hand, several groups of developing states advocated the 200-mile zone in which the jurisdiction of coastal states was to be extended to the regulation of fisheries: sovereignty and jurisdiction over resources up to the 200-mile zone (the 1970 Montevideo Declaration);¹²⁷ a 200-mile patrimonial sea (the 1972 Santo Domingo Declaration);¹²⁸ and a 200-mile exclusive economic zone (the 1973 OAU Declaration).¹²⁹ In line with these proposals, Kenya formally proposed an exclusive economic zone.¹³⁰ This proposal began to gain impetus with support from the majority of developing states.¹³¹

120 A/AC.138/SC.II/L.4, Article III(1).

121 *Ibid.*, Article III(2)(C) and (D).

122 A/AC.138/SC.II/L.9, II and III.

123 A/AC.138/SC.II/L.12.

124 *Ibid.*, paras 1.1-1.3.

125 *Ibid.*, para. 3.1.

126 *Ibid.*, paras 6.1-6.2.

127 Declaration of Principles on the Law of the Sea, 8 May 1970 (Argentina, Brazil, Chile, Ecuador, El Salvador, Nicaragua, Panama, Peru and Uruguay).

128 Adopted at the Specialized Conference of the Caribbean Countries on Problems of the Sea, Santo Domingo, the Dominican Republic, 7 June 1972.

129 Declaration of 1973 on the Issues of the Law of the Sea, Addis Ababa, Ethiopia, 17-24 May 1973.

130 A/AC.138/SC.II/L.10.

131 Oda, 'Proposals Regarding a 12-mile Limit for the Territorial Sea by the United States in 1970 and Japan in 1971: Implications and Consequences', at p. 193.

Following the gradual acceptance of the idea to establish an economic zone between the territorial sea and the high seas, more focus was put on fisheries beyond the 200-mile zone by those advocating the exclusive economic zone. Several proposals argued that fisheries beyond the 200-mile zone should be regulated.¹³² While most proposals did not refer to the structure of a regulatory system, China proposed regulation by a unified international fishery organization. Pending its establishment, it was proposed, states of a given sea area may set up a regional committee to elaborate appropriate rules and regulations for the regulation of fishing and the conservation of marine living resources, while vessels of other states may enter the region for fishing activities only when complying with the relevant rules and regulations of the region.¹³³ Some states proposed that the CHM principle should be applied to waters lying over the seabed beyond the limits of national jurisdiction.¹³⁴

Despite the purported intent to regulate high seas fisheries in general, it was clear that a major focus was put on certain species and stocks. In fact, many proposals linked the need to regulate high seas fisheries to their impacts on resources within the 200-mile zone by pronouncing special interests of coastal states in the productivity of resources of the high seas adjacent to their jurisdictional zone.¹³⁵ These proposals were followed by more assertive claims which attempted to grant to coastal states preferential rights to resources beyond the 200-mile zone.¹³⁶

In sum, it was reflected in the Report of Sub-Committee II of the Seabed Committee that the interest of the international community beyond the 200-mile zone shall be safeguarded by way of regulating high seas fisheries, while the special interests of coastal states in straddling stocks and highly migratory and anadromous species were also emphasized.¹³⁷

132 A/AC.138/SC.II/L.21 (Colombia, Mexico and Venezuela), Articles 16-17; A/AC.138/SC.II/L.27 (Ecuador, Panama and Peru), Articles 20-22; A/AC.138/SC.II/L.38 (Canada, India, Kenya and Sri Lanka), Articles 8-12; A/AC.138/SC.II/L.45 (China); A/AC.138/SC.II/L.54 (Ecuador, Panama and Peru), Articles G-M.

133 A/AC.138/SC.II/L.45, para. 6. In the context of stocks transcending the border between the high seas and the exclusive fishery zone, A/AC.138/SC.II/L.38 (Canada, India, Kenya, Sri Lanka) also referred to the regulatory systems in the following way. On the one hand, regulations concerning resources which are of limited migratory habits and breed, feed and survive on the resources of the region may be made on a regional basis, and the states of the region may establish these regulations by agreement between themselves or request the Authority to formulate these regulations (Article 9). On the other hand, highly migratory species shall be regulated by the Authority (Article 10).

134 Orrego Vicuña, *The Changing International Law of High Seas Fisheries*, at p. 10 note 26 and its accompanying text; J.E. Carroz, 'Institutional Aspects of Fishery Management under the New Regime of the Oceans', 21 *San Diego Law Review* (1984), at pp. 516-517.

135 See, e.g., A/AC.138/SC.II/L.21 (Colombia, Mexico, Venezuela); A/AC.138/SC.II/L.27 (Ecuador, Panama, Peru). See also the 1973 OAU Declaration.

136 A/AC.138/SC.II/L.38 (Canada, India, Kenya, Sri Lanka); A/AC.138/SC.II/L.54 supplementing A/AC.138/SC.II/L.27.

137 Nandan and Rosenne (eds.), *Virginia Commentary*, vol. III, at p. 283.

1.3.2 UNCLOS III: 1973-1982

As the concept of sovereign rights over living resources in the EEZ was accepted at UNCLOS III by the end of the 1975 session, the new regime governing high seas fisheries gradually became clear.¹³⁸ While coastal states gained exclusive rights over resources in the vast area adjacent to their territorial sea, freedom of fishing remained a general principle of high seas fisheries beyond that area. While various formulations had still existed in the Main Trends Working Paper,¹³⁹ freedom of fishing, subject to the conditions laid down in section 2, appeared as part of the freedoms of the high seas in Article 75 of the ISNT.¹⁴⁰

The Main Trends Working Paper provided two basic paragraphs for the exploitation of living resources of the high seas in Provision 138.¹⁴¹ Formula A stipulated the preferential rights of coastal states to a certain portion of resources of the high seas adjacent to their EEZ.¹⁴² Formula B provided for the right of all states to engage in fishing on the high seas subject to conservation measures.

In the following period, the special interests of coastal states in the adjacent high seas in Formula A were elaborated to regulate fishing for certain species and stocks within the framework of the discussion on the EEZ provisions. A biological approach was adopted, and the high seas fisheries regime was divided into separate regimes on the basis of biological characteristics of stocks and species, particularly their migratory ranges. Articles 63-67 and 120 of the LOSC provide regimes for fishing for straddling stocks, highly migratory species, anadromous and catadromous species, and marine mammals.¹⁴³ In particular, specific provisions exclusively govern fishing for anadromous stocks and catadromous species on the high seas.¹⁴⁴

Formula B and other rules of conservation and management later developed as common provisions for all the high seas fisheries (except for marine mammals) and developed into Articles 116-119 of the LOSC. Fisheries for stocks occurring solely on the high seas are subject to these provisions in Part VII, section 2, while fisheries

138 While the Main Trends Working Paper (1974) incorporated various proposals and reflected three (territorialist, preferentialist and zonist) positions with regard to the EEZ, the text of the Informal Single Negotiating Text (ISNT) struck the balance among the competing interests within the EEZ and the main elements of the ISNT/Part II (Articles 45-61) were retained in subsequent texts and appear in Part V of the LOSC. See, generally, S.N. Nandan and S. Rosenne (eds.), *United Nations Convention on the Law of the Sea 1982: A Commentary (Virginia Commentary)*, vol. II (1993), at pp. 498-501.

139 Provision 154.

140 ISNT, Article 75(1)(e).

141 See Nandan and Rosenne (eds.), *Virginia Commentary*, vol. III, at pp. 283-284. Note that the term 'high seas' was not yet uniformly used at this stage to denote the area beyond national jurisdiction.

142 Some other provisions also referred to a special status of coastal states with regard to marine living resources of the high seas adjacent to their maritime zone. See Provision 155 and Provision 156, Formula A, paragraph 2.

143 Sedentary species on the continental shelf continue to be governed by the continental shelf regime and are subject to the sovereign rights of coastal states. LOSC, Article 77.

144 *Ibid.*, Articles 66 and 67.

for straddling stocks are also covered by Article 63(2). Thus, initiatives to safeguard the interests of the international community distinct from those of coastal and fishing states through, *inter alia*, a unified international fishery organization were not included in the LOSC.

1.4 CONCLUDING REMARKS

The principle of freedom of fishing was solidly established by the nineteenth century. Before 1945, despite the emerging awareness of the exhaustible nature of marine living resources, states could, outside the narrow belt of the territorial sea, adopt conservation measures only for their nationals and no regulation could take place unless the states concerned agreed on measures applicable among themselves. In other words, freedom of fishing on the high seas was the single operating principle under general international law. States did not consider that the freedom was curtailed by the obligation to take conservation measures for high seas fisheries and international regulations ensued only for some species of marine mammals and for some regions in case states agreed on them. The instances reviewed at the beginning of this chapter illustrate the dominance of the freedom of fishing on the high seas. Multilateral regulatory regimes accepted for some fisheries aimed to maintain a high seas fishing order in an economically profitable way.

As the concerns of overexploitation caused by the further advance of technology grew and the attempts of coastal states to gain greater control over the living resources in the adjacent waters for economic development and food supply increased, a conceptual change took place after the Second World War. This change led the ILC to work on the progressive development of the international law of high seas fisheries and culminated in the Geneva Conventions of 1958.

Several general principles appear in the Geneva Conventions: freedom of high seas fishing as restrained by the requirement of due regard, the duty of cooperation and the duty of conservation. During the process leading up to the adoption of the Geneva Conventions, it was generally recognized that the duties of due regard for the interests of other states relegated the concept of unfettered freedom to history. This new conceptualization of freedom of fishing was subsequently confirmed in the judgments of the ICJ in the *Fisheries Jurisdiction* cases. The duty to cooperate between high seas fishing states was clearly recognized, while coastal states were also entitled to participate in the regulatory system if the fishery took place in the high seas area adjacent to their territorial sea. Other states such as market states were not granted participatory rights, apart from the right to request fishing states to take conservation measures. The concept of conservation which was framed and elaborated during this period still forms the basis of the current concept of conservation. The concept introduced both biological and scientific considerations as well as social and economic considerations. General interests of states were thus formulated as attaining optimum sustainable yield so as to maximize food supply and other marine products. The utilization aspect dominated the concept of conservation.

It is doubtful to what extent the elaborate content of the principles of cooperation and conservation existed beyond treaty law. Most of the detailed provisions of the HSFC did not crystallize into customary rules, nor did the compulsory dispute settlement provisions function. While the special interests of coastal states articulated during the codification process gradually gained universal acceptance in the following period, it took the form of an extension of coastal state jurisdiction seawards by establishing a new jurisdictional zone, rather than a change in the general principles of high seas fisheries.

The ensuing period leading to UNCLOS III and the adoption of the LOSC completely transformed the jurisdictional framework of the oceans: under the LOSC, fisheries in the area up to 200 miles were separated from the high seas regime, and high seas fisheries for certain stocks and species were subjected to specific regimes. Fishing for stocks occurring solely in the high seas is to be regulated by, among others, the provisions of Part VII, section 2 of the LOSC.

It is noted that the legal regime of high seas fisheries during this period developed along the lines of tensions between coastal states and distant water fishing nations at both global and regional levels. At the global level, the progressive development of the international law of high seas fisheries was attempted in the ILC by incorporating the interests of coastal states in fisheries in high seas areas adjacent to the territorial sea. At the regional level, several commissions covered vast areas of the high seas, including those parts that were not considered as adjacent high seas areas, but their practice was concentrated on adjacent areas except for, *inter alia*, the IWC.

In summary, despite the formulation of the rules governing high seas fisheries in general at the global level, practice at the regional level was scarce with regard to fisheries outside the high seas areas adjacent to the territorial sea. One might consider that there was no international law of high seas fisheries *per se* that reflected the actual practice of states while there was international law governing fisheries in high seas areas adjacent to the territorial sea. Or, alternatively, one might argue that the whaling regime represented the international law of high seas fisheries at that time. However, the whaling regime was subsumed under the marine mammal provisions under the LOSC. It is thus difficult to argue that existing state practice with regard to fisheries for DHSFS at that time was reflected in the provisions of Part VII, section 2 of the LOSC. It could rather be argued that the provisions of Part VII, section 2 of the LOSC had the *potential* to be applied to fisheries for DHSFS and to provide a legal framework to address such fisheries once they took place after the adoption of the LOSC.¹⁴⁵ The next chapter examines this framework as elaborated by developments that took place after the adoption of the LOSC.

145 On the issue of deep-sea fisheries in the North-Western Pacific and the South Pacific during the 1970s, see Chapter 5.

The Legal Framework for High Seas Fisheries under the LOSC

The LOSC provides a general legal framework for all kinds of activities in the seas and oceans. Fisheries on the high seas are regulated by rules, among others, contained in Part VII, Section 2. In addition to the quasi-universal participation in the LOSC by states, the importance of the LOSC as the legal framework for the conservation and sustainable use of marine living resources and biological diversity has been emphasized in a number of recent international fora.¹

The first section of this chapter presents a general overview of the general principles of high seas fisheries under the LOSC. It examines various interpretations of the provisions of the LOSC regarding high seas fisheries in the light of the text of the Convention, its drafting history, judgments of the ICJ, the International Tribunal for the Law of the Sea (ITLOS) and regional courts and arbitral awards of international tribunals as well as state practice subsequent to the adoption of the LOSC in 1982. In particular, the section ultimately attempts to articulate the likely interpretation of the contentious provisions of the LOSC in the light of the subsequent practice of states and international organizations.

The second section of the chapter explores whether the harvesting of organisms belonging to sedentary species beyond the outer limit of the continental shelf and fisheries for DHSFS fall under separate regimes distinct from the regime governing high seas fisheries in general. As Part II of this study is devoted to case studies on fisheries for DHSFS, high seas deep-sea fisheries and the protection of VMEs, these topics will not be examined in detail in this chapter.

Before analyzing the general principles of high seas fisheries under the LOSC, it is necessary to elaborate the relationship between the LOSC and subsequent international instruments. In accordance with the law of treaties, the provisions of the LOSC are interpreted in the light of the subsequent agreements and practice.² A question is whether international fisheries-related instruments adopted subsequent to the adoption of the LOSC may be considered to be subsequent agreements in the sense of the VCLT. The question is particularly relevant with regard to the UN Fish Stocks Agreement (FSA), whose title indicates that the Agreement is intended for the im-

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- 1 See, for example, Report of the Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction, A/61/65, 20 March 2006, at p. 7, para. 22. As of 3 December 2007, there are as many as 155 parties to the LOSC. Information is available on the website of the Division for Ocean Affairs and the Law of the Sea (DOALOS) <<http://www.un.org/Depts/los/index.htm>>.
 - 2 Vienna Convention on the Law of Treaties (VCLT), Vienna, 23 May 1969, Article 31(3). On the implications of the characterization of the LOSC as a 'constitution for the oceans', see, e.g., S. Scott, 'The LOS Convention as a Constitutional Regime for the Oceans', in A.G. Oude Elferink (ed.), *Stability and Change in the Law of the Sea: The Role of the LOS Convention* (2005), at pp. 9-38.

plementation of the provisions of the LOSC.³ It has been argued that the FSA is to be qualified as a subsequent agreement in this sense.⁴ Apart from its potential as a subsequent agreement, many commentators point to the importance of the FSA in interpreting or elaborating the provisions of the LOSC.⁵

Furthermore, subsequent instruments, including non-binding instruments, may have legal significance if their provisions are considered to have passed into customary international law. In that case, the maxim *lex posterior derogat legi priori* could apply.⁶

2.1 GENERAL PRINCIPLES OF HIGH SEAS FISHERIES

The provisions of Part VII of the LOSC govern high seas fisheries, including those for stocks exclusively found in the high seas. Other Parts such as Parts XII and XVI are of relevance to high seas fisheries as well.

Some commentators argue that the concept of high seas fishing rights was fundamentally altered by Article 116 in the LOSC,⁷ while others do not agree with this proposition for one reason or another.⁸ This section examines whether this proposition

3 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, New York, 4 August 1995.

4 D.H. Anderson, 'The Straddling Stocks Agreement of 1995: An Initial Assessment', 45 *International and Comparative Law Quarterly* (1996), at p. 468; P.G.G. Davies and C. Redgwell, 'The International Legal Regulation of Straddling Fish Stocks', 67 *British Year Book of International Law* (1996), at p. 259; T. Henriksen *et al.*, *Law and Politics in Ocean Governance: The UN Fish Stocks Agreement and Regional Fisheries Management Regimes* (2006), at p. 15. But, see M. Gavouneli, *Functional Jurisdiction in the Law of the Sea* (2007), at p. 129. Also note the difference between the FSA and the 1994 Implementation Agreement with regard to the relationship with the LOSC. Article 2(1) of the 1994 Agreement stipulates that '[t]he provisions of [the 1994] Agreement and Part XI shall be interpreted and applied together as a single instrument' (emphasis added) and, in the event of any inconsistency between the 1994 Agreement and Part XI of the LOSC, 'the provisions of [the 1994] Agreement shall prevail'. The FSA is not linked to the LOSC as firmly as the 1994 Agreement, stipulating that '[n]othing in [the FSA] shall prejudice the rights, jurisdiction and duties of states under the [LOSC]' and the FSA 'shall be interpreted and applied in the context of and in a manner consistent with' the LOSC in its Article 4.

5 E.g., Orrego Vicuña, *The Changing International Law of High Seas Fisheries*, at p. 214.

6 Bernhardt, 'Custom and Treaty in the Law of the Sea', at p. 276.

7 Nandan and Rosenne (eds.), *Virginia Commentary*, vol. III, at pp. 29 and 287. See also Orrego Vicuña, *The Changing International Law of High Seas Fisheries*, at p. 25.

8 C.A. Fleischer, 'The New Régime of Maritime Fisheries', 209 *Recueil des Cours* (1988-II), at p. 172 ('there is here virtually no 'new régime', but only the application of traditional rules'); Hey, *The Regime for the Exploitation of Transboundary Marine Fisheries Resources*, at pp. 5 and 119 (the provisions of the LOSC do not change the essence of the legal regime applicable to high seas fishery resources); S. Oda, 'Fisheries under the United Nations Convention on the Law of the Sea', 77 *American Journal of International Law* (1983), at p. 749 (the basic scheme does not change under the LOSC).

holds true for high seas fisheries in general by analyzing the general principles of high seas fisheries under the LOSC.

2.1.1 Freedom of Fishing on the High Seas

Freedom of fishing remains as one of the freedoms of the high seas explicitly stated in the list in Article 87(1) of the LOSC. Freedom of fishing shall be exercised with due regard for the interests of other states in their exercise of the freedom of the high seas and for the rights under the Convention with respect to activities in the Area and is subject to conditions laid down in section 2 of Part VII.⁹

The high seas fishing right of all states, an essential element of freedom of fishing, is maintained in Article 116, which stipulates that the right to fish on the high seas shall be subject to treaty obligations, rights, duties and interests of coastal states, and provisions of Part VII, Section 2, i.e., Articles 116-120. A similar provision already exists in the HSFC.¹⁰ However, what is innovative is that freedom of fishing is directly linked to the restrictions on the right to fish on the high seas. While states may ratify the HSC without ratifying the HSFC, the LOSC does not allow reservations to any of its provisions unless expressly allowed.¹¹ Therefore, there is a major difference between the LOSC and the 1958 Geneva Conventions in that the right of high seas fishing is automatically subject to the restrictions of Part VII, Section 2 under the LOSC framework.

The following parts examine the content of the freedom/right of fishing on the high seas, focusing on four issues: restraints of a general nature on freedom of the high seas, the scope of 'fishing' in Articles 87 and 116, paragraphs (a)-(c) of Article 116 and the scope of 'nationals' in Articles 116-118.

2.1.1.1 Restraints of a general nature

Freedom of fishing shall be exercised with due regard for the interests of other states and also with due regard for the rights under the LOSC with respect to activities in the Area.¹² The requirement of due regard in the LOSC, as in the HSC, is formulated so broadly that it could restrain the exercise of freedom by all states. It has been argued that the standard of due regard requires all states to be aware of and consider the interests of other states in using the high seas, and to refrain from activities that interfere with the exercise by other states of the freedom of the high seas.¹³ In other

9 LOSC, Article 87(2).

10 See, e.g., HSFC, Article 1(1).

11 LOSC, Article 309.

12 Ibid., Article 87(2).

13 Nandan and Rosenne (eds.), *Virginia Commentary*, vol. III, at p. 86. This provision may also have implications for the setting of an allowable catch and the determination of fishing quotas. Division for Ocean Affairs and the Law of the Sea, *The Regime for High-Seas Fisheries: Status and Prospects* (1992), at pp. 8-9.

words, it is the balance of interests among states that is required under this requirement.

The requirement may play an important role in resolving a dispute over interests in fisheries between two states, as is exemplified by the *Fisheries Jurisdiction* cases. In these cases, the ICJ declared that the freedom of fishing on the high seas was not absolute, indicating that the regime of high seas fisheries moved from *laissez-faire* to the recognition of a duty to have due regard to the rights of other states and of the needs of conservation for the benefit of all.¹⁴ The Court considered that the Icelandic action constituted an infringement of the principle enshrined in Article 2 of the HSC concerning reasonable regard for the interests of other states to be had in exercising the freedom of the high seas.¹⁵ This indicates that the Court considered Article 2 of the HSC as a rule of general international law, given the fact that Germany and Iceland were not parties to the HSC.¹⁶ Furthermore, the Court considered that not only the right of fishing of all states but also preferential rights recognized only for certain states shall be exercised with due regard for the rights of other states to fishing on the high seas.

As far as due regard for the interests of other states is concerned, the importance attached to this provision in the LOSC appears to be less significant than in the HSC, given the fact that the freedom is no longer considered as absolute under general international law as noted above and fishing is regulated in more detail in Part VII, section 2.¹⁷ In fact, it is not clear to what extent the requirement has significance in a multilateral context, especially for states not engaged in fishing.¹⁸ It should be noted, however, that whenever a new issue comes up, the requirement of due regard could be invoked.

As opposed to due regard for other states in their exercise of high seas freedom, the requirement of due regard with regard to the activities of the Area¹⁹ is new and could be regarded as a significant addition. Article 87(2) and Article 147 stipulate how fishing and mining activities shall be reconciled as conflicts between two or more activities arise. First of all, Article 147(2)(b) provides that installations may not be established in areas of intense fishing activity. It could be argued, *a contrario*, that where fishing activities are not 'intense', installations may be established and mining

14 *I.C.J. Reports 1974*, at p. 31, para. 72; *I.C.J. Reports 1974*, at pp. 200-201, para. 64.

15 *I.C.J. Reports 1974*, at p. 29, para. 67; *I.C.J. Reports 1974*, at p. 198, para. 60.

16 The applicants, i.e., Germany and the UK, invoking their historic fishing rights in the waters concerned, argued that 'reasonable regard must be had to such traditional rights by the coastal State, in accordance with the generally recognized principles embodied in Article 2' of the HSC. *I.C.J. Reports 1974*, at p. 24, para. 54; *I.C.J. Reports 1974*, at p. 193, para. 46.

17 For a similar evaluation of the due regard clause in relation to the interests of other states, see C.A. Fleischer, 'Fisheries and Biological Resources', in R.-J. Dupuy and D. Vignes (eds.), *A Handbook on the New Law of the Sea* (1991), at p. 1113.

18 See D.P. O'Connell, *The International Law of the Sea*, vol. I (1982), at p. 58 (the concept of reasonable use is relativistic and hence susceptible of subjective evaluation and not capable of resolving specific questions).

19 'Activities in the Area' is defined as 'all activities of exploration for, and exploitation of, the resources of the Area', for the purposes of the LOSC. LOSC, Article 1(1)(3).

activities initiated. Second, Article 147 does not give precedence to mining over fishing: read together, paragraphs 1 and 3 of Article 147 as well as Article 87(2) indicate that neither activity has precedence. In reality, various considerations need to be carefully taken into account, including the scale of these activities in spatial and economic terms, the potential impacts mining may have on fishing in large areas, and other possible environmental impacts. Third, like installations on the continental shelf, it is not clear whether regulations in safety zones around them may cover fishing activities as Article 147(2)(c) is silent on this point. It could be argued that although Article 147 does not specify that fishing is subject to safety zones around installations, the due regard requirement in Article 87 as well as the reasonable regard requirement in Article 147(3)²⁰ suggest that high seas fisheries need to be conducted in a manner so as not to interfere with such installations or safety zones around them.

General principles contained in the LOSC, including the concepts of good faith and the prohibition of abuse of rights, also restrict the exercise of freedom of fishing. First, states are required to fulfil their obligations under the LOSC in good faith.²¹ As the ICJ stated in the *Nuclear Tests* cases, the principle of good faith is '[o]ne of the basic principles governing the creation and performance of legal obligations, whatever their source'.²² In a fisheries context, the obligation to execute treaties in good faith was recognized as early as 1910.²³ As opposed to the obligation to negotiate in good faith recognized in the *Fisheries Jurisdiction* cases, the duty in Article 300 of the LOSC covers all types of obligations to be performed in good faith. Second, states shall exercise rights, jurisdiction and freedoms under the LOSC in a manner that does not constitute an abuse of rights.²⁴ Notwithstanding the legislative history of this provision indicating the original intent to restrain the discretionary power of coastal states, Article 300 as a general provision applies to the Convention as a whole and is not solely related to abuse of rights by coastal states.²⁵

20 'Other activities in the marine environment shall be conducted with reasonable regard for activities in the Area.'

21 LOSC, Article 300.

22 *Nuclear Tests Case (Australia v. France)*, Judgment, 20 December 1974, *I.C.J. Reports 1974*, p. 253, at p. 268, para. 46; *Nuclear Tests Case (New Zealand v. France)*, Judgment, 20 December 1974, *I.C.J. Reports 1974*, p. 457, at p. 473, para. 49.

23 *The North Atlantic Coast Fisheries Case between Great Britain and the United States*, Award of the Tribunal, 7 September 1910, *The Hague Court Reports*, vol. I, p. 141, at p. 171. The arbitral tribunal stated as follows: 'Regulations which are (1) appropriate or necessary for the protection and preservation of such fisheries, or (2) desirable or necessary on grounds of public order and morals without unnecessarily interfering with the fishery itself, and in both cases equitable and fair as between local and American fishermen, and not so framed as to give unfairly an advantage to the former over the latter class, are not inconsistent with the obligation to execute the treaty in good faith, and are therefore reasonable and not in violation of the treaty'.

24 LOSC, Article 300.

25 See F. Orrego Vicuña, *The Exclusive Economic Zone: Regime and Legal Nature under International Law* (1989), at p. 132; S. Rosenne and L.B. Sohn (eds.), *United Nations Convention on the Law of the Sea 1982: A Commentary (Virginia Commentary)*, vol. V (1989), at pp. 150-151; M.T. Infante, 'The Settlement of Disputes regarding the Law of the Sea and its Bearing on the

In the context of this study, it is of interest to note that an act of a state which is incompatible with the provision of Article 300 may be considered to constitute a breach of an obligation separately from specific provisions of the Convention. In the *Southern Bluefin Tuna* case, the arbitral tribunal did not exclude the possibility that a conduct ‘would be so egregious, and risk consequences of such gravity, that a Tribunal might find that the obligations of [the LOSC] provide a basis for jurisdiction, having particular regard to the provisions of Article 300 of [the LOSC]’, even if a fisheries treaty implementing the LOSC excludes the application of the compulsory dispute settlement procedure in respect of an alleged breach of the obligations under Articles 64 and 116-119 of the LOSC.²⁶

2.1.1.2 *Scope of ‘fishing’*

The term ‘fishing’ is not defined in the LOSC. What activities fall under the term ‘fishing’? If an activity may not be regarded as fishing, what rules are applicable? Some activities related to the exploitation of living resources are not always considered as ‘fishing’ in the traditional sense of the word. First, there have been controversies over whether activities associated with or in support of harvesting are considered to be ‘fishing’.²⁷ Second, the purpose of the harvesting activities might be relevant in determining whether the activity concerned is fishing or not. In particular, this is the case for fisheries for scientific purposes.²⁸ Some RFMO/As explicitly include the

Legal Nature of the Exclusive Economic Zone’, in F. Orrego Vicuña (ed.), *The Exclusive Economic Zone: A Latin American Perspective* (1984), at pp. 166-167.

- 26 *Southern Bluefin Tuna Case*, Award on Jurisdiction and Admissibility, 4 August 2000, at para. 64. In that case, the Tribunal noted that while Australia and New Zealand in the proceedings before ITLOS invoked Article 300, they made it clear that they did not consider Japan to be responsible for any independent breach of an obligation to act in good faith. *Ibid.* See also pp. 168-170 of the transcripts of the daily sessions of the hearing on jurisdiction, first round presentation of Australia and New Zealand, May 8, 2000 (In particular, Ms Geddis, Counsel for New Zealand, stated: ‘Australia and New Zealand do not accuse Japan of some independent breach of an obligation to act in good faith. No allegation of bad faith on the part of Japan has been made either expressly or impliedly. [...] I note that Australia and New Zealand have referred to Article 300 of UNCLOS in their diplomatic correspondence and Statement of Claim. We did so on the basis that it is relevant to the interpretation and application of the substantive articles at the center of the dispute. However, the extent to which that is the case is, again, I submit, an issue for resolution at the merits stage’).
- 27 The word ‘fishery’ might be interpreted to cover only capture fisheries, not aquaculture. See, e.g., Report of the Technical Consultation on Technical Guidelines for Responsible Fish Trade, Rome, 5-7 November 2007, FAO Fisheries Report No. 854, FIIU/R854 (Tri), at p. 26 note 2. As far as this study is concerned, this distinction is not important as it concerns only marine capture fisheries.
- 28 In addition, fishing for recreational purposes occasionally conducted by crew members during navigation on the high seas does not appear to be qualified as commercial fishing. In other words, it seems that there is a *de minimis* requirement in terms of the scale of the activity concerned.

harvesting of fisheries resources for scientific research purposes in ‘fishing’.²⁹ As regards domestic legislation, some laws and regulations extend the requirement of permits to fisheries for scientific or experimental purposes, either explicitly³⁰ or implicitly.³¹ Others appear to exclude such fisheries by limiting the permit requirement to commercial fisheries.³² In this context, it is recalled that it is not always easy to find a clear distinction between so-called ‘applied’ research as part of marine scientific research (MSR) and fishery research as part of resource exploration.³³ The former is regulated by Part XIII of the LOSC while the latter, if conducted in the high seas, is subject to Part VII, section 2 of the LOSC. Third, it is not always clear whether the exploitation of species other than invertebrates or finfish, such as flora belonging to sedentary species, is included in ‘fishing’.³⁴ The latter issue is dealt with in Section 2.2.1 of this chapter and Chapters 4-5.

As regards the scope of activities covered by the term ‘fishing’, a possible argument would be that, in view of the modernization of fishing techniques, activities of support vessels such as refuelling vessels, processing vessels, refrigeration vessels and transport vessels may be considered to be fishing, in addition to the capturing of fish.

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- 29 E.g., Convention on the Conservation and Management of Fishery Resources in the South East Atlantic Ocean (SEAFO Convention), Windhoek, 20 April 2001, Article 1(h)(ii) and (k); Southern Indian Ocean Fisheries Agreement, Rome, 7 July 2006, Article 1(g)(ii). In the process of revising the 1978 NAFO Convention, explicit references to harvesting for scientific research purposes and experimental or exploratory vessels were contained in the Chair’s Working Paper (Revision 3) in 2006. In addition, in collaboration with the Scientific Council, the Commission would have to develop measures for the conduct of fishing for scientific purposes under that Draft. See the Chair’s Working Paper (Revision 3, Corr.), Convention on Future Multilateral Cooperation in the Northwest Atlantic Fisheries, Articles I(g)-(h) and VI(5)(d). The new NAFO Convention agreed in 2007 does not refer to fisheries for scientific research purposes in the definition of fishing, but provides that the Commission ‘shall in collaboration with the Scientific Council, [...] develop guidelines for the conduct of fishing activities for scientific purposes’ and ‘shall, in relation to the Regulatory Area adopt [...] measures for the conduct of fishing for scientific purposes as referred to in subparagraph 6(d)’. Convention on Cooperation in the Northwest Atlantic Fisheries (New NAFO Convention), Lisbon, 28 September 2007, Article VI(6)(d) and (8)(d). For the negotiations in the South Pacific, see Section 5.2.3.2 below.
- 30 Australia, Fisheries Management Act, Sections 105A and 105B; Canada, Fishery (General) Regulations, Section 51.
- 31 See South Africa, Marine Living Resources Act, Section 83.
- 32 Namibia, Marine Resources Act, Articles 1 and 32; New Zealand, Fisheries Act, Section 113D (for sale); United States, High Seas Fishing Compliance Act of 1995, Pub. L. 104-43, title I, section 103; 16 US Code 5502(4)(B).
- 33 See, e.g., A.H.A. Soons, *Marine Scientific Research and the Law of the Sea* (1982), at p. 7.
- 34 In addition, it is controversial whether activities taking a negligible amount of samples are considered to be fishing or exploration or exploitation of living resources. This issue goes beyond the scope of this study. Suffice it to say that bioprospecting for genetic resources in areas beyond national jurisdiction was the main topic of the Informal Consultative Process (ICP) in 2007 and no recommendation was made to the General Assembly due to disagreement among participating states. See Report on the Work of the United Nations Open-Ended Informal Consultative Process on Oceans and the Law of the Sea at its Eighth Meeting, A/62/169.

The issue of vessels conducting activities related to fisheries has attracted attention before international tribunals after the adoption of the LOSC in disputes relating to the exercise of sovereign rights in the EEZ: in those cases, flag states argued that the exercise of coastal state jurisdiction over these activities in the EEZ was incompatible with the provisions of the LOSC.

In the *La Bretagne* case,³⁵ the arbitral tribunal took a cautious approach to the question of the rights of the coastal state under the 1972 Agreement between Canada and France in fishery matters. Canadian laws and regulations defined the term ‘fishing vessel’ to include vessels used for catching, processing or transporting fish and defined the term ‘fishery’ to include related activities such as packing, transporting and processing.³⁶ Finding that the coastal state should exercise its rights in a reasonable manner, the tribunal concluded that ‘the regulation of filleting at sea cannot *a priori* be justified by coastal state powers under the new law of the sea’.³⁷ In other words, it confined the sovereign rights regarding the management of living resources to the conservation of resources (to the exclusion of environmental, economic and social factors).³⁸ Notwithstanding this, the tribunal did not deny coastal state jurisdiction altogether, indicating that the coastal state could regulate fish processing in the EEZ through the power to require the landing of the catch in Article 62(4)(h) and regulations could cover the ‘type’, ‘size’ and ‘numbers’ of fishing vessels.³⁹ On the other hand, the tribunal identified that ‘the natural and ordinary sense of the phrase ‘fishing regulations’ consists in designating the legislative or regulatory prescriptions [...] which fix the conditions to which all fish-catching activities are subject’.⁴⁰

In the *Saiga* case, having rejected the assertion of Guinea that it had customs jurisdiction extending to 250 kilometres from the coast, ITLOS did not comment on the legal regime of bunkering in the EEZ generally.⁴¹ However, the parties to the dispute as well as some judges expressed their views on this issue. St. Vincent and the Grenadines argued that bunkering in the EEZ ‘constitutes the exercise of the freedom of navigation and other internationally lawful uses of the sea related to the freedom of navigation, as provided for in articles 56 and 58 of the Convention’ while Guinea contended that bunkering was not navigation or a use of the sea related to navigation

35 *Case concerning filleting within the Gulf of St. Lawrence between Canada and France*, Decision, 17 July 1986, *International Law Reports*, vol. 82, p. 590.

36 See *ibid.*, at para. 41.

37 *Ibid.*, at para. 52.

38 *Ibid.*, at para. 50. See D. Anderson, ‘The Regulation of Fishing and Related Activities in Exclusive Economic Zones’, in E. Franckx and P. Gautier (eds.), *The Exclusive Economic Zone and the United Nations Convention on the Law of the Sea, 1982-2000: A Preliminary Assessment of State Practice* (2003), at p. 37.

39 *La Bretagne case*, at para. 53.

40 *Ibid.*, at para. 38.

41 *The M/V ‘Saiga’ (No. 2) Case (Saint Vincent and the Grenadines v. Guinea)*, Judgment, 1 July 1999, Case No. 2, at para. 138.

or communications but ‘a commercial activity’.⁴² Judges Zhao and Warioba accepted the Guinean contention that coastal states may exercise jurisdiction over bunkering within the EEZ, while Judges Nelson and Vukas opposed this argument.⁴³ Judge Anderson delivered a separate opinion, differentiating between situations of bunkering for the efficient exploitation of marine living resources and those for navigation in transit or emergency.⁴⁴

To sum up, first of all, despite the fact that these cases are concerned with the exercise of sovereign rights in the EEZ and might be argued to have limited relevance, they could shed some light on the interpretation of the term ‘fishing’ in the LOSC in relation to high seas fisheries as well. As indicated above, it is difficult to draw any definitive conclusion on the meaning of ‘fishing’ given the fact that the opinions of or before tribunals are not uniform, in particular with regard to bunkering vessels.⁴⁵ Some academic literature seems to suggest that trans-shipment vessels can be included in fishing vessels while bunkering vessels cannot be included.⁴⁶

Recent state practice at the global and regional levels indicates a trend where states are increasingly required to take necessary conservation measures not only for fish-catching vessels but also other fishing vessels associated with fishing operations. At the global level, transport vessels and support vessels are referred to in the context of combating IUU fishing, and at-sea trans-shipment of catch harvested in IUU fishing operations is subject to regulation.⁴⁷ Several RFMO/As have determined or are to determine the nature and extent of participation in fisheries, including the allocation of fishing opportunities, and regulate processing, trans-shipment, transporting and refuelling (the last one not always explicitly) as part of fishing and include these

42 Ibid., at para. 137. Note that Guinea now appears to maintain a similar position. See the *Luchegorsk* incident of 21 August 2006, cited in R. Lagoni, ‘Offshore Bunkering in the Exclusive Economic Zone’, in T.M. Ndiaye and R. Wolfrum (eds.), *Law of the Sea, Environmental Law and Settlement of Disputes: Liber Amicorum Judge Thomas A. Mensah* (2007), at p. 615 note 6 and p. 626.

43 See the Separate Opinion of Judge Zhao, at paras 3-4; Dissenting Opinion of Judge Warioba, at para. 91; Separate Opinion of Judge Nelson, at p. 7; Separate Opinion of Judge Vukas, at para. 17.

44 Separate Opinion of Judge Anderson, at p. 5.

45 It has been argued that the *Juno Trader* case of ITLOS confirms the inclusion of trans-shipment vessels in fishing vessels. T. Treves, ‘Some International Law Aspects of the Use of Vessel Monitoring Systems for Preventing Illegal Unreported Unregulated Fishing’, in T.M. Ndiaye and R. Wolfrum (eds.), *Law of the Sea, Environmental Law and Settlement of Disputes: Liber Amicorum Judge Thomas A. Mensah* (2007), at p. 816 (observing that ‘the *Juno Trader* was used for carrying frozen fish probably after transshipment from the vessel having fished them was not even envisaged as an argument for holding that article 73 was not applicable’). However, given the fact that the scope of Article 73 is not limited to fishing vessels and the article concerns the exercise of sovereign rights to explore, exploit, conserve and manage the living resources in the EEZ, it is not clear to what extent the judgment may be taken as supporting evidence.

46 Ibid., at pp. 816-817; Lagoni, ‘Offshore Bunkering in the Exclusive Economic Zone’, at p. 617.

47 E.g., UNGA Resolution 61/105, paras 38 and 45.

vessels in the definition of fishing.⁴⁸ Legislation in a number of countries whose vessels are engaged in high seas fisheries, including deep-sea fisheries, requires permits not only for catch vessels but also for vessels engaging in support operations to various extents.⁴⁹

Even if these activities would not be regarded as fishing, this does not mean that there is a legal vacuum, as some of the principles of the LOSC would be applicable. First, since the list of freedoms in Article 87 is not exhaustive, other activities may be conducted as part of the exercise of the freedom of the high seas.⁵⁰ Second, as in the case of fishing, such freedoms are subject to conditions laid down in the LOSC and other rules of international law as well as the requirement of due regard for the exercise of the high seas freedom by other states and for the rights of other states with regard to activities in the Area. In this regard, the activities are subject to *inter alia* the provisions of Part XII.

In addition, some of the articles of section 2 of Part VII are relevant to the regime governing these activities. The scope of the provisions of Part VII, section 2 is not very clear in terms of ‘activities’ regulated by those provisions.⁵¹ They are certainly aimed at regulating high seas fisheries.⁵² However, the title of the section is ‘Conservation and management of the living resources of the high seas’, implying that the scope of that section is not limited to fishing but includes other activities potentially having an impact on the conservation and management of these resources. In fact, the text of the articles appears to differ in their scope of activities. For example, Allen points out that the LOSC prescribes duties with respect to a broader category

48 New NAFO Convention, Articles I(g)-(h) and VI(6)(d); NEAFC, Scheme of Control and Enforcement, 15 November 2006 (entered into force on 1 May 2007), Articles 1(e) and (h) and 4; SEAFO Convention, Article 1(h) and (j); SIOFA, Article 1(g) and (i). See also Revision 3 of the Draft SPRFMO Agreement, Articles 1(i)(iii) and (g), 7(1)(b) and 26(2)(c). The Draft Agreement on port state measures defines ‘fishing related activities’ including processing, transshipment and transport as well as the provision of fuel. Chairperson’s Draft Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, Article 1(1)(d).

49 Australia, Fisheries Management Act, Section 4(1); Canada, Fishery (General) Regulations, Section 65; South Korea, Fisheries Act, Article 2(1); Namibia, Marine Resources Act, Article 50(1); New Zealand, Fisheries Act, Section 113D(2); South Africa, Marine Living Resources Act, Sections 1 and 40; United States, High Seas Fishing Compliance Act of 1995, Pub. L. 104-43, title I, section 103; 16 US Code 5502(4)(C). For Japan, see Report on the state of Japan’s Implementation of UNFSA, distributed at the Review Conference on the FSA in May 2006 (on file with the author), at p. 5 (in principle, trans-shipment at sea is prohibited).

50 Churchill and Lowe observe that the freedoms cannot be exhaustively listed ‘because new ocean technology is constantly developing’ and that disputes over the status of a particular activity constituting freedoms should be resolved on the principle of compatibility with the status of the high seas. Churchill and Lowe, *The Law of the Sea*, at p. 205.

51 On the ambiguities of the scope of states on which obligations are imposed, see the following subsections.

52 For example, see the Virginia Commentary: ‘Section 2 elaborates on the freedom of fishing as set out in article 87, on the freedom of the high seas. In that regard, articles 116 to 120 set out conditions on the freedom of fishing [...]’ Nandan and Rosenne (eds.), *Virginia Commentary*, vol. III, at p. 280.

of resources. He states that each of Articles 117-119 ‘imposes obligations with respect to ‘living resources’, presumably, a class that includes more than just fish’.⁵³ In the context of bioprospecting in the Area, Owen observes that Articles 117-119 of the LOSC refer to the conservation of living resources more generally than fishing specifically, although he recognizes that applying these Articles to bioprospecting is not straightforward.⁵⁴

In this regard, attention could be drawn to the subtle difference in the wording of Articles 116 to 119. First, Article 117 is concerned with the conservation and management of living resources of the high seas in general, not being limited to fishing or other exploration and exploitation. Second, Article 118, while its first sentence appears to be broader in scope, is primarily concerned with cooperation between states whose nationals *exploit* resources on the high seas. Third, Articles 116 and 119 clearly intend to regulate *fishing*. Article 116 provides for the ‘right for their nationals to engage in fishing’. While the *chapeau* of Article 119 leaves room for the possibility of broader scope, other parts of that article seem to imply a limited scope for the contemplated activities. All paragraphs refer to fish or fishing in one way or another. Thus, while Articles 116 and 119 are exclusively concerned with fishing, there may be room for Articles 117 and 118 to be invoked with regard to other activities involving the living resources of the high seas. All in all, it can be argued that the LOSC provides a sufficient legal framework to address new challenges concerning the marine living resources of the high seas, including activities related to fishing.

2.1.1.3 Paragraphs (a)-(c) of Article 116

Two questions arise with regard to the content of paragraphs (a)-(c) of Article 116. The first question is what is meant by the formulation that the right is ‘subject to’ paragraphs (a)-(c) since the term ‘subject to’ may have different meanings.⁵⁵ There have been a number of works expressing different views on the implications of the interests of coastal states in the context of Article 116(b). Some commentators have

53 C.H. Allen, ‘Protecting the Oceanic Gardens of Eden: International Law Issues in Deep-Sea Vent Resource Conservation and Management’, 13 *Georgetown International Environmental Law Review* (2001), at p. 597. Note that he regards Article 119 as applicable to living resources other than fish.

54 D. Owen, *The Powers of the OSPAR Commission and Coastal State Parties to the OSPAR Convention to Manage Marine Protected Areas on the Seabed Beyond 200 nm From the Baseline: A Report for WWF Germany* (2006), at pp. 30-31. Among others, he cites the Report of the Secretary-General, A/59/62, pointing to its reference to ‘the conservation and management of the living resources of the high seas, in particular in relation to fishing activities’. But also note that, in another work, he narrowly interprets the term ‘living resources’, stating that the term ‘living resources’ as used in the LOSC is ‘restricted to those species of marine fauna and flora which are exploited’. D. Owen, ‘The Application of the Wild Birds Directive Beyond the Territorial Sea’, 13 *Journal of Environmental Law* (2001), at p. 51.

55 Fleischer, ‘The New Régime of Maritime Fisheries’, at p. 161.

argued for the possibility of coastal state unilateral conservation measures.⁵⁶ Others do not recognize any preferential position of coastal states in taking conservation measures.⁵⁷ Another approach taken by Hey is somewhere in between these arguments, limiting a special interest of coastal states to participation in the regulatory system of adjacent high seas fisheries.⁵⁸

In addition, consequences that a violation of Article 116 may cause are subject to different interpretations. Do states retain the right to fish as such, while being held responsible for their internationally wrongful acts? Or, does this provision imply that states are disqualified as a right holder if they do not abide by the obligations referred to in paragraphs (a)-(c)?⁵⁹ In other words, is the exercise of the right conditional upon compliance with the obligations stipulated in paragraphs (a)-(c)? It might be argued that if the breach of the obligations under Articles 117-119 by a state is very serious, this could lead to forfeiting the right to fish on the high seas. But such a far-reaching conclusion needs to be examined in the light of state practice.⁶⁰

Second, Article 116(b) subjects the right of fishing on the high seas to the interests,⁶¹ rights (not 'sovereign rights') and duties of coastal states, *inter alia*, in Article 63(2) and Articles 64-67. First and foremost, this provision relates to transboundary

56 See, e.g., Burke, *The New International Law of Fisheries*, at p. 134; Orrego Vicuña, *The Changing International Law of High Seas Fisheries*, at p. 42; Scovazzi, 'The Evolution of International Law of the Sea', at pp. 134-137.

57 Brown, *The International Law of the Sea*, at p. 228; Davies and Redgwell, 'The International Legal Regulation of Straddling Fish Stocks', at pp. 238-239 and 241; Fleischer, 'Fisheries and Biological Resources', at p. 1116; Joyner and De Cola, 'Chile's Presential Sea Proposal', at pp. 106-107; Kaye, *International Fisheries Management*, at pp. 160-161; J.L. Meseguer, 'Le Régime Juridique de l'Exploitation de Stocks Communs de Poissons au-delà des 200 Milles', *XXVIII Annuaire Français de Droit International* (1982), at pp. 898-899; Nelson, 'The Development of the Legal Regime of High Seas Fisheries', at p. 123; Oda, 'Fisheries under the United Nations Convention on the Law of the Sea', at p. 750; K. Yonezawa, 'Some Thoughts on the Straddling Stock Problem in the Pacific Ocean', in T. Kuribayashi and E.L. Miles (eds.), *The Law of the Sea in the 1990s: A Framework for Further International Cooperation* (1992), at pp. 133-134.

58 Hey, *The Regime for the Exploitation of Transboundary Marine Fisheries Resources*, at p. 54. Note also her more restrictive approach at p. 123 of that book.

59 See, in the context of straddling stocks, Joyner and De Cola, 'Chile's Presential Sea Proposal', at p. 111. For arguments supporting subtler implications of the term, see, e.g., Fleischer, 'Fisheries and Biological Resources', at p. 1116; L.D.M. Nelson, 'Declarations, Statements and 'Disguised Reservations' with Respect to the Convention on the Law of the Sea', *50 International and Comparative Law Quarterly* (2001), at p. 123.

60 See Sections 2.1.2.2 and 2.1.3.2 below.

61 The nature and extent of the 'interests' of coastal states appears to relate to both management and conservation. In other words, coastal states have an interest in maintaining the long-term sustainability of and exploiting resources, and in the coordination of conservation measures adopted for the outer continental shelf and those for the high seas. See also Nandan and Rosenne (eds.), *Virginia Commentary, vol. III*, at p. 288.

fish stocks such as straddling stocks under Article 63(2).⁶² It should be noted that Article 63(2) is not only concerned with ‘the same stock’ (namely, a straddling stock) but also ‘stocks of associated species’. The latter phrase could be interpreted to the effect that a state fishing for a stock solely occurring in the high seas whose predator species straddles the EEZ and the high seas is under an obligation to seek agreement on necessary conservation and management measures, irrespective of the engagement of the coastal state in the high seas fishery concerned. If this interpretation is adopted, certain DHSFS are subject to both Article 63(2) and the provisions of Part VII, section 2.⁶³

The wording ‘*inter alia*’ in Article 116(b) seems to indicate that the enumerated articles are not exhaustive and the interests, rights and duties of coastal states are provided for elsewhere in the LOSC. Other interests of coastal states could be invoked, among others, on the following bases.⁶⁴ First, coastal states have sovereign rights to explore and exploit natural resources on the continental shelf, including that beyond 200 miles.⁶⁵ The issue was discussed in connection with the regime for the

62 The situation covered in Article 116 includes circumstances where it is not clear whether a given fish population comprises two fish stocks including a discrete high seas stock or one straddling fish stock. On this issue, see the management of orange roughy fisheries in the high seas areas of the South Tasman Rise by Australia and New Zealand in Section 5.2.2 below.

63 It is not clear whether this type of associated stocks was in the drafters’ minds at UNCLOS III. The 1980 NEAFC Convention and the 1978 NAFO Convention which were negotiated in parallel with UNCLOS III appear to include this situation in their scope. See Convention on Future Multilateral Co-operation in North-East Atlantic Fisheries, London (1980 NEAFC Convention), 18 November 1980, Article 5(2); Convention on Future Multilateral Cooperation in the Northwest Atlantic Fisheries (1978 NAFO Convention), Ottawa, 24 October 1978, Article XI(3). The existing literature almost equates the scope of Article 63(2) to straddling stocks. See, e.g., Nandan and Rosenne (eds.), *Virginia Commentary*, vol. II, at p. 647. A notable exception would be Hey who argues that by this provision ‘the consequence that fisheries management should in fact be multi-species management is accepted’ Hey, *The Regime for the Exploitation of Transboundary Marine Fisheries Resources*, at p. 54. See also L. Miovski, ‘Solutions in the Convention on the Law of the Sea to the Problem of Overfishing in the Central Bering Sea: Analysis of the Convention, Highlighting the Provisions Concerning Fisheries and Enclosed and Semi-Enclosed Seas’, 26 *San Diego Law Review* (1989), at p. 538 (arguing that the *inter alia* clause refers to instances ‘where an EEZ species was related to, or dependent on, a species of the adjacent high seas area, or where fishing in the high seas otherwise has a direct effect on stocks in the EEZ’).

64 It has also been argued that Article 123 is also relevant. See Miovski, ‘Central Bering Sea Overfishing’.

65 See LOSC, Articles 76(1) and 77(1). The argument developed here also applies to the continental shelf beyond the outer limit of the territorial sea if a state has not yet proclaimed an EEZ or exclusive fishing zone. The latter situation is particularly relevant to the Mediterranean, where coastal states have so far refrained from extending their maritime zone to 200 miles. Note that sovereign rights of coastal states on the continental shelf exist regardless of the proclamation by the coastal states concerned. In the words of the ICJ, ‘the rights of the coastal State in respect of the area of continental shelf [...] exist *ipso facto* and *ab initio*, by virtue of its sovereignty over the land, as an extension of it in an exercise of sovereign rights for the purpose of exploring the seabed and exploiting its natural resources.’ *North Sea Continental Shelf (Federal Republic of Germany/Denmark; Federal Republic of Germany/Netherlands)*, Judg-

continental shelf even before the ILC recognized that coastal states have sovereign rights over sedentary species. For example, Mouton argued that '[t]rawling on [...] banks, even with the exclusive object to catch bottom-fish, will certainly be objected to by the coastal State as being destructive for the oysters or other 'sedentary' species'.⁶⁶

The exercise by coastal states of rights on the continental shelf is restricted by the provision of Article 78(2), which provides that the exercise must not infringe or result in any unjustifiable interference with navigation and other rights and freedoms of other states.⁶⁷ On the one hand, one might argue that this provision prevents coastal states from prescribing conservation measures unilaterally and that coastal states shall cooperate with states engaged in high seas fisheries. On the other hand, it is possible to argue that since coastal states' regulation in this regard is in any case limited to measures aimed at avoiding harm to the exploration and exploitation of natural resources on the continental shelf, Article 78(2) does not deprive coastal states of the possibility to take unilateral measures, but merely sets limitations thereon. Given the weight of wording such as 'sovereign rights' and 'exclusive right', the second argument appears to be more plausible.⁶⁸

Second, provisions in Part XII for the protection and preservation of the marine environment may be considered to be included in articles implied in the '*inter alia*' clause.⁶⁹ Whether or not components of marine ecosystems on the continental shelf are harvestable, the duty to protect and preserve the marine environment demands that all states, including high seas fishing states, do not cause harm to the environment of the continental shelf.⁷⁰ Taken together, it is submitted that fisheries in the superjacent

ment, 20 February 1969, *I.C.J. Reports 1969*, p. 3, at p. 22, para. 19. See also *Case concerning the Continental Shelf (Libyan Arab Jamahiriya/Malta)*, Judgment, 3 June 1985, *I.C.J. Reports 1985*, p. 13, at p. 33, para. 33.

66 M.W. Mouton, *The Continental Shelf* (1952), at p. 151. O'Connell, who defended coastal state sovereign rights over continental shelf resources, also argued for coastal state jurisdiction in this regard. D.P. O'Connell, 'Sedentary Fisheries and the Australian Continental Shelf', 49 *American Journal of International Law* (1955), at pp. 205-206 (the doctrine of abuse of rights might be resorted to as a solution to the interesting legal problem of a hypothetical collision of two incompatible rights, and the coastal state is competent to require foreign nationals to employ suitable rollers on the foot-wire of the trawl). It is of interest to note that he wrote in a book published in 1982 that '[t]hirty years later, [...] no incompatibility between fishing for pelagic and sedentary species has been recorded'. O'Connell, *The International Law of the Sea, Vol. I*, at p. 500.

67 For various proposals during the negotiations in UNCLOS III, see Nandan and Rosenne (eds.), *Virginia Commentary, vol. II*, at pp. 901-907.

68 It is noted that the LOSC added the word 'infringe' in this provision. According to Attard, the word was inserted because 'the concept of 'unjustifiable interference' was not felt to be sufficient to safeguard the international community's interests in view of the new extensive EEZ powers allocated to the coastal State'. D.J. Attard, *The Exclusive Economic Zone in International Law* (1987), at p. 144.

69 Nandan and Rosenne (eds.), *Virginia Commentary, vol. III*, at pp. 287-288.

70 See LOSC, Article 192.

water column in the high seas are subject to the rights, duties and interests of coastal states concerning the continental shelf.⁷¹

There is not much state practice with regard to the regulation of high seas fisheries in the water column superjacent to the continental shelf. Nevertheless, existing practice might be considered to indicate assertions of coastal state jurisdiction (or interests) over fisheries in the water column superjacent to the outer continental shelf. The Canadian Senate suggested that the government should examine the possibility of action concerning the regulation of bottom trawl fishing over Canada's outer continental shelf.⁷² The Chilean 'presential sea' doctrine could also be considered as an expression of coastal state interests over the high seas area superjacent to the outer continental shelf as it extends to the outermost limit of the asserted outer continental shelf of the Chilean islands in the South Pacific.⁷³ It should be noted that until the outer limit of the outer continental shelf is determined on the basis of recommendations by the Commission on the Limits of the Continental Shelf (CLCS), states might hesitate in taking action regarding activities in the superjacent water column of their continental shelf.⁷⁴ Opposition to the exercise of such jurisdiction is found in a European Commission paper, especially in relation to Grand Banks off the Canadian coast and the South West Atlantic.⁷⁵ Some commentators explicitly advocate the exercise of coastal state jurisdiction over high seas areas superjacent to the continental shelf.⁷⁶

71 It should of course be noted that the exercise of sovereign rights by coastal states over the continental shelf does not affect the legal status of the superjacent water. *Ibid.*, Article 78(1).

72 Standing Senate Committee on Fisheries and Oceans of the Senate of Canada, *The Management of Atlantic Fish Stocks: Beyond the 200-Mile Limit*, February 2007, at pp. 51-52.

73 The Preliminary Report of the International Law Association (ILA) Outer Continental Shelf Committee notes 'the progressive encroachment by certain states of their fisheries jurisdiction within the superjacent waters of their outer continental shelf' and refers to Canada and Chile as examples of that type of state practice. Preliminary Report, Committee on Legal Issues of the Outer Continental Shelf, New Delhi Conference (2002), 15 January 2002, at p. 15. For the 'presential sea' doctrine, see Section 5.2.1 below.

74 See also Owen, *The Powers of the OSPAR Commission and Coastal State Parties to the OSPAR Convention to Manage Marine Protected Areas on the Seabed Beyond 200 nm From the Baseline: A Report for WWF Germany*, at p. 45.

75 Background Paper No. 3 on Exclusive Economic Zones, Underwater Resources (Including Fisheries Resources, Continental Shelves, Law of the Sea), at p. 15. But the paper also states that coastal states, at least EU member states, should also exercise their duties for conservation (including the relevant provisions of the EC acquis). See European Commission Background Paper No. 3, at p. 14.

76 See, e.g., Fleischer, 'Fisheries and Biological Resources', at p. 1105; M. Hayashi, 'Global Governance of Deep-Sea Fisheries', 19 *International Journal of Marine and Coastal Law* (2004), at p. 293; Mioviski, 'Central Bering Sea Overfishing', at pp. 555-556; E.J. Molenaar, 'Unregulated Deep-Sea Fisheries: A Need for a Multi-Level Approach', 19 *International Journal of Marine and Coastal Law* (2004), at pp. 243-246; J. Mossop, 'Protecting Marine Biodiversity on the Continental Shelf Beyond 200 Nautical Miles', 38 *Ocean Development and International Law* (2007), at pp. 297-299; Owen, *The Powers of the OSPAR Commission and Coastal State Parties to the OSPAR Convention to Manage Marine Protected Areas on the Seabed Beyond 200 nm From the Baseline: A Report for WWF Germany*, at pp. 40-41; A. Ser-

In this context, it is of interest to note that during the first meeting of the open-ended working group to study the issues of conservation and sustainable use of biodiversity beyond areas of national jurisdiction established by the UNGA, some delegations stated that ‘the coastal State was fully entitled to adopt any conservation and management measures it deemed necessary to protect its sedentary species on the continental shelf. Those may include the possibility of imposing restrictive measures on fishing activities in the high seas over its continental shelf, including on fishing practices that were deemed to have a negative impact on sedentary species’.⁷⁷ According to the Co-Chairpersons, ‘[i]t was acknowledged that under the Convention a coastal State had the right to regulate the activities that had negative impacts on the sedentary species of its continental shelf and the right to adopt the necessary measures, including restrictive measures, to protect those resources’.⁷⁸

2.1.1.4 Scope of ‘nationals’

Under Article 116, the high seas fishing right of all states is formulated as the right *for their nationals to engage in fishing* on the high seas. The scope of the right to fish on the high seas under Article 116 remains ambiguous in respect of the meaning of the term ‘nationals’. There is no article defining the term ‘nationals’ comparable to Article 14 of the HSFC.⁷⁹ In this respect, an argument has been put forward that this omission may be interpreted to the effect that non-flag states whose national is a member of the crew of a third state vessel must exercise jurisdiction over fishing activities by such a vessel and that they must assume responsibility to prescribe and enforce conservation measures.⁸⁰ In this regard, it is of interest to note a provision of the LOSC concerning fisheries in the EEZ. Article 62(4) starts with the following sentence: ‘Nationals of other States fishing in the exclusive economic zone shall comply with the conservation measures and with the other terms and conditions

dy, ‘Schrödinger’s TAC: Superposition of Alternative Catch Limits from 2003 to 2006 under the South Tasman Rise Orange Roughy Arrangement between Australia and New Zealand’, in R. Shotton (ed.), *Deep Sea 2003: Conference on the Governance and Management of Deep-sea Fisheries: Part 1: Conference Reports. Queenstown, New Zealand, 1-5 December 2003* (2005). But see the discussions on the unilaterally designated MPAs (including those whose superjacent waters are high seas) applicable only to one’s own nationals in Section 3.3 below.

⁷⁷ A/61/65, at p. 7, para. 22.

⁷⁸ *Ibid.*, at p. 23 (Summary of trends prepared by the Co-Chairpersons, para. 9). But note that, in discussing the draft Co-Chairs’ summary of trends, the US objected to and suggested the deletion of the text on the rights of coastal states that do not accurately reflect the provisions in the LOSC. *Earth Negotiations Bulletin (ENB)*, Vol. 25 No. 25, at p. 4. *ENB* is available at the website of the International Institute for Sustainable Development <<http://www.iisd.ca/>>. See also a view in E.J. Molenaar, ‘Marine Biodiversity in Areas Beyond National Jurisdiction’, 22 *International Journal of Marine and Coastal Law* (2007), at p. 118.

⁷⁹ Note that the French version of the LOSC uses ‘ressortissants’ as opposed to ‘nationaux’ employed in the HSFC.

⁸⁰ See, e.g., Kaye, *International Fisheries Management*, at p. 106 note 57; Fleischer, ‘Fisheries and Biological Resources’, at p. 989; Molenaar, ‘Management and Conservation of Orange Roughy’, at p. 106 note 121 and its accompanying text.

established in the laws and regulations of the coastal State'. The article continues by stipulating that '[t]hese laws and regulations [...] may relate, inter alia, to the following: (a) licensing of fishermen, fishing vessels [...]'. Taken together, it could be argued that both natural persons and vessels are included in the meaning of the term 'nationals'.

This argument encounters several difficulties. First, if the term is interpreted in this way, it is too demanding for such non-flag states. For example, not only the duty to take conservation measures under Article 117 but also the duty of negotiation under Article 118 will be imposed on such states. Second, the drafting history indicates the contrary. Almost all proposals for articles concerning the conservation and management of living resources of the high seas seem to consistently employ 'nationals' in the same sense as the HSFC. As regards the right to fish, an exception is found in Article III(1) of the 1971 US draft articles on territorial sea, straits, and fisheries submitted to the UN Seabed Committee, which provided that the coastal state and any other state whose nationals *or vessels* exploit or desire to exploit a regulated species have an equal right. Formulated in this way, 'nationals' seem to include natural persons as opposed to 'vessels'. This formulation was not adopted in the final text of the LOSC, and both subsequent proposals and the text of the LOSC retain phrases similar to the HSFC. Thus, it is safe to say that the term 'nationals' as employed in the LOSC is used in the same sense as the HSFC, and it means vessels flying the flag of that state.⁸¹

However, the term 'nationals' has often been used in the sense of natural and juridical persons in recent international fisheries instruments. In addressing IUU fishing, states, whether flag states or not, are increasingly required to take action against their nationals where their nationals engage in or support IUU fishing or attempt the reflagging of vessels.⁸² At the regional level, newly established RFMO/As prescribe the duty of investigation and report on actions taken by each contracting party in response to any alleged serious infringement of conservation, management and enforcement measures by its nationals or foreign flagged fishing vessels owned or operated by its nationals.⁸³ In addition, under the new NAFO Convention, parties shall take measures, or cooperate, to ensure that their nationals and fishing vessels owned or operated by their nationals conducting fishing activities in the Convention Area comply with the provisions of the Convention and any conservation, management and enforcement measure and shall investigate and report on the alleged violations of the provisions of the Convention and agreed measures.⁸⁴ Furthermore, the CBS Convention does not employ the term 'nationals' in the sense of 'vessels'.⁸⁵ The

81 See also Nandan and Rosenne (eds.), *Virginia Commentary*, vol. III, at pp. 286 and 294.

82 E.g., UNGA Resolution 61/105, para. 36.

83 SEAFO Convention, Article 13(6)(a); SEAFO, Conservation Measure 07/06 relating to Interim Measures to Amend the Interim Arrangement of the SEAFO Convention, para. 6(e)-(f); SIOFA, Article 10(3)-(4).

84 New NAFO Convention, Article X(1)(g)-(h).

85 Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea (CBS Convention), Washington, 16 June 1994, Articles XI(1), XII(1) and (3), XVI(4).

Draft Convention for the South Pacific RFMO explicitly provides that ‘nationals’ includes both natural and legal persons.⁸⁶ At the national level, the legislation of some high seas fishing states addresses activities of their nationals as masters or crew members of foreign fishing vessels or beneficial owners.⁸⁷

Notwithstanding the above, terms are not used in a uniform way, among others, in the FSA. The FSA uses various phrases such as ‘States whose nationals fish for such stocks in the region’ (Article 7(1)), ‘States fishing on the high seas’ (Article 8(1)) and ‘A State whose vessels fish on the high seas’ (Article 18(1)). Despite different phrases in these articles, the FSA does not appear to intend to refer to different states by virtue of these articles. This view may be supported, for example, by the declarations of the European Community deposited on signature and ratification as follows: ‘The European Community and its Member States understand that the term “States whose nationals fish on the high seas” shall not provide any new grounds for jurisdiction based on the nationality of persons involved in fishing on the high seas rather than on the principle of flag State jurisdiction’.⁸⁸ It appears that the declarations focus on the rejection of any potential for a new jurisdictional basis. Furthermore, it could be argued that the EC and its member states are not willing to assign a meaning to ‘nationals’ other than vessels in the context of high seas fisheries.

2.1.2 Cooperation

2.1.2.1 Provisions of the LOSC

Cooperation between states is one of the essential elements in the legal regime of high seas fisheries under the LOSC. Article 117 of the LOSC enunciates the duty of *all* states to cooperate in taking the necessary conservation measures. It has been pointed

⁸⁶ Revision 3 of the Draft SPRFMO Agreement, Article 1(o).

⁸⁷ Australia, Fisheries Management Act, Section 105E-105F; Canada’s National Plan of Action to Prevent, Deter and Eliminate Illegal, Unregulated and Unreported Fishing, at p. 19; National Plan of Action to Prevent, Deter and Eliminate Illegal, Unregulated and Unreported Fishing / Republic of Korea, at p. 11 (measures to prevent IUU fishing through fishing licence systems and to prohibit Korean nationals from being involved in IUU fishing by the Fisheries Law); New Zealand, Fisheries Act, Section 113E. See also Republic of Namibia, National Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, Part B, Section 2.2.2. For the United States, including the Lacey Act, which enables the US authorities to prosecute US nationals who engage in certain forms of IUU fishing where there is some nexus between the activity in question and the United States, see National Plan of Action of the United States of America to Prevent, Deter, and Eliminate Illegal, Unregulated, and Unreported Fishing, at pp. 5-6. See also Miller, ‘Management and Governance Conventions and Protocols: SEAFAC, WCPFC and SADC’, at pp. 606-607 note 13.

⁸⁸ Interpretative declarations, para. 3. All the declarations regarding the FSA are available at the UN Treaty Collection database. See <http://untreaty.un.org/ENGLISH/bible/englishinternet_bible/partI/chapterXXI/treaty9.asp> (last visited 27 May 2008).

out that the duty to cooperate in taking measures cannot be avoided by individually taking measures; this view is reinforced by Article 118.⁸⁹

The provisions of the LOSC leave some ambiguities with regard to the content of the duty of cooperation.⁹⁰ It is not clear: (1) which states are required to cooperate; (2) which states are entitled to require cooperation from other states; (3) what form cooperation needs to take.

As regards the first issue, the scope of states required to cooperate under the LOSC appears to be broad: in fact, as suggested by the second sentence of Article 118, even if nationals of two states are not engaged in fishing for the same stock in the same area of the high seas, they are still under the duty to cooperate when targeted stocks are biologically related or two states are engaged in the fishery for the same stock in different areas of the high seas.⁹¹ It has been argued that the reference to *all* states aims to include both fishing states and coastal states.⁹² It is unlikely that states other than coastal, port or market states have the duty to cooperate if their vessels or nationals are not involved in harvesting and post-harvesting activities at all.

Regarding the second issue, it could be argued that states which do not have the duty still have the right of cooperation if they have an interest in the fishery resource concerned. In other words, arguments could be made that states not engaged in high seas fisheries, including coastal states, are entitled to require 'some' cooperation from high seas fishing states, such as allowing participation in benefit-sharing. Otherwise, as Joyner and DeCola write: '[t]rue, all states may in principle enjoy the same rights to exploit living resources of the high seas. But, it is believed, only states having distant-water fishing fleets will be able to harvest them without having to share benefits with other nations'.⁹³ If the coastal state in the region cannot afford to invest in costly high seas fishing fleets, the special recognition of developing states through, say, favourable allocation of fishing opportunities will not be meaningful unless the entitlement is transferrable to other states. The increased participation in high seas fisheries through support activities might be one solution particularly where the stock is fully-exploited and the states should not develop their fishing capacities.

With regard to the third issue, the relevant articles do not command particular types of cooperation to be pursued by the states concerned, nor do these articles

89 Nandan and Rosenne (eds.), *Virginia Commentary*, vol. III, at p. 294; Hey, *The Regime for the Exploitation of Transboundary Marine Fisheries Resources*, at pp. 34-35. But see Fleischer, 'Fisheries and Biological Resources', at p. 1114.

90 It has been pointed out that '[a] broader issue undermining the sustainability of high seas fisheries is the absence of a consensus on the nature of the duty to cooperate under international law for the conservation and management of high seas fisheries'. A/60/63, at p. 58, para. 211. The Report continues by observing the problem associated with fishing by third party vessels without regard for RFMO conservation measures.

91 See also Davies and Redgwell, 'The International Legal Regulation of Straddling Fish Stocks', at p. 229.

92 See also Nandan and Rosenne (eds.), *Virginia Commentary*, vol. III, at p. 294.

93 Joyner and De Cola, 'Chile's Presential Sea Proposal', at p. 109.

explicitly state the consequences of the failure to cooperate.⁹⁴ Cooperation may take various forms and need not necessarily be pursued in a single form at any given time.⁹⁵ It has been argued that cooperation may have objectives other than conservation such as the orderly conduct of fishing operations.⁹⁶

Articles 116-119 do not explicitly require cooperation through international organizations. The third sentence of Article 118 stipulates that fishing states ‘shall, as appropriate, cooperate to establish subregional or regional fisheries organizations to this end’. This suggests that cooperation through international fisheries organizations, particularly regional or subregional, is generally considered to be desirable in the LOSC.⁹⁷ But, under the LOSC, there is no explicit obligation for high seas fishing states to join the relevant RFMO.⁹⁸ Thus, it is not impossible for existing fishing states to continue fishing without joining or even cooperating with regional fisheries organizations. Such organizations do not have to be granted a management mandate; they can be advisory bodies.⁹⁹ It is up to the states concerned to decide whether or not to collectively adopt conservation and management measures.¹⁰⁰

Only in three situations are particular actions required under the LOSC. First, the second sentence of Article 118 stipulates the duty to enter into negotiations with a view to taking the appropriate conservation measures when their nationals exploit identical living resources or different resources in the same area of the high seas. It has been argued that the duty to enter into negotiations means the duty to negotiate in good faith. The duty has been examined in the *North Sea Continental Shelf* cases, where the International Court pointed out as one of the rules binding upon states for maritime delimitations the following:

94 Some commentators attach significant consequences to the lack of cooperation. See, e.g., Mioviski, ‘Central Bering Sea Overfishing’, at p. 536.

95 Burke, *The New International Law of Fisheries*, at pp. 122-124. Miles and Burke identify the obligation of contributing and exchanging available scientific information, catch and fishing effort statistics and other data relevant to the conservation of fish stocks as the most basic obligation. E.L. Miles and W.T. Burke, ‘Pressures on the United Nations Convention on the Law of the Sea of 1982 Arising From New Fisheries Conflicts: The Problem of Straddling Stocks’, 20 *Ocean Development and International Law* (1989), at p. 351. The ICJ in the *Fisheries Jurisdiction* cases required some forms of cooperation such as a joint examination of conservation measures and entering into negotiations in giving effect to the duty of due regard.

96 Fleischer, ‘The New Régime of Maritime Fisheries’, at p. 173.

97 Article 119(2) concerning data exchange through competent international organizations also underlines the importance of institutional cooperative mechanisms.

98 J. Beer-Gabel and V. Lestang, *Les Commissions de Pêche et Leur Droit* (2003), at p. 45; Orrego Vicuña, *The Changing International Law of High Seas Fisheries*, at p. 201; M. Hayashi, ‘The 1995 Agreement on the Conservation and Management of Straddling and Highly Migratory Fish Stocks: Significance for the Law of the Sea Convention’, 29 *Ocean & Coastal Management* (1995), at p. 58.

99 See COFI/2007/9 Rev.1, at p. 3 note 5 and its accompanying text.

100 States are obliged to enter into negotiations with a view to taking necessary measures, but the text of the LOSC does not explicitly require them to agree on collective measures or even to negotiate such measures.

‘[T]he parties are under an obligation to enter into negotiations with a view to arriving at an agreement, and not merely to go through a formal process of negotiation as a sort of prior condition for the automatic application of a certain method of delimitation in the absence of agreement; they are under an obligation so to conduct themselves that the negotiations are meaningful, which will not be the case when either of them insists upon its own position without contemplating any modification of it’¹⁰¹

In the *Fisheries Jurisdiction* cases, the Court further elaborated the duty in the context of fisheries as follows:

‘[t]he task before them will be to conduct their negotiations on the basis that each must in good faith pay reasonable regard to the legal rights of the other in the waters around Iceland outside the 12-mile limit, thus bringing about an equitable apportionment of the fishing resources based on the facts of the particular situation, and having regard to the interests of other States which have established fishing rights in the area. It is not a matter of finding simply an equitable solution, but an equitable solution derived from the applicable law.’¹⁰²

The Court ruled that the parties were under mutual obligations to undertake negotiations in good faith for the equitable solution of their differences concerning their respective fishery rights, taking into account elements specified by the Court.¹⁰³

In view of these judgments, while states are regarded as being in violation of the obligation when they decline to negotiate, negotiations are considered to be sufficient as long as they are conducted in good faith and the duty does not require fishing states to reach agreement.¹⁰⁴ Moreover, Article 300 of the LOSC concerning abuse of rights implies that states may not require other states to negotiate indefinitely if they have

101 *I.C.J. Reports 1969*, at p. 47, para. 85. The ‘meaningful’ or ‘good faith’ negotiation formula was reaffirmed in the *Case concerning the Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, Judgment, 25 September 1997, *I.C.J. Reports 1997*, p. 7, at p. 78, para. 141. see also *Case concerning the Land and Maritime Boundary between Cameroon and Nigeria (Cameroon v. Nigeria: Equatorial Guinea Intervening)*, Judgment, 10 October 2002, *I.C.J. Reports 2002*, p. 303, at p. 424, para. 244 (Articles 74 and 83 of the LOSC do not require that delimitation negotiations should be successful, but, like all similar obligations to negotiate in international law, ‘negotiations have to be conducted in good faith’; *Arbitration Between Barbados and the Republic of Trinidad and Tobago*, Award of the Arbitral Tribunal, 11 April 2006, at para. 292 (‘obliged to negotiate in good faith’).

102 *I.C.J. Reports 1974*, at p. 33, para. 78; *I.C.J. Reports 1974*, at p. 202, para. 69.

103 *I.C.J. Reports 1974*, at pp. 34-35, para. 79; *I.C.J. Reports 1974*, at pp. 205-206, para. 77.

104 See, e.g., Burke, *The New International Law of Fisheries*, at p. 125; Fleischer, ‘The New Régime of Maritime Fisheries’, at pp. 157-158; D. Freestone, ‘International Fisheries Law Since Rio: The Continued Rise of the Precautionary Principle’, in A. Boyle and D. Freestone (eds.), *International Law and Sustainable Development: Past Achievements and Future Challenges* (1999), at p. 148; Kaye, *International Fisheries Management*, at pp. 118-119; Nandan and Rosenne (eds.), *Virginia Commentary*, vol. III, at p. 302; O’Connell, *The International Law of the Sea*, Vol. I, at p. 551. But, in the context of the 2006 Barbados/Trinidad and Tobago arbitral award, see also B. Kwiatkowska, ‘The 2006 Barbados/Trinidad and Tobago Award: A Landmark in Compulsory Jurisdiction and Equitable Maritime Boundary Delimitation’, *22 International Journal of Marine and Coastal Law* (2007), at pp. 30 and 46.

failed to agree on conservation measures. If the negotiation fails to reach an agreement on the appropriate conservation measures to be taken, it appears that because of the phrase ‘shall take, *or* cooperate in taking’ (emphasis added), each fishing state is not relieved from the duty in Article 117 but is still under the duty to take necessary conservation measures for its nationals.

In relation to straddling stocks and stocks associated therewith, some states have expressed a different view. Cape Verde, Sao Tome and Principe, and Uruguay declared upon signing the LOSC that high seas fishing states had an obligation to agree with the coastal state on the necessary conservation measures.¹⁰⁵

Second, fishing states are obliged, as appropriate, to cooperate to establish regional or subregional fisheries organizations under the third sentence of Article 118. It is not clear under what circumstances such organizations need to be established by virtue of the wording ‘as appropriate’. Even for a fishery in which a number of states are engaged, it is still possible to conclude an arrangement for management, rather than to establish an organization.¹⁰⁶

Third, Article 119(2) demands that available scientific information, catch and fishing effort statistics, and other data relevant to the conservation of fish stocks shall be exchanged on a regular basis through competent international organizations where appropriate.¹⁰⁷ In view of the difficulty caused by sporadic statistics on high seas fisheries, the exchange of data is an important condition for the conservation of marine living resources.¹⁰⁸

It has been argued that, given the duty to cooperate, new entrants to a fishery where conservation measures have been taken by existing fishing states, in particular through RFMOs, must apply the existing conservation measures to their nationals as

105 Declarations are available at the website of the DOALOS mentioned above. As Article 309 of the LOSC prohibits reservations, declarations may not be considered as reservations unless reservations are allowed in an amending agreement; interpretive declarations can be considered as ‘offers’ of interpretation but lack any inherent binding character. Nelson, ‘Declarations, Statements and ‘Disguised Reservations’ with Respect to the Convention on the Law of the Sea’, at pp. 775 and 784. Compare this with the following statement: ‘Yet the general obscurity and uncertainty which now are inherent in these two articles [i.e., Articles 309 and 310] will probably only be dissipated by practice and by decisions rendered in application of the dispute settlement provisions of Part XV of the Convention.’ Rosenne and Sohn (eds.), *Virginia Commentary*, vol. V, at p. 227.

106 See Chapters 4-5.

107 It is argued that scientific information should include biological data, the migratory habitats of the species in question, the fishing gear and methods utilized in harvesting those species, and the landing of each species, including incidental catches. See Nandan and Rosenne (eds.), *Virginia Commentary*, vol. III, at p. 312.

108 Ibid.; Y. Tanaka, ‘Obligation to Co-operate in Marine Scientific Research and the Conservation of Marine Living Resources’, 65 *Zeitschrift für ausländisches öffentliches Recht und Völkerrecht* (2005), at p. 944. Moreover, as scientific work is conducted on the basis of the results of earlier investigations, the exchange of data is an important condition for the progress of scientific research in the future. Ibid., at p. 940.

far as the measures are taken in accordance with Article 119.¹⁰⁹ On the other hand, it has also been argued that the right to fish on the high seas in Article 116 and the requirement of non-discrimination in Article 119(3)¹¹⁰ prevent existing fishing states from excluding new entrants.¹¹¹ The topic is more controversial in relation to restrictions on fishing opportunities such as the allocation of catches than in relation to the regulation of fishing gear or methods: on the one hand, new entrants should not in principle be excluded from a share in the total allowable catch (TAC), given that Article 116 allows nationals of every state to engage in fishing; on the other hand, it is possible to argue that certain states may be placed in a less favourable position in respect of the allocation because of the factors enumerated in Article 119(1).¹¹²

As the LOSC stipulates no criteria for the allocation of fishing opportunities,¹¹³ it remains unclear whether certain states could be given preferential treatment in allocation by virtue of the existence of coastal state interests as referred to in Article 116. The concept of preferential rights of coastal states outside the exclusive fishery zone under carefully circumscribed situations was recognized in the *Fisheries Jurisdiction* cases, but the concept in these cases, namely the preferential rights of Iceland up to 50 miles, was later subsumed within the 200-mile EEZ regime. The identification of such rights under customary international law has been criticized on the ground that state practice and/or *opinio juris* do not exist in this regard.¹¹⁴ The LOSC does not articulate such rights with regard to high seas fisheries.¹¹⁵

109 See Burke, *The New International Law of Fisheries*, at p. 131; Nandan and Rosenne (eds.), *Virginia Commentary*, vol. III, at p. 313 (arguing that, where conservation and management measures have already been established, new entrants must seek to exercise their right to fish through that mechanism and cannot ignore or flaunt such measures simply because they have not been able to obtain an allocation); Division for Ocean Affairs and the Law of the Sea, *The Regime for High-Sea Fisheries*, at p. 34; A. Tahindro, 'Conservation and Management of Transboundary Fish Stocks: Comments in Light of the Adoption of the 1995 Agreement for the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks', 28 *Ocean Development and International Law* (1997), at p. 25.

110 Article 119(3) of the LOSC requires states, in taking and implementing conservation measures, to ensure non-discrimination, in form or in fact, against the fishermen of any state.

111 See Kaye, *International Fisheries Management*, at pp. 153-154; Fleischer, 'Fisheries and Biological Resources', at p. 1115; Oda, 'Fisheries under the United Nations Convention on the Law of the Sea', at p. 752.

112 See also Nandan and Rosenne (eds.), *Virginia Commentary*, vol. III, at p. 313; Division for Ocean Affairs and the Law of the Sea, *The Regime for High-Sea Fisheries*, at p. 34.

113 In addition to the literature cited in connection with coastal state interests, see E.J. Molenaar, 'Regional Fisheries Management Organizations: Issues of Participation, Allocation and Unregulated Fishing', in A.G. Oude Elferink and D.R. Rothwell (eds.), *Oceans Management in the 21st Century: Institutional Frameworks and Responses* (2004), at p. 78.

114 Fleischer, 'The New Régime of Maritime Fisheries', at p. 123.

115 The concept of states 'overwhelmingly dependent on the exploitation of the living resources' is found in Article 71, but this provision only means that such states are exempted from the duty under Articles 69 and 70 and the dependence is qualified as 'living resources of its exclusive economic zone'. The definition of the term 'geographically disadvantaged states' includes coastal states 'whose geographical situation makes them dependent upon the exploitation of the living resources of the exclusive economic zones of other States in the subregion or region for

2.1.2.2 *Post-UNCLOS III developments*

The growing awareness of the need for cooperation through institutions has led to the elaboration of the duty of cooperation in high seas fisheries in a number of ways and has affected the exercise of the right of fishing on the high seas. As far as high seas fisheries are concerned, means to give effect to the duty of cooperation have been centred on, if not limited to, institutional mechanisms such as RFMO/As in recent international fisheries instruments.¹¹⁶ Some authors argue that states are already bound under international law to cooperate through RFMO/As.¹¹⁷ In treaty law, the most notable example is the FSA. On the one hand, the FSA does not exclude direct cooperation between states, as confirmed, *inter alia*, by Article 8(1). On the other hand, the FSA provides that where RFMO/As have the competence to establish conservation and management measures, high seas fishing states and relevant coastal states shall give effect to their duty to cooperate by becoming members of such an RFMO or participants in such an arrangement or by agreeing to apply the conservation and management measures established by such an RFMO/A.¹¹⁸ Read together, these articles imply two consequences. First, states are not relieved from the duty to cooperate simply by participating in the work of regional organizations with an advisory mandate. Second, the option of direct cooperation could be used only where no existing RFMO/A with the competence to establish conservation and management measures exists or where a given state is neither fishing for fish stocks regulated by the RFMO/A concerned nor the coastal state in the subregion or region. Article 10 enumerates functions of RFMO/As through which states fulfil their duty to cooperate. While members shall ‘agree on and comply with conservation and management measures to ensure the long-term sustainability of straddling fish stocks and highly migratory fish stocks’,¹¹⁹ they are not obliged to agree on participatory rights such as

adequate supplies of fish for the nutritional purposes of their populations or parts thereof’. As neither concept is mentioned in the context of high seas fisheries, these states are unlikely to be given preferential allocations.

116 Note that while ‘arrangement’ is defined in Article 1(d) of the FSA, the latter does not define the term ‘regional fishery management organization’. The term is considered to mean an organization having the competence to establish conservation and management measures. See, e.g., Chairperson’s Draft Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, Article 1(1)(i).

117 See Gjerde, ‘High Seas Fisheries Management under the Convention on the Law of the Sea’, at p. 302; Rayfuse, ‘Countermeasures and High Seas Fisheries Enforcement’, at pp.56 and 59 (explicitly referring to DHSFS as well); Tahindro, ‘Conservation and Management of Transboundary Fish Stocks’, at p. 27. See also H. Schiffman, *Marine Conservation Agreements: The Law and Policy of Reservations and Vetoes* (2008), at p. 19.

118 FSA, Article 8(3). Article 8(6) on prior consultation within a competent RFMO/A before the submission of any proposal to an intergovernmental organization reinforces this proposition. See also Tahindro, ‘Conservation and Management of Transboundary Fish Stocks’, at p. 21. But note that the article uses ‘should’ rather than ‘shall’. Thus, this is not a legal obligation but a desirable option.

119 FSA, Article 10(a).

allocations of allowable catch or levels of fishing effort within the RFMO/A, as the wording ‘as appropriate’ indicates.¹²⁰

It is not clear, however, what implications the requirement of cooperation through institutional mechanisms under these provisions have for the implementation of the duty of cooperation. Article 8(3), as well as Article 8(4), is formulated with regard to ‘regional fisheries management organization or arrangement’, the term ‘arrangement’ in turn being defined as ‘a cooperative mechanism established in accordance with the Convention and this Agreement by two or more States for the purpose, inter alia, of establishing conservation and management measures in a subregion or region for one or more straddling fish stocks or highly migratory fish stocks’ in Article 1(d). Such a broad definition may be interpreted so flexibly as to allow both treaties and non-binding agreements.¹²¹ Then, it is not clear how this is different from direct cooperation between states. For example, Henriksen and others observe that while an arrangement can be distinguished from direct cooperation, it is not possible to identify precisely what constitutes an arrangement and makes it different from direct cooperation and an organization.¹²²

The scope of the right and obligation of cooperation was clarified by the introduction of the concept ‘real interest in the fisheries concerned’.¹²³ The concept could be interpreted in two ways. The concept can be interpreted to mean that states are entitled to participate in RFMO/As on the ground that they have a real interest. Such states may become members of or participants in RFMO/As with the competence to establish conservation and management measures.¹²⁴ The terms of participation of such RFMO/As shall not preclude such states from membership or participation, nor shall they be applied in a manner which discriminates against any state or group of states having a real interest in the fisheries concerned.¹²⁵ First and foremost, high seas fishing states are qualified as ‘having a real interest’. However, questions such as to what extent the state concerned needs to be engaged in the fishery or research and whether the intention to engage in the fishery or research or past fishing record qualify the state in this regard remain. In addition to high seas fishing states, given the first sentence of Article 8(3), it is very likely that the ‘relevant’ coastal states would be considered to be entitled to take part in the regulatory system, whether or not they

120 Ibid., Article 10(b).

121 See, e.g., Henriksen *et al.*, *Law and Politics in Ocean Governance*, at p. 17.

122 Ibid.

123 FSA, Article 8(3).

124 Ibid.

125 Ibid. This does not by itself mean that RFMO constitutive instruments may not provide for approval systems. See Molenaar, ‘Regional Fisheries Management Organizations: Issues of Participation, Allocation and Unregulated Fishing’, at p. 76; W. Edeson, ‘Soft and Hard Law Aspects of Fisheries Issues: Some Recent Global and Regional Approaches’, in M.H. Nordquist, J.N. Moore and S. Mahmoudi (eds.), *The Stockholm Declaration and Law of the Marine Environment* (2003), at p. 178 note 25. Davies and Redgwell claim that the participation clauses of NAFO and the CBS Convention may require a reassessment in the light of Article 8(3). Davies and Redgwell, ‘The International Legal Regulation of Straddling Fish Stocks’, at p. 264 note 365.

are engaged in the fishery concerned on the high seas. If so, this coastal state entitlement to take part in regulation, which is found in the HSFC but is not explicitly stipulated in the LOSC, constitutes an expression of coastal state interests under the LOSC.¹²⁶

This concept might also be interpreted to imply that existing members of and participants in RFMO/As could decline a request by non-members/non-participants on the ground that they do not have a real interest.¹²⁷ This argument is perhaps based on an interpretation *a contrario* of the word ‘may’: as there is no provision entitling states not having a real interest to become a member of or a participant in RFMO/As, such states ‘may not’ do so (at least under the FSA) unless otherwise agreed at the regional level.¹²⁸ In this regard, a question might be raised with regard to coastal states not engaged in high seas fisheries for the stock concerned and non-coastal states that have not engaged or do not plan to engage in the exploitation of the fishery resources concerned at all. Some commentators limit the scope of states having a real interest to high seas fishing states only¹²⁹ or to high seas fishing states and coastal states. Others, however, have argued that an interest in conservation, rather than in engaging in fisheries, is included in the scope of the term ‘real interest’. These authors claim that Article 11 of the FSA, which provides for determining the nature and extent of participatory rights for new entrants, should not be interpreted to exclude a situation where no fishing opportunities are allocated to new members/participants at all and, as the use of ‘such as’ in Article 10(b) suggests, participatory rights in RFMOs are not limited to those benefiting from the utilization of fishery resources.¹³⁰

126 The recognition of coastal state interests is, of course, not limited to this. Another form of recognition is the requirement of compatibility.

127 Orrego Vicuña, *The Changing International Law of High Seas Fisheries*, at p. 207. See also E.J. Molenaar, ‘The Concept of Real Interest and Other Aspects of Co-operation through Regional Fisheries Management Mechanisms’, 15 *International Journal of Marine and Coastal Law* (2000), at pp. 497-501.

128 On the theory of treaty interpretation, including *expressio unius est exclusio alterius* and interpretation *a contrario*, see A. Aust, *Modern Treaty Law and Practice* (2000), at pp. 200-201; A.D. McNair, *The Law of Treaties* (1961), at pp. 399-410.

129 Orrego Vicuña, *The Changing International Law of High Seas Fisheries*, at p. 208.

130 Molenaar, ‘Regional Fisheries Management Organizations: Issues of Participation, Allocation and Unregulated Fishing’, at p. 78; D.A. Balton, ‘Strengthening the Law of the Sea: The New Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks’, 27 *Ocean Development and International Law* (1996), at p. 139 note 97. See also Gavouneli, *Functional Jurisdiction in the Law of the Sea*, at p. 110 (stating that third’ states having a real interest are invited). Such an interpretation is not the only possible interpretation of Article 10(b), however. Conflicts may arise between a new member/participant wishing to engage in a fishery and existing members/participants that do not want to allocate fishing opportunities to the new member/participant where the stock concerned is fully-exploited. In other words, the main concern in formulating criteria for the determination of the nature and extent of participatory rights for new entrants might be how to deal with new entrants in situations of limited availability of resources, rather than the acceptance of the participation of conservation-minded states. For the drafting process of Article 11, see Orrego Vicuña, *The Changing International Law of High Seas Fisheries*, at pp. 210-211.

The FSA as such does not provide a clear answer to the question of what is meant by a real interest.¹³¹ The FSA does not define the term ‘real interest’, nor do related global or regional instruments.¹³² The examination of the constitutive instruments and practice of RFMOs will shed some light on this point. First, except for the 1978 NAFO Convention, which requires members of the Fisheries Commission to be currently participating or expecting to participate in fisheries, RFMO/As allow participation in the organization or the decision-making body by coastal states regardless of engagement in exploitation or research. Second, several RFMOs do not require actual engagement in fisheries,¹³³ but the SEAFO Convention requires non-signatory non-coastal states to do so.¹³⁴ Where actual engagement in fisheries is not required for participation in decision-making, several RFMOs require approval by

131 See Molenaar, ‘The Concept of Real Interest and Other Aspects of Co-operation through Regional Fisheries Management Mechanisms’, at pp. 475-531; Davies and Redgwell, ‘The International Legal Regulation of Straddling Fish Stocks’, at p. 270 (‘Whether a State motivated by conservation concerns but not with imminent plans for commercial exploitation of stocks in the region would be entitled to participate in a regional [*sic*] RFO in consequence of this provision in the [FSA] is not clear and will depend upon the interpretation of “real interest”’). Örebech and others argue that the FSA cannot be seen to protect the position of existing fishing states, while there was also a concern over undesirable consequences of open membership. E.g., P. Örebech *et al.*, ‘The 1995 United Nations Straddling and Highly Migratory Fish Stocks Agreement: Management, Enforcement and Dispute Settlement’, 13 *International Journal of Marine and Coastal Law* (1998), at p. 122. They understand the concept of ‘real interest’ broadly, stating that the concept applies to the EU with regard to Norwegian Arctic cod of the high seas since the EU is very active in harvesting it within areas under national jurisdiction while not fishing for it on the high seas. *Ibid.*, at pp. 122-123.

132 For example, the preamble to the SEAFO Convention provides that contracting parties recognize relevant provisions of the FSA and desire ‘cooperation with the coastal States and with all other States and Organisations *having a real interest* in the fishery resources of the South East Atlantic Ocean to ensure compatible conservation and management measures’ (emphasis added). SEAFO Convention, preambular paras 3 and 9. In early stages of the negotiation, an unsuccessful attempt was made to agree on a definition of the concept of ‘real interest’ and to limit accession to those with a real interest. Molenaar, ‘The Concept of Real Interest and Other Aspects of Co-operation through Regional Fisheries Management Mechanisms’, at p. 508 (citing Articles 4 and 25 of the Draft Convention discussed at the Third Session of the negotiation).

133 While the CCAMLR Convention may be ratified by any state interested in research or harvesting, membership of the Commission is only open to those engaged in research or harvesting. Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR Convention), Canberra, 20 May 1980, Articles VII(2) and XXIX. SIOFA allows participation by those who are interested in fishing activities. Article 23(1). The Agreement for the Establishment of the General Fisheries Commission for the Mediterranean and the NEAFC Convention are silent on this issue.

134 SEAFO Convention, Articles 25-26. Molenaar points to the disadvantage of such applicants once SEAFO has adopted a conservation measure, stating that such applicants are ‘being confronted with measures against non-participants’. Molenaar, ‘The Concept of Real Interest and Other Aspects of Co-operation through Regional Fisheries Management Mechanisms’, at pp. 508-509.

existing members.¹³⁵ A rather different category of provisions is found in the Framework Agreement for the Conservation of Living Marine Resources on the High Seas of the South Pacific (Galapagos Agreement).¹³⁶ The participants in the negotiations on the Agreement excluded distant water fishing nations from the negotiating process. The resultant Agreement does not allow distant water fishing states to participate in the Agreement before the Agreement enters into force by the ratification by all four coastal states. The coastal states have stronger positions than distant water fishing nations in the decision-making process within the Organization to be established under the Agreement.¹³⁷ In conclusion, while coastal states are entitled to participation regardless of the engagement of their vessels in the fishery concerned, other states without any intention to engage in fisheries or research are not automatically admitted to the RFMO/A concerned or its decision-making with regard to the adoption of conservation measures.

The provision concerning the institutionalization of cooperation is supplemented by the denial of access to fisheries resources without participating in RFMO/A management mechanisms. Only those states which are members/participants of such RFMO/As or which agree to apply the conservation and management measures of such RFMO/As shall have access to the fishery resources to which those measures apply.¹³⁸ The Chairperson's Draft Agreement on port state measures, currently under consideration by the FAO Technical Consultation, has a bracketed provision supporting this provision.¹³⁹ It has been argued that the Review Conference on the Fish Stocks Agreement supported this proposition.¹⁴⁰ The practice at the regional level

135 For approval systems, see CCAMLR Convention, Article VII(2)(d); Agreement for the Establishment of the General Fisheries Commission for the Mediterranean (GFCM Convention), Rome, 24 September 1949, amended lastly in November 1997, Article XI(2); Convention on Future Multilateral Co-operation in North-East Atlantic Fisheries, London, 18 November 1980, revised in 2006 (New NEAFC Convention), Article 20(4); NAFO Convention, Articles II(2), III(c), V(2) and XIII(1). An exception is SIOFA.

136 Framework Agreement for the Conservation of Living Marine Resources on the High Seas of the South Pacific, Santiago, Chile, 14 August 2000, not yet in force. For more details, see Chapter 5.

137 See, e.g., *ibid.*, Articles 12(1)-(2), 16(2), 19(1) and 20.

138 FSA, Article 8(4). In the FSA, this provision is completed by Article 17(1), which requires a non-member/participant which does not agree to comply with the adopted conservation and management measures not to authorize its vessels to engage in fishing for the stock concerned.

139 Chairperson's Draft Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, Article 9(1)(a).

140 Gavouneli, *Functional Jurisdiction in the Law of the Sea*, at p. 127. She cites paragraph 32(e) of the Outcome of the Review Conference, whose second sentence reads: 'Non-members shall enjoy benefits from participation in the fishery commensurate with their commitment to comply with conservation and management measures in respect of the stocks'. But note that the recommendation was made in the context of encouraging existing members of RFMOs to provide incentives for non-members to join. Outcome of the Review Conference, 26 May 2006, para. 32(e). Perhaps this recommendation was made to prevent existing members from excluding the possibility for non-members to have access to the resources regulated by the RFMO, rather than denying the access of non-members of the RFMO.

shows certain support. RFMO/As have attempted to control activities by non-contracting party vessels by giving incentives for cooperation (e.g., cooperating non-contracting party status) and/or by taking a confrontational approach. The latter approach is pursued in various RFMO/As with varying degree of success. A number of RFMO/As may, under their constitutive instruments, draw the attention of non-contracting parties to activities of their vessels in the regulatory area of RFMO/As and/or request full cooperation in the implementation of measures adopted by these RFMO/As.¹⁴¹ These RFMOs have already done so in practice, but controversial measures such as port measures and trade-related measures on the basis of the blacklisting of IUU vessels have only been taken by some RFMOs. In national legislation, some states explicitly prohibit fisheries in the regulatory area of RFMOs to which they are not parties.¹⁴² If such fisheries are not prohibited explicitly under laws and regulations, national policies may in effect restrain vessels flying the flag of a given state to engage in fisheries in the area where the flag state is not a party to the RFMO, by taking into account this factor in considering authorization to fish on the high seas.¹⁴³ For example, under US law, although fisheries in the areas of RFMOs to which the United States is not a party is not prohibited, analyses of environmental impacts showing no significant adverse impact (SAI) on the environment or protected living marine resources or their habitat are required if US vessels are to engage in fisheries in these areas.¹⁴⁴

Some authors have questioned whether the provision restricting access to fishery resources and state practice in this regard are compatible with the LOSC. One commentator argues that an RFMO and its members have no absolute right to deny the fishing activities of other states.¹⁴⁵ The compatibility of this provision with the LOSC matters even among parties to the FSA since nothing in the FSA shall prejudice the rights of states under the LOSC and the provisions of the FSA shall be interpreted and

141 CCAMLR Convention, Articles X and XXII; SEAFO Convention, Articles 6(5) and (10) and 22(3)-(4); SIOFA, Article 17 (2) and (4); New NAFO Convention, Article XVI(1).

142 Australia, High Seas Fishery Temporary Order; New Zealand Plan of Action to Prevent, Deter and Eliminate Illegal, Unregulated and Unreported Fishing, at pp. 33-34. See also Iceland, Act No. 151/1996. See also Sustainable Fisheries, Including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and Related Instruments, Report of the Secretary-General, A/62/260, 15 August 2007, at p. 26, para. 81.

143 For the requirement of authorization to fish on the high seas under domestic legislation, see 'Strengthening flag state responsibilities' in Section 2.1.3.2 below.

144 A/62/260, at p. 26, para. 81. The proposed fishing activity needs to have been analyzed in accordance with the requirements of the Endangered Species Act and the National Environmental Policy Act. Information kindly provided by Bob Dickinson, US National Marine Fisheries Service (e-mail correspondence of 20 November 2007).

145 M. Hayashi, 'Regional Fisheries Management Organisations and Non-Members', in T.M. Ndiaye and R. Wolfrum (eds.), *Law of the Sea, Environmental Law and Settlement of Disputes: Liber Amicorum Judge Thomas A. Mensah* (2007), at p. 760. See also Davies and Redgwell, 'The International Legal Regulation of Straddling Fish Stocks', at p. 265 ('[a] serious question remains').

applied in the context of and in a manner consistent with the LOSC.¹⁴⁶ If compatibility with the LOSC is recognized, the next question is: do the restrictions on access have a legal effect on non-parties to the FSA either as a rule of customary international law or as a subsequent agreement? Some commentators express concerns and/or doubts in this regard. A fear has been expressed that such restrictions become definitive definitions of the LOSC on this issue.¹⁴⁷ Their customary law status at this moment in time has been questioned by Birnie and Boyle.¹⁴⁸

In any case, some RFMOs such as NEAFC have explicitly required non-parties to refrain from fishing activities. On the other hand, the rather hesitant practice of other RFMOs suggests that the provision on restrictions on access by non-parties is still applicable only under treaty law. In this connection, it is noted that the successive UNGA resolutions have been calling only on states engaged in fisheries for straddling or highly migratory fish stocks to give effect to the duty of cooperation through RFMO/As. In view of the fact that some other parts of these resolutions explicitly or implicitly refer to DHSFS, it is difficult to argue that the duty to cooperate through RFMO/As extends to high seas fisheries in general.

Members of RFMOs may still opt out of conservation and management measures by the use of objection procedures while they have access to fishery resources. The FSA does not explicitly prohibit these procedures,¹⁴⁹ although it has been argued that they may be viewed as being contrary to the FSA and/or the LOSC.¹⁵⁰ In any case, to do so, the state must be a member of or a participant in such a regime. While CCAMLR and SIOFA adopt measures by consensus and do not allow the use of objection procedures, the GFCM, SEAFO, NEAFC and NAFO allow for opting out of conservation measures.¹⁵¹ The latter three RFMOs restrict the use of objection procedures procedurally by requiring a written explanation of the reasons and a statement of intentions following the use of objection procedures, including proposals

146 FSA, Article 4.

147 See D. Freestone, 'A Decade of the Law of the Sea Convention: Is It a Success?' 39 *George Washington International Law Review* (2007), at p. 528.

148 Birnie and Boyle, *International Law and the Environment*, at p. 679.

149 For example, Article 17 is only applicable to non-members/participants.

150 See also Davies and Redgwell, 'The International Legal Regulation of Straddling Fish Stocks', at p. 271 (a party to the regional fisheries organization (RFO) which objects to a TAC may fish above the TAC without committing a serious violation, but it might nonetheless still be viewed as contrary to the international minimum standards for fisheries conservation and management set forth in Article 5 of the FSA and Article 119 of the LOSC); Örebech *et al.*, 'The 1995 United Nations Straddling and Highly Migratory Fish Stocks Agreement: Management, Enforcement and Dispute Settlement', at pp. 125-126 (observing that there is nothing explicit in the FSA which prohibits the existence and use of an objection procedure, while a contextual analysis points to the 'non-opting-out' possibility).

151 CCAMLR Convention, Articles IX(4) and (5) and XII(1); SIOFA, Article 8(1); GFCM Agreement, Article II(2); SEAFO Convention, Article 17(1) and 23(1); New NEAFC Convention, Articles 3(9), 5 and 12; Documents of the 23rd annual meeting of the North-East Atlantic Fisheries Commission, 8-12 November 2004, at pp. 28-29 (Annex K); New NAFO Convention, Articles XIII(2) and XIV(1) and (5). SEAFO allows opting out despite the fact that measures are taken only by consensus. SEAFO Convention, Articles 17(1) and 23 (1).

for alternative measures. In the case of NAFO, the restriction would be more than mere procedural requirements: the reasons shall be either the inconsistency of the measure with the Convention or unjustifiable discrimination against the objecting state.¹⁵² Under these three RFMOs, the use of objection procedures is subject to binding decisions by third party dispute settlement procedures. It is safe to say that the use of objection procedures is largely restrained by constitutive instruments or the practice of RFMOs, except for the GFCM.

Another area where cooperation between states needs to take place is the exchange of data with other high seas fishing states as well as coastal states. During the negotiation on the FSA, coastal states demanded the submission of data to them since timely acquisition of data would greatly increase the capability of coastal states to monitor fishing occurring in an area adjacent to their EEZ, while distant water fishing states were opposed to this idea.¹⁵³ Article 7(1) of Annex I of the FSA stipulates the submission of data to other flag states and relevant coastal states, but makes it conditional on terms to be determined by RFMO/As. In the words of Orrego Vicuña, the availability of data for the coastal state is 'thereby significantly limited and conditioned'.¹⁵⁴

2.1.3 Conservation

The present section deals with the duty to conserve marine living resources of the high seas. The first part elaborates the provisions of the LOSC in this regard, highlighting the possibility of differing interpretations. This part is divided into two parts because the LOSC stipulates regimes in two Parts (Part VII, section 2 and Part XII) without any cross-reference in spite of the fact that they are often related and the conservation of marine living resources are in fact concerned with both Parts.

The second part examines international fisheries-related instruments adopted after 1982 as well as the subsequent practice of states and international organizations. The examination of these developments is particularly meaningful as far as the duty of conservation is concerned. Article 119(1) explicitly stipulates that the generally agreed international minimum standards shall be taken into account in adopting conservation and management measures. Any such standards may be used to give effect to the duty of conservation measures without meeting the requirement of the formation of customary international law. It has been argued that the generally recognized international minimum standards are set forth in various instruments including the FSA, the Convention on Biological Diversity (CBD), the FAO Code of Conduct for Responsible Fisheries (Code of Conduct), the Johannesburg Plan of Implementation (JPOI) and the FAO International Plans of Action (IPOAs).¹⁵⁵ The

152 New NAFO Convention, Article XIV(5).

153 See Orrego Vicuña, *The Changing International Law of High Seas Fisheries*, at pp. 167-169; M. Hayashi, 'The Role of the United Nations in Managing the World's Fisheries', in G.H. Blake *et al.* (eds.), *The Peaceful Management of Transboundary Resources* (1995), at p. 383.

154 Orrego Vicuña, *The Changing International Law of High Seas Fisheries*, at p. 169.

155 Gjerde, 'High Seas Fisheries Management under the Convention on the Law of the Sea', at p. 304.

subsequent practice of states is also relevant to the interpretation of the LOSC provisions concerning conservation.

2.1.3.1 LOSC Provisions

Conservation and management of marine living resources

Article 117 of the LOSC provides that '[a]ll States have the 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'.¹⁵⁶ Although not expressly mentioning the duty to take conservation measures, the ICJ already referred, in addition to the recognition of a duty to have due regard to the rights of other states, to the need for conservation for all in the *Fisheries Jurisdiction* cases.¹⁵⁷ It has been argued that the duty is part of customary international law.¹⁵⁸ Following the brief examination of the nature of the duty to take conservation measures, the remaining part of this sub-section elaborates on the content of conservation measures.

With respect to the nature of the duty to take conservation measures, it has been argued that this duty is linked to, and is part of, the overall flag state duty of states to exercise effective jurisdiction and control over their vessels on the high seas. Put differently, flag states are required to effectively exercise jurisdiction and control not only in respect of administrative, technical and social matters but also in respect of other matters regulated by the LOSC including the conservation and management of the living resources of the high seas.¹⁵⁹ The genuine link concept is separated from the obligation of the effective exercise of jurisdiction in respect of administrative, technical and social matters: the concept is clearly related to the effective exercise of jurisdiction and control by flag states in general under the LOSC.¹⁶⁰ The LOSC does

156 This formulation is almost identical to the HSFC. See HSFC, Article 1(2).

157 *I.C.J. Reports 1974*, at p. 31, para. 72; *I.C.J. Reports 1974*, at pp. 200-201, para. 64.

158 See, for example, Burke, *The New International Law of Fisheries*, at p. 100; Fleischer, 'The New Régime of Maritime Fisheries', at p. 140. For a contrary view, see Kindt and Wintheiser, 'The Conservation and Protection of Marine Mammals', at pp. 356-357.

159 Fleischer, 'Fisheries and Biological Resources', at p. 1114. This point was made clear in the study produced to clarify the role of the genuine link concept upon the request of the UNGA. In considering the role of the genuine link requirement, the study points out that the range of flag state duties under the LOSC is more extensive than the matters listed in Article 94, and the duties of flag states in relation to the protection of the marine environment and conservation of marine living resources are set out in a number of articles throughout the LOSC. Report of the Ad Hoc Consultative Meeting of senior representatives of international organizations on the 'genuine link', A/61/160, 17 July 2006, at paragraph 19.

160 See S.W. Tache, 'The Nationality of Ships: The Definitional Controversy and Enforcement of Genuine Link', 16 *International Lawyer* (1982), at 305-306; M.L. McConnell, '... Darkening Confusion Mounted Upon Darkening Confusion: The Search for the Elusive Genuine Link', 16 *Journal of Maritime Law and Commerce* (1985), at 376-377 and 382; A.G. Oude Elferink, 'The Genuine Link Concept: Time for a Post Mortem?' in I. Dekker and H. Post (eds.), *On the Foundations and Sources of International Law* (2003), at 42; A.H.A. Soons, 'Comments on the Genuine Link Concept', in I. Dekker and H. Post (eds.), *On the Foundations and Sources of*

not indicate how flag state responsibilities shall be discharged in respect of the exploitation of marine living resources.¹⁶¹ In other words, the method to carry out the duty is left to the discretion of each flag state.

The term ‘conservation and management measures’ could include a wide range of acts. As the ICJ stated, ‘[a]ccording to international law, in order for a measure to be characterized as a ‘conservation and management measure’, it is sufficient that its purpose is to conserve and manage living resources and that, to this end, it satisfies various technical requirements’; in other words, ‘[i]nternational law [...] characterizes ‘conservation and management measures’ by reference to factual and scientific criteria.’¹⁶²

Neither Article 117 nor Article 118 of the LOSC stipulates what type of conservation measure shall be taken. In fact, as opposed to the HSFC, no explicit definition of the concept of conservation or conservation measures is found in the LOSC; instead, Article 119 gives effect to these articles through the provision of criteria for conservation measures.¹⁶³ The *chapeau* of Article 119 (‘[i]n determining the allowable catch and establishing other conservation measures’) implies that the determination of the TAC is one of the conservation measures. The article does not, however, require states to determine the TAC as opposed to Article 61, which obliges coastal states to determine the TAC in their EEZ,¹⁶⁴ while the explicit reference suggests that the determination of the TAC is in principle a desirable measure for the conservation of

International Law (2003), at 66. See also Conclusions de l’Avocat Général M. Philippe Léger présentées le 27 mai 2004, Affaire C-299/02, Commission des Communautés européennes contre Royaume des Pays-Bas (Léger Opinion), at para. 58.

161 In other areas, this is prescribed in the LOSC. For example, in respect of administrative, technical and social matters, Article 94(2)-(4) prescribes the way in which the flag state is to fulfil its obligations.

162 *Fisheries Jurisdiction Case (Spain v. Canada)*, Judgment (Jurisdiction), 4 December 1998, *I.C.J. Reports 1998*, p. 432, at p. 461, para. 70. The Court distinguished between a matter of definition and a question of legality, and it did not judge the legality of the specific act of Canada, but simply determined whether it had jurisdiction to entertain the dispute by interpreting the meaning attached to the expression ‘conservation and management measures’ in Canada’s reservation to the declaration accepting the compulsory jurisdiction of the ICJ. *I.C.J. Reports 1998*, at pp. 460-461, paras 68-69. In doing so, the Court interpreted the wording of the FSA and the FAO Compliance Agreement in this regard as meaning that ‘what is generally understood by ‘conservation and management measures’ must comply with the obligations of international law that they have undertaken pursuant to these agreements, such as, compatibility with [MSY], concern for the needs of developing States, the duty to exchange scientific data, effective flag State control of its vessels, and the maintenance of detailed records of fishing vessels’. In this context, the Court stated that the question of who may take such measures, and the areas to which they may relate, was neither treated as an element of their definition in international law generally nor in these agreements. *I.C.J. Reports 1998*, at pp. 461-462, para. 70.

163 Compare with Article 2 of the HSFC. Orrego Vicuña suggests that this absence of a definition was caused by the consideration that the complexity of the matter did not allow for overall definitions and it was better to identify the relevant criteria for specific determinations. Orrego Vicuña, *The Changing International Law of High eas Fisheries*, at p. 77.

164 LOSC, Article 61(1).

living resources in the high seas.¹⁶⁵ No other measure is, of course, excluded under the LOSC; the choice of measures to be taken is left to states.

The LOSC does not explicitly provide for objectives of conservation measures. However, the procedural means for formulating such objectives are found in the LOSC.¹⁶⁶ Article 119 provides for factors which are relevant in determining conservation measures as follows: ‘States shall

(a) take measures which are designed, on the best scientific evidence available to the States concerned, 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, including the special requirements of developing States, and taking into account fishing patterns, the interdependence of stocks and any generally recommended international minimum standards, whether subregional, regional or global;

(b) take into consideration the effects on species associated with or dependent upon harvested species with a view to maintaining or restoring populations of such associated or dependent species above levels at which their reproduction may become seriously threatened’.

This provision is similar to that contained in Article 61(3) and (4) concerning conservation measures for marine living resources in the EEZ. In fact, these provisions were developed in parallel at UNCLOS III. It appears to have been the intention of the drafters of the LOSC that the same concept of conservation is applied both in EEZ fisheries and in high seas fisheries. For example, in introducing a proposal on living resources of the high seas in 1974, on which Article 119 was based,¹⁶⁷ the representative of the United States stated that he ‘agreed with those who maintained that the conservation duty of the coastal State in the economic zone and of other States beyond the economic zone was the same’.¹⁶⁸

During the negotiations at UNCLOS III, as the concept of EEZ was accepted, the main outstanding issue was the responsibility of coastal states in the conservation of fisheries resources in the EEZ. African and Latin American states generally referred to the authority of coastal states, while Western European and Socialist states favoured the involvement of international fisheries organizations.¹⁶⁹ A revised proposal by the United States, while recognizing the regulatory authority of coastal states, incorporated criteria and factors such as ‘on the best evidence available to the coastal State’, ‘levels which can produce the maximum sustainable yield’, ‘taking into

165 See also Orrego Vicuña, *The Changing International Law of High Seas Fisheries*, at p. 46. But see Chapters 3-5 in the context of deep-sea fisheries.

166 The classification between ‘content’ and ‘procedural’ is borrowed from Burke, who uses this classification in analyzing the compatibility of US legislation with the EEZ fisheries regime in the (draft) LOSC. W.T. Burke, ‘U.S. Fishery Management and the New Law of the Sea’, 76 *American Journal of International Law* (1982), at p. 36.

167 Oda, ‘Fisheries under the United Nations Convention on the Law of the Sea’, at p. 752.

168 Second Committee, 44th meeting (1974) in *Official Records*, vol. II, at p. 298, para. 21.

169 Nandan and Rosenne (eds.), *Virginia Commentary*, vol. II, at pp. 600-601.

account relevant environmental and economic factors, and any generally agreed global and regional minimum standards’, and ‘take into account effects on species associated with or dependent upon harvested species’.¹⁷⁰ Many of the criteria and factors in this proposal, with a number of later modifications, eventually became part of Article 61(3) and (4) and, in the context of the high seas, Article 119(1). In view of the drafting history, it is reasonable to assume that the factors and criteria in Article 119(1) were particularly influenced by the concerns over the exploitation of trans-boundary stocks.

The conservation measures shall be aimed at, in the first place, maintaining or restoring populations of harvested species. The primary reference point to be employed in the conservation measures is levels at which the MSY can be maintained. The term ‘optimum sustainable yield’ – a term similar to ‘MSY’ – found in the HSFC did not specify how to arrive at the ‘optimum’ position. To the contrary, the provision in the LOSC specifies which factors qualify the MSY to achieve the goal of conservation and management measures: relevant environmental and economic factors as well as fishing patterns, the interdependence of stocks and any generally recommended international minimum standards.¹⁷¹

The way in which these factors are applied in determining the TAC is not specified in the LOSC. In other words, while the MSY is to be determined on the basis of scientific data and, therefore, in an objective manner,¹⁷² the determination of the degree of departure from the MSY inevitably calls for agreement between the states concerned and there is no criterion to govern the degree of departure, nor is a provision made concerning balancing between the factors.¹⁷³ For example, in theory, the consideration of economic factors could lead to deviations in opposite directions.¹⁷⁴ One might predict more abundant populations of the harvested stocks by pursuing the maximum economic yield: the return per effort is to increase; the cost of operation is

170 Article 12(2)(a) and (b) of the revised US proposal, reproduced in *Official Records*, vol. III, at p. 223. It is noted that ‘to the coastal State’ is found after ‘on the best evidence available’. Despite the statement by the American delegation cited above, this or a similar phrase is not found in its proposal for the high seas.

171 In addition, Article 61 makes an explicit reference to the ‘economic needs of coastal fishing communities’ as a factor to be taken into account in designing conservation measures in the EEZ. While there is no equivalent provision in Article 119, it might be possible to argue that this factor is also relevant in high seas fisheries as a part of relevant ‘economic factors’ in Article 119.

172 However, according to Tahindro, ‘most [fisheries bodies] are hampered by issues such as disagreement over scientific advice concerning management’. Tahindro, ‘Conservation and Management of Transboundary Fish Stocks’, at p. 27.

173 It is not clear to what extent states can derogate from the MSY by taking action in favour of the conservation of fisheries resources. There is no requirement of optimum utilization with regard to high seas fisheries, but as the conservation status of a given fish stock could affect other stocks in the same marine ecosystem, stricter measures might result in putting the interests of other states in high seas fisheries in jeopardy under some circumstances.

174 For the meaning of relevant environmental factors, see the section entitled ‘Protection and preservation of the marine environment’ below.

to decrease; and the problem of overcapacity is to be solved.¹⁷⁵ On the other hand, one might also depart from the MSY to increase short-term socio-economic benefits sacrificing long-term sustainability. Commentators differ in their views on this point: for example, Burke argues that both directions could be pursued,¹⁷⁶ while Kaye argues that ‘no catch limit beyond the MSY would be consistent with the [LOSC]’.¹⁷⁷

States shall also take into consideration the effects on associated or dependent species. Since the effects only need to be taken into consideration in determining conservation measures for harvested stocks, Article 119 as such does not explicitly require states either to determine the TAC or to take other conservation measures for these species unless they are also targeted.¹⁷⁸ In taking into consideration the effects, the desirable goal is to maintain or restore populations of those species above levels at which their reproduction may become seriously threatened.¹⁷⁹ This provision effectively broadens the duty to take conservation measures by encompassing the conservation of these species,¹⁸⁰ and there is, arguably, a duty to ensure the sustainability of those species.¹⁸¹ In addition, the need to consider the effects on these species presupposes the duty to seek the relevant information in advance.¹⁸²

The measures shall be designed on the best scientific evidence available to the states concerned. On the one hand, the wording ‘designed, on the best scientific evidence available’ in Article 119 appears to leave less room for discretion than the wording ‘taking into account’ (which seems to allow deviation) in Article 61(2).¹⁸³

175 See Koers, *International Regulation of Marine Fisheries*, at pp. 54-63; Kaye, *International Fisheries Management*, at p. 100. However, while the overall cost of the fishery concerned will decrease, this is not necessarily the case for each and every fishing state. Burke, *The New International Law of Fisheries*, at p. 112.

176 Burke, ‘U.S. Fishery Management and the New Law of the Sea’, at p. 31. See also T.A. Clingan, Jr., ‘An Overview of Second Committee Negotiations in the Law of the Sea Conference’, 63 *Oregon Law Review* (1984), at p. 57; Fleischer, ‘Fisheries and Biological Resources’, at p. 992.

177 Kaye, *International Fisheries Management*, at p. 100. See also Tahindro, ‘Conservation and Management of Transboundary Fish Stocks’, at p. 9.

178 Despite this, it could be argued that other articles, such as Articles 192 and 194(5), oblige states to take measures in any case. For these articles, see further below.

179 It seems that the criteria are much more lenient than those for harvested stocks. See also Kindt and Wintheiser, ‘The Conservation and Protection of Marine Mammals’, at p. 361 (‘This requirement could be interpreted to justify a stock size below even MSY levels’). See also Orrego Vicuña, *The Changing International Law of High Seas Fisheries*, at p. 47.

180 Nandan and Rosenne (eds.), *Virginia Commentary*, vol. III, at p. 311. See also Freestone, ‘International Fisheries Law Since Rio’, at p. 147.

181 Division for Ocean Affairs and the Law of the Sea, *The Regime for High-Sea Fisheries*, at p. 9.

182 Burke, *The New International Law of Fisheries*, at p. 113; Nandan and Rosenne (eds.), *Virginia Commentary*, vol. III, at p. 311.

183 Burke, *The New International Law of Fisheries*, at p. 115 note 87. Burke argues that even the phrase ‘taking into account’ in Article 61 is not intended to leave the coastal state free to refer to evidence of lesser quality and the phrase appears to be a diplomatic euphemism for ‘using’. Burke, ‘U.S. Fishery Management and the New Law of the Sea’, at p. 34. For the importance of the slight difference in modifiers in the LOSC in general, see P. Allott, ‘Power Sharing in the Law of the Sea’, 77 *American Journal of International Law* (1983), at p. 11.

Furthermore, the phrases ‘taking into account the best scientific evidence available’ and ‘designed’ are separated in two paragraphs in Article 61.¹⁸⁴ To the contrary, the phrase ‘designed, on the best scientific evidence available’ in Article 119 appears to link the designation of measures and the scientific basis more closely than Article 61. On the other hand, it has been argued that measures need not be necessarily based solely on scientific evidence: other factors may be taken into consideration.¹⁸⁵ With regard to the word ‘designed’, although it is not defined in the LOSC, all the provisions using ‘designed’ relate to situations where the action concerned is aimed at a particular vague objective and where it is difficult to evaluate whether the objective has been achieved by that action.¹⁸⁶ The wording in Article 119 certainly indicates the importance of a scientific basis in the determination of conservation measures for high seas fisheries. However the wording in Article 119 is interpreted, the phrase used in Article 119 requires the states concerned, at the very least, to use, in good faith, the best scientific evidence available in designing conservation measures.¹⁸⁷

The states concerned are not required to seek the best scientific evidence at a given time, but are required to use the best scientific evidence *available to them*. In the

In the context of the continental shelf, the wording ‘on the basis of’ in Article 76(8) replaced ‘taking into account’, implying a closer relationship between recommendations from the CLCS and the establishment of the limit of the shelf by the coastal state. First Report, Legal Issues of the Outer Continental Shelf, Berlin Conference (2004), at p. 21; T.L. McDorman, ‘The Role of the Commission on the Limits of the Continental Shelf: A Technical Body in a Political World’, 17 *International Journal of Marine and Coastal Law* (2002), at p. 314. But, this language does not, according to Clingan, provide as strong a link as ‘in accordance with’. T.A. Clingan, Jr, ‘Dispute Settlement among Non-parties to the LOS Convention with Respect to the Outer Limits of the Continental Shelf’, in T.A. Clingan, Jr (ed.), *The Law of the Sea: What Lies Ahead?* (1988), at p. 500 note 9. See also ILA First Report on the Outer Continental Shelf, at p. 22 note 106 and the literature cited therein (referring to ‘a certain flexibility’). For the drafting history of this provision, see generally Nandan and Rosenne (eds.), *Virginia Commentary*, vol. II, at pp. 848-873.

184 Paragraph 3 reads in part: ‘Such measures shall *also* be designed to maintain or restore populations of harvested species at levels which can produce [MSY]’ (emphasis added).

185 See, e.g., Kaye, *International Fisheries Management*, at pp. 103 and 150; Nandan and Rosenne (eds.), *Virginia Commentary*, vol. III, at p. 310; Freestone, ‘International Fisheries Law Since Rio’, at p. 147. See also Section 3.2.2 below.

186 The word ‘designed’ is used on seven occasions in the LOSC, including twice for living resources as described above. Other provisions are Articles 60(5) (‘designed to ensure that [safety zones] are reasonably related to the nature and function of the artificial islands, installations or structures’), 155(2) (‘designed to ensure equitable exploitation of the resources of the Area for the benefit of all countries’), 194(3) (‘designed to minimize to the fullest possible extent’), 207(5) (‘designed to minimize, to the fullest extent possible’) and 211(1) (‘designed to minimize the threat of accidents which might cause pollution of the marine environment’).

187 Some authors infer rather stronger implications from the ‘best scientific evidence’ standard. For example, Schiffman argues that ‘[s]ince the great majority of conservation and management measures are informed by scientific input, vetoes that block them, and specific reservations that allow individual states to depart from them, would appear to undermine the ‘best scientific evidence’ requirement’. Schiffman, *Marine Conservation Agreements: The Law and Policy of Reservations and Vetoes*, at p. 189.

negotiation at UNCLOS III, a suggestion was made by the EEC delegation to include ‘available to it [i.e., the coastal state]’ after the reference to ‘best scientific evidence’ in Article 61(2).¹⁸⁸ By virtue of these qualifying words, it became clear that coastal states would not be under an obligation to actively conduct scientific investigations in order to obtain the best scientific evidence, but could take conservation measures on the basis of scientific information to which they have access at a given moment.¹⁸⁹ Moreover, this qualification leaves room for the varying capabilities of the states concerned.¹⁹⁰ It seems that this analysis could also be applied to high seas fisheries.

The need for a scientific basis for conservation measures poses a dilemma in the conservation of marine living resources. On the one hand, it is difficult to require ‘full’ understanding, and, moreover, such a requirement risks delaying any conservation measures to be taken. Article 119 does not suggest that no measures should be taken until the adequate information is accessible, while it is safe to say that states cannot take measures while disregarding the existing scientific evidence. On the other hand, if the wording ‘evidence’ is distinguished from ‘information’ by the criteria of credibility, one might argue that the phrase may imply that no action should be taken, unless scientific information is reliable enough to be ‘evidence’, because action based on poor data can also have harmful consequences.¹⁹¹

The provisions of Part VII, section 2 fall short of explicitly demanding the conducting of scientific research or the collection of scientific information.¹⁹² Nevertheless, the requirement of the best scientific evidence available appears to assume that states have made some efforts to obtain scientific information in the first place since the availability of data and other scientific information is essential for accurate stock

188 A.H.A. Soons, ‘Regulation of Marine Scientific Research by the European Community and its Member States’, 23 *Ocean Development and International Law* (1992), at pp. 259-260.

189 This should not be interpreted to imply that states are not required to collect scientific information at all. See the subsequent paragraphs of this section.

190 Soons, ‘Regulation of Marine Scientific Research by the European Community and its Member States’, at p. 260. Compare this provision with Article 234 (‘based on the best available scientific evidence’). The difference is clearer in the French version: Article 234 reads ‘[...] sur la base des données scientifiques les plus sûres dont on puisse disposer’ while Article 61 reads ‘compte tenu des données scientifiques les plus fiables dont il [namely, l’Etat côtier] dispose’.

191 Burke, ‘U.S. Fishery Management and the New Law of the Sea’, at p. 34. Burke himself is not convinced that the slight difference between ‘information’ and ‘evidence’ can be given such significance that this alone warrants a refusal to take action. Burke, ‘U.S. Fishery Management and the New Law of the Sea’, at p. 35.

192 See also Kaye, *International Fisheries Management*, at p. 150. But see Burke, *The New International Law of Fisheries*, at pp. 92, and 125-127. As opposed to Article 119, Article 206 explicitly requires states to conduct environmental impact assessments when ‘States have reasonable grounds for believing that planned activities under their jurisdiction or control may cause substantial pollution of or significant and harmful changes to the marine environment’. See also E.H. Buck, U.N. Convention on the Law of the Sea: Living Resources Provisions, Updated January 7, 2004, at p. 8.

assessment and for the design of sound conservation measures.¹⁹³ In fact, the importance of monitoring fishing activities on the basis of reporting was recently pointed out by ITLOS: ‘Monitoring of catches, which requires accurate reporting, is one of the most essential means of managing marine living resources’.¹⁹⁴

Protection and preservation of the marine environment

The importance of the protection of the marine environment in the LOSC has been stressed by a number of authors.¹⁹⁵ Environmental protection has become integrated into the general principles of fisheries management. One commentator aptly notes that ‘a balance must be sought between the objectives of the provisions on the protection and preservation of the marine environment and the objectives of the fisheries provisions of [the LOSC], i.e. the sustainable exploitation of the stocks must be ensured’.¹⁹⁶ The following paragraphs examine the relevance of environmental considerations to the conservation of the marine living resources of the high seas under the LOSC in the light of the United Nations Conference on the Human Environment (the Stockholm Conference), which was held just before UNLOS III started.¹⁹⁷

The development of international environmental law led to the inclusion of various categories of activities under the term ‘environment’. The conservation of marine living resources was perceived as part of environmental problems in the Stockholm Declaration. The second sentence of Principle 4 of the Stockholm Declaration posits this by stating that ‘[n]ature conservation, including wildlife, must [...] receive importance in planning for economic development’. In addition, Principle 3 stipulates that ‘[t]he capacity of the earth to produce vital renewable resources must be maintained and, wherever practicable, restored or improved’.

The LOSC confirms this wide notion of environmental problems. The term ‘environment’ is not defined in the LOSC: during the negotiations at UNCLOS III, proposals were made to define the term ‘environment’, but none of them was

193 See Burke, *The New International Law of Fisheries*, at pp. 92, and 125-127. For the importance of data, see S.M. Garcia and J. Majkowski, ‘State of High Seas Resources’, in T. Kuribayashi and E.L. Miles (eds.), *The Law of the Sea in the 1990s: A Framework for Further International Cooperation* (1992), at p. 218.

194 *The ‘Hoshinmaru’ Case (Japan v. Russian Federation)*, Judgment, 6 August 2007, Case No. 14, at para. 99.

195 See, e.g., Freestone, ‘International Fisheries Law Since Rio’, at p. 149; E. Hey, ‘The Provisions of the United Nations Law of the Sea Convention on Fisheries Resources and Current International Fisheries Management Needs’, *The Regulation of Driftnet Fishing on the High Seas: Legal Issues (FAO Legislative Study No. 47)* (1991), at p. 9; Orrego Vicuña, *The Changing International Law of High Seas Fisheries*, at p. 25 (the full meaning of the LOSC comes to light when the provisions relating to the protection of the marine environment are also taken into account).

196 Hey, ‘The Provisions of the United Nations Law of the Sea Convention on Fisheries Resources and Current International Fisheries Management Needs’, at p. 9.

197 Held in Stockholm, 5-16 June 1972. For a comprehensive analysis of the Conference and the Stockholm Declaration on the Human Environment, see L.B. Sohn, ‘The Stockholm Declaration on the Human Environment’, 14 *Harvard International Law Journal* (1973), at pp. 423-515.

adopted.¹⁹⁸ Nevertheless, agreement existed at UNCLOS III that the term appears to include ‘marine life’ as stated by the Chairman of the Third Committee.¹⁹⁹ Besides, Article 194(5) explicitly refers to measures which are necessary to protect and preserve certain categories of marine life. Therefore, the general duty of marine environmental protection under Article 192 extends to the conservation of marine living resources from fisheries as a part of environmental protection. The duty of prevention in Article 192 should be considered as the duty to mitigate potential harm to acceptable levels, rather than the prohibition of any impact on the environment.²⁰⁰ In the context of fisheries, therefore, measures taken to this end are not necessarily a total ban on the fishing activities concerned.

Subsequent articles give effect to the general duty stipulated in Article 192. Article 194 provides for the duty to take measures to prevent, reduce and control pollution of the marine environment. Some commentators are sceptical about the applicability of Article 194(5) to fisheries as such,²⁰¹ while others appear to see no problem in this regard.²⁰² The LOSC defines pollution as follows:

“‘pollution of the marine environment’ means the introduction by man, directly or indirectly, of substances or energy into the marine environment, including estuaries, which results or is likely to result in such deleterious effects as harm to living resources and

198 S. Rosenne and A. Yankov (eds.), *United Nations Convention on the Law of the Sea 1982: A Commentary (Virginia Commentary)*, vol. IV (1991), at p. 42. The term ‘marine environment’ is defined in the Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area, adopted in the sixth session of the International Seabed Authority held on 20-31 March 2000, Regulation 1(3)(c). The Regulations define the term in a non-exhaustive way as ‘the physical, chemical, geological and biological components, conditions and factors which interact and determine the productivity, state, condition and quality of the marine ecosystem, the waters of the seas and oceans and the airspace above those waters, as well as the seabed and ocean floor and subsoil thereof’. Young suggests that the definitions of ‘marine environment’ and ‘serious harm to the marine environment’ in these Regulations must be thought of as ‘interim’. T.R. Young, *The Legal Framework for MPAs and Successes and Failures in Their Incorporation into National Legislation*, in Report and documentation of the Workshop on Marine Protected Areas and Fisheries Management: Review of Issues and Consideration, Rome, 12-14 June 2006, FAO Fisheries Report No. 825, at p. 231 note 32.

199 *Official Records*, vol. X, at p. 97.

200 See, e.g., Rosenne and Yankov (eds.), *Virginia Commentary*, vol. IV, at p. 36.

201 See J. Morishita, ‘What is the ecosystem approach for fisheries management’, 32 *Marine Policy* (2008), at p. 20; Mossop, ‘Protecting Marine Biodiversity on the Continental Shelf Beyond 200 Nautical Miles’, at p. 289; G.S. Stone *et al.*, ‘Seamount Biodiversity, Exploitation and Conservation’, in L.K. Glover and S.A. Earle (eds.), *Defying Ocean’s end: An Agenda for Action* (2004), at p. 65; L. Glowka, ‘Putting Marine Scientific Research on a Sustainable Footing at Hydrothermal Vents’, 27 *Marine Policy* (2003), at p. 305, note 5.

202 See E. Hey, ‘Global Fisheries Regulations in the First Half of the 1990s’, 11 *International Journal of Marine and Coastal Law* (1996), at pp. 484-485. See also Owen, ‘The Application of the Wild Birds Directive Beyond the Territorial Sea’, at p. 61; Owen, *The Powers of the OSPAR Commission and Coastal State Parties to the OSPAR Convention to Manage Marine Protected Areas on the Seabed Beyond 200 nm From the Baseline: A Report for WWF Germany*, at p. 13.

marine life, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea water and reduction of amenities'.²⁰³

It appears to be incompatible with the ordinary meaning of the term to assume that the removal of fish as such inherently falls under the term 'pollution' as defined in this way. However, energy could be considered to include 'physical disturbance such as anchoring or grounding'.²⁰⁴ Defined in this way, fishing could be considered to generate pollution not only in situations such as an oil spill, lost or abandoned gear and discards but also through impacts of bottom trawling on the benthic environment. On that account, states are obliged to take measures to prevent such pollution from occurring during fishing activities under this provision.

International environmental law has refined the concept of the conservation of marine living resources. Principle 2 of the Stockholm Declaration states:

'[t]he natural resources of the earth, including the air, water, land, flora and fauna and especially representative samples of natural ecosystems, must be safeguarded for the benefit of present and future generations through careful planning or management, as appropriate'.

Two points of importance follow from this pronouncement. First, the purpose of management from this perspective is to ensure the long-term sustainability of resources as such.²⁰⁵ While the phrase 'sustainability of resources' does not appear in the LOSC, it is possible to argue that the relevant provisions of the LOSC shall be dictated by the need to ensure the sustainability of marine living resources as well as the sustainability of their yields.²⁰⁶ Second, the Principle stipulates that the natural resources listed in that Principle are 'to be safeguarded for the benefit of mankind'.²⁰⁷

Besides, international environmental law broadened the scope of factors to be considered in the concept 'conservation'. The explicit reference in Principle 2 of the

203 LOSC, Article 1(1)(4).

204 See E.J. Molenaar, *Coastal State Jurisdiction over Vessel-Source Pollution* (1998), at p. 17. But, see, *contra*, K.M. Gjerde and D. Ong, 'Protection of Particularly Sensitive Sea Areas under International Marine Environmental Law: Report of the International Meeting of Legal Experts on Particularly Sensitive Sea Areas University of Hull, 20-21 July 1992', 26 *Marine Pollution Bulletin* (1993), at p. 11.

205 The concept has been weakened in that the original 'idea that states hold their resources 'in trust' for present and future generations has been replaced by the vaguer notion of an unspecified somebody safeguarding the resources for the 'benefit' of these generations' (footnote omitted). Sohn, 'The Stockholm Declaration on the Human Environment', at p. 457.

206 See also G.J. Schram and A. Tahindro, 'Developments in Principles for the Adoption of Fisheries Conservation and Management Measures', in E. Hey (ed.), *Developments in International Fisheries Law* (1999), at p. 265.

207 Sohn, 'The Stockholm Declaration on the Human Environment', at p. 457. It is interesting to note that he considers that the Conference followed UNGA Resolution 2749 (XXV) on the Declaration of Principles Governing the Sea-bed and the Ocean Floor, and the Subsoil Thereof, Beyond the Limits of National Jurisdiction in stipulating that the natural resources listed in the Stockholm Declaration are to be safeguarded for the benefit of mankind.

Stockholm Declaration to ‘representative samples of natural ecosystems’²⁰⁸ implies a new kind of consideration in fisheries management. Principle 4 states, in part, that ‘[m]an has a special responsibility to safeguard and wisely manage the heritage of wildlife *and its habitat*, which are now gravely imperilled by a combination of adverse factors’ (emphasis added). The Conference, *inter alia*, referred to the need for information on living marine resources and their environment and fisheries activities as well as the evaluation and monitoring of environmental conditions.²⁰⁹ The protection of habitats and taking into account other environmental conditions therefore emerged as part of the principles of fisheries management.

It is submitted that relevant environmental factors in Article 119(1) of the LOSC should be construed so as to include the protection of the ecosystems and habitats, at least vulnerable ones.²¹⁰ This interpretation is supported by Article 194(5) which, in the context of the protection and preservation of the marine environment, specifically mentions marine living resources, their habitats and ecosystems as a whole (‘rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life’).²¹¹ While the explicit introduction of such concepts as ecosystems and habitats into the LOSC is significant, the phrases such as ‘rare or fragile’ ecosystems and ‘depleted, threatened or endangered’ species and other forms of marine life²¹² appear to set a rather high threshold for protection.²¹³

Finally, Article 197 of the LOSC supports the necessity of cooperation at the global and regional levels by stipulating that ‘[s]tates shall co-operate 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 character-

208 Being not satisfied with word ‘representative’ inserted upon a suggestion by Brazil, the United States made an interpretative statement that ‘the phrase means retention of a complete system with all of the complex interrelationships intact, not a portion thereof’. *Ibid.*, at p. 457 note 110.

209 Action Plan for the Human Environment, adopted at the United Nations Conference on Human Environment, Recommendations for action at the international level, Recommendation 46(b)-(c). See also Recommendations 32 and 46(e) on the protection of species inhabiting international waters or those which migrate from one country to another and on management of stocks of fish and other aquatic animals, respectively.

210 See Birnie and Boyle, *International Law and the Environment*, at p. 4.

211 The US proposal adding paragraph 5 to the then Article 195 (now Article 194(5)) appears to be aimed at extending the *object* of protection rather than activities subject to regulation. Oxman writes that ‘these amendments [i.e., the addition of paragraph 5 and the proposal to add in “Use of terms” a sentence reading “Marine environment” includes marine life] expand and clarify the rights and obligations to take measures to minimize ship accidents and damage resulting from such accidents’. See B.H. Oxman, ‘The Third United Nations Conference on the Law of the Sea: The Seventh Session (1978)’, 73 *American Journal of International Law* (1979), at pp. 24-25.

212 The words ‘marine life’ are qualified by ‘depleted, threatened or endangered’. This point is clear in the French text reading ‘l’habitat des espèces et autres organismes marins en régression, menacés ou en voie d’extinction’.

213 Hey, ‘Global Fisheries Regulations in the First Half of the 1990s’, at p. 485.

istic regional features.’ This provision does not add much to what is provided in Articles 116-119, but it is noteworthy that the obligation of cooperation is also stipulated from the perspective of environmental protection.²¹⁴

2.1.3.2 Post-UNCLOS III developments

The developments with respect to the duty to conserve living resources of the high seas subsequent to the adoption of the LOSC can be seen with regard to two issues. The first line of developments concerns the strengthening of flag state responsibilities in the context of high seas fisheries. With regard to this line of developments, a possible consequence might be that non-compliance with the requirement leads to the forfeit of the right of fishing on the high seas. The second line of developments concerns the refinement of the concept of ‘conservation’ in accordance with the parallel developments in international environmental law. In this respect, four inter-related elements are worth noting: sustainable fisheries; ecosystem approaches; conservation of marine biodiversity; and the precautionary approach. It could be argued that the elaboration of the concept of conservation modified standards which were applicable to giving effect to the duty to take necessary conservation measures. In the following paragraphs these topics are considered in the light of the examination of each element.

Strengthening flag state responsibilities

Various attempts have been made to clarify the content of a genuine link in relation to both shipping and fishing vessels in particular.²¹⁵ Recent state practice indicates that states have been shifting towards strengthening flag state responsibilities over fishing vessels with a view to enhancing compliance with conservation and management measures agreed at the international level, rather than elaborating on the genuine link concept on the basis of the nationality requirements.

For shipping in general, attempts made by the United Nations Conference on Trade and Development (UNCTAD) to clarify the content of the genuine link concept in terms of nationality requirements resulted in the adoption of the Registration Convention in 1986.²¹⁶ The Convention, in particular Articles 7-9 thereof, seeks to introduce nationality requirements, but has failed to obtain agreement on such

214 In the context of deep-sea fisheries on the high seas, see Report and Documentation of the Expert Consultation on Deep-sea Fisheries in the High Seas, Bangkok, Thailand, 21-23 November 2006, at p. 12, para. 64.

215 E.g., UNGA Resolution 61/105, paras 40-41.

216 United Nations Convention on Conditions for Registration of Ships (Registration Convention), Geneva, 7 February 1986. The term ‘ships’ is defined for the purposes of the Convention as ‘any self-propelled sea-going vessel used in international seaborne trade for the transport of goods, passengers, or both with the exception of vessels of less than 500 gross registered tons’ in Article 2. Thus, this Convention does not apply to most fishing vessels (i.e., applicable to transport vessels of 500 gross tonnage or more).

requirements in an effective manner.²¹⁷ Moreover, this Convention is not likely to enter into force.²¹⁸

In the field of fisheries, too, efforts to elaborate the concept of a genuine link have been unable to produce significant results. In response to the concerns about the adverse impacts of the practice of reflagging, the FAO adopted the FAO Compliance Agreement in 1993.²¹⁹

At the early stage in the negotiations on the Agreement, three distinctive features were noted. First, the issues involved in the reflagging of fishing vessels as such, namely, the registration of fishing vessels and the right to fly the flag were directly addressed.²²⁰ Second, as a means of regulating registration, the concept of a genuine link was employed and elaborated. An early draft subjected the granting of the right to fly a flag to the existence of a genuine link. More importantly, the draft enumerated elements which would be considered in determining the existence of a genuine link, including the nationality requirement.²²¹ Third, aspects of both illegitimate flagging-in and flagging-out were addressed. For example, in the US 'notional draft', parties would be required to prohibit owners of fishing vessels subject to their jurisdiction from reflagging those vessels to other nations for the purpose of avoiding compliance with conservation and management measures adopted by RFMOs, and to take practical steps to enforce the prohibition.²²²

However, the negotiations encountered difficulties with issues such as legitimate reflagging, the real transfer to owners in other states, the impossibility of knowing exactly the intention of the owner and unawareness on the part of flag state governments of the intended reflagging. Moreover, additional information presented during the negotiations complicated the situation: a growing number of newly-built vessels

217 For a brief discussion on this Convention and other developments, see Oude Elferink, 'The Genuine Link Concept: Time for a Post Mortem?' at pp. 41-63.

218 On the requirement of the entry into force of the Convention, see Article 19(1), including no less than 40 parties as well as at least 25 per cent of world tonnage.

219 Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (FAO Compliance Agreement), Rome, approved by the FAO Conference on 24 November 1993.

220 See Doc. COFI/93/10, January 1993, reproduced in *International Organizations and the Law of the Sea Documentary Yearbook*, vol. 9, at p. 636-651, Annex 2, Draft Agreement on the Flagging of Vessels Fishing on the High Seas to Promote Compliance with Internationally Agreed Conservation and Management Measures, Article III (Registration of Fishing Vessels).

221 See *ibid.*, Article IV (Allocation of Flag):

'1. No Party shall accord any fishing vessel to which this Agreement applies the right to fly its flag unless it is satisfied, in accordance with its own national legislation, that there exists a genuine link between the vessel and the Party concerned.

2. (a) In determining whether or not there exists a genuine link for the purposes of paragraph 1, each Party shall give due weight to all relevant factors, including in particular:

(i) the nationality or permanent residence of the beneficial owner or owners [*sic*] of the vessel in accordance with their national law;

(ii) where effective control over the activities of the vessel is exercised. [...]

222 D.A. Balton, 'The Compliance Agreement', in E. Hey (ed.), *Developments in International Fisheries Law* (1999), at p. 39.

had been registered in flag of convenience (FOC) states. These circumstances prevented the negotiators from agreeing on the way to properly address reflagging, and led the negotiations to pursue a broader objective of the improvement of flag state responsibility rather than merely addressing the reflagging problem.²²³ Thus, the effort to elaborate the concept of a genuine link was abandoned, and the negotiations focused on authorization to fish rather than flagging and registration.²²⁴

The Compliance Agreement refers to links between the flag state and ships authorized to fish by the flag state, and stipulates that no party shall authorize fishing on the high seas unless the party is satisfied that it is able to exercise effectively its responsibilities under the Compliance Agreement.²²⁵ To deter reflagging, the Compliance Agreement provides that no party shall authorize any vessel, previously registered in another state, which has undermined the effectiveness of international conservation and management measures unless the period of suspension by the previous flag state has expired and no authorization has been withdrawn in the previous three years.²²⁶ These provisions seek to address the problem of reflagging by regulating flagging-in through the use of the concept of authorization, imposing obligations on the part of states where vessels flag in. From the perspective of fishing vessels, these provisions restrict fishing vessels with a bad compliance record from seeking a new flag. More importantly, these provisions contribute indirectly to placing limits on the discretion of states, so as to deter reflagging, although the restraint is put on the authorization to fish, instead of the granting of nationality as such.

Since the Compliance Agreement has attracted a limited number of parties and major open registry states are not included in the states parties to the Agreement, its impact as a legally binding instrument is limited at this moment in time. Nevertheless, the requirement of authorization to fish may exert an influence since similar requirements were included in subsequent instruments. For example, the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU), in paragraph 41, recommends that flag states consider making their decision to register a fishing vessel, *inter alia*, conditional upon being prepared to provide to the vessel an authorization to fish on the high seas, and, in paragraph 39, stipulates that states ‘should take all practical steps, including denial to a vessel of an authorization to fish and the entitlement to fly that State’s flag, to prevent “flag hop-

223 Ibid., at pp. 39-41 and 43. See also G. Moore, ‘The Food and Agriculture Organisation Compliance Agreement’, 10 *International Journal of Marine and Coastal Law* (1995), at p. 413. Balton argues that ‘the Compliance Agreement represents an elaboration of the responsibilities that flag states must fulfil in order for them to maintain the rule of exclusive jurisdiction over their fishing vessels on the high seas’, and, if they do not do so, ‘the international community will find other ways to control fishing vessels on the high seas’. Balton, ‘The Compliance Agreement’, at p. 33.

224 Moore, ‘The Food and Agriculture Organisation Compliance Agreement’, at p. 413.

225 FAO Compliance Agreement, Article III(3).

226 Ibid., Article III(5). However, there are exceptions and limitations where the previous owner does not have any interest or control, or the party considers the granting not to undermine the object and purpose of the Compliance Agreement. See FAO Compliance Agreement, Article III(5)(c) and (d).

ping”.²²⁷ The FSA provides for flag state responsibilities for fishing vessels in a similar manner. Flag states shall take necessary measures to ensure that their vessels comply with RFMO/A conservation and management measures and that such vessels do not engage in any activity which undermines the effectiveness of such measures.²²⁸ States shall authorize the use of their vessels for fishing on the high seas only where they are able to exercise effectively their responsibilities in respect of such vessels.²²⁹ While the right to fish on the high seas is not directly restricted by this provision, the restriction on authorization in effect amounts to a denial of the right to fish on the high seas for ‘flag of non-compliance’ states inasmuch as they fail to fulfil their flag state responsibilities.

The legislation of a number of states requires all vessels flying their flag to have permits to engage in fishing for any species on the high seas.²³⁰ Some other states require permits only for certain fisheries. For example, under Act No. 151/1996 on Fisheries Outside the Jurisdiction of Iceland (27 December 1996), Icelandic vessels intending to fish on the high seas shall obtain special permits if Iceland is a party to the RFMO that has competence to regulate fisheries in the high seas area where the vessel concerned intends to fish. Icelandic vessels conducted high seas deep-sea fisheries in the NAFO Convention Area, but discontinued their operations in 2006. Currently (as of October 2007), no Icelandic vessel is engaged in deep-sea fisheries on the high seas.²³¹ Under Japan’s fisheries legislation, high seas fisheries falling under two categories need special permits. The first category, ‘designated fisheries’,²³² includes bottom trawling in certain areas, e.g., the North Pacific.²³³ In total, 52 vessels are given permits to conduct bottom trawling in high seas areas such as areas of CCAMLR, NAFO and the CBS Convention as well as the Emperor Seamount chain of the North-West Pacific in 2006.²³⁴ The other category, ‘approved fisheries’, includes bottom-set gillnets in the high seas area of the Pacific.²³⁵ All existing Japa-

227 See also paragraph 40. See also FSA, Article 18(2).

228 *Ibid.*, Article 18(1). See also UNGA Resolution 61/105, paras 34-35.

229 FSA, Article 18(2). See also UNGA Resolution 61/105, para. 36 (calling upon ‘States not to permit [their] vessels to engage in fishing on the high seas [...] unless duly authorized by the authorities of the States concerned and in accordance with the conditions set out in the authorization’).

230 Australia, Fisheries Management Act, Sections 105A and 105B; Canada, Fishery (General) Regulations, Section 65; Chile, Decree No. 360; South Korea, Fisheries Act, Articles 41(1)(2) and 57; Namibia, Marine Resources Act, Article 32; New Zealand, Fisheries Act, Section 113D(1); Norway, Decree No. 173 of 1998 to regulate fishing in marine areas outside the fisheries jurisdiction of any state, Section 2; South Africa, Marine Living Resources Act, Section 40; United States, High Seas Fishing Compliance Act of 1995, Pub. L. 104-43, title I, section 104; 16 U.S. Code 5503(a).

231 Interview with Dr Hrefna Karlsdóttir of the Icelandic Ministry of Fisheries on 8 October 2007.

232 Japan, Fisheries Law, Article 52(1).

233 Cabinet Decree No. 6 of 1963, 22 January 1963.

234 See Notice of the Ministry of Agriculture, Forestry and Fisheries No. 656 of 27 April 2006.

235 Ministerial Decree No. 54 of 1994 (Ministry of Agriculture, Forestry and Fisheries), 26 August 1994, Article 3(1).

nese fishing vessels operating on the high seas fall under the licensing system.²³⁶ The European Commission intends to enact a regulation requiring vessels engaged in all high seas fisheries to have authorization with a view to regulating Community vessels currently engaged in fisheries on the high seas where no RFMO exists. A Commission proposal submitted to the Council provides for more concrete duties for Community vessels engaged in fisheries outside Community waters, both in areas of RFMO/A competence and in areas where no competent RFMO/A exists.²³⁷ The proposed Regulation concerns the authorisations for Community vessels to engage, inter alia, in fishing activities falling under the scope of RFMOs and in those not falling under the scope of any fisheries agreement.²³⁸ The proposed Regulation provides, among other things, that Community fishing vessels shall be entitled to engage in fishing activities outside Community waters which are not covered by an agreement only if they have been issued with an authorisation from their flag member state in accordance with national provisions.²³⁹

Suggestions have been made that the provisions of the FSA concerning flag state responsibilities, including those on the requirement of authorization, are applicable to DHSFS as Article 18 does not limit their applicability to straddling fish stocks and highly migratory fish stocks.²⁴⁰ But, given the object and purpose of the FSA, it is also suggested that it is difficult to support this argument.²⁴¹

More significantly in practice, the new and revised constitutive instruments of RFMO/As adopted in 2001 or thereafter contain detailed flag state responsibilities.²⁴² Members of these RFMO/As shall discharge flag state responsibilities irrespective of their participation in the Compliance Agreement or whether their vessels fish for straddling fish stocks or DHSFS.

At the global level, initiatives have been launched to develop criteria for assessing flag state performance, including at the 27th session of the FAO Committee on Fisheries (COFI). The 27th session of COFI asked the FAO to look into the possibility of not only developing criteria for flag state performance assessment but also actions

236 Report on the state of Japan's Implementation of UNFSA, distributed at the Review Conference on the FSA in May 2006, at p. 5 (on file with author). In fact, it has been asserted that Japan was the only state employing the licensing system for all existing high seas fisheries when the FAO Compliance Agreement was negotiated in 1993, and, for that reason, proposed to require transponders, rather than observer programmes, to secure the transparency of fishing activities through appropriate monitoring. H. Watanabe and S. Ono, 'Analytical Review of the Elaboration Process of FAO Code of Conduct for Responsible Fisheries [in Japanese]', 35 *The Report of Tokyo University of Fisheries* (2000), at p. 166 note 29.

237 EU, Proposal for a Council Regulation concerning authorisations for fishing activities of Community fishing vessels outside Community waters and the access of third country vessels to Community waters, 18 June 2007, COM(2007) 330 final, 2007/0114 (CNS).

238 *Ibid.*, Article 1(a).

239 *Ibid.*, Article 15(1). For the new Regulation specifically aimed at controlling deep-sea fisheries, see Section 5.5.1 below.

240 W.R. Edeson *et al.*, *Legislating for Sustainable Fisheries: A Guide to Implementing the 1993 FAO Compliance Agreement and 1995 UN Fish Stocks Agreement* (2001), at pp. 39-40.

241 *Ibid.*, at p. 148 note 84.

242 SEAFO Convention, Article 14; SIOFA, Article 11; New NAFO Convention, Article XI.

that could be taken against vessels in the case of non-performance by their flag state.²⁴³ In this connection, suggestions were made that states should be provided with means to take measures against vessels when the flag state is not acting responsibly.²⁴⁴ At the regional level, the new NAFO Convention provides that the Commission is to develop appropriate processes in accordance with international law to assess flag state performance with respect to implementing the obligations regarding fishing vessels flying the flag of contracting parties as set out in the Convention, and to adopt proposals if appropriate to ensure flag state performance.²⁴⁵ These global and regional initiatives are complementary to the specification of flag state responsibilities in treaties and other international instruments in that the development of such criteria assists flag states in finding concrete actions necessary for the fulfilment of the requirement while the criteria would provide support for non-flag state actions aimed at enhancing compliance with flag state duties.

In addition, an argument could be made that states should be denied the right to fish on the high seas on the ground that they have not discharged flag state responsibilities in respect of taking necessary conservation measures.²⁴⁶ After all, as the ICJ indicated in its advisory opinion in the *Namibia* case: 'a party which disowns or does not fulfil its own obligations cannot be recognized as retaining the rights which it claims to derive from the relationship'.²⁴⁷

Sustainable fisheries

The concept of sustainable development has acquired a prevalent position in the field of environmental protection and development. This sub-section first articulates the concept of sustainable development in international law and then examines its application to high seas fisheries.

On the international stage, the concept of sustainable development was first introduced in the seminal report by the World Commission on Environment and Development (the 'Brundtland Commission' or 'WCED') entitled 'Our Common Future'.²⁴⁸ Drawing upon the report, the Rio Declaration provides that 'environmental protection shall constitute an integral part of the development process and cannot be

243 Report of the Twenty-Seventh Session of the Committee on Fisheries, Rome, 5-9 March 2007, Fisheries Report No. 830, FIEL/R830, at p. 11, para. 71.

244 Report of the Sixth Round of Informal Consultations of States Parties to the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (New York, 23-24 April 2007), ICSP6/UNFSA/REP/INF.1, 29 May 2007, at p. 11, para. 43.

245 New NAFO Convention, Article VI(5)(j).

246 See Rayfuse, 'Countermeasures and High Seas Fisheries Enforcement', at pp. 54, 60 and, in particular, 62.

247 *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) Notwithstanding Security Council Resolution 276 (1970)*, Advisory Opinion, 21 June 1971, *I.C.J. Reports 1971*, p. 16, at p. 46, para. 91.

248 World Commission on Environment and Development, *Our Common Future* (1987).

considered in isolation from it',²⁴⁹ and Agenda 21 stipulates various ways to implement this concept. The concept became the main topic of the World Summit on Sustainable Development (WSSD) held in Johannesburg in 2002.²⁵⁰

Various aspects of the concept have been analyzed in detail in a number of international instruments and in the literature, including the ILA New Delhi Declaration of Principles of International Law relating to Sustainable Development.²⁵¹ Although commentators vary in their understanding of the concept,²⁵² the following principles that were articulated in the above-mentioned ILA Declaration constitute a useful, although not exhaustive, list which is relevant to high seas fisheries: the integration of social, economic and environmental objectives, the duty of states to ensure the sustainable use of natural resources, equity (intergenerational equity and intra-generational equity), common but differentiated responsibilities, and the precautionary principle.²⁵³ Most of these principles are analyzed below while related concepts such as the precautionary approach and ecosystem approaches are examined in detail in a separate sub-section.

The objective of sustainable development involves a comprehensive and integrated approach to economic, social and political processes.²⁵⁴ In particular, the primary aspect of the concept is, as pronounced in the judgement of the ICJ in the *Case Concerning Gabčíkovo-Nagymaros Project*, the integration of economic development and environmental protection. The ICJ observed that '[t]his need to reconcile economic development with protection of the environment is aptly expressed in the concept of sustainable development'.²⁵⁵ This was confirmed in the recent award of the arbitral tribunal in the *Iron Rhine Railway* case between Belgium and the Netherlands.²⁵⁶ In the words of the ILA, states 'should strive to resolve apparent

249 Rio Declaration, Principle 4.

250 See the JPOI adopted at the WSSD.

251 ILA New Delhi Declaration of Principles of International Law relating to Sustainable Development, New Delhi, 6 April 2002. For the literature, see, e.g., articles in A. Boyle and D. Freestone (eds.), *International Law and Sustainable Development: Past Achievements and Future Challenges* (1999).

252 Compare, e.g., Birnie and Boyle, *International Law and the Environment*, at pp. 86-95; P. Sands, *Principles of International Environmental Law*, 2nd edition (2003), at pp. 253-266.

253 Note also that the Institut de Droit International referred to sustainable development in parallel with the concepts of intergenerational equity, the precautionary approach, environmental security and the principle of shared but differentiated responsibility. Resolution on Responsibility and Liability under International Law for Environmental Damage, adopted at the session of Strasbourg in 1997, preambular para. 8.

254 ILA New Delhi Declaration of Principles of International Law relating to Sustainable Development, preambular para. 13.

255 *I.C.J. Reports 1997*, at para. 140.

256 See *Arbitration Regarding the Iron Rhine ('Ijzeren Rijn') Railway between the Kingdom of Belgium and the Kingdom of the Netherlands*, Award of the Arbitral Tribunal, 24 May 2005, at pp. 28-29, para. 59.

conflicts between competing economic, financial, social and environmental considerations'.²⁵⁷

The duty of states to ensure the sustainable use of natural resources derives from this overall objective. States are under a duty to manage natural resources 'in a rational, sustainable and safe way so as to contribute to the development of their peoples [...] and to the conservation and sustainable use of natural resources and the protection of the environment, including ecosystems'.²⁵⁸

Intergenerational equity requires each generation to use and develop its natural and cultural heritage in such a manner that it can be passed on to future generations in no worse condition than it was received.²⁵⁹ The definition of the concept of sustainable development by the Brundtland Commission emphasizes the centrality of the concept of intergenerational equity.²⁶⁰

Its implementation requires a balancing of interests in decision making concerned with development activities. The main implication of the concept is to prevent irreversible harm such as the depletion of a species of natural resources (e.g., fish and the components of their ecosystem) so as to leave an option for future generations. The concept may not be interpreted to require a blanket ban on any activity unless it is considered necessary to preserve the option concerned.

The concept of intra-generational equity implies 'the right of all peoples within the current generation of fair access to the current generation's entitlement to the Earth's natural resources'.²⁶¹ Furthermore, the concept 'food security' became a central concept of the work of the FAO.²⁶² Marine-captured fish provide an important source of nutrition for human beings and may contribute to the improvement of the nutritional situation of people in developing countries. Fisheries are now perceived as a tool to achieve 'food security'.

In addition to the principle of equity, the principle of common but differentiated responsibilities works in two different ways. First, the differentiation of responsibilities must take into account the economic and developmental situation of developing states, and the special needs and interests of developing countries should be recognized.²⁶³ Second, developed countries bear a special burden of responsibility in reducing and eliminating unsustainable patterns of production and consumption and

257 ILA New Delhi Declaration of Principles of International Law relating to Sustainable Development, para. 7.2.

258 Ibid., para. 1.2.

259 Birnie and Boyle, *International Law and the Environment*, at p. 89. See also A. Kiss, 'The Rights and Interests of Future Generations and the Precautionary Principle', in D. Freestone and E. Hey (eds.), *The Precautionary Principle and International Law: The Challenge of Implementation* (1996), at pp. 19-28.

260 *Our Common Future*, at pp. 8-9 and 43-66.

261 ILA New Delhi Declaration of Principles of International Law relating to Sustainable Development, para. 2.1.

262 See, e.g., Kyoto Declaration, adopted at the International Conference on the Sustainable Contribution of Fisheries to Food Security, 4-9 December 1995, Kyoto, Japan, para. 1.

263 ILA New Delhi Declaration of Principles of International Law relating to Sustainable Development, paras 3.2-3.3.

in contributing to capacity-building in developing countries, including financial assistance and the transfer of environmentally sound technology.²⁶⁴ Developed states are thus required both to strive towards achieving sustainable development in relation to their nationals and to assist developing states in achieving the same objective.

The concept of sustainable development shall be applied to high seas fisheries.²⁶⁵ Fisheries are one of the areas which may contribute to achieving the overall objective of sustainable development through, among other things, food security.²⁶⁶ In this sense, fisheries are integral to the concept of sustainable development as one of the development activities in order to achieve sustainable development. The concept of sustainable development has two implications for fisheries.

First, fisheries as such need to be 'sustainable'. In other words, fisheries may not proceed without incorporating environmental concerns. Thus, the elaboration of the meaning of the sustainable development of living marine resources as well as the formulation of the means to achieve that objective is required. The FAO, at the 94th session of the Council in 1988, adopted an explicit definition of sustainable development for aquatic and terrestrial systems as follows:

'[s]ustainable development is the management and conservation of the natural resource base, and the orientation of technological and institutional change in such a manner as to ensure the attainment and continued satisfaction of human needs for present and future generations. Such development conserves land, water, plant and genetic resources, is environmentally non-degrading, technologically appropriate, economically viable and socially acceptable.'²⁶⁷

It is clear that the definition by the FAO emphasizes the importance of satisfying human needs. The definition also takes into consideration the prevention of environmental degradation as an element of sustainable development.

Second, sustainability relates not only to the resources and the environment but also to the fishery that exploits living marine resources.²⁶⁸ Fisheries are sensitive to the state of the resources to be exploited;²⁶⁹ adverse impacts on marine ecosystems caused by a fishery may render the fishery itself more difficult or less profitable. Thus, the sustainable development of living marine resources shall aim at two

264 Ibid., para. 3.4.

265 Orrego Vicuña, *The Changing International Law of High Seas Fisheries*, at pp. 145-153. See also Hey, 'The Provisions of the United Nations Law of the Sea Convention on Fisheries Resources and Current International Fisheries Management Needs', at p. 9.

266 See Report of the Secretary-General, *Oceans and the Law of the Sea*, A/60/63, 4 March 2005, at pp. 47-62.

267 Cited in J.F. Caddy and R.C. Griffiths, *Living Marine Resources and Their Sustainable Development: Some Environmental and Institutional Perspectives*, Fisheries Technical Paper No. 353.

268 Ibid.

269 S.M. Garcia, *The Precautionary Approach to Fisheries and its Implications for Fishery Research, Technology and Management: An Updated Review*, in *Precautionary Approach to Fisheries*, FAO Fisheries Technical Paper No. 350-2.

interrelated objectives of the sustainability of the resources and that of fisheries themselves, the former being the necessary requisite for the latter. The concept of sustainable fisheries embracing both objectives came to be used in the UN Secretary-General's reports on fisheries and FAO documents as a goal to be achieved.²⁷⁰ In these documents, the concept of sustainable fisheries is framed as the integration of the need for exploitation and for conservation.

While the LOSC lacks an explicit reference to the objective of fisheries management for high seas fisheries, a number of post-UNCLOS III global fisheries instruments aim to achieve 'sustainable use and conservation'.²⁷¹ The balance to be achieved was formulated as follows by Orrego Vicuña: the concern for conservation cannot amount to restricting fishing beyond a reasonable point, as the activity is also a valid and legitimate economic objective; the prohibition of fishing is not a real solution.²⁷² Gavouneli concludes that the general obligation to conserve and to manage high seas fisheries in a sustainable manner is already part of customary law.²⁷³

Furthermore, in view of the increasing introduction of ecosystem considerations in fisheries management, as seen below, one might discern that the objective of obtaining a maximum yield is being replaced, or at least paralleled, by the goal of conducting fisheries without causing harm to ecosystems. Put differently, the value underlying the international law of high seas fisheries is in the process of changing from the utilitarian value to the intrinsic value of marine living resources. It has even been argued that the optimum utilization concept is not obligatory and the LOSC itself simply requires states engaged in high seas fishing to ensure that stocks are maintained or restored to levels which have the potential to produce the MSY.²⁷⁴ The FSA is unclear in this respect. It states that the States Parties are '[d]etermined to ensure the long-term conservation and sustainable use of straddling fish stocks and highly migratory fish stocks'.²⁷⁵ It also provides that its objective is 'to ensure the long-term conservation and sustainable use',²⁷⁶ and measures are adopted 'to ensure long-term sustainability' of the fish stocks concerned.²⁷⁷ But measures are at the same time to be adopted so as 'to promote the objective of their optimum utilization', as in

270 See, e.g., A/59/298.

271 E.g., FSA, Article 2; Code of Conduct for Responsible Fisheries Rome, adopted by the FAO Conference on 31 October 1995, Article 7.1.1; UNGA Resolution 61/105, paras 6, 19 and 70. It could even be argued that it may be inferred from the provisions of Articles 63(2), 64 and 117 that the obligation to conserve high seas living marine resources is to be dictated by the need to ensure the long-term sustainability of those resources. Tahindro, 'Conservation and Management of Transboundary Fish Stocks', at p. 9.

272 F. Orrego Vicuña, 'The Law Governing High Seas Fisheries: In Search of New Principles', 18 *Ocean Yearbook* (2004), at p. 392. See also E. Hey, 'Reviewing Implementation of the LOS Convention and Emerging International Public Law', in A.G. Oude Elferink (ed.), *Stability and Change in the Law of the Sea: The Role of the LOS Convention* (2005), at p. 79 note 24.

273 Gavouneli, *Functional Jurisdiction in the Law of the Sea*, at p. 121.

274 Freestone, 'International Fisheries Law Since Rio', at p. 147.

275 FSA, preambular para. 2.

276 *Ibid.*, Article 2.

277 *Ibid.*, Article 5(a).

the case of the EEZ in the LOSC,²⁷⁸ and it continues to use MSY as a reference point.²⁷⁹ Subtle changes in wording imply that the emphasis is shifting from the yield of target species as food resources to the long-term sustainability of target and other species as part of the marine ecosystem. This thesis is supported by the shift of principal reference points as noted below. In the FSA, the sustainability of target species and optimum utilization of the resources co-exist as objectives. The Code of Conduct, while integrating ecosystem considerations in various parts, recognizes that the ‘overriding objective of conservation and management’ is long-term sustainable use of fisheries resources.²⁸⁰ The JPOI requires to ‘[m]aintain or restore stocks to levels that can produce the maximum sustainable yield’ with urgent action for depleted stocks to this end.²⁸¹ UNGA resolutions reiterate long-term conservation, management and sustainable use as the objective of fisheries management.²⁸²

This trend has also been reflected in the criteria for establishing reference points for target species. With the understanding of the uncertainty in fisheries research, fisheries management has adopted new reference points for target species, which are precautionary in nature, for the purpose of avoiding a failure in fisheries management. The FSA obliges states to apply the precautionary approach, and stipulates that in implementing the precautionary approach, states shall, *inter alia*, determine the stock-specific reference points.²⁸³ The Code of Conduct also provides that states and RFMOs and arrangements should determine stock-specific target reference points and limit reference points and the actions to be taken if these reference points are exceeded.²⁸⁴ Target reference points are the desirable state of the stock. Limit reference points set safe biological limits for harvesting beyond which the stock cannot produce MSY.²⁸⁵ When the target reference point is exceeded and the limit reference point is approached, ‘measures should be taken to ensure that it will not be exceeded’.²⁸⁶ Therefore, it is observed that precautionary reference points, particularly target reference points, are in the process of replacing the MSY-based reference points as the principal reference point of fisheries management.

While expressions are not uniform, it is certain that undeniable importance is attached to the conservation aspect in recent international instruments: a trend of moving from maximizing the immediate yield to ensuring the long-term sustainability

278 Ibid. See LOSC, Article 62(1).

279 FSA, Article 5(b).

280 Code of Conduct, Article 7.2.1.

281 Johannesburg Plan of Implementation, para. 31(a).

282 E.g., UNGA Resolution 61/105, paras 1 and 19.

283 FSA, Article 6(3)(b). See also FSA, Annex II. However, note that the FSA still maintains the MSY as one of its reference points. FSA, Article 5(b).

284 Code of Conduct, Article 7.5.3. Threshold reference points may also be used to provide an early warning to reduce the risk of reference points being exceeded. The threshold reference point indicates that the state of a fishery and/or a resource is approaching a target or limit reference point. Garcia, *The Precautionary Approach to Fisheries and its Implications for Fishery Research, Technology and Management*, at section 2.

285 See *ibid.* See also FSA, Annex II, para. 2.

286 See Code of Conduct, Article 7.5.3(b).

of the species concerned is evident. One paper states: '[r]egulation of environmental protection [under the LOSC] materialises in accessory measures to the regulation of the 'principal' activities concerned', but, today, 'perceptions have changed. The protection of the environment is considered as an objective in itself that must be pursued not only to ensure the sustainability of the economic exploitation of marine resources, but also to preserve the natural common heritage for future generations'.²⁸⁷

Ecosystem approaches

The concept of sustainable development requires the sustainable use of natural resources and the protection of the environment, including ecosystems.²⁸⁸ Fishing entails a risk of causing several kinds of harm to marine ecosystems. For example, the UN Secretary-General identifies four kinds of ecosystem impacts that may be caused by fisheries: reduction of target biomass in the ecosystem, impacts on non-target fisheries and by-catch taken in fisheries operations, impacts on the habitat as a result of the use of destructive fishing gear, and indirect impacts on other species through food-chain effects.²⁸⁹ It is widely recognized that 'the conventional approaches to fisheries management, focusing more or less exclusively on the target species and the objective of sustainable yields, has been inadequate for conservation and sustainable use of ecosystems as a whole'.²⁹⁰

A number of ecosystem considerations have been already incorporated in treaties and other international instruments. Both the LOSC and the HSFC require states to take into account impacts on associated or dependent species. A number of post-UNCLOS III instruments significantly extended factors reflecting ecosystem considerations and emphasized the need to incorporate such ecosystem considerations in fisheries management. Agenda 21 recommends states 'to preserve habitats and other ecologically sensitive areas',²⁹¹ although it does not contain concrete actions in relation to areas beyond national jurisdiction as opposed to areas under national jurisdiction.²⁹² The FSA states in its preamble that the States Parties are '[c]onscious of the need to avoid adverse impacts on the marine environment, preserve biodiversity, maintain the integrity of marine ecosystems and minimize the risk of long-term or irreversible effects of fishing operations'.²⁹³ The Code of Conduct, in its General

287 European Commission Background Paper No. 3, at p. 5.

288 ILA New Delhi Declaration of Principles of International Law relating to Sustainable Development, para. 1.2.

289 A/59/298, at pp. 22-26. Similarly, another report by the Secretary-General describes three types of impacts on VMEs: impacts on target species, impacts on non-target and associated species and impacts on benthic ecosystems. A/61/154, at pp. 13-17.

290 Implementing the Ecosystem Approach to Fisheries, Including Deep-sea Fisheries, Biodiversity Conservation, marine Debris and Lost or Abandoned Fishing Gear, COFI/2007/8, December 2006, at p. 8.

291 Agenda 21, para. 17.46(f).

292 Ibid., para. 17.85. It provides that potential means of limitations on the use of the area include the designation of MPAs. Its priority areas include coral reef ecosystems, seagrass beds and other spawning and nursery areas.

293 FSA, preambular paras 2 and 7.

Principles, provides that ‘[s]tates and users of living aquatic resources should conserve aquatic ecosystems’.²⁹⁴ Moreover, references to environmental protection such as ‘in order to preserve the aquatic environment’,²⁹⁵ ‘to conserve [...] aquatic ecosystems’²⁹⁶ and ‘[a]ll critical fisheries habitats in marine and fresh water ecosystems [...] should be protected and rehabilitated’²⁹⁷ are found in various parts of the Code. The Reykjavik Declaration on Responsible Fisheries in the Marine Ecosystem (the Reykjavik Declaration)²⁹⁸ brought ecosystem considerations to the forefront of fisheries management. In the Declaration, states declare that they ‘will individually and collectively work on incorporating ecosystem considerations into that management’.²⁹⁹ Towards this end, the Declaration calls for the effective implementation of the Code of Conduct and the IPOAs.³⁰⁰ Moreover, it emphasizes the importance of incorporating ecosystem considerations in the work of RFMOs and improving cooperation between RFMOs and regional environmental organizations.³⁰¹

Recently, the terms such as ‘ecosystem approach to fisheries’ (EAF) or ‘ecosystem-based approach to fisheries management’ have been introduced to refer to various ecosystem considerations in fisheries management. Decision V/6 of the Conference of the Parties (COP) to the CBD called upon governments and international organizations to apply the ecosystem approach.³⁰² More importantly, the JPOI confirms the necessity of EAF, referring to actions at all levels to

‘[e]ncourage the application by 2010 of the ecosystem approach, noting the Reykjavik Declaration on Responsible Fisheries in the Marine Ecosystem and decision V/6 of the Conference of Parties to the Convention on Biological Diversity’.³⁰³

Subsequent documents such as ICP recommendations³⁰⁴ and UNGA resolutions³⁰⁵ reiterated the need to implement this commitment in the context of fisheries.

No uniform definition of the term ‘ecosystem approach’ has been agreed upon.³⁰⁶ Its definition was a source of disagreement when the Seventh meeting of the ICP attempted to address the problem. Paragraph 6 of the report of the ICP recognized that

294 Code of Conduct, Article 6.1.

295 Ibid., Article 6.5.

296 Ibid., Article 6.6.

297 Ibid., Article 6.8.

298 Reykjavik Declaration on Responsible Fisheries in the Marine Ecosystem, Reykjavik, Iceland, 4 October 2001.

299 Report of the Reykjavik Conference on Responsible Fisheries in the Marine Ecosystem, Reykjavik, Iceland, 1-4 October 2001, Fisheries Report 658, FIID/R658, at p. 106.

300 Reykjavik Declaration, para. 1.

301 Ibid., para. 3.

302 COP/CBD V/6, para. 2.

303 Johannesburg Plan of Implementation, para. 30(d). (footnotes omitted.) See also *ibid.*, para. 32(c).

304 Report on the Work of the United Nations Open-Ended Informal Consultative Process on Oceans and the Law of the Sea at its Seventh Meeting, A/61/156, at para. 5(a).

305 UNGA Resolution 59/25, para. 58; UNGA Resolution 61/105, para. 76.

306 COFI/2007/8, at p. 2.

‘there is no universally agreed definition of an ecosystem approach’.³⁰⁷ Some documents use ‘approaches’ or ‘an approach’ instead of ‘the approach’.³⁰⁸ It has been even suggested that the application of an ecosystem approach ‘does not need to follow a single blueprint but be consistent with local context, means and culture’.³⁰⁹

Nevertheless, some global instruments are useful to identify the implications of this approach, offering a useful list of considerations to be taken into account in fisheries management.³¹⁰ First of all, the Reykjavik Declaration clarified the concept ‘ecosystem approach to fisheries’ in the following terms:

*‘[a]ffirming that incorporation of ecosystem considerations implies more effective conservation of the ecosystem and sustainable use and an increased attention to interactions, such as predator-prey relationships, among different stocks and species of living marine resources; furthermore that it entails an understanding of the impact of human activities on the ecosystem, including the possible structural distortions they can cause in the ecosystem’.*³¹¹

The Declaration further specified actions to be taken in fisheries management. Second, the Review Conference on the FSA recommended states to enhance the understanding of ecosystem *approaches* and referred to the incorporation of ecosystem considerations in fisheries management, singling out actions to conserve associated and dependent species and to protect habitats of special concern.³¹² Third, the FAO Technical Guidelines for Responsible Fisheries observe that:

‘[g]enerally speaking, the purpose of an ecosystem approach to fisheries is to plan, develop and manage fisheries in a manner that addresses the multiple needs and desires of societies, without jeopardizing the options for future generations to benefit from the full range of goods and services provided by marine ecosystems’;

Then, they adopt the following as a working definition: an ecosystem approach

307 Report on the Work of the United Nations Open-Ended Informal Consultative Process on Oceans and the Law of the Sea at its Seventh Meeting. The first meeting of the network of the secretariats of regional fisheries organizations (RSN-1), held on 12-13 March 2007, recognized that different approaches to the ecosystem approach to fisheries would be taken in different types of fisheries, and noted that as a consequence of the perceived difficulty in defining an ‘ecosystem approach’, concerns have been raised about expressly elaborating ecosystem approach principles in regional fishery body Conventions or Agreements. Report of the First Meeting of Regional Fishery Body Secretariats Network, Rome, 12-13 March 2007, FAO Fisheries Report No. 837, FIEL/R837 (En), at p. 15, paras 81 and 83.

308 See Morishita, ‘What is the ecosystem approach for fisheries management’, at p. 19.

309 COFI/2007/8, at p. 2.

310 For the definition of ‘ecosystem approach to fisheries management’ at the regional level, see, e.g., Revision 3 of the Draft SPRFMO Agreement, Article 1(f). See also Chapters 4-5 below.

311 Reykjavik Declaration, preambular para. 16.

312 Outcome of the Review Conference, para. 18(d).

*‘strives to balance diverse societal objectives, by taking account of the knowledge and uncertainties of biotic, abiotic and human components of ecosystems and their interactions and applying an integrated approach to fisheries within ecologically meaningful boundaries’ (italics in the original).*³¹³

International instruments not limited to fisheries management also provide definitions of an ecosystem approach that is of relevance to high seas fisheries. First, COP Decision V/6 of the CBD describes that the ecosystem approach is ‘a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way’, helping to reach a balance of the three objectives of the CBD.³¹⁴ It also identifies principles of the ecosystem approach: consideration of the actual or potential effects of activities on adjacent and other ecosystems (Principle 3); conservation of ecosystem structure and functioning, in order to maintain ecosystem services, as a priority target (Principle 5); objectives for ecosystem management to be set for the long term (Principle 8); recognizing that change is inevitable (Principle 9); seeking the appropriate balance between, and the integration of, conservation and use of biological diversity (Principle 10). Second, the ICP stated that ecosystem *approaches* to oceans management ‘should be focused on managing human activities in order to maintain and, where needed, restore ecosystem health to sustain goods and environmental services, provide social and economic benefits for food security, sustain livelihoods [...], and conserve marine biodiversity’, and listed a number of actions to be included in *an* ecosystem approach.³¹⁵

The term ‘ecosystem’ refers to a functional complex of living and non-living resources. For example, the CBD defines ‘ecosystem’ as follows:

“‘[e]cosystem’ means a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit.”³¹⁶

Components of ecosystems include marine living resources such as fish, marine mammals, seabirds and plants and non-living resources such as seamounts and hydrothermal vents. The following paragraphs analyze representative ecosystem considerations to be taken into consideration in fisheries management as follows: the interaction of species (fish and non-fish) and the protection of habitats; and the spatial

313 P. 14. See also the Report of the Bergen Conference on Implementing the Ecosystem Approach to Fisheries, 26-28 September 2006, Bergen, Norway, available at <http://cieaf.imr.no/_data/page/6218/CIEAF_Conference_Report_230207.pdf> (last visited 5 September 2008).

314 Section A, para. 1. For the objectives of the CBD, see ‘Marine Biodiversity’ in Section 2.1.3.2 below.

315 Report on the Work of the United Nations Open-Ended Informal Consultative Process on Oceans and the Law of the Sea at its Seventh Meeting (ICP-7 Report), at paras 4 and 6.

316 Convention on Biological Diversity (CBD), Rio de Janeiro, 5 June 1992, Article 2. See also the definition of ‘the Antarctic marine ecosystem’ in the CCAMLR Convention. CCAMLR Convention, Article I(3), which defines it as ‘the complex of relationships of Antarctic marine living resources with each other and with their physical environment.’

aspect of ecosystem considerations (the compatibility of conservation and management measures within the same ecosystem).³¹⁷

First, a number of post-UNCLOS III documents deal with interactions among species and widen the scope of interactions to be taken into consideration. Agenda 21, in addition to the protection of the marine environment in general and marine biodiversity in particular, notes the impacts of fishing activities by stating ‘taking into consideration relationships among species’,³¹⁸ and promoting fishing practices to minimize by-catch of non-target species.³¹⁹ The FSA provides a list of impacts caused through the interaction of species.³²⁰

Interactions to be taken into account comprise two elements: impacts on associated or dependent species, and by-catch of non-target species. Impacts on associated or dependent species are one of the targets of international action. The FSA and the Code of Conduct deal with impacts on associated or dependent species in a number of provisions. The FSA requires that, when necessary, conservation and management measures are to be taken to conserve associated or dependent species.³²¹ The Code of Conduct prescribes that management measures should not only ensure the conservation of target species but also of species belonging to the same ecosystem or associated with or dependent upon the target species and that states should take measures to rehabilitate populations as far as possible and when appropriate.³²² These provisions contrast with those of Part VII of the LOSC, which do not explicitly state the obligation to conserve associated or dependent species.³²³ The Reykjavik Declaration refers to the undertaking to ‘identify and describe the structure, components and functioning of [...] diet composition and food webs, species interactions and predator-prey relationships’.³²⁴

As regards by-catch, in a number of instruments it is required that by-catch of non-target species needs to be minimized and waste shall be avoided. The FSA provides for the minimization of waste, discards and catch of non-target species, both fish and non-fish species.³²⁵ The Code of Conduct also refers to the minimization of waste, discards, and the catch of non-target species.³²⁶ The Reykjavik Declaration refers to the undertaking to improve the monitoring of by-catch and discards, and to support research and technology developments in fishing gear and practices to improve gear selectivity.³²⁷ UNGA resolutions have urged states, RFMOs and arrangements, and

317 In addition, a form of ecosystem approach includes addressing effects of environmental factors such as climate change. Morishita, ‘What is the ecosystem approach for fisheries management’, at p. 24.

318 Agenda 21, para. 17.46(b).

319 Ibid., 17.46(c).

320 FSA, Article 5(f).

321 Ibid., Article 5(e). See also FSA, Article 5(d) and (f).

322 Code of Conduct, Article 6.2.

323 But the obligation is implicit in Article 119 under certain circumstances as well as Article 192.

324 Reykjavik Declaration, para. 5(b).

325 FSA, Article 5(f).

326 Code of Conduct, Articles 6.6, 7.2.2(g), 7.6.9 and 8.5.1.

327 Reykjavik Declaration, para. 5(d)-(e).

other relevant international organizations to take action to reduce or eliminate by-catch and fish discards, including, as appropriate, technical measures, and encouraged participation in regional mechanisms with mandates to conserve non-target species taken incidentally in fishing operations.³²⁸

Specific regimes have been developed at the global and/or regional levels. First, seabirds, cetaceans, sharks and sea turtles have been identified as seriously affected by fishing activities, and are subject to special protection given in several international instruments, including treaties and memoranda of understanding.³²⁹ Second, there have been initiatives to regulate the use of certain types of fishing gear or techniques. Fishing practices that have been identified as destructive or inadequate include gears such as large-scale driftnet fishing and bottom-trawling and techniques such as the use of poison and explosions.³³⁰ Some legislation addresses destructive fishing practices by means of the requirement of permits: directly, some of the most destructive fishing practices are prohibited or regulated outright in basic fishery laws and regulations; indirectly, destructive fishing practices are taken into account in considering applications for permits. The former way of regulation includes fishing employing explosives, poisons or dynamite,³³¹ driftnet fishing³³² and bottom trawling.³³³ In considering applications for permits, several states take into account, among others, involvement in IUU fishing and/or impacts on benthic ecosystems. Third, another attempt to protect ecosystems is the action currently undertaken against fishing by lost or abandoned gear, so-called ‘ghost fishing’. The UNGA has been working on this issue in cooperation with other organizations such as the FAO.³³⁴

328 E.g., UNGA Resolution 59/25, paras 45-46; UNGA Resolution 61/105, paras 60-61.

329 Although these instruments were developed to address by-catch in pelagic fisheries, these marine living resources are taken as by-catch also in deep-sea fisheries. For example, the Secretary-General in his report identifies by-catch species affected by deep-water fisheries including not only benthic invertebrates and fish species, but also migrating cetaceans and sea turtles, seabirds and deep-sea sharks. A/61/154, at pp. 15-16, paras 46-49.

330 See e.g., information available at FAO, ‘Destructive fishing practices’, <<http://www.fao.org/fi/website/FIRetrieveAction.do?dom=topic&fid=12353>> (last visited 20 November 2007). The term ‘destructive fishing practice’ could be understood to include both impacts on biomass of target species caused by indiscriminate fishing methods such as driftnet fishing and those on the marine ecosystem, including associated or dependent species, habitats and biodiversity.

331 South Korea, Fisheries Act, Article 73; Namibia, Marine Resources Act, Article 47(1); South Africa, Marine Living Resources Act, Section 44(1)(a).

332 Australia, Fisheries Management Act, Section 13(2)-(4); Namibia, Marine Resources Act, Article 47(2); South Africa, Marine Living Resources Act, Section 47. See also 16 U.S. Code 1826 *et seq.*

333 Namibia, Regulations relating to the Exploitation of Marine Resources, Regulation 14(1).

334 UNGA Resolution 58/14, Sustainable Fisheries, Including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and Related Instruments, 24 November 2003, para. 44; UNGA Resolution 59/25, paras 45 and 60-63; UNGA Resolution 60/31, paras 77-82; UNGA Resolution 61/105, paras 60 and 94-95.

Second, the attention of states has been increasingly focused on the protection of habitats. The CBD, for example, defines the word ‘habitat’ as ‘the place or type of site where an organism or population naturally occurs’.³³⁵ The Code of Conduct refers to wetlands, mangroves, reefs, lagoons, nursery and spawning areas as examples of critical habitats in marine and fresh water ecosystems to be protected and rehabilitated.³³⁶ The FSA refers only to the protection of habitats of special concern, not as a part of general principles but as a part of the application of the precautionary approach.³³⁷ This issue is extensively dealt with in the Reykjavik Declaration. Among other things, states will undertake to identify and describe the role of habitat and the biological, physical and oceanographic factors affecting ecosystem stability and resilience, and to support research and technology developments concerning fishing gear and practices to reduce adverse impacts of fishing practices on habitat.³³⁸ The issue has drawn more attention recently in relation to impacts on VMEs of bottom fisheries. Ecosystem features of concern include seamounts, hydrothermal vents and cold water corals. Chapters 3-5 extensively deal with this issue in the sections on deep-sea fisheries.

Third, another ecosystem consideration is the claim that fisheries shall be managed in a compatible manner within the same marine ecosystem.³³⁹ In the context of straddling fish stocks and highly migratory fish stocks, states have articulated the requirement of compatibility between measures adopted for the EEZ and those for the high seas, in giving effect to the rights, duties and interests of coastal states.³⁴⁰

In the context of DHSFS, too, this requirement may play a role in adopting conservation and management measures. As the convention area of RFMOs is not necessarily established in accordance with the location of ecosystems, discrete stocks may straddle regulatory areas of two or more RFMOs.³⁴¹ As in the case for straddling stocks and highly migratory species, without compatible conservation and management measures, fisheries management may fail to achieve its purpose on either or both sides of the border between the RFMOs. Thus, cooperation between relevant RFMOs is necessary in this case. Direct cooperation between RFMOs and the coordination of measures between such RFMOs have already taken place.³⁴² FAO-hosted meetings of secretariats of RFMOs as well as future consultations of members of RFMOs, as

335 CBD, Article 2.

336 Code of Conduct, Article 6.8.

337 FSA, Article 6(3)(d). The FSA also refers to the minimization of pollution. See FSA, Article 5(f).

338 See Reykjavik Declaration, para. 5(a)-(b) and (e).

339 For example, see Orrego Vicuña, *The Changing International Law of High Seas Fisheries*, at p. 171 *et seq.*; Davies and Redgwell, ‘The International Legal Regulation of Straddling Fish Stocks’, at p. 263.

340 See, e.g., FSA, Article 7(2); Agenda 21, paras 17.1 and 17.49.

341 This would be the case of, *inter alia*, NAFO and NEAFC.

342 On the management of redfish by NAFO and NEAFC, see Section 4.5.4 below.

proposed by UNGA resolution 61/105,³⁴³ may contribute to the improved cooperation and coordination of measures among the RFMOs concerned.

Marine biodiversity

Biological diversity has been defined as ‘the variability among living organisms from all sources including [...] marine and other aquatic ecosystems and the ecological complexes of which they are part’, and includes diversity ‘within species, between species and of ecosystems’.³⁴⁴ Biodiversity is linked to fisheries in two senses: destructive fishing practices could pose a risk of decreasing biodiversity; the loss of biodiversity causes the decreased productivity of fish.³⁴⁵

Treaties regulating high seas fisheries have traditionally dealt with problems concerning resources in the oceans ‘in a piecemeal fashion’.³⁴⁶ For example, despite the statement that states parties to the LOSC are ‘[c]onscious that the problems of ocean space are closely interrelated and need to be considered as a whole’,³⁴⁷ the LOSC deals with the conservation and management of marine living resources of the high seas and the protection of the marine environment in different sections (Part VII, section 2 and Part XII, respectively), and there is no cross-reference between these sections.

The Expert Group on Environmental Law of the WCED was the first to articulate legal principles requiring states to maintain ‘maximum biodiversity’ by ensuring the survival and promoting the conservation of all species of flora and fauna in their natural habitat. Their proposals led to the drafting of and, eventually, the adoption of the CBD in 1992.³⁴⁸ The CBD now enjoys almost universal participation.³⁴⁹

343 UNGA Resolution 61/105, para. 71. See also Report of the Twenty-Seventh Session of the Committee on Fisheries, Rome, 5-9 March 2007, at para. 85.

344 CBD, Article 2. The definitions of terms such as ‘biological diversity’, ‘ecosystem’ and ‘habitat’ in the CBD are incorporated into or reiterated almost verbatim in other international instruments. E.g., see Annex V on the Protection and Conservation of the Ecosystems and Biological Diversity of the Maritime Area to the Convention for the Protection of the Marine Environment of the North-East Atlantic, Sintra, 22-23 July 1998, Article 1.

345 The impacts of biodiversity loss on fisheries are documented in B. Worm *et al.*, ‘Impacts of Biodiversity Loss on Ocean Ecosystem Services’, 314 *Science* (2006), at pp. 787-790 (arguing for positive relationships between diversity and ecosystem functions and services). The term ‘biodiversity loss’ was defined in CBD COP Decision VII/30, for the purpose of assessing progress towards the target to achieve a significant reduction in the current rate of biodiversity loss by 2010, as ‘the long-term or permanent qualitative or quantitative reduction in components of biodiversity and their potential to provide goods and services, to be measured at global, regional and national levels’. COP Decision VII/30, para. 2.

346 Birnie and Boyle, *International Law and the Environment*, at p. 568.

347 LOSC, preambular para. 3.

348 M. Bowman and C. Redgwell, ‘Introduction’, in M. Bowman and C. Redgwell (eds.), *International Law and the Conservation of Biological Diversity* (1996), at pp. 1-4.

349 There are 190 parties to the CBD as of 27 March 2008. Information available at the website of the CBD, ‘List of Parties’ <<http://www.cbd.int/convention/parties/list.shtml>> (last visited 27 March 2008).

The objectives of the CBD are ‘the 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’.³⁵⁰ The CBD reaffirms that the conservation of biological diversity is ‘a common concern of humankind’.³⁵¹

The CBD stipulates that its provisions apply differently in areas within the limits of national jurisdiction and in areas beyond national jurisdiction. In the case of ‘biological components’, the provisions apply only in relation to areas within the limits of national jurisdiction. On the other hand, in the case of ‘processes and activities’, the provisions apply to those carried out under the jurisdiction or control of the states parties in areas under *and* beyond national jurisdiction, regardless of where their effects occur.³⁵² It is not clear from the text of the Convention as such which provisions are applicable to the conservation and sustainable use of marine biodiversity beyond the limits of national jurisdiction. In the context of genetic resources, the Secretary-General in his report stated that ‘[t]he provisions of the CBD therefore do not apply to genetic resources beyond national jurisdiction’.³⁵³ It has also been pointed out that while ‘bioprospecting activities in the deep seabed carried out under the control of a Party to the CBD are in principle subject to the CBD provisions’, ‘the latter provisions are essentially based on a provider/user countries relationship which seems ill-suited for the deep seabed’.³⁵⁴

In relation to the marine environment, moreover, the application of the CBD is circumscribed. Parties to the CBD ‘shall implement the CBD with respect to the marine environment consistently with the rights and obligations of States under the law of the sea’.³⁵⁵ In fact, the United States expressed its disappointment in this regard in its declaration, stating ‘we are disappointed with the development of issues related to [...] the legal relationship between this Convention and other international agreements, and the scope of obligations with respect to the marine environment’.³⁵⁶ But, it has been also suggested that the CBD provisions exist in parallel and supplement the LOSC with respect to the marine environment: because Article 22(2) of the CBD is qualified by ‘rights and obligations’, the provisions of the CBD could be applied

350 CBD, Article 1. The CBD also confirms that states have the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of areas beyond the limits of national jurisdiction. CBD, Article 3.

351 CBD, Preamble para. 3. On the content of and differences between the CHM concept and the concept of Common Concern of Humankind, see S. Mahmoudi, ‘Common Heritage of Mankind, Common Concern of Humanity’, in J.-P. Beurier, A. Kiss and S. Mahmoudi (eds.), *New Technologies and Law of the Marine Environment* (2000), at pp. 215-223.

352 CBD, Article 4.

353 A/62/66, para. 201.

354 European Commission Background Paper No. 3, at p. 8.

355 CBD, Article 22(2).

356 Declaration (Upon adoption), para. 5, reproduced in Secretariat of the Convention on Biological Diversity, *Handbook of the Convention on Biological Diversity Including its Cartagena Protocol on Biosafety* (3rd edition, 2005), at p. 394.

to the extent it does not infringe upon the rights or obligations of states under the LOSC.³⁵⁷

Notwithstanding the potential obstacles associated with the conservation of marine biodiversity beyond national jurisdiction in the text of the Convention, parties to the CBD identified marine and coastal management as a priority area. COP II issued Decision II/10, known as the 'Jakarta Mandate', and assigned a number of tasks in this regard. As noted earlier, COP Decision V/6 endorsed the 'ecosystem approach' as a useful tool for the conservation of biodiversity, and elaborated the concept in this context. Protected areas as a tool for biodiversity conservation also became a focal point in the work of the CBD regime, and several decisions and studies were issued, including COP Decision VIII/24. The Ad Hoc Open-Ended Working Group on Protected Areas held its first meeting in June 2005, considering, among other things, 'Options for cooperation for the establishment of marine protected areas in marine areas beyond the limits of national jurisdiction'. Subsequent developments inside and outside the CBD regime will be dealt with in Chapter 3.

A number of recent international instruments of relevance to fisheries management also refer to marine biodiversity, in association with ecosystem approaches. The JPOI makes it necessary to '[m]aintain the productivity and biodiversity of important and vulnerable marine and coastal areas, including in areas within and beyond national jurisdiction',³⁵⁸ and '[d]evelop and facilitate the use of diverse approaches and tools, including the ecosystem approach, the elimination of destructive fishing practices', and the establishment of MPAs consistent with international law and based on scientific information.³⁵⁹ Among others, at the 2005 World Summit, this commitment was confirmed by heads of state and government.³⁶⁰ The Secretary-General recommended the incorporation of the commitment to significantly reduce the rate of loss of biodiversity by 2010 into a new target under Millennium Goal 7 for the follow up on the Millennium Declaration.³⁶¹ The ICP underlined the importance of the conservation of biodiversity to an ecosystem approach, inviting states to consider that an ecosystem approach should '[s]eek to minimize adverse impacts of human activities on marine ecosystems and biodiversity'.³⁶² The United Nations General Assembly has established an open-ended working group to study issues relating to the conservation

357 R. Wolfrum and N. Matz, 'The Interplay of the United Nations Convention on the Law of the Sea and the Convention on Biological Diversity', 4 *Max Planck Yearbook of United Nations Law* (2000), at p. 476.

358 Johannesburg Plan of Implementation, para. 32(a).

359 *Ibid.*, para. 32(c).

360 UNGA Resolution 60/1, 2005 World Summit Outcome, 16 September 2005, para. 56(c). In the same paragraph, it also referred to the negotiation and elaboration of an international regime to promote and safeguard the fair and equitable sharing of benefits arising out of the utilization of genetic resources.

361 Report of the Secretary-General on the Work of the Organization, A/61/1(SUPP), 16 August 2006, at para. 24.

362 ICP-7 Report, para. 6(n).

and sustainable use of biodiversity beyond areas of national jurisdiction, which held the first meeting in 2006 and the second meeting in 2008.³⁶³

Various international fisheries instruments also stipulate the conservation of biodiversity. The FSA refers to the protection of biodiversity in the marine environment as one of the general principles.³⁶⁴ The Code of Conduct also explicitly prescribes conservation of biological diversity.³⁶⁵ The Reykjavik Declaration, in the context of the need to advance scientific knowledge to promote the incorporation of ecosystem considerations, referred to the objective to reduce adverse impacts of fishing practices on biodiversity.³⁶⁶ The UNGA in its Resolutions on sustainable fisheries also recognized 'the immense importance and value' of biodiversity deep-sea ecosystems contain.³⁶⁷ UNGA resolutions also called for the modernization of mandates of RFMO/As by incorporating, among others, biodiversity considerations.³⁶⁸ The protection of biodiversity in the context of fisheries will be further investigated in the following chapters with regard to deep-sea fisheries and the protection of VMEs.

Precautionary approach

In the field of environmental protection, state responsibility for injury *ex post facto* is not a desirable solution to the problem. In some cases, environmental damage is irreversible or it costs much more to restore the environment to its prior condition. In other words, precautionary action is desirable or necessary to prevent deterioration of the environment. Besides, the application of the precautionary principle is dictated by the very concept of sustainable development,³⁶⁹ since the latter concept requires states to take into account the needs of future generations – a cautious attitude is a logical way of behaviour.

Although the definition of the precautionary principle is different from one document to another, the basic character of the concept is expressed as 'erring on the side of caution'.³⁷⁰ Features common to the concept of precaution relate to (1) a risk of harm to the environment; (2) uncertainty in the causal relationship between the activity and potential harm; and (3) action *ex ante* to prevent or reduce the risk.³⁷¹

363 See Chapter 3.

364 FSA, Article 5(g).

365 Code of Conduct, Articles 6.6, 7.2.2(d), 8.4.8 and 12.10.

366 Reykjavik Declaration, para. 5(e).

367 UNGA Resolution 61/105, para. 80.

368 UNGA Resolution 60/31, para. 58; UNGA Resolution 61/105, para. 70.

369 ILA New Delhi Declaration of Principles of International Law relating to Sustainable Development, para. 4.

370 See A. Trouwborst, *Precautionary Rights and Duties of States* (2006), at p. 29 (text accompanying note 49 and the literature cited therein).

371 *Ibid.*, at pp. 30-33. Garcia observes that the gist of the precautionary principle is that if there exists, to a certain extent, a risk of harm, scientific uncertainty may not be an excuse for inaction. According to him, most characteristic attributes include: taking preventive action when there is a risk of serious or irreversible damage; the requirement of action even in the absence of certainty about the damage and without full scientific certainty; and the reversal of

Applying the precautionary principle does not in itself decide what action is needed for the purpose of risk abatement.³⁷² The precautionary principle plays a role in addressing a risk of potential harm, rather than stipulating a particular type of action. As elaborated below, action required to be taken under the precautionary principle is therefore determined by considering factors such as the types of activity taking place and the risk involved.

Although the precautionary principle developed in fields other than fisheries, it can be applied to fisheries management.³⁷³ Initially, especially until the adoption of the FSA, views on the compatibility between the precautionary approach and the international law of high seas fisheries varied considerably and some argued that the precautionary principle would not be applicable to fisheries management. For example, the EC maintained that the application of the precautionary principle was limited to marine pollution.³⁷⁴ However, most, if not all, recent international fisheries instruments oblige or recommend states and RFMOs to apply the precautionary approach to fisheries and indicate ways to implement it.³⁷⁵

In applying the precautionary approach to fisheries management, common features of the precautionary principle need to be adjusted to the context of fisheries. The following three elements will be examined below: harm to the environment, the role of scientific information, and the types of precautionary action.³⁷⁶

the burden of proof. Garcia, *The Precautionary Approach to Fisheries and its Implications for Fishery Research, Technology and Management*, at section 3.1.

372 Trouwborst, *Precautionary Rights and Duties of States*, at p. 165 *et seq.*; Birnie and Boyle, *International Law and the Environment*, at pp. 119-120.

373 As far as the term is concerned, 'precautionary principle' and 'precautionary approach' are both in use. This study uses 'approach' when it refers to the concept in the context of fisheries. For implications of distinguishing between these two terms, see Birnie and Boyle, *International Law and the Environment*, at pp. 116-117. Note that some authors insist that the precautionary approach employed in fisheries is different from the precautionary principle in other areas in its normative content. See, e.g., Orrego Vicuña, *The Changing International Law of High Seas Fisheries*, at p. 157 *et seq.*

374 A. Kanehara, 'A New or Pathological Tendency in the International Regulation of Sovereign States: From the Perspective of the International Regulation of Whaling', 47 *Japanese Annual of International Law* (2004), at p. 49 n. 54; G.J. Hewison, 'The Precautionary Approach to Fisheries Management: An Environmental Perspective', 11 *International Journal of Marine and Coastal Law* (1996), at p. 310.

375 For example, FSA, Articles 5-6; Code of Conduct, Articles 6.5 and 7.5; UNGA Resolution 61/105, para. 5. In addition, the CBD, while not explicitly referring to the precautionary approach, notes in its preamble that where there is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimize such a threat. CBD, preambular para. 9.

376 Note that, in this regard, terminologies are different from one commentator to another: e.g., different measures, strict application and strong version. See, generally, A. Trouwborst, *Evolution and Status of the Precautionary Principle in International Law* (2002), at p. 3 *et seq.*

First, in the practice of states, thresholds of harm which trigger the application of the precautionary principle are two-fold: serious or irreversible harm.³⁷⁷ The term ‘irreversible’ could include ‘virtually irreversible’.³⁷⁸ The term ‘serious’ is more context-specific.³⁷⁹ what amounts to serious or irreversible harm depends on the concrete situation.

Impacts of fisheries on the marine environment could be divided into two types. In addressing these two distinct impacts of fisheries, different actions may be required, depending on the causal links between fisheries and impacts, and the likelihood and the potential magnitude of harm.³⁸⁰

On the one hand, fisheries always result in the reduction of target biomass, at least in the short-term before the recruitment of juveniles restores the biomass to the original point. The Secretary-General in his report observes as follows: ‘it should be noted that even a sustainable fisheries harvest has an impact on the target fisheries biomass in the ecosystem [...]. One element of effective ecosystem management is therefore setting and enforcing sustainable catch limits’.³⁸¹ Therefore, the reduction of biomass as such should not be regarded to constitute unacceptable harm to the environment.³⁸²

If a fishery results in the over-exploitation, depletion or extinction of the stock concerned, the impact of the fishery may be qualified as ‘serious or irreversible harm’ to the environment. For example, ITLOS in the *Southern Bluefin Tuna* cases stated ‘that, in the view of the Tribunal, the parties should in the circumstances act with prudence and caution to ensure that effective conservation measures are taken to

377 Trouwborst, *Precautionary Rights and Duties of States*, at pp. 53-56. But see N. Oral, ‘Protection of Vulnerable Marine Ecosystems in Areas Beyond National Jurisdiction: Can International Law Meet the Challenge?’ in A. Strati, M. Gavouneli and N. Skourtos (eds.), *Unresolved Issues and New Challenges to the Law of the Sea: Time Before and Time After* (2006), at p. 98, note 72. She seems to suggest that the precautionary principle itself does not require the threshold of ‘serious harm’.

378 Trouwborst, *Precautionary Rights and Duties of States*, at pp. 61-62. He includes in this category damage that ‘cannot be undone in the course of several human generations’, and points to harm to ecosystems with a slow recovery rate such as coral reefs. A. Trouwborst, ‘The Precautionary Principle in General International Law: Combating the Babylonian Confusion’, 16 *Review of European Community & International Environmental Law* (2007), at p. 189. In this regard, see Section 3.2.2.1 below.

379 The term ‘serious harm to the marine environment’ is defined in the Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area as ‘any effect from activities in the Area on the marine environment which represents a significant adverse change in the marine environment determined according to the rules, regulations and procedures adopted by the Authority on the basis of internationally recognized standards and practices’. Regulation 1(3)(f).

380 See also W. Howarth, ‘The Interpretation of ‘Precaution’ in the European Community Common Fisheries Policy’, 20 *Journal of Environmental Law* (2008), at pp. 219-220 (arguing for the need for contrasts between conservation and natural resource management in analyzing the application of the precautionary principle to fisheries).

381 A/59/298, at p. 22, para. 75.

382 See also Howarth, ‘The Interpretation of ‘Precaution’ in the European Community Common Fisheries Policy’, at p. 216.

prevent serious harm to the stock of southern bluefin tuna'.³⁸³ As far as this type of impact is concerned, fishing activities have a direct causal relationship with the possible harm; uncertainty is limited to the magnitude and likelihood of the harm. To address this type of impact, recent fisheries-related instruments use precautionary reference points to indicate thresholds of acceptable impacts on target species. For example, the FSA articulates two types of reference points and the target reference points are designed to have a buffer zone taking into account uncertainty in stock assessment and recruitment rates.³⁸⁴

On the other hand, there could be indirect outcomes engendered by fishing activities such as risks of harm to non-target species and habitats. Fisheries entail a varying degree of by-catch; habitats are also susceptible to damage from certain types of fishing gear and/or techniques.³⁸⁵ In this case, the link between the fishing activity and the possible harm is sometimes indirect and ambiguous. Moreover, the amount of risks causing the harm is open to challenge.

Second, one feature of the precautionary approach is to take action *despite* uncertainty: in other words, action needs to be taken to protect the environment whether or not uncertainty exists.³⁸⁶ This is not to say that no scientific information is required for the precautionary approach to be applied and all risks are unacceptable: *some* information is needed at all times in order to identify the risk of harm and to develop a solution to the problem. In fact, the importance of scientific information in fisheries management has been emphasized in recent international fishery-related instruments. For example, General Assembly Resolution 44/225 confirmed the essential role of scientific information in fisheries management by stating, in its preamble, that 'any regulatory measure to be taken for the conservation and management of living marine resources should take account of the best available scientific data and analysis'.³⁸⁷ Similarly, the FSA and the Code of Conduct provide for conservation and management measures being based on the best scientific evidence available.³⁸⁸ The Reykjavik Declaration observes that '[w]hile it is necessary to take immediate action to address particularly urgent problems on the basis of the precautionary approach, it is important to advance the scientific basis for incorporating ecosystem considerations,

383 *Southern Bluefin Tuna Cases (New Zealand v. Japan; Australia v. Japan)*, 27 August 1999, Cases Nos. 3 and 4, *Order (Request for provisional measures)*, at para. 77.

384 FSA, Annex II, para. 2.

385 Four fishing practices which may have impacts on deep-sea habitats have been identified: bottom-trawling and dredging, bottom-set longlines, bottom-set gillnets, and pots and traps. A/61/154, at pp. 9-10, paras 20-23.

386 See Trouwborst, *Precautionary Rights and Duties of States*, at pp. 91-96. On the absence of the requirement of scientific uncertainty under the FSA, see also Orrego Vicuña, *The Changing International Law of High Seas Fisheries*, at p. 162; Schiffman, *Marine Conservation Agreements: The Law and Policy of Reservations and Vetoes*, at p. 185. On the concept of uncertainty in the context of fisheries, see Howarth, 'The Interpretation of 'Precaution' in the European Community Common Fisheries Policy', at pp. 220-221.

387 UNGA Resolution 44/225, Large-Scale Pelagic Driftnet Fishing and Its Impact on the Living Marine Resources of the World's Oceans and Seas, 22 December 1989, preambular para. 6.

388 FSA, Article 5(b); Code of Conduct, Article 7.2.1.

building on existing and future available scientific knowledge', and specifies six undertakings towards this end.³⁸⁹ The need for data is emphasized in successive UNGA resolutions,³⁹⁰ and this point has been confirmed by commentators.³⁹¹

The formulation of the relationship between scientific information and the application of the precautionary approach in fisheries-related instruments is not uniform. Some instruments provide for measures based on the best scientific information available *and* the application of the precautionary approach,³⁹² while others demand a scientific basis, *including* the application of the precautionary approach.³⁹³ But, in any case, it is safe to say that the availability of at least some information is assumed in both cases.³⁹⁴

Third, there is no single way of implementing the precautionary approach in a given context, although the concept 'precautionary principle' has often been associated with the reversal of the burden of proof and a ban on the activity concerned. The concept 'burden of proof' has both general connotations and legal significance. In legal terminology, the burden of proof is defined as, for example, '[a] party's duty to prove a disputed assertion or charge', or loosely equated with the burden of persuasion, which means '[a] party's duty to convince the fact-finder to view the facts in a way that favors that party'.³⁹⁵ Therefore, in legal proceedings, if the burden of proof has not been discharged, the assertion of the party is dismissed by impartial third parties (e.g., judges and arbitrators) who decide the case.³⁹⁶ As the ICJ stated, '[u]ltimately, [...] it is the litigant seeking to establish a fact who bears the burden of proving it; and in cases where evidence may not be forthcoming, a submission may in the judgment be rejected as unproved [...]'.³⁹⁷

389 Reykjavik Declaration, para. 5.

390 For example, see UNGA Resolution 61/105, paras 8 and 28.

391 E.g., Tahindro, 'Conservation and Management of Transboundary Fish Stocks', at p. 5.

392 UNGA Resolution 61/105, para. 70.

393 For example, UNGA Resolution 59/25, para. 66.

394 See Birnie and Boyle, *International Law and the Environment*, at p. 117. In the words of Trouwborst, the precautionary principle does not take effect as long as there are no 'reasonable grounds for concern'. Trouwborst, *Precautionary Rights and Duties of States*, at pp. 115-117.

395 B.A. Garner (ed.), *Black's Law Dictionary* (Second pocket edition, 2003), at p. 80.

396 See also S. Rosenne, *The Law and Practice of the International Court, 1920-2005*, Fourth edition (2006), at p. 1040. But also note that he points out that '[i]n many cases the absence of a strict plaintiff/defendant relationship between the parties makes it difficult to determine with any degree of finality which party is the actor' (Italics in the original).

397 *Military and Paramilitary Activities in and against Nicaragua (Nicaragua v. United States of America)*, Judgment (Jurisdiction of the Court and Admissibility of the Application), 26 November 1984, *I.C.J. Reports 1984*, p. 392, at p. 437, para. 101. This general principle of law has been confirmed by the jurisprudence of the ICJ. For the latest confirmation, see *Sovereignty over Pedra Branca/Pulau Batu Puteh, Middle Rocks and South Ledge (Malaysia/Singapore)*, Judgment, 23 May 2008, at para. 45. But also see *Case concerning the Frontier Dispute (Burkina Faso/Republic of Mali)*, Judgment, 22 December 1986, *I.C.J. Reports 1986*, p. 554, at pp. 587-588, para. 65 ('In any event, however, in a case such as this, the rejection of any particular argument on the ground that the factual allegations on which it is based have not been proved is not sufficient to warrant upholding the contrary argument').

Although, in international litigation under the LOSC, judges and arbitrators are to decide whether the conservation and management measure in question is compatible with the LOSC and other relevant rules of international law on an impartial basis, there is not always an impartial third party in decision-making processes outside legal proceedings. On the one hand, in RFMOs, states collectively decide what conservation measures should be taken in accordance with their policy and evaluation of the situation, while they themselves assert the desirability of certain measures. No single state, or group of states, has the duty to prove its assertion before impartial third parties before any conservation and management measure is adopted. The burden of proof in the legal sense has no utility in this case. On the other hand, impartial parties might be involved when a dispute is referred to dispute settlement procedures within the framework of RFMOs or under the LOSC. Then, adjudicatory or consultative bodies, whether established in accordance with RFMO dispute settlement procedures or not, appear to decide as an impartial party. In these instances, the reversal of the burden of proof could be invoked.

In relation to the non-legal usage of the concept, the inherent uncertainty over impacts of fisheries on marine ecosystems, which is the norm in fisheries management, makes it impossible to provide conclusive proof.

Notwithstanding the above considerations, the reversal of the burden of proof has implications in procedural terms: there may be a situation where those who benefit from the activity need to convince others that the activity is harmless or the harm is acceptable. In other words, the activity might be assumed to be harmful to the resource unless proven otherwise, and the responsibility to argue that the activity is harmless or the impacts are acceptable might lie on those who intend to derive benefits from the ecosystem.³⁹⁸ The reversal of the burden of proof in this sense has implications particularly for new or exploratory fisheries.

Now, let us take an (alleged) example of the reversal of the burden of proof in fisheries management in UNGA Resolution 44/225 and subsequent UNGA Resolutions concerning large-scale driftnet fishing.³⁹⁹ First, decision-making in the General Assembly, as in RFMOs, was made in a forum where decision-makers evaluate and decide upon their own claims, rather than act as a third party. Second, it should be noted that the 'statistically sound analysis', which would determine whether the moratorium would be imposed or not, was 'to be *jointly* made by concerned parties of the international community with an interest in the fishery resources of the region' (emphasis added). While the phrase 'with an interest in the fishery' might be interpreted as implying only those who have benefits from the fishing practice concerned,

398 See Garcia, *The Precautionary Approach to Fisheries and its Implications for Fishery Research, Technology and Management*, at section 5.3.

399 This is considered to be a representative example of the reversal of the burden of proof as applied to fisheries management in association with the application of the precautionary approach. For example, see Hey, 'Global Fisheries Regulations in the First Half of the 1990s', at p. 466; Burke, *The New International Law of Fisheries*, at p. 121.

the wording does not exclude those who want to impose a moratorium.⁴⁰⁰ It could be argued that both pro- and anti-moratorium groups (not only states, but also other stakeholders) were required to participate in the proposed analysis. Therefore, the responsibility has never lain on either group of states.

The more important achievement in Resolution 44/225 is found in securing support from both pro- and anti-moratorium states. Resolution 44/225 identified the existence of the harm and indicated the corresponding action to be taken. It is submitted that the measure is better understood as a *conditional* conservation measure, a measure which may be cancelled only in accordance with a strict condition. Normally, conservation measures are final and do not refer to the possibility of review procedures. An innovative point of the series of UNGA Resolutions is this method of accommodating different views so as to tackle an important problem, rather than the alleged reversal of the burden of proof. By adding the possibility of cancellation, the measure gained support from both the antagonists and the sceptics.

As discussed above, the concept of (the reversal of) the burden of proof as a ban on fishing activities could be applied only in limited circumstances.⁴⁰¹ As Orrego Vicuña suggested, since scientific uncertainty is always the rule in fisheries activities, activities cannot be paralysed until full scientific certainty is achieved that no environmental damage will ensue.⁴⁰²

Other types of precautionary action include: setting precautionary reference points for target species, determining catch limits for non-target species, controlling new or exploratory fisheries, implementing interim arrangements such as interim closure, emergency measures and collecting data and other scientific information.⁴⁰³ Requesting provisional measures is also a cautious attitude, although provisional measures are not usually considered to be an application of the precautionary approach. ITLOS prescribed the provisional measures in the *Southern Bluefin Tuna* cases, finding that

400 For example, Burke seems to assume that the analysis was to be made jointly by proponents and opponents, stating that the analysis ‘cannot be completed because the concerned parties do not agree on it’. Burke, *ibid.*, at p. 117. See also Section 2.1.2.2 above.

401 Commenting on the provisions of the FSA on the precautionary approach, Davies and Redgwell observe that ‘[t]he application of the precautionary approach in Article 6 is particularly welcome, though it does not go so far as to prevent fishing even where stocks are threatened’. Davies and Redgwell, ‘The International Legal Regulation of Straddling Fish Stocks’, at p. 261.

402 Orrego Vicuña, ‘The Law Governing High Seas Fisheries: In Search of New Principles’, at p. 387.

403 FSA, Article 6 and Annex II; Code of Conduct, Article 7.5. As will be explained in Part II, measures applying the precautionary approach may also contribute to the protection of ecosystems. In addition, an ecosystem approach to fisheries influences precautionary measures by requiring adaptive management: as Howarth points out, ‘precaution looks less like a one-off response to an uncertain ecological threat and more like an iterative process involving a sequence of actions each of which is dependent on those preceding it and the monitoring and evaluation of their ecological success or failure’. Howarth, ‘The Interpretation of ‘Precaution’ in the European Community Common Fisheries Policy’, at p. 242. The consequence of this proposition would be that more stringent measures, including a moratorium, will be required if precautionary measures taken in the past have not proved to be effective in the conservation of fishery resources and ecosystems.

measures should be taken as a matter of urgency to preserve the rights of the parties and to avert further deterioration of the southern bluefin tuna stock.⁴⁰⁴

It is submitted that where the causal relationship between the fishery activity and harm to the environment appears to be more uncertain, less strict measures are likely to be adopted; where the potential harm may be more serious, more stringent measures are likely to be taken. In fact, the requirement of proportionality demands that actions correspond to the size of the risk involved, so as to avoid the adoption of excessively strict measures.⁴⁰⁵

2.2 POTENTIAL IMPLICATIONS OF THE GENERAL PRINCIPLES OF HIGH SEAS FISHERIES

The general principles of high seas fisheries articulated above are to be given effect through implementation at the global, regional and national levels. The provisions of Articles 116-119 of the LOSC are couched in an all-inclusive manner: they do not directly exclude any species of the marine living resources of the high seas from their scope. Nevertheless, by cross-reference in Article 116, they stipulate that special regimes govern high seas fisheries for certain fish stocks such as anadromous stocks and catadromous species.

The rest of this section examines the possibility that separate regimes apply to high seas fisheries in two additional circumstances: the exploitation of organisms belonging to sedentary species beyond the outer limit of the continental shelf and fisheries for DHSFS.⁴⁰⁶

404 *Southern Bluefin Tuna Cases (New Zealand v. Japan; Australia v. Japan)*, at para. 80. See also paras 77 and 79: ‘*Considering* that, in the view of the Tribunal, the parties should in the circumstances act with prudence and caution to ensure that effective conservation measures are taken to prevent serious harm to the stock of southern bluefin tuna’ (para. 77); ‘*Considering* that there is scientific uncertainty regarding measures to be taken to conserve the stock of southern bluefin tuna and that there is no agreement among the parties as to whether the conservation measures taken so far have led to the improvement in the stock of southern bluefin tuna’ (para. 79). ITLOS may prescribe provisional measures to preserve the respective rights of the parties to the dispute or to prevent serious harm to the marine environment. See LOSC, Article 290(1).

405 Trouwborst, *Precautionary Rights and Duties of States*, at pp. 149-153. See also Howarth, ‘The Interpretation of ‘Precaution’ in the European Community Common Fisheries Policy’, at pp. 224-225.

406 In theory, it is also possible to consider the possibility of a distinct regime for fisheries covered by Article 13 of the HSFC. But it is doubtful that the type of fisheries contemplated in that article has been maintained and conducted by the coastal state’s nationals on the high seas even if the area covered by Article 13 is interpreted as high seas areas adjacent to the EEZ. For this reason, the present study does not look at this issue.

2.2.1 Sedentary Species beyond the Outer Limit of the Continental Shelf

Organisms belonging to sedentary species may be found both within and beyond the outer limit of the continental shelf determined in accordance with Article 76 of the LOSC.⁴⁰⁷ On the one hand, coastal states have sovereign rights to explore and exploit sedentary species on the continental shelf, while the regime of the EEZ does not apply to these resources.⁴⁰⁸ On the other hand, comparable provisions do not exist in relation to such activities in areas beyond the limits of national jurisdiction. Thus, the question arises whether the high seas regime governs the exploitation of these resources beyond the outer limit of the continental shelf like other high seas fish stocks, or whether they are governed by the regime of the Area.

At the outset, it should be noted that the term 'sedentary species' is not used in any context outside the continental shelf in the LOSC; it is not used in either Part VII or Part XI. It is not even clear if, in the context of areas located outside the outer limit of the continental shelf, whether it is adequate to use the term 'sedentary species' to refer to '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'.⁴⁰⁹ The concept of sedentary species has been primarily developed in association with the regime of the continental shelf.⁴¹⁰ Thus, it is not necessarily justified to assimilate the relationship between sedentary species and the continental shelf to that between equivalent resources outside the continental shelf and the Area.⁴¹¹ Nevertheless, for the sake of convenience, the term 'sedentary species' is employed in this section to mean 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, whether within or beyond the outer limit of the continental shelf.

407 Under the CSC, the outer limit of the continental shelf was not certain: while the drafting history of the Convention indicates that the requirement of adjacency in Article 1 prohibits unrestrained extensions seawards, some commentators have argued that the exploitability criterion made any extension possible. This was precisely the concern when Ambassador Arvid Pardo made his famous speech on the deep seabed. See Official Records of the General Assembly, Twenty-Second Session, First Committee, 1515th Meeting, 1 November 1967, A/C.1/PV.1515, at p. 9.

408 LOSC, Articles 68 and 77.

409 Sedentary species of the continental shelf are defined in Article 77(4) 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'. While the French text of Article 77(4) of the LOSC includes the phrase 'au stade où ils peuvent être pêchés' (emphasis added), the term 'exploitation' is used in this study as they include both fauna and flora.

410 See also T. Scovazzi, 'Mining, Protection of the Environment, Scientific Research and Bioprospecting: Some Considerations on the Role of the International Sea-Bed Authority', 19 *International Journal of Marine and Coastal Law* (2004), at pp. 400-401.

411 A.G. Oude Elferink, 'The Regime of the Area: Delineating the Scope of Application of the Common Heritage Principle and Freedom of the High Seas', 22 *International Journal of Marine and Coastal Law* (2007), at p. 151; Scovazzi, 'Mining, Protection of the Environment, Scientific Research and Bioprospecting', at p. 401.

The scope of species covered by the term ‘sedentary species’ is not without controversy. While the term is defined in the CSC and the LOSC, disputes have arisen as to whether a particular species falls under the biological character defined in the treaties.⁴¹² Moreover, recent interest in micro-organisms has further complicated the classification of marine living resources.⁴¹³ In this regard, it is interesting to note the following comments made by the Secretary-General: ‘[t]he extent to which the definition of sedentary species under article 77 covers the complex and symbiotic web of life of deep-sea ecosystems may need to be addressed in order to clarify whether such ecosystems and organisms belong to the regime of the continental shelf or of the water column above it’.⁴¹⁴

The Area is defined as the seabed and ocean floor and the subsoil thereof beyond the limits of national jurisdiction,⁴¹⁵ while the term ‘resources of the Area’ is defined as mineral resources for the purposes of Part XI.⁴¹⁶ Many of the provisions of Part XI are concerned with the exploration and exploitation of mineral resources, and only Article 145 has the potential to be considered to explicitly refer to living resources. The LOSC does not define which living resources belong to the Area or to the high seas. The term ‘seabed’ is not defined in the LOSC, either.

The LOSC does not offer a clear-cut answer to the question of which legal regime governs living resources of the Area. The delineation of the scope of the Area and the high seas has consequences for the determination of the applicable rules of the LOSC. On the one hand, if such resources are considered to be those of the high seas, the exploitation of these resources is either fishing or the exercise of an unlisted freedom of the high seas. In the former case, the same general principles are applicable as other fishing on the high seas; in the latter case, the freedom of the high seas is subject to, *inter alia*, Articles 117 and 118. On the other hand, if such resources are considered to be those of the Area, the freedom of the high seas would not be applicable. Rather, the activities would be governed by the CHM principle, including the ‘benefit of

412 Disputes include those concerning king crab between the United States and Japan, lobster between Brazil and France, and Icelandic scallops between Canada and the United States. See Buck, CRS Report for Congress (January 7, 2004).

413 Certain benthic micro-organisms, including some hydrothermal vent resources, may not be classified as sedentary species. See Allen, ‘Protecting the Oceanic Gardens of Eden’, at pp. 618-628. The Secretary-General in his report refers to sponges and corals as examples of sedentary species and states that biological resources other than sedentary species on the continental shelf whose superjacent water column is the high seas are subject to the regime of the high seas. See Oceans and the Law of the Sea, Report of the Secretary-General, A/62/66, 12 March 2007, at para. 193. This observation appears to imply that freedom of the high seas, together with restrictions thereon, is applicable to these resources. A detailed examination of the definition of sedentary species is made by Allen in the context of vent resources. See Allen, ‘Protecting the Oceanic Gardens of Eden’, at pp. 618-628.

414 A/62/66, at para. 193.

415 LOSC, Article 1(1)(1).

416 *Ibid.*, Article 133(a).

mankind' principle.⁴¹⁷ Since the detailed mechanism for exploitation is only concerned with non-living resources, elements of the CHM concept such as non-appropriation of the Area and its resources,⁴¹⁸ the sharing of the benefits from exploitation, peaceful uses of the deep seabed, and protection of the seas for future generations are of relevance in the context of the present study.⁴¹⁹ Even if neither the high seas regime nor the regime of the Area is applicable, it could be argued that activities are regulated by general provisions such as the prohibition of the abuse of rights and other rules of international law.⁴²⁰

Recent debates on bioprospecting for genetic resources in areas beyond the limits of national jurisdiction may help to shed some light on the analysis of the legal regime applicable to living resources of the Area in general and sedentary species in particular.

Many authors argue that provisions of Part XI or the CHM concept are not applicable to living resources,⁴²¹ while some suggest the applicability as *lege ferenda*.⁴²² The principal argument to deny the applicability of Part XI to living resources is that Article 133 defines resources as mineral resources, thus excluding living resources.

417 See, e.g., Oude Elferink, 'The Regime of the Area', at pp. 154-160. Allen argues that even if the present definition of resources in Part XI is stretched to include sedentary species or any other living marine resources, that would 'place those resources under a regime that presently includes no provision for their conservation or management' and would frustrate the goal of efficient utilization and conservation of marine living resources in preambular paragraph 4. Allen, 'Protecting the Oceanic Gardens of Eden', at p. 631.

418 Baslar proposes to replace the non-appropriation with non-exclusive use, noting the problem associated with the misconception that non-appropriation of international *spaces* is the essential feature of the CHM concept. See K. Baslar, *The Concept of the Common Heritage of Mankind in International Law* (1998), at pp. 86-89.

419 See *ibid.*, at p. 209. Note that the provisions amended by the 1994 Implementing Agreement should not be regarded as constituting the core of the concept because Article 311(6) of the LOSC prohibits amendments to the basic principle relating to the common heritage of mankind set forth in Article 136. *Ibid.*, at pp. 206-210.

420 See also Allen, 'Protecting the Oceanic Gardens of Eden', at p. 628 ('Organisms not falling within either regime would arguably be governed by principles of general international law').

421 E.g., *ibid.*, at pp. 628-638; E. Holmila, 'Common Heritage of Mankind in the Law of the Sea', 1 *Acta Societatis Martensis* (2005), at pp. 193-194; Orrego Vicuña, *The Changing International Law of High Seas Fisheries*, at pp. 10-11. See also Wolfrum and Matz, 'The Interplay of the United Nations Convention on the Law of the Sea and the Convention on Biological Diversity', at p. 455.

422 S. Oda, 'Sharing of Ocean Resources: Unresolved Issues in the Law of the Sea', 3 *New York Law School Journal of International and Comparative Law* (1981), at p. 13 (the CHM concept has been introduced for the exploitation of mineral resources in areas beyond the continental shelf or EEZ, although 'in the future, almost without doubt, this concept [CHM] will also apply to fishery resources or even to protection of the marine environment'); Baslar, *The Concept of the Common Heritage of Mankind in International Law*, at pp. 235 and 242.

Others, implicitly or explicitly, argue that activities concerning the exploration and exploitation of living resources fall within the regime of Part XI.⁴²³ For example, Armas Pfirter contends that ‘neither the negotiations of [UNCLOS III], nor the works of the Seabed Committee considered that these ‘sedentary species from the Area’ should be included in the high seas’ regime’ and notes that ‘the maritime area in which they live determines the legal regime applicable to them’ and ‘[t]hose which inhabit the Area have a greater dependency on the seabed and subsoil than those living in the continental shelf’.⁴²⁴

A number of arguments could be presented for the applicability of the provisions of Part XI to living resources of the Area. First, the preamble to the LOSC appears to indicate that living resources should not be excluded from the scope of the regime of Part XI.⁴²⁵ Preambular paragraph 6 reads:

‘[d]esiring by this Convention to develop the principles embodied in resolution 2749 (XXV) of 17 December 1970 in which the General Assembly of the United Nations solemnly declared inter alia that the area of the sea-bed and ocean floor and the subsoil thereof, beyond the limits of national jurisdiction, as well as its resources, are the common heritage of mankind, the exploration and exploitation of which shall be carried out for the benefit of mankind as a whole, irrespective of the geographic allocation of States’.

A question arises whether or not the preambular paragraph intends to imply both living and non-living resources by using the term ‘resources’. The drafting history of the definition of the term ‘resources’ in the text may help to understand the implications of the preambular reference to resources. The ISNT in 1975 did not exclude living resources from the definition of ‘resources’. It simply defined the term, for the purposes of the Convention, as ‘resources *in situ*’ in Article 1(iii). The Revised Single Negotiating Text in 1976 changed this in its Article 1: ‘For the purpose of this Part of the Convention’, [...] (iii) ‘Resources’ means mineral resources *in situ*’; at the same time, this definition was made applicable only to the draft prepared by the First Committee. The first draft including a preamble, namely, the Informal Composite Negotiating Text placed the definition of ‘Resources’ as mineral resources *in situ* in Part XI and the definition was again limited ‘[f]or the purpose of this Part of the

423 E.g., Fleischer, ‘Fisheries and Biological Resources’, at p. 1126 (it cannot be interpreted *a contrario* with the implication that the sea itself and the living resources thereof are not part of a ‘common heritage’ and therefore subject to national appropriation or unrestrained exploitation); Oude Elferink, ‘The Regime of the Area’, at pp. 149-154. See also R. W. Grigg, ‘Precious Coral Fisheries of Hawaii and the U.S. Pacific Islands’, 55 *Marine Fisheries Review* (1993).

424 F.M. Armas Pfirter, ‘The Management of Seabed Living Resources in ‘the Area’ under UNCLOS’, 11 *Revisita Electrónica de Estudios Internacionales* (2006), at pp. 8, 19 and 21.

425 See also S.N. Nandan *et al.* (eds.), *United Nations Convention on the Law of the Sea 1982: A Commentary (Virginia Commentary)*, vol. VI (2002), at p. 76 note 9 (‘[i]f a contextual approach is taken, it may be noted that the preamble to the Convention cites the 1970 Declaration of Principles’).

present Convention'.⁴²⁶ The final text of the LOSC follows this in Article 133. On the basis of this drafting history, it may be concluded that the reference to 'resources' in the preamble should be interpreted to express an ordinary meaning of the term, rather than the definition provided solely for the purposes of Part XI. Moreover, the cited UNGA resolution 2749 (XXV) does not distinguish between living and non-living 'resources'.⁴²⁷

In addition, Article 133 does not state that Part XI is only applicable to mineral resources, nor does it exclude living resources from the scope of application of Part XI.⁴²⁸ Since the terms 'living resources', 'non-mineral resources' and 'natural resources' (as opposed to 'resources') are not defined for the purposes of Part XI, it has been argued that it should be presumed that the meaning that is normally given to those terms is also applicable for the purposes of Part XI.⁴²⁹ Moreover, the term 'natural resources' is used in the LOSC to imply both living and non-living resources.⁴³⁰

Notwithstanding these arguments, it should be noted that, as opposed to bioprospecting, the exploitation of sedentary species – as far as those on the continental shelf in the geophysical sense are concerned – was already a well-known activity in the oceans at the time of UNCLOS III, even though the existence of living resources in the Area was mostly doubted.⁴³¹ Therefore, factors supporting the argument that the regime of the common heritage of mankind is applicable to living resources do not give such strong support to the exploitation of sedentary species as they do in the case of bioprospecting.⁴³²

The competence of the International Seabed Authority (ISA) is strictly limited to the development of mineral resources⁴³³ and any extension of its competence needs an amendment to the LOSC. Thus, a practical issue shall also be resolved regarding

426 The term 'Activities in the Area' was defined both in Article 1 of Part I and Article 133 of Part XI of the ISNT, resulting in the lack of clarity with respect to the scope of the definition. As late as the ninth session in 1980, the definition of the term in Part XI was deleted for 'purely editorial' reasons, since the definition 'has already been included in article 1 of the convention'. A/CONF.62/C.1/L.27, section II, A, para. 11, reproduced in *Official Records*, vol. XIII, at p. 114.

427 Nandan *et al.* (eds.), *Virginia Commentary*, vol. VI, at p. 76 note 9.

428 See Armas Pfirter, 'The Management of Seabed Living Resources in 'the Area' under UNCLOS', at p. 26 note 108.

429 Oude Elferink, 'The Regime of the Area', at p. 152.

430 E.g., LOSC, Articles 56(1)(a) and 77(4).

431 See Armas Pfirter, 'The Management of Seabed Living Resources in 'the Area' under UNCLOS', at p. 7.

432 See also E.J. Molenaar, 'Current Legal and Institutional Issues Relating to the Conservation and Management of High Seas Deep-Sea Fisheries', *Report and Documentation of the Expert Consultation on Deep-sea Fisheries in the High Seas, Bangkok, Thailand, 21-23 November 2006*, *FAO Fisheries Report*, No. 838 (2007), at p. 131.

433 The powers and functions of the Authority are those expressly conferred on it by the LOSC as well as such incidental powers, consistent with the LOSC, as are implicit in and necessary for the exercise of those powers and functions with respect to activities in the Area. LOSC, Article 157(2).

the institutional structure of management if the regime of the exploitation of sedentary species is assimilated to the regime of common heritage of mankind: which institution will have competence (e.g., the ISA, RFMOs, the UNGA or any other institution) and what objectives shall be pursued.

Whether or not recognizing the applicability of the regime of the Area to living resources, most commentators argue that sedentary species of the Area are not governed by the regime of the Area, but by the regime of the high seas.⁴³⁴ A notable exception is Armas Pfirter, who argues that ‘it would not be logical to consider living resources that are in constant contact with the seabed in the Area subject to the high seas legal regime’, among other reasons, because ‘[t]hose which inhabit the Area have a greater dependency on the seabed and subsoil than those living in the continental shelf [and the] particular status of the Area will exert an influence on any regulatory framework dealing with biological communities associated with mineral resources in the Area’.⁴³⁵ Another commentator, having argued that corals are mineral resources, concludes that as bottom trawling takes advantage of corals, ‘it thereby should be considered exploitation’; thus it would fall under the Part XI system.⁴³⁶

State practice supports the majority proposition. Grigg notes that the US Western Pacific Fishery Council has requested the State Department to enter into multilateral arrangements with Japan and Taiwan for jointly managing the precious coral fisheries in international waters off Hawaii.⁴³⁷ The constitutive instruments of RFMO/As appear to support the majority proposition: whereas the SEAFO Convention explicitly uses the term ‘sedentary species’ to denote those beyond the limit of the continental shelf, none of the RFMO/As examined in Chapters 4 and 5 exclude sedentary species beyond the limit of the continental shelf from their definition of resources to be

434 Allen appears to consider that the regime applicable to sedentary species in areas beyond the limits of national jurisdiction is no different from that which is applicable to non-sedentary species beyond the limits of the EEZ, namely, freedoms of the high seas. See Allen, ‘Protecting the Oceanic Gardens of Eden’, at p. 628. Molenaar reaches the same conclusion by way of an analysis of the constitutive instruments of the relevant RFMOs. See Molenaar, ‘Current Legal and Institutional Issues Relating to the Conservation and Management of High Seas Deep-Sea Fisheries’, at p. 131.

435 Armas Pfirter, ‘The Management of Seabed Living Resources in ‘the Area’ under UNCLOS’, at p. 21.

436 P. Prows, ‘Tough Love: The Dramatic Birth and Looming Demise of UNCLOS Property Law (and What is to be Done about it)’, 42 *Texas International Law Journal* (2007), at pp. 295-307. He points to the treatment of corals in the Brazilian and Taiwanese classification of goods, products and services under the WIPO Nice Agreement. See Prows, ‘Tough Love’, at p. 300. The DOALOS and the International Seabed Authority, in their joint study, list coral deposits formed by the phosphatisation of coral limestone associated with volcanic seamounts as one of the mineral resources of the continental shelf. See Division for Ocean Affairs and the Law of the Sea and International Seabed Authority, *Marine Mineral Resources: Scientific Advances and Economic Perspectives* (2004), at pp. 82-83.

437 Grigg, ‘Precious Coral Fisheries of Hawaii and the U.S. Pacific Islands’. He refers to the CHM principle and measures to conserve living resources within and beyond the EEZ in this regard. It is not clear whether these arguments were actually made and whether any action has been taken by the State Department.

regulated by them.⁴³⁸ Many domestic laws and regulations widely define the scope of fish or fishery resources which may not be harvested without permits.⁴³⁹ Some refer to molluscs and/or crustaceans (Australia, Canada, Namibia, South Africa, Norway and the United States), while some laws appear to include corals and/or sponges (South Africa and the United States).

Assuming that the regime of the high seas, including the freedom of fishing, is applicable to sedentary species beyond the outer limit of the continental shelf, one difference could be perceived as far as the general principles of high seas fisheries are concerned. Since Part V is not applicable to sedentary species, Article 63(2) is not involved in the right to fish on the high seas under Article 116. However, the ‘inter alia’ clause in Article 116 subjects in any case the high seas fishing right to coastal states’ rights, duties and interests with regard to sedentary species occurring both within and beyond the outer limit of the continental shelf. Thus, where those resources occur both on or in the continental shelf and in areas beyond the continental shelf, nothing in the LOSC explicitly requires them outside the continental shelf to be managed differently from other straddling stocks.

There may be various ways to give effect to coastal states’ rights and interests over sedentary species on the continental shelf.⁴⁴⁰ It is thus necessary to confirm, through examining the practice of RFMO/As, whether there is any difference between sedentary species and non-sedentary species in giving effect to the rights and interests of coastal states. At any rate, it is noted that the issue of straddling sedentary species is marginal precisely because sedentary species do not tend to move as actively as finfish do.

2.2.2 Discrete High Seas Fish Stocks

Despite the fact that the LOSC does not explicitly refer to DHSFS, the general principles of the LOSC are also applicable to fisheries for DHSFS. Provisions of the

438 See Chapters 4-5. In addition, one treaty includes ‘any aquatic plant’ in the definition of ‘fish’. South African Development Community Protocol on Fisheries (SADC Protocol), Maputo, 14 August 2001, Article 1(2). See also Chairperson’s Draft Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, Article 1(1)(b) (“fish” means all species of living marine resources, whether processed or not’).

439 Australia, Fisheries Management Act, Section 4(1); Canada, Fisheries Act, Section 2; Namibia, Marine Resources Act, Article 1; New Zealand, Fisheries Act, Section 2; Norway, Act of 3 June 1983 relating to Sea-water Fisheries, Section 2; South Africa, Marine Living Resources Act, Section 1. US law lists corals and sponges under ‘continental shelf fishery resource’ whereas ‘fish’ is defined as ‘finfish, mollusks, crustaceans, and all other forms of marine animal and plant life other than marine mammals and birds’. See 16 U.S. Code 1802. In addition, the US government has understood the exploitation of corals as falling under the regime established by Part VII of the LOSC. See Grigg, ‘Precious Coral Fisheries of Hawaii and the U.S. Pacific Islands’.

440 Note that the FSA does not cover sedentary species on the continental shelf, although such organisms beyond the continental shelf are not explicitly excluded from the scope of Article 1(1)(c). Therefore, the compatibility requirement in Article 7 does not apply to sedentary species as opposed to finfish, to which Article 7 applies by virtue of Article 3(1).

treaty ‘shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose’.⁴⁴¹ As pointed out earlier, the term ‘living resources’ is generic and wide enough to justify the inclusion of DHSFS. Even if the drafters were not particularly concerned about the issue of DHSFS at the time of drafting high seas fisheries provisions, this does not prevent the applicability of the LOSC to DHSFS: as unequivocally clarified by the World Court, ‘[t]he mere fact that, at the time when the Convention [...] was concluded, certain facts or situations, which the terms of the Convention in their ordinary meaning are wide enough to cover, were not thought of, does not justify interpreting those of its provisions which are general in scope otherwise than in accordance with their terms.’⁴⁴² In addition, nothing in the LOSC, subsequent agreements or state practice appears to exclude DHSFS from the scope of the provisions of Part VII, section 2 of the LOSC.

There is widespread agreement in legal writing that the LOSC is applicable to fisheries for DHSFS. For example, describing DHSFS as “‘orphan’ fish stocks of the ocean”, Munro and others state that ‘[i]n legal terms, [discrete high seas stocks] are covered by the 1982 UN Convention Articles 116(a), 116(c), 117-120’.⁴⁴³ The FAO, in its SOFIA 2006, stated that the legal framework for the conservation and management of discrete high seas stocks is provided by Part VII of the LOSC.⁴⁴⁴ A number of publicists recognize that the provisions of Part VII, section 2 of the LOSC are applicable to DHSFS.⁴⁴⁵

A question remains whether all articles are applicable and whether there should be any difference in the implications of the relevant articles between DHSFS and straddling fish stocks. Notably, two important issues would be whether the right to fish on the high seas is subject to rights, duties and interests of coastal states under Article 116(b) and whether the obligation and the right of states to cooperate with

441 VCLT, Article 31.

442 *Interpretation of the Convention of 1919 concerning Employment of Women during the Night*, Advisory Opinion, 15 November 1932, *PCIJ, Série A/B No. 50*, p. 365, at p. 377.

443 G. Munro *et al.*, *The Conservation and Management of Shared Fish Stocks: Legal and Economic Aspects*, FAO Fisheries Technical Paper No. 465, at p. 55. It is notable that the paper observes that in the LOSC, ‘[n]o mechanism for cooperation is suggested’ in relation to these stocks, and also observes that one has no justification for ‘assuming that these articles will prove to be any more adequate for the conservation of discrete high seas stocks’ than for the conservation of straddling and highly migratory stocks, for which ‘[t]hese articles proved to be inadequate’. *Ibid.*, at p. 55.

444 FAO Fisheries and Agriculture Department, SOFIA 2006, at p. 125.

445 See also Burke, *The New International Law of Fisheries*, at pp. 93 and 99; St. John’s Conference Report, at p. 12 (comments by Satya Nandan); Orrego Vicuña, *The Changing International Law of High Seas Fisheries*, at p. 51; Joyner and De Cola, ‘Chile’s Presential Sea Proposal’, at p. 119 note 45; Miles and Burke, ‘Pressures on the United Nations Convention on the Law of the Sea of 1982 Arising From New Fisheries Conflicts: The Problem of Straddling Stocks’, at pp. 350-351. Others implicitly consider that the LOSC is applicable to DHSFS by observing that the LOSC is applicable to all living resources of the high seas. E.g., Tahindro, ‘Conservation and Management of Transboundary Fish Stocks’, at p. 3.

other states extends to coastal states not engaged in high seas fishing in the context of DHSFS.

On the one hand, the above-mentioned FAO Technical Paper by Munro and others excludes Article 116(b) from its list of articles.⁴⁴⁶ On the other hand, writing in 1989, Miles and Burke suggested that the obligations are owed to at least three recipients, namely, ‘another state or states fishing on the high seas, the general community of states [...], and coastal states adjoining on the high seas area’ and that it is conceivable that ‘states of a region or subregion might be the beneficiaries of the obligation as well’.⁴⁴⁷ While the article was written in the context of straddling stocks, the same argument might be advanced with regard to DHSFS. Even if this argument is accepted, it is not clear how and to what extent coastal states whose vessels are not engaged in a particular fishery for DHSFS are allowed to participate in fisheries management for that fishery. These ambiguities over the interpretation of the provisions of Part VII of the LOSC generate the need to examine state practice in relation to DHSFS.

Another issue that might matter in the context of DHSFS is whether provisions of the LOSC concerning marine living resources are considered to be part of customary international law in relation to DHSFS. True, the LOSC has attracted quasi-universal participation from states and its general principles have been argued to reflect customary international law in relation to high seas fisheries.⁴⁴⁸ But, without state practice supporting the proposition that the general principles of high seas fisheries as reflected in the LOSC apply to DHSFS, this question may not be conclusively answered.

2.3 CONCLUDING REMARKS

At the beginning of this chapter, a question was posed whether or not general principles of high seas fisheries have changed fundamentally in the LOSC. Despite perceptions to the contrary, the analysis of this chapter indicates that the general principles have neither remained unchanged nor been fundamentally altered by the provisions of the LOSC. The principles identified in Chapter 1 constitute the general principles of high seas fisheries also under the LOSC: circumscribed freedom of fishing, cooperation between states and the conservation of marine living resources.

The freedom of fishing on the high seas continues to be restrained by the due regard clause, but a major addition is the requirement of due regard for interests with regard to the activities of the Area. Under the LOSC, high seas fisheries and mining activities in the Area need to be conducted in a mutually reconcilable way, paying

446 Munro *et al.*, *The Conservation and Management of Shared Fish Stocks: Legal and Economic Aspects*, at p. 55.

447 Miles and Burke, ‘Pressures on the United Nations Convention on the Law of the Sea of 1982 Arising From New Fisheries Conflicts: The Problem of Straddling Stocks’, at p. 351.

448 E.g., Sands, *Principles of International Environmental Law*, at p. 569; Mioviski, ‘Central Bering Sea Overfishing’, at pp. 525-574.

reasonable regard to each other. In reality, this balancing cannot be always easy to achieve. Bottom fisheries have more likelihood of contact with the seafloor or areas around it than pelagic fisheries. In order to comply with the spirit of the Convention, limitations need to be imposed, taking into account various factors. There is a clear need to accommodate both interests through the enactment of regulations by competent international organizations.

Other restrictions of a general nature such as the prohibition of an abuse of rights are explicitly stipulated in the LOSC. It could be argued that serious violations of conservation measures may constitute a separate breach of these provisions in addition to the breach of individual articles concerning the marine living resources of the high seas.

Fishing under Articles 87 and 116 should not be considered in the narrow sense of the term. A growing trend is discernible where states and international organizations have been concerned with the regulation of support activities. Even if any fishery-related activity is not regarded as fishing in the sense of Articles 87 and 116, the LOSC provides a basis for regulating such activities by virtue of the provisions of Part VII.

The right to fish on the high seas is subject to, among other things, rights, duties and interests of coastal states. The phrase 'subject to' is open to various interpretations, including the view that coastal states may take unilateral conservation measures for fisheries on the adjacent high seas by vessels of third states. However, under the LOSC, as opposed to the HSFC, exceptions to exclusive flag state jurisdiction with regard to high seas fisheries are not expressly stipulated. In addition, there is a clear difference in the formulations of the special interests of coastal states between the HSFC and the LOSC: the former concerns the 'area' adjacent to their territorial sea while the latter, *inter alia*, covers 'stocks' occurring in the adjacent high seas area. On the other hand, the right of high seas fishing is subject to the interests of a coastal state where the fishery takes place over the continental shelf of the coastal state. In particular, it is arguable that high seas fisheries could be restricted by coastal states on the following grounds: (1) by virtue of sovereign rights for the purpose of exploring and exploiting natural resources of the continental shelf; and (2) the protection of the marine environment of the continental shelf from high seas fisheries in the area superjacent to it. Such measures are restricted, among others, by Article 78(2) in order not to infringe or result in any unjustifiable interference with high seas fishing. Since pelagic fisheries are not likely to have contact with the seafloor in the normal course of operations, there has been little practice on this matter. But, it is likely that high seas deep-sea fisheries give rise to conflicts between distant water fishing nations and coastal states in this regard.

As in the HSFC, freedom of fishing is elaborated under the LOSC as the right of states for their nationals to engage in fishing. The term 'nationals' under the LOSC is not clear, but the drafting history suggests that it means vessels flying the flag of the state concerned. Nevertheless, recent practice indicates that the term 'nationals' has been increasingly used in the sense of natural and juridical persons, rather than fishing vessels.

Cooperation between states is the essential element of the legal regime of high seas fisheries. The range of states which may take part in the regulatory system of high seas fisheries is not unequivocal in the LOSC. The FSA and the practice of RFMO/As indicate that coastal states are entitled to do so, while this is not clear for non-fishing non-coastal states which have concerns for the conservation of the fishery resources concerned. The type of cooperation is not specified under the LOSC. Cooperation may be pursued directly or through regional or subregional fisheries organizations. The FSA changed this by obliging high seas fishing states to participate in RFMO/A regimes or agree to comply with their measures. While the institutionalization of cooperation is achieved through this provision, the loose definition of ‘arrangement’ could be interpreted to make it no different from direct cooperation. In any case, although an emerging general trend exists pointing to development in the direction contemplated by the FSA, one would still hesitate to conclude its general acceptance by the international community. As regards the duty of negotiation, it is widely accepted that what is required by this duty is to negotiate in good faith, while some states have argued that high seas fishing states shall agree to coastal state conservation and management measures for straddling stocks of the high seas.

The innovative aspect of the legal regime of high seas fisheries under the LOSC is that environmental concerns are integrated into the concept of conservation, and this advancement has been elaborated in subsequent instruments. Under the LOSC the reference point of the MSY is qualified by environmental factors and conservation measures need to take into account impacts on associated or dependent species. While the LOSC does not offer criteria governing how to depart from the MSY using the factors mentioned and two diametrically opposed interpretations are possible, the subsequent international instruments virtually oblige stricter conservation measures by introducing precautionary reference points. The rather moderate provision on the conservation of associated or dependent species in the LOSC has been amplified in subsequent practice. In addition, the concept of the conservation of marine ecosystems is introduced through the provisions of Part XII, in particular Article 194(5). The LOSC stipulates that a scientific basis is needed for the determination of conservation and management measures, while subsequent instruments have introduced the concept of the precautionary approach in parallel with the best scientific information available: these two considerations are not conflicting but complementary. Contrary to the perceptions of some commentators, the precautionary approach does not by itself determine the action to be taken for the conservation of marine living resources.

The LOSC does not specify the legal consequences of a breach of Article 117. Some states are willing to eventually make the fishing activities conditional upon the fulfilment of flag state responsibilities, but this is not a general trend as opposed to the breach of the duty of cooperation as noted above.

The duty of conservation has been significantly elaborated by the adoption of new concepts and approaches in recent international fisheries-related instruments, including the objective of sustainable fisheries, ecosystem approaches, protection of marine biodiversity and the precautionary approach. The objective of fisheries management has moved to the sustainable use and conservation of marine living resources and, arguably, conservation measures are being gradually taken for the purpose of conser-

vation as such, rather than conservation with a view to utilization. In other words, the underlying value of conservation is in the process of change. This is reflected in the adoption of the precautionary approach in general and precautionary reference points in particular. Enhanced ecosystem considerations and biodiversity conservation are other aspects of the contemporary change in the concept of conservation. All in all, the traditional concept of conservation has been replaced by a new, elaborated and broadened concept.

As a matter of fact, the new concept was already partly heralded by some provisions of the LOSC, that is, the regime for marine mammals under Articles 65 and 120. The latter article allows for stricter conservation measures to be taken for marine mammals in the high seas. The regime for straddling and highly migratory fish stocks does not yet go as far as the new concept of conservation, but it is not unlikely that the international community will establish a new, separate regime for the harvesting of resources other than marine mammals of the high seas (or a part of them) on the basis of the provisions of the LOSC incorporating new concepts and approaches.

The analysis of the provisions of the LOSC as well as their drafting history indicates that the general principles of high seas fisheries are applicable to the harvesting of sedentary species beyond the outer limit of the continental shelf and fisheries for DHSFS. However, it is necessary to examine to what extent and how these general principles, especially coastal state special interests, are reflected in the practice of states and international organizations with regard to harvesting sedentary species in the area beyond the outer limit of the continental shelf and fisheries for DHSFS. The next Part will examine the practice of states and international organizations with a view to investigating the interplay between the general principles of high seas fisheries and specific cases of DHSFS, deep-sea fisheries on the high seas and the protection of the marine ecosystem in areas beyond national jurisdiction.

Part II

CHAPTER 3

Practice at the Global Level

Part I of the present study has concluded that the LOSC provides a legal framework for all high seas fisheries, including fisheries for DHSFS and those for sedentary species. At the same time, it has been pointed out that there is a potential that the general principles of high seas fisheries under the LOSC are implemented differently: in the case of DHSFS, differently from straddling stocks; in the case of sedentary species, differently from non-sedentary species such as finfish. Part II investigates how general principles are being implemented in the face of new challenges in high seas fisheries. Practice at the global, regional and national levels is examined in Chapters 3-5.

The current Chapter considers new challenges in high seas fisheries under three headings. The first section analyzes initiatives that require the application of some principles of the FSA to discrete high seas stocks. Many of the new trends in fisheries management described in Chapter 2 have primarily been developed in the context of fisheries for straddling and highly migratory fish stocks or the protection of the environment in general. It is not certain to what extent new approaches under the FSA are considered to be applicable to high seas fisheries in general. The section therefore examines whether and, if so, which principles of the FSA are applicable to DHSFS. The second section seeks to examine a new category of fisheries, i.e., deep-sea fisheries, and to consider possible implications of such a new classification for the legal regime of high seas fisheries under the LOSC. In other words, the main questions are whether special characteristics of deep-sea fisheries on the high seas require implementing the general principles of high seas fisheries differently; whether such differences have led to the creation of a new sub-set of principles for deep-sea fisheries, whether for DHSFS or for straddling stocks. The third section deals with marine protected areas (MPAs) in the high seas and associated issues, and their potential impacts on the legal regime for fisheries on the high seas. In other words, it considers whether the need for coordination in establishing multi-purpose MPAs in the high seas has modified the jurisdictional framework set out in the LOSC and the FSA.

3.1 INITIATIVES TO ADDRESS FISHERIES FOR DISCRETE HIGH SEAS FISH STOCKS BY APPLYING PRINCIPLES OF THE FSA

The issue of DHSFS appeared for the first time at the global level in 2003. At the 25th session of the FAO COFI in February 2003, several members specifically drew attention to DHSFS in referring to the need for the improved management of deep-sea

fisheries and noted the need to further develop international law in this regard.¹ Similarly, during the discussion of the Informal Consultations of States Parties to the FSA (ICSP) in 2003, a number of delegations identified the absence of a regulatory regime for demersal species as a major gap in present high seas fisheries management. An extension of the FSA's regulatory regime was considered a possible solution to addressing the gap, while a state party pointed out that other fora had the mandate to oversee the work of RFMOs.²

The issue was also raised in responses to a questionnaire circulated by the Secretary-General in 2004. It was proposed that the issue be addressed on the occasion of the review of the FSA.³ Reports of the UN Secretary-General of that year analyzed the issue briefly. The Reports pointed out that 'there is no legally binding global agreement containing conservation and management measures for discrete high seas stocks'⁴ and some of these stocks 'generally remain outside existing regulatory frameworks'.⁵

UNGA Resolution 59/25 did not expressly deal with the issue of DHSFS. However, some of its parts have implications for the conservation and management of these stocks. Among others, in relation to negotiations and ongoing preparatory work to establish RFMOs in several fisheries, participants in those negotiations were urged to 'apply provisions of the Convention *and the Agreement* to their work' (emphasis added).⁶ Among ongoing negotiations at that time, those for the Southern Indian Ocean primarily concerned DHSFS.⁷

The 26th session of COFI discussed problems associated with deep-sea fisheries and noted that the Review Conference for the FSA 'may be an appropriate forum for exploring international conservation and management options for [DHSFS]'.⁸

As indicated by the above-mentioned meetings, the Review Conference on the FSA in May 2006 was considered to be a potential venue for considering the issue of DHSFS. Naturally, preparatory meetings for the Review Conference, notably the St.

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- 1 Report of the Twenty-Fifth Session of the Committee on Fisheries, Rome, 24-28 February 2003, Fisheries Report No. 702, FIPL/R702, at para. 26.
 - 2 Report of the Second Informal Consultations of States Parties to the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (New York, 23-25 July 2003), ICSP2/UNFSA/REP/INF.1, August 2003, at p. 13, para. 61. See also L.A. Kimball, 'Deep-Sea Fisheries of the High Seas: The Management Impasse', 19 *International Journal of Marine and Coastal Law* (2004), at p. 267.
 - 3 See A/59/298, at p. 10.
 - 4 Oceans and the Law of the Sea, Report of the Secretary-General, A/59/62/Add.1, 18 August 2004, at p. 77.
 - 5 A/59/298, at p. 22.
 - 6 UNGA Resolution 59/25, para. 54. See also UNGA Resolution 58/14, para. 41; UNGA Resolution 61/105, para. 69; UNGA Resolution 62/177, para. 84.
 - 7 See Section 5.1 below.
 - 8 Report of the Twenty-Sixth Session of the Committee on Fisheries, Rome, 7-11 March 2005, Fisheries Report No. 780, FIPL/R780, at p. 15, para. 93.

John's Conference in May 2005 and the fourth ICSP in May/June 2005, discussed this issue.⁹

In May 2005, a conference was held in St. John's, Newfoundland and Labrador, Canada to discuss high seas fisheries issues in preparation for the Review Conference.¹⁰ The Conference consisted of, among other things, expert panel discussions and workshops. Concurrent with the Conference, 19 countries participated in a Ministerial Roundtable. The ministers issued a Declaration setting out their commitment to specific actions to improve the governance of high seas fisheries. First and foremost, the Ministerial Declaration of the Conference identified the issue of the sustainable management of discrete high seas fisheries as one of the possible gaps, and agreed to work to address it.¹¹ Participants in the workshop shared the view that 'States should apply the fundamental management principles' of the FSA to DHSFS. According to the Conference Report, such application can be 'confirmed formally' at the Review Conference and, based on the outcome of the Conference, states should consider developing a legal instrument based on this commitment.¹² However, it has been pointed out that, while this view was agreed by consensus at the workshop, subsequent discussion at the plenary about the status and purpose of the summary of the workshops shows hesitation on the part of states to take action in line with the view expressed at the workshop.¹³

During the fourth ICSP, states parties to the FSA primarily discussed issues related to the upcoming Review Conference on the FSA for the purpose of assessing the effectiveness of and strengthening the substance and methods of the implementation of the provisions of the FSA.¹⁴ While the Consultations did not discuss the substantive issues related to DHSFS,¹⁵ the Chairman's background paper on possible initiatives for strengthening the substance and methods of the implementation of the provisions of the Agreement included the issue of DHSFS in the list. The initiatives directly

9 The ICSP in 2006 was mainly devoted to the discussion on procedural issues of the Review Conference. See Report of the Fifth Informal Consultations of States Parties to the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (New York, 20 to 24 March 2006), ICSP5/UNFSA/REP/INF.1, 26 April 2006.

10 See St. John's Conference Report.

11 Ministerial Declaration at the Conference on the Governance of High Seas Fisheries and the UN Fish Agreement: Moving from Words to Action, St. John's, Newfoundland and Labrador, 2 May 2005, para. 13(A).

12 St. John's Conference Report, at p. 19.

13 See E.J. Molenaar, 'Addressing Regulatory Gaps in High Seas Fisheries', 20 *International Journal of Marine and Coastal Law* (2005), at p. 555.

14 Report of the Fourth Informal Consultations of States Parties to the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (New York, 31 May-3 June 2005), ICSP4/UNFSA/REP/INF.1, 18 July 2005.

15 One observer (Greenpeace International) expressed concerns about threats to these stocks and asked for the FSA to be extended to cover all high seas stocks. *Ibid.*, at p. 8.

concerned were ‘Apply basic [FSA] provisions to high seas discrete stocks and/or deep sea fisheries’ and ‘To address gaps in the regulation of high seas fisheries, broaden competence of RFMOs and/or establish new RFMOs’.¹⁶ A number of delegations welcomed the background paper as a useful document.¹⁷

Discussions on the issue of DHSFS took place in the UNGA process in 2005. The sixth meeting of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea (ICP) in June 2005, welcoming the outcome of the St. John’s Conference, proposed to the General Assembly to encourage ‘States, as appropriate, to recognize that the general principles of the [FSA] should also apply to discrete fish stocks in the high seas’.¹⁸ Following this recommendation, the UNGA adopted Resolution 60/31, paragraph 12 of which ‘[e]ncourages States, as appropriate, to recognize that the general principles of the Agreement should also apply to discrete fish stocks in the high seas’.

The issue of DHSFS was also discussed within the framework of the CBD. Concerns for the conservation and management of DHSFS were also raised in the context of the protection of biological diversity. In preparation for the first meeting of the Working Group on Protected Areas, the Secretariat of the CBD provided a document entitled ‘Options for Cooperation for the Establishment of Marine Protected Areas in Marine Areas beyond the Limits of National Jurisdiction’, which stated, on the basis of a legal study undertaken in collaboration with the IUCN:¹⁹ ‘there is growing awareness of discrete high-seas fish stocks associated, for example, with seamounts, which was not the case when the United Nations Convention on the Law of the Sea and the United Nations Fish Stocks Agreement were adopted’.²⁰ The document identified a number of options for cooperation regarding the establishment of MPAs beyond the limits of national jurisdiction, including further use and improvement of existing instruments. In particular, it was stated that the scope of the FSA could be expanded to include all high seas fish stocks, an option which requires that ‘precautionary and ecosystem approaches are applied in conservation and management measures for discrete stocks’.²¹ However, the first meeting of the Working

16 Ibid., at Annex V, pp. 20-21. Some of the other initiatives regarding the ecosystem approach, the precautionary approach, RFMOs, flag state duties and compliance and enforcement are also relevant to DHSFS.

17 Ibid., at p. 9.

18 Report on the Work of the United Nations Open-Ended Informal Consultative Process on Oceans and the Law of the Sea at its Sixth Meeting, A/60/99, 7 July 2005, at p. 4, para. 6(f). Note that Chile opposed specific references to FSA articles, noting that these stocks are already addressed in the LOSC. *ENB*, vol. 25, No. 18, at p. 6.

19 The International Legal Regime of the High Seas and the Seabed Beyond the Limits of National Jurisdiction and Options for Cooperation for the Establishment of Marine Protected Areas (MPAs) in Marine Areas Beyond the Limits of National Jurisdiction, UNEP/CBD/WG-PA/1/INF/2, 28 April 2005.

20 Options for Cooperation for the Establishment of Marine Protected Areas in Marine Areas beyond the Limits of National Jurisdiction, UNEP/CBD/WG-PA/1/2, 20 April 2005, at p. 9.

21 Ibid., at p. 11.

Group did not reach consensus on this point, and the proposed sentence remained for consideration at the second meeting of the Working Group.²²

At the Review Conference on the FSA, Canada proposed to request the FAO to produce guidelines for discrete high seas stocks.²³ In the end, an agreement was not reached on this proposal. The Conference, in line with UNGA Resolution 60/31, merely observed as follows: ‘Regional fisheries management organizations with competence to regulate straddling fish stocks have the necessary competence to conserve and manage discrete high seas stocks. There is no obstacle for [them] to adopt management measures in respect of discrete high seas stocks in accordance with the general principles set forth in the [FSA]’.²⁴

The subsequent UNGA fisheries Resolutions clarified in more detail what should be done with respect to DHSFS by explicitly referring to DHSFS. First, UNGA Resolutions called upon states ‘to adopt necessary measures to ensure the long-term conservation, management and sustainable use of [DHSFS] in accordance with the [LOSC] and consistent with the general principles set forth in the [FSA]’.²⁵ Second, the Resolutions called on all states, directly or through RFMO/As, to apply widely, in accordance with international law and the Code of Conduct, the precautionary approach and an ecosystem approach to the conservation, management and exploitation of fish stocks, including DHSFS.²⁶ Third, the Resolutions called for the collection and reporting of catch and effort data and fishery-related information in a complete, accurate and timely way, including for DHSFS.²⁷ The Resolutions also requested the FAO to revise its global fisheries statistics database to provide information, among other things, on DHSFS on the basis of where the catch was taken.²⁸

22 See Report of the First Meeting of the ad hoc Open-ended Working Group on Protected Areas, UNEP/CBD/WG-PA/1/6, 20 June 2005, at pp. 14-16. The proposed text, which remained within square brackets, is as follows: ‘Apply the relevant provisions of the United Nations Fish Stocks Agreement to high seas discrete fish stocks’. Report of the First Meeting of the ad hoc Open-ended Working Group on Protected Areas, at p. 28 (Annex I, Recommendations Adopted by the Ad Hoc Open-Ended Working Group on Protected Areas at its First Meeting, 1/1., para. 4(s)(vii)). The second meeting of the Working Group took place in February 2008. But, as the issue of options for cooperation was dropped from the agenda, the issue of DHSFS did not fall under the scope of the meeting. See Section 3.3 below.

23 *ENB*, Vol. 7 No. 57 (23 May 2006), at p. 2.

24 Outcome of the Review Conference, para. 16.

25 UNGA Resolution 61/105, para. 19; UNGA Resolution 62/177, para. 23. The 2006 Expert Consultation on deep-sea fisheries in the high seas also recognized the need to apply the principles and relevant provisions of the FSA to the management of discrete high-seas fish stocks. Report and Documentation of the Expert Consultation on Deep-sea Fisheries in the High Seas, Bangkok, Thailand, 21-23 November 2006, at para. 56.

26 UNGA Resolution 61/105, para. 5; UNGA Resolution 62/177, para. 5.

27 UNGA Resolution 61/105, para. 8; UNGA Resolution 62/177, para. 9. See also UNGA Resolution 60/31, para. 65.

28 UNGA Resolution 61/105, para. 28; UNGA Resolution 62/177, para. 32.

3.2 DEEP-SEA FISHERIES ON THE HIGH SEAS

There is no universally agreed definition of deep-sea fisheries. For example, instead of defining deep-sea fisheries, the FAO Expert Consultation in 2006 considered deep-sea fisheries to be ‘those fisheries that are centred at depths below 200 metres’. It further recognized the need for further classifying deep-sea fisheries on the basis of their biological characteristics.²⁹ In fact, as noted in Section 3.2.2.1 below, the determination of fisheries falling under the scope of the FAO International Guidelines on deep-sea fisheries was one of the controversial issues in the FAO Technical Consultation in February 2008.

Characteristics of many, but not all, deep-sea species include geographically restricted populations, high longevity and low fecundity.³⁰ These characteristics lead to the vulnerability of target species. In addition, as noted in the Introduction, deep-sea fisheries, especially bottom trawling, are likely to cause adverse impacts on vulnerable benthic ecosystems and deep-sea biodiversity.

Due to these special characteristics and impacts of deep-sea fisheries, one may wonder whether they can be managed through the traditional regulatory framework intended for pelagic (straddling) fish stocks.³¹ In this regard, discussions at the FAO Expert Consultation held in 2006 are insightful. On the one hand, the Expert Consultation recognized that ‘many of the issues associated with the effective management of deep-sea fisheries differ in degree rather than substance from those associated with management of other fisheries’ and, therefore, ‘recommendations for management that have been applied to fisheries generally are also applicable to deep-sea fisheries’. On the other hand, the Expert Consultation referred to the special characteristics of deep-sea fisheries and observed additional conservation challenges: (1) the frequent lack of information needed to apply many of the usual tools for assessment of stocks and management of fisheries; (2) lesser knowledge of the structural and functional characteristics of deepwater ecosystems; (3) because of their lower productivity and life histories capable of sustaining only low exploitation rates, the consequences of perturbations of deepwater ecosystem components pose a higher risk of serious or

29 Report and Documentation of the Expert Consultation on Deep-sea Fisheries in the High Seas, Bangkok, Thailand, 21-23 November 2006, at para. 47. See also an article by the International Council for the Exploitation of the Sea (ICES) ‘Is time running out for deepsea fish?’, available at <<http://www.ices.dk/marineworld/deepseafish.asp>> (last visited 7 May 2008), which states ‘[f]isheries carried out in waters deeper than about 400 m are generally considered to be deep-sea fisheries’. Cautious remarks were made against the generalization of deep-sea species. See, e.g., J.D.M. Gordon, ‘Environmental and Biological Aspects of Deepwater Demersal Fishes’, in R. Shotton (ed.), *Deep Sea 2003: Conference on the Governance and Management of Deep-sea Fisheries: Part 1: Conference Reports. Queenstown, New Zealand, 1-5 December 2003* (2005), at pp. 81-82.

30 See, e.g., FAO Fisheries Department, *SOFIA 2004*, at p. 93.

31 As noted in the Introduction, deep-sea species are the bulk of DHSFS currently targeted in high seas fisheries.

irreversible harm.³² On this basis, the Expert Consultation suggested the need for an approach to the management of such fisheries which is different from the management of other types of fisheries:

‘management actions should be more precautionary than those implemented for shelf fisheries [...] Decisions on these individual tools [for management] should support and be consistent with a strict application of the precautionary approach and an ecosystem approach to fisheries, because of the characteristics of deep-sea fisheries.’³³

States have been addressing deep-sea fisheries at the global level mainly through the UNGA and the FAO.³⁴ The ICP started discussions on deep-sea fisheries on the high seas in the context of protecting benthic marine ecosystems in 2002,³⁵ On the basis of the recommendations by the ICP, the UNGA adopted some recommendations in Resolution 59/25 and since then has been addressing the regulation of bottom fisheries on the high seas in its fisheries resolutions.³⁶ In parallel with the UNGA process, COFI of the FAO has called for attention to deep-sea fisheries on the high seas since 2003.³⁷ COFI recommended further actions in 2005 and 2007. So far, the UNGA and the FAO have divided the tasks: while policy discussions were mainly held at the UNGA, the FAO took on the technical aspects in the implementation of the recommendations by the UNGA. As elaborated in Chapters 4-5, these actions were interwoven with those at the regional and national levels.

The remainder of this section describes the actions taken by these two main fora in addressing deep-sea fisheries on the high seas. The first sub-section analyzes the recommendations contained in the successive UNGA Resolutions on sustainable fisheries, focusing on actions to be taken by states and RFMO/As. The second sub-section deals with the development of the FAO International Guidelines on deep-sea fisheries on the high seas, initiated by COFI of the FAO upon the request by the UNGA. Although the Guidelines are not intended to be legally binding, they will likely be consulted in the process of implementing the UNGA Resolutions at the regional and national levels. In order to examine whether the special characteristics of deep-sea fisheries indirectly impact on the jurisdictional framework of high seas fisheries and/or the general principles of high seas fisheries, the analysis in this

32 Report and Documentation of the Expert Consultation on Deep-sea Fisheries in the High Seas, Bangkok, Thailand, 21-23 November 2006, at paras 67-70.

33 Ibid., at paras 72 and 75.

34 Other initiatives include actions to protect VMEs from destructive practices suggested in CBD COP Decision VII/5 adopted in 2004, in particular paras 30 and 60 as well as suggested activities concerning operational objective 2.4.

35 Report on the Work of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea at Its Third Meeting, A/57/80, 2 July 2002, at p. 7, paras 19-25.

36 UNGA Resolution 59/25, paras 66-71; UNGA Resolution 60/31, paras 69-74; UNGA Resolution 61/105, paras 80-91; UNGA Resolution 62/177, paras 97-101.

37 Report of the Twenty-Fifth Session of the Committee on Fisheries, Rome, 24-28 February 2003, at paras 26 and 106.

section pays particular attention to the potential impacts of the actions of the UNGA and the FAO in this respect.

3.2.1 UNGA Resolutions

Since 2003, the UNGA has been addressing various ecosystem impacts of fisheries in the section entitled ‘Responsible fisheries in the marine ecosystem’. Among others, the General Assembly has repeatedly called upon states to take action, individually and/or through RFMO/As, to address impacts of fisheries on VMEs. Although the principal activity that is being targeted is bottom trawling on the high seas, the scope of these recommendations is not limited to bottom trawling, but extends to destructive fishing practices in general, in areas both under and beyond national jurisdiction. First, Resolution 59/25 called upon states, either by themselves or through RFMO/As, to take action urgently.³⁸ Resolution 61/105 called upon states to take immediate action, individually *and* through RFMO/As, to sustainably manage fish stocks and to protect VMEs from destructive fishing practices.³⁹

With regard to specific action dealing with bottom fisheries, including bottom trawling, urgent actions as well as long-term solutions have been articulated in the successive UNGA resolutions. Despite pressures from environmental NGOs and some governments suggesting a moratorium on all bottom trawling fisheries on the high seas, states did not agree on a moratorium either in Resolution 59/25 of 2004 or in Resolution 61/105 of 2006.

Resolution 59/25 called upon states, either by themselves or through RFMO/As, to consider the interim prohibition of destructive fishing practices until appropriate conservation and management measures are adopted.⁴⁰ This recommendation is markedly different from the recommendation of a moratorium in UNGA Resolution 44/225 on large-scale pelagic driftnet fishing in one important aspect: in Resolution

38 UNGA Resolution 59/25, para. 66. The following year, Resolution 60/31 called upon states to urgently accelerate their cooperation in establishing interim targeted protection mechanisms for VMEs in regions. UNGA Resolution 60/31, para. 72. Also note that in 2004 when Resolution 59/25 was adopted, the resolution on oceans and the law of the sea also mentioned the protection of biodiversity in deep-sea areas: ‘*Reaffirms* the need for States and competent international organizations to urgently consider ways to integrate and improve, on a scientific basis and in accordance with the [LOSC] and related agreements and instruments, the management of risks to the marine biodiversity of seamounts, cold water corals, hydrothermal vents and certain other underwater features’ (para. 68).

39 UNGA Resolution 61/105, para. 80. See also UNGA Resolution 62/177, para. 97.

40 Para. 66: ‘*Calls upon* States, either by themselves or through regional fisheries management organizations or arrangements, where these are competent to do so, to take action urgently, and consider on a case-by-case basis and on a scientific basis, including the application of the precautionary approach, the interim prohibition of destructive fishing practices, including bottom trawling that has adverse impacts on vulnerable marine ecosystems, including seamounts, hydrothermal vents and cold water corals located beyond national jurisdiction, until such time as appropriate conservation and management measures have been adopted in accordance with international law’.

59/25, consideration of a moratorium on a case-by-case basis was recommended, while Resolution 44/225 recommended a moratorium *per se*.⁴¹

Two conditions were explicitly attached to the recommendation on the consideration of an interim prohibition in Resolution 59/25. First, the phrase ‘on a case-by-case basis’ implies that a blanket ban was not considered to be desirable and the socio-economic effects of a prohibition should be weighed against the merits to the ecosystems concerned, presumably taking into account the difficulties associated with monitoring and enforcing the prohibition in relation to deep-sea fisheries.⁴² Second, the phrases ‘on a scientific basis’ and ‘including the application of the precautionary approach’ indicate that science-based fisheries management and the application of the precautionary approach are not mutually exclusive in the context of high seas deep-sea fisheries. The precautionary approach was thus to be applied in such a way as to accommodate and utilize scientific data and not to exclude the relevance of scientific information in decision-making. The possible prohibition was to last for a limited duration, at least in theory, since the *interim* prohibition will be lifted when appropriate conservation and management measures will have been adopted in accordance with international law. Implications of the phrase ‘appropriate conservation and management measures [...] adopted in accordance with international law’ were not clarified, but it appears to include the LOSC and customary international law. It appears that the measures should be consistent with, among others, the principle of non-discrimination contained in Article 119(3) of the LOSC.

While the Resolution did not exclude destructive fishing practices other than bottom trawling, it obviously focused on bottom trawling on the high seas ‘that has adverse impacts on vulnerable marine ecosystems’. Resolution 59/25 referred to ecosystem features such as seamounts, hydrothermal vents and cold water corals located beyond national jurisdiction as examples of VMEs. While those located within national jurisdiction are not excluded from the scope of the Resolution in this paragraph or other relevant paragraphs, it is clear from the discussion at the ICP as well as Decision VII/5 of the CBD Conference of Parties that measures were, first of all, directed at the impacts on VMEs beyond national jurisdiction.⁴³ One question is whether bottom trawling occurring in the water column above the continental shelf of coastal states is included in the scope of the recommendation in this regard. As noted in Chapter 2 (as well as in Section 3.2.2 below), the extent to which coastal

41 In fact, at the ICP in 2004 most states were not in a position to support proposed recommendations to consider an interim prohibition of bottom trawling in areas beyond national jurisdiction, and the proposal to recommend the General Assembly to urgently consider an interim prohibition on bottom trawling was deleted. See *ENB*, vol. 25, No. 12, at p. 5. The agreed elements of the ICP called for the consideration of an interim prohibition of destructive practices, without direct reference to bottom trawling. Report on the Work of the United Nations Open-Ended Informal Consultative Process on Oceans and the Law of the Sea at Its Fifth Meeting, A/59/122, 1 July 2004, at para. 6(a).

42 On such difficulties, see M.W. Lodge, ‘Improving International Governance in the Deep Sea’, 19 *International Journal of Marine and Coastal Law* (2004), at p. 300, note 7 and its accompanying text.

43 See *ENB*, vol. 25, No. 12, at p. 5. See also COP Decision VII/5, paras 60-61.

states may exercise jurisdiction to regulate bottom fisheries on the high seas superjacent to their continental shelf is controversial. The UNGA Resolutions refer to seamounts, hydrothermal vents and cold water corals located beyond national jurisdiction for illustrative, not definitional, purposes. Thus, fishing activities on the high seas having adverse impacts on ecosystem features located within national jurisdiction are not excluded from the scope of the recommendation.

The Resolutions recognized the crucial importance of RFMO/As in the regulation of bottom trawling in the mid to long term and adopted a three-fold approach in this regard. First, RFMO/As having competence to regulate bottom trawling were called upon to urgently adopt appropriate conservation and management measures in accordance with international law (and to ensure compliance therewith).⁴⁴ Bottom trawling to be addressed by such urgent conservation and management measures of RFMOs was, as in the case of the interim prohibition in paragraph 66 of Resolution 59/25, limited to that having ‘adverse impacts on vulnerable marine ecosystems’. Resolution 60/31 expanded the scope of regulated fishing activities from bottom trawling to bottom fisheries. Resolution 60/31 also clarified the measures to be taken to protect VMEs, indicating spatial and temporal measures.⁴⁵ After a review in 2006, again failing to impose an immediate moratorium despite continued calls to do so,⁴⁶ the General Assembly specified a series of concrete measures to be implemented no later than 31 December 2008:

44 UNGA Resolution 59/25, para. 67 (‘Calls upon regional fisheries management organizations or arrangements with the competence to regulate bottom fisheries urgently to adopt, in their regulatory areas, appropriate conservation and management measures, in accordance with international law, to address the impact of destructive fishing practices, including bottom trawling that has adverse impacts on vulnerable marine ecosystems, and to ensure compliance with such measures’). It should be noted that paragraph 67 refers to RFMOs which are competent to regulate bottom fisheries, as opposed to paragraphs 68 and 69 relating to RFMOs with the competence to regulate bottom fisheries *and* the impacts of fishing on VMEs. This would imply that conservation and management measures as required in paragraph 67 are first and foremost directed at bottom fisheries despite the inclusive expression ‘to address the impact of destructive fishing practices’. Presumably, the competence to regulate the impacts of fishing on VMEs has thus been rendered unnecessary in this paragraph. In fact, at the ICP it was agreed to propose to the General Assembly to encourage such RFMOs to urgently address the impact of deep-sea bottom trawling, rather than destructive fishing practices, on VMEs. Report on the Work of the United Nations Open-Ended Informal Consultative Process on Oceans and the Law of the Sea at Its Fifth Meeting, at para. 6(b). The wording of the recommendation was based on the EU proposal to use the language of Decision VII/5 of the CBD COP7. See *ENB*, vol. 25, No. 12, at p. 5.

45 UNGA Resolution 60/31, para. 70.

46 See, e.g., The World Conservation Congress REC 3.099 The protection of seamounts, deep-sea corals and other vulnerable deep-sea habitats from destructive fishing practices, including bottom trawling, on the high seas, Bangkok, Thailand, 17-25 November 2004, para. 5; UN Millennium Project, *Environment and Human Well-being: A Practical Strategy*, Report of the Task Force on Environmental Sustainability, at p. 87; T. Murombo, ‘The Role of International Environmental Diplomacy in the Sustainable Use of Marine Biodiversity in Areas Beyond National Jurisdiction: Ending Deep Sea Trawling’, 40 *Comparative and International Law Journal of Southern Africa* (2007), at pp. 172-192.

- (a) To assess, on the basis of the best available scientific information, whether individual bottom fishing activities would have significant adverse impacts on vulnerable marine ecosystems, and to ensure that if it is assessed that these activities would have significant adverse impacts, they are managed to prevent such impacts, or not authorized to proceed;
- (b) To identify vulnerable marine ecosystems and determine whether bottom fishing activities would cause significant adverse impacts to such ecosystems and the long-term sustainability of deep sea fish stocks, inter alia, by improving scientific research and data collection and sharing, and through new and exploratory fisheries;
- (c) In respect of areas where vulnerable marine ecosystems, including seamounts, hydrothermal vents and cold water corals, are known to occur or are likely to occur based on the best available scientific information, to close such areas to bottom fishing and ensure that such activities do not proceed unless conservation and management measures have been established to prevent significant adverse impacts on vulnerable marine ecosystems;
- (d) To require members of the regional fisheries management organizations or arrangements to require vessels flying their flag to cease bottom fishing activities in areas where, in the course of fishing operations, vulnerable marine ecosystems are encountered, and to report the encounter so that appropriate measures can be adopted in respect of the relevant site [...]⁴⁷

The key terms such as VMEs and SAIs are not defined in the Resolution. The standards and criteria for identifying them are critical for the proper implementation of these provisions. The UNGA recommended that the FAO should develop such standards and criteria as needed to implement them.⁴⁸ This issue will be examined in the next section.

Second, members of existing RFMO/As without the competence to regulate bottom fisheries or the impacts of fishing on VMEs were called upon to expand their competence.⁴⁹ Since regional fisheries *management* organizations and arrangements were called on to take action, it appears that this recommendation did not target advisory bodies. Similarly, given the recommendation in paragraph 69 of that Resolution, RFMO/As dealing with highly migratory species were not included in the scope of this recommendation. This provision thus seems to relate to RFMO/As which are competent to regulate fisheries for straddling fish stocks and DHSFS but lack certain competence as follows: (1) they do not have competence to regulate fisheries for the sole purpose of the conservation of ecosystems (if the measure concerned does not contribute to the sustainability of the target species) (e.g., NEAFC under the 1980 NEAFC Convention); (2) their competence is limited to the management of certain species of straddling fish stocks and DHSFS (e.g., the multilateral arrangement for pollock resources in the Bering Sea).

Third, the Resolution called upon states urgently to cooperate in the establishment of new RFMO/As with the competence to regulate bottom fisheries and the impacts of fishing on VMEs where necessary and appropriate, if no relevant RFMO/A

47 UNGA Resolution 61/105, para. 83.

48 Ibid., para. 89.

49 UNGA Resolution 59/25, para. 68; UNGA Resolution 60/31, para. 71. See also UNGA Resolution 61/105, para. 82.

existed.⁵⁰ In 2006, the General Assembly further called upon participants in such negotiations to expedite such negotiations and, by no later than 31 December 2007, to adopt and implement interim measures consistent with paragraph 83 of Resolution 61/105.⁵¹ These resolutions left ambiguous which states are entitled to participate in such negotiations (e.g., distant water fishing nations, coastal states not engaged in the high seas fishery concerned and/or other states).

As described above, the successive UNGA Resolutions clearly pointed out that RFMO/As are assigned a primary role in addressing impacts of high seas bottom fisheries on VMEs. In other words, circumstances in which flag states have the discretion to determine what action is necessary are limited to those where there is no RFMO/A or where the existing RFMO/A has not adopted interim measures. In fact, the recommendations in Resolution 61/105 support this proposition. Following the recommendations concerning RFMO/A-related action, the Resolution called upon flag states either to adopt and implement measures in accordance with paragraph 83, *mutatis mutandis*, or cease to authorize fishing vessels flying their flag to conduct bottom fisheries pending the establishment of a competent RFMO/A or interim measures.⁵²

Under UNGA Resolution 59/25, the General Assembly agreed to review progress on action taken by states and RFMOs in response to paragraphs 66 to 69 on bottom trawling within two years ‘with a view to further recommendations, where necessary, in areas where arrangements are inadequate’.⁵³ On the basis of this review in 2006, the General Assembly recognized that additional actions were urgently needed.⁵⁴ The General Assembly decided to conduct a further review of such actions with a view to further recommendations, where necessary, in 2009.⁵⁵

3.2.2 FAO International Guidelines on Deep-sea Fisheries on the High Seas

The Technical Consultation on the International Guidelines for the Management of Deep-sea Fisheries in the High Seas was held in Rome in February and August 2008. It was convened in order to assist states and RFMOs and arrangements in sustainably managing deep-sea fisheries and implementing the relevant provisions of UNGA Resolution 61/105, following the request at the 27th session of COFI in 2007. In particular, COFI instructed that the Guidelines ‘should include standards and criteria for identifying vulnerable marine ecosystems beyond areas under national jurisdiction

50 UNGA Resolution 59/25, para. 69; UNGA Resolution 60/31, para. 71. See also UNGA Resolution 61/105, para. 82.

51 Ibid., para. 85.

52 Ibid., para. 86. The resolution also called upon states to make publicly available a list of those vessels authorized to conduct bottom fisheries in areas beyond national jurisdiction and the measures adopted pursuant to paragraph 86. Ibid., para. 87.

53 UNGA Resolution 59/25, para. 71. See also UNGA Resolution 60/31, paras 73-74.

54 UNGA Resolution 61/105, para. 82. See also UNGA Resolution 62/177, para. 98.

55 UNGA Resolution 61/105, para. 91.

and the impacts of fishing activities on such ecosystems'.⁵⁶ The Technical Consultation adopted the International Guidelines in August 2008, which are expected to be endorsed by COFI in 2009.⁵⁷ The following paragraphs briefly discuss the Guidelines, focusing on the aspects relevant to the implementation of UNGA Resolution 61/105.

At the outset, it is useful to provide an overview of the scope of the Guidelines in terms of both the area of application and the type of fisheries. Among the recurring topics during the meeting were jurisdictional issues concerning deep-sea fisheries on the high seas over the continental shelf. Deep-sea fisheries take place in three situations: (1) in waters under national jurisdiction (e.g., the EEZ or the territorial sea); (2) on the high seas over the continental shelf; (3) on the high seas over the international seabed area (the Area). As the title of the Guidelines suggests, the meeting was primarily concerned with situations (2) and (3). It was extensively discussed whether the Guidelines should stipulate two different regimes in situations (2) and (3). Some delegations (e.g., Argentina) argued for the recognition of different regimes between situations (2) and (3). The argument was not put forward in terms of interests of coastal states in straddling stocks, but in terms of sovereign rights and jurisdiction of coastal states over the continental shelf. In fact, explicit reference was hardly made to the issue of 'straddling' deep-sea fish stocks. Although a suggestion to expressly confine the applicability of the Guidelines to areas beyond the EEZ *and the continental shelf* was not adopted, a non-prejudice clause was inserted regarding sovereign rights and jurisdiction of coastal states with regard to the continental shelf as paragraph 25.

This issue is particularly relevant where no RFMO/A exists, especially where negotiations to establish an RFMO/A have not yet started such as the South West Atlantic and the Central Atlantic.⁵⁸ In that case, it could be argued that the coastal state might attempt to advance claims to distant water fishing nations on the following three bases: (1) the Guidelines are not applicable to high seas deep-sea fisheries over the continental shelf, and the coastal state has the competence to regulate such fisheries; (2) even if the Guidelines are applicable to high seas deep-sea fisheries, (i) the coastal state may exercise jurisdiction over such fisheries by vessels of other states with a view to preventing such fisheries from jeopardizing sovereign rights with regard to sedentary species (including corals) or (ii) the flag state may authorize deep-sea fisheries by its vessels only after it obtains consent from the coastal state with regard to conducting MSR on the continental shelf of that coastal state.⁵⁹

56 Report of the Twenty-Seventh Session of the Committee on Fisheries, Rome, 5-9 March 2007, at para. 77.

57 There was no suggestion to develop follow-up instruments such as an international plan of action or a legally-binding instrument, although the use of the Guidelines in the upcoming meetings to establish new RFMOs in the South Pacific and the North-Western Pacific was mentioned by some delegations.

58 See Section 5.4 below.

59 The Guidelines stipulate that states should gather scientific information in order to establish whether deep-sea fisheries are likely to cause SAIs. Such information does not necessarily relate to resource exploration (e.g., 'baseline information on the ecosystems, habitats and communities in the fishing area, against which future changes are to be compared' in paragraph

Paragraph 13 defines the scope of fisheries to which the Guidelines are applicable. It allows the inclusion of certain fisheries of concern while excluding pelagic fisheries on the high seas. First, the Guidelines apply to fisheries with the following two characteristics: (1) the total catch includes species that can only sustain low exploitation rates; and (2) the fishing gear is likely to contact the seafloor during the normal course of fishing operations. Second, the Guidelines are also applied as appropriate to similar fisheries, including those targeting medium productivity species.

3.2.2.1 Common understandings of key concepts

As stated at the beginning of this sub-section, COFI explicitly instructed the Technical Consultation to include standards and criteria for identifying VMEs and the impacts of fishing activities on such ecosystems in the Guidelines. Thus, establishing definitions or common understandings of these key concepts was a crucial issue for the meeting.

Vulnerable marine ecosystems

Paragraphs 14-16 describe VMEs. The Guidelines recognized the need to take into account not only the likely effect of various threats but also the probability of those threats as one of the factors that determine the risks to a marine ecosystem.⁶⁰

A list of characteristics to be used as criteria in the identification of VMEs was introduced in paragraph 42, and the list of examples of potentially vulnerable species groups, communities and habitats as well as features that potentially support them are contained in Annex I. The latter list includes those which were not explicitly mentioned in UNGA Resolutions 59/25 and 61/105 such as sponge as well as cold seeps.

In designating an ecosystem as ‘vulnerable’, the decision should evaluate habitats and ecosystems against the criteria in paragraph 42, ‘individually or in combination using the best available scientific and technical information’.⁶¹

Significant adverse impacts

SAIs are described as:

‘those that compromise ecosystem integrity (i.e. ecosystem structure or function) in a manner that: (i) impairs the ability of affected populations to replace themselves; (ii) degrades the long-term natural productivity of habitats; or (iii) causes, on more than a temporary basis, significant loss of species richness, habitat or community types’.⁶²

47(ii)). This type of information may have little utility in increasing catches or making operations more efficient in economic terms, and may be primarily intended to be used to increase human beings’ knowledge of the benthic environment. Thus, it could be argued that activities necessary to obtain some of the information required in prior environmental impact assessments (EIAs) fall under the regime of MSR (rather than fishery research).

60 Paragraph 16.

61 Paragraph 46.

62 Paragraph 17.

Impacts should be evaluated ‘individually, in combination and cumulatively’. Among the six factors stipulated for consideration when determining the scale and significance of an impact, is ‘the spatial extent of the impact relative to the availability of the habitat type affected’.⁶³ This latter factor might be invoked, when the flag state tries to argue that a particular fishery does not cause SAIs (e.g., the removal of a coral reef on a seamount does not constitute an SAI if the same habitat type is available in the vicinity of the affected feature in sufficient abundance). Temporary impacts are those that are limited in duration and that allow the particular ecosystem to recover over an acceptable timeframe, which are decided on a case-by-case basis and should be on the order of 5-20 years.⁶⁴

Where the impact assessment concludes that the area does not contain VMEs or that SAIs are not likely, additional assessments are still required in limited circumstances. When there have been significant changes to the fishery or other activities in the area, or when natural processes are thought to have undergone significant changes, impact assessments should be repeated.⁶⁵

3.2.2.2 *Conservation and management*

The Guidelines stipulate that the main objectives of the management of deep-sea fisheries are to promote responsible fisheries that provide economic opportunities while ensuring the conservation of marine living resources and the protection of marine biodiversity, by ensuring the long-term conservation and sustainable use of marine living resources in the deep seas and preventing SAIs on VMEs.⁶⁶ The objectives of the management of deep-sea fisheries as agreed for the Guidelines clearly indicate an emphasis on environmental protection, in particular the protection of benthic ecosystems.

The meeting agreed that states and RFMO/As should adopt and implement measures in accordance with the precautionary approach and an ecosystem approach to fisheries (EAF).⁶⁷ As explored below, these principles find expression in many paragraphs of the agreed text. In addition, the meeting discussed the possibility to take more precautionary conservation and management measures for deep-sea fisheries than for pelagic fisheries. For instance, paragraph 23 states that ‘[i]n recognition of the potential vulnerability of deep-sea resources and their ecosystems, conservation and management measures for [deep-sea fisheries] should ensure that, while knowledge is low, harvest rates are kept low enough to minimise risk to sustainability and harvests only increase as knowledge, management capacity, and [monitoring, control and surveillance] increases’.

Paragraph 21 stipulates that states and RFMO/As should recognize the need, in managing deep-sea fisheries, to do so in a manner consistent with the Code of

63 Paragraph 18(ii).

64 Paragraph 19.

65 Paragraph 53.

66 Paragraph 11.

67 Paragraph 12.

Conduct and general principles set forth in the FSA. In this respect, the Guidelines enumerated actions to be taken in a non-exhaustive list in the same paragraph. While the list is based on the general principles in the above-mentioned instruments, some notable differences exist. First, subparagraph (ii) requires states and RFMO/As to identify areas or features where VMEs are known or likely to occur, and the location of fisheries in relation to these areas and features. Second, management should be based on the best scientific and *technical* information available, as opposed to the best scientific information (or evidence) available in the FSA and the Code of Conduct, and fisher's knowledge is to be taken into account, where appropriate (subparagraph (iv)).

The action to be taken with regard to fishing gear and techniques under the Guidelines could not be interpreted to prohibit less selective gear such as bottom trawling since the term 'cost-effective' as in Article 5(f) of the FSA and Article 7.2.2(g) of the Code of Conduct was inserted.⁶⁸ Another point of note in this subparagraph is the reference to 'recognizing the difficulties of managing fisheries with mixed species or high bycatch'.

Management in the absence of any competent RFMO/A

Paragraph 28 refers to the cooperation of states in the establishment of new RFMOs and arrangements. It calls on states to cooperate to develop interim measures prior to their establishment. It stipulates that

'[p]rior to the establishment of such a new RFMO/A States participating in the negotiations should cooperate to adopt and implement interim conservation and management measures to ensure sustainable management of [deep-sea fisheries] in the long-term and to prevent significant adverse impacts to VMEs, taking full account of these Guidelines'.⁶⁹

The potential role of the FAO is of particular relevance to areas where no RFMO/A exists. The Guidelines only stipulate the submission of impact assessments and conservation and management measures to the FAO as well as the role of the FAO as an information clearing-house (i.e., making it publicly available).⁷⁰

Prior environmental impact assessments

As indicated in paragraph 83 of UNGA Resolution 61/105, the EIA is an important element in managing deep-sea fisheries. The meeting agreed that '[f]lag states and RFMO/As should conduct assessments to establish if deep-sea fishing activities are likely to produce significant adverse impacts in a given area' and enumerated exam-

68 Paragraph 23(v).

69 It appears inconsistent with this text to exclude non-fishing coastal states from negotiations on interim measures. If agreement on the interim measures is not forthcoming between distant water fishing nations and coastal states, the only feasible option left to distant water fishing nations would be the control of their vessels under their domestic legislation. See also the situations in the South West Atlantic in Section 5.4.3 below.

70 See, e.g., paragraph 34.

ples of information to be assessed.⁷¹ As the type of information in the list indicates, the meeting recognized the need for EIAs not only for existing fisheries but also for proposed fisheries.⁷²

Risk assessments referred to in paragraph 47(vi) do not need to be conducted in a uniform manner. They ‘should take into account, as appropriate, differing conditions prevailing in areas where [deep-sea fisheries] are well established and in areas where [deep-sea fisheries] have not taken place or only occur occasionally’.⁷³ The proposal to differentiate between established and new fisheries was intended to avoid burdening established fisheries too much. However, it has been pointed out that areas that have been subject to deep-sea fisheries for a long time might still contain unknown VMEs so that the differentiation should not be interpreted to imply that lower standards are applied to risk assessments in established fisheries.

The Guidelines recognize that ‘there may be circumstances in which States may have to rely on information and data obtained only from vessels flying their flags or their own research activities when assessing [deep-sea fisheries] that take place in areas where no competent RFMO/As is in place’.⁷⁴

Authorization of fishing

Paragraph 83 of UNGA Resolution 61/105 called on RFMO/As, among others, not to authorize individual bottom fishing activities if it is assessed that these activities would have SAIs (subparagraph (a)) or in respect of areas where VMEs are known to occur or are likely to occur based on the best available scientific information (subparagraph (c)), unless conservation and management measures have been established to prevent SAIs on VMEs.

The Consultation extensively examined ways to implement these recommendations and further advanced that paragraph. Paragraph 73 stipulates that if deep-sea fisheries activities are likely to produce SAIs, authorizations should not be issued. The Guidelines formulated paragraph 74 on situations of substantial uncertainty. If the presence of VMEs or the likelihood that individual deep-sea fisheries activities would cause SAIs on VMEs cannot be adequately determined, States should only authorize them to proceed in accordance with: (i) precautionary conservation and management measures to prevent SAIs as described in paragraph 65; (ii) a protocol for encounters with VMEs consistent with paragraphs 67-69;⁷⁵ and (iii) measures to reduce the uncertainty. In other words, although the provision was not formulated in a negative

71 Paragraph 47.

72 The first meeting of the RFB Secretariats Network (RSN-1) agreed that there is an associated need to collect relevant data to better understand the potential impact of bottom trawling; as a precautionary measure, RSN-1 also noted that stringent data and information requirements should be put in place before opening any deepwater trawl fishery in the future. Report of the First Meeting of Regional Fishery Body Secretariats Network, Rome, 12-13 March 2007, at p. 5, para. 17.

73 Paragraph 48.

74 Paragraph 49.

75 Paragraphs 67-69 stipulate actions to be taken in order to implement paragraph 83(d) of UNGA Resolution 61/105.

way (e.g., ‘should not be authorized to proceed’), deep-sea fisheries are prohibited when substantial uncertainty remains unless and until conservation and management measures to prevent SAIs have been taken: the burden of proof was reversed in this regard.

3.3 AREA-BASED MANAGEMENT TOOLS: MPAS IN THE HIGH SEAS

Area-based management tools have been widely employed to protect and preserve the marine environment, including living resources, through the prohibition or regulation of certain activities in a defined area. The name of area-based management tools varies in accordance with the regulated activities and purposes of the regulation. Among others, the term ‘marine protected area (MPA)’ has been used on many occasions.⁷⁶ So far, MPAs have been mainly established within areas under national jurisdiction for various purposes, while existing high seas MPAs have been limited in number of regulatory purposes. All global treaties except the CBD and most regional treaties purport to regulate only particular types of activities.⁷⁷ There is no single global high seas MPA treaty or global network of MPAs encompassing all regulatory purposes. In a number of recent international fora, the establishment of MPAs on the high seas and the regulation of activities in such areas have been advocated as a new management tool.⁷⁸ First and foremost, the JPOI called for the use of diverse approaches and tools and referred to the establishment of MPAs 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.⁷⁹ Successive UNGA Resolutions have called for the implementation of this

76 There is no generally accepted definition of the term ‘MPA’. For example, the IUCN defines it as ‘[a]ny area of intertidal or subtidal terrain, together with its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment’. Resolution 17.38, General Assembly of the IUCN (1988), reconfirmed in Resolution 19.46 (1994). For present purposes, this term is used in an all-encompassing way, without excluding any particular purpose of regulation.

77 A notable exception among the regional mechanisms is the Mediterranean Network. See Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean, Barcelona, 10 June 1995, which is applied to all the maritime waters of the Mediterranean, whether internal waters, historical waters, territorial seas, EEZ, fishing zones, ecological zones or high seas. See also T. Scovazzi, ‘Marine Protected Areas on the High Seas: Some Legal and Policy Considerations’, 19 *International Journal of Marine and Coastal Law* (2004), at pp. 11-15. For the regional mechanism for the protection of the marine environment in the North-East Atlantic, see Section 4.4.2.3 below.

78 Nevertheless, some states such as Norway challenged the compatibility of MPAs on the high seas with the law of the sea, particularly the LOSC. *ENB*, Vo. 25 No. 6 (9 June 2003), at p. 5. See also *ibid.*, at p. 4.

79 Johannesburg Plan of Implementation, para. 32(c).

commitment in the JPOI.⁸⁰ The CBD stipulates that ‘[e]ach Contracting Party shall, as far as possible and as appropriate [...] [e]stablish a system of protected areas or areas where special measures need to be taken to conserve biological diversity’.⁸¹ One commentator argues that ‘[r]ead in conjunction with each other, articles 4, 5 and 8 [of the CBD] not only supported the establishment of high seas MPAs but rather under certain circumstances actually required their establishment’.⁸²

In a fisheries context, RFMO/As have established area closures for certain fisheries in many areas. As these tools may play a role in preserving not only spawning biomass but also critical habitats and sensitive life stages of species,⁸³ they have been adopted by RFMO/As with a view to conserving target species and/or protecting marine ecosystems. Implications and benefits of MPAs for fisheries are less clear than for biodiversity conservation, though.⁸⁴ With regard to the establishment of closed areas for fisheries by RFMO/As, the main legal issue is whether the RFMO/A concerned has the competence to do so under its constitutive instrument.

As for integrated or multi-purpose MPAs, additional legal and policy issues arise. First, international legal issues arise in relation to the freedom of the high seas. Opponents argue that the establishment of such areas on the high seas is incompatible with the freedom of the high seas as provided in Article 87 of the LOSC as well as the invalidity of claims of sovereignty over the high seas and in relation to the Area.⁸⁵ Proponents have argued that the freedom of the high seas is not absolute and the exercise of freedoms is subject to the obligation under the law of the sea such as the conservation of marine living resources of the high seas and the protection of the marine environment.⁸⁶ Accordingly, as Articles 87 and 92(1) of the LOSC must be understood in this context, multi-purpose MPAs are not incompatible with the law of the sea. In addition, as noted earlier, the CBD stipulates the establishment of MPAs

80 E.g., UNGA Resolution 62/215, Oceans and the Law of the Sea, 22 December 2007, para. 111. The commitment of the JPOI concerning high seas MPAs was also confirmed in CBD Decisions VII/5, para. 19 and VII/28, para. 18.

81 CBD, Article 8(a).

82 Oral, ‘Protection of Vulnerable Marine Ecosystems in Areas Beyond National Jurisdiction: Can International Law Meet the Challenge?’ at p. 97.

83 Fisheries management, Technical Guidelines for Responsible Fisheries 4, at p. 47.

84 COFI/2007/8, at p. 5.

85 LOSC, Articles 89 and 137(1).

86 As regards the measures necessary for protecting and preserving VMEs and species, Article 194(5) has been invoked as a legal basis for the designation of certain categories of areas, which may require higher standards of environmental protection. European Commission Background Paper No. 3, at p. 16. Scovazzi points out that although a possible convention on high seas MPAs could not be applicable to third party vessels, every state is already under the obligations arising from customary international law and from the LOSC to protect and preserve rare or fragile ecosystems and to cooperate for this purpose. T. Scovazzi, ‘New International Instruments for Marine Protected Areas in the Mediterranean Sea’, in A. Strati, M. Gavouneli and N. Skourtos (eds.), *Unresolved Issues and New Challenges to the Law of the Sea: Time Before and Time After* (2006), at p. 120.

in Article 8.⁸⁷ All in all, it can be argued that the establishment of multi-purpose high seas MPAs is not in itself incompatible with the law of the sea, but they are only binding on states that have consented.⁸⁸

In the meeting of the biodiversity working group established by the UNGA, a number of delegations stated that multi-purpose MPAs would be ‘a key tool’ to manage biodiversity beyond areas of national jurisdiction.⁸⁹ Other delegations took a cautious approach to the utility of high seas MPAs and their compatibility with the law of the sea. These delegations considered high seas MPAs as a possible tool, though not a necessary one, for obtaining a multi-sectoral approach. In their view, ‘there should be a strong causal link between the impacts being addressed and the management measures proposed, consistent with customary international law, as reflected in the [LOSC]’.⁹⁰

Second, multi-purpose MPAs may give rise to conflicts over which institution(s) are entitled to designate such MPAs and enforce measures therein: e.g., states (an individual state or a group of states); regional bodies (RFMO/As or regional seas programmes under UNEP); global bodies (the International Maritime Organization (IMO), the FAO, the CBD, the UNGA or any other entity to be established for that purpose). In fact, various international institutions have been working on the issue of area-based management tools simultaneously, including COPs of the CBD, the FAO, the IMO and the Ad Hoc Open-ended Informal Working Group to Study Issues Relating to the Conservation and Sustainable Use of Marine Biological Diversity beyond Areas of National Jurisdiction established by the UNGA. One question is whether one particular institution should be allowed to exclusively designate multi-purpose MPAs and, if so, which entity it should be. If two or more institutions have the competence to employ area-based management tools to regulate different activities falling under their respective competence in the same area, a question is which institution, if any, should play a primary role and how potential conflicts should be avoided, including the cooperation and coordination in developing criteria for the designation of the area as well as in respect of the enforcement of measures to regulate activities therein.

MPAs designated unilaterally by a state or a group of states outside the EEZ or territorial sea have been criticized by some commentators. They stated that the designation of MPAs needs to be a cooperative activity and the duty of cooperation renders unilateral MPAs incompatible with the LOSC even where measures within the designated MPAs are applicable to the vessels and persons of the state(s) con-

87 For the relationship between the provisions of the LOSC and the CBD, see ‘Marine biodiversity’ in Section 2.1.3.2 above.

88 For a similar view, see, e.g., Wolfrum and Matz, ‘The Interplay of the United Nations Convention on the Law of the Sea and the Convention on Biological Diversity’, at p. 468.

89 A/61/65, at p. 16, para. 61.

90 Ibid., at pp. 16-17, para. 62.

cerned.⁹¹ In this regard, it is interesting to note that recent unilateral actions by some coastal states to claim the designation of certain areas outside their territorial sea for the purpose of protection of the environment have been met with warnings against such moves.⁹²

With regard to the cooperation and coordination among relevant international organizations, policy questions are not yet settled at the global level. The Task Force on Biodiversity in Marine Areas beyond National Jurisdictions has been established within UN-Oceans in order to coordinate information input to the General Assembly, the CBD, and other international processes dealing with biodiversity in marine areas beyond national jurisdiction.⁹³ It remains to be seen how the Task Force, which will be led by the CBD, will arrive at a consensus on issues such as the status of the biodiversity and the threats, and what tools are available for the conservation and sustainable use of biodiversity. So far, little progress has been reported from this initiative.

Under the 1995 Jakarta Mandate, parties to the CBD have been working on this issue, and designated the topic 'marine and coastal protected areas' as one of the thematic areas.⁹⁴ The Ad Hoc Open-Ended Working Group on Protected Areas in its first meeting in June 2005 considered, among others, 'Options for cooperation for the establishment of marine protected areas in marine areas beyond the limits of national jurisdiction'. In 2006, the eighth COP decided to defer to the UNGA on this issue, recognizing the UNGA's 'central role in addressing issues relating to the conservation and sustainable use of biodiversity in marine areas beyond national jurisdiction'.⁹⁵ The COP did not include the issue of MPAs in areas beyond national jurisdiction in

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- 91 See, e.g., Young, *The Legal Framework for MPAs and Successes and Failures in Their Incorporation into National Legislation*, in *Report and documentation of the Workshop on Marine Protected Areas and Fisheries Management: Review of Issues and Consideration*, Rome, 12-14 June 2006, at p. 259 (but see also the more liberal views expressed at pp. 247 and 261). See also Scovazzi, 'Marine Protected Areas on the High Seas', at p. 5.
- 92 B.H. Oxman, 'The Territorial Temptation: A Siren Song at Sea', 100 *American Journal of International Law* (2006), at pp. 843-849; P.H. Sand, "'Green" Enclosure of Ocean Space – Déjà Vu?' 54 *Marine Pollution Bulletin* (2007), at pp. 374-376.
- 93 Report of the First Inter-Agency Meeting of UN-OCEANS, 25-26 January 2005, UNESCO-IOC, Paris, at p. 6.
- 94 'Marine and coastal protected areas' was designated as programme element 3. See Decision IV/5 and its Annex.
- 95 VIII/24, first recital after the heading '*Options for cooperation for the establishment of marine protected areas in marine areas beyond the limits of national jurisdiction*'. See also European Commission Background Paper No. 3, at p. 19. The subsequent COP also supported this position by focusing on scientific and technical aspects and called for cooperation in the context of the UNGA processes. See, e.g., Decision IX/20, paras 8 and 18-19. It should not, however, be forgotten that the COP emphasized the critical role of the CBD by observing as follows: '*Recognizes that the Convention on Biological Diversity has a key role in supporting the work of the General Assembly with regard to marine protected areas beyond national jurisdiction, by focusing on provision of scientific and, as appropriate, technical information and advice relating to marine biological diversity, the application of the ecosystem approach and the precautionary approach, and in delivering the 2010 target*'. VIII/24, para. 42.

the provisional agenda for the second meeting of the ad hoc Working Group, but it agreed to ‘consider at its ninth meeting, progress with the work identified in its decisions relating to conservation and sustainable use of marine biodiversity beyond national jurisdiction, including marine protected areas, and consider further supporting actions as appropriate, that may be required in the context of paragraph 42 above in cooperation with competent international organizations’. Thus, although the CBD has deferred to the UNGA with respect to policy issues, it might become active again in policy discussions on this issue in the future.⁹⁶

Upon a recommendation by COFI in 2005, the FAO has been developing technical guidelines on the design, implementation and testing of MPAs, building on the best available knowledge on fisheries science and management and the role and requirements of MPAs, with particular emphasis on their potential contribution to an ecosystem approach to fisheries.⁹⁷ The UNGA has welcomed the proposed work of the FAO on this issue.⁹⁸ Nevertheless, it did not give the coordinating or leading role to the FAO with regard to MPAs for fisheries conservation purposes.⁹⁹ Therefore, while the work of the FAO may set scientific criteria and operational standards in respect of fisheries, the FAO will not be able to designate such areas in regions where there exist competent RFMO/As. Nor is it competent to develop scientific or technical criteria for MPAs for non-fisheries purposes or to play a leading role in policy discussions.¹⁰⁰

In the meeting of the biodiversity working group established by the UNGA, on the one hand, it was ‘reaffirmed that the [UNGA] has a central role in addressing issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction [and other] organizations, processes and agreements also have an essential complementary role within areas of their respective competence’.¹⁰¹ On the other hand, while ‘[i]t was proposed that the General Assembly could assume a leading role in the identification of criteria for the establishment of marine protected areas, and that such underutilized bodies as the Meeting of States Parties of the [LOSC] could be considered for this purpose’, there appears to have been no consen-

96 See also E. Morgera, ‘Competence or Confidence? The Appropriate Forum to Address Multi-Purpose High Seas Protected Areas’, 16 *Review of European Community & International Environmental Law* (2007), at p. 11.

97 COFI/2007/8, at p. 5.

98 See, e.g., UNGA Resolution 61/105, para. 92.

99 *Ibid.*, para. 92 (the UNGA ‘urges coordination and cooperation among all relevant international organizations and bodies’).

100 The FAO, in the process of developing the technical guidelines, has confined itself to technical issues involved in MPAs for fisheries management and emphasized the need for cooperation between other interest groups, including the CBD. See, e.g., paras 22, 31 and 38 of the conclusions and recommendations by 2006 Workshop on MPAs and Fisheries Management (Fisheries Report No. 825). Among other things, it stated that the FAO could contribute to the improved management of fisheries in areas beyond national jurisdiction by providing technical guidance on effective means of management and that greater collaboration between the FAO and the CBD would help to integrate initiatives to achieve the conservation of biodiversity with efforts to ensure sustainable use of fishery resources (para. 22).

101 A/61/65, at p. 21 (Annex I, para. 2).

sus on assigning such a role to the UNGA or the meeting of the parties to the LOSC.¹⁰² In fact, the above proposal was made in the following context:

‘it was noted that further cooperation was necessary to further develop criteria for the identification of ecologically and biologically significant areas, the development of systems of marine protected areas and biogeographic classification systems. Further consideration should also be given to ways of establishing, managing and enforcing such designations, recognizing in this context the existing role and mandate of such bodies as FAO, IMO and the Convention on Biological Diversity and of regional seas conventions.’¹⁰³

Read together, the above statements imply that delegations were reluctant to recognize such a coordinating or leading role for the UNGA. All in all, legal and policy frameworks for the coordination and cooperation in establishing multi-purpose MPAs are ambiguous at the moment.

It is in this context that an initiative to adopt an implementation agreement to the LOSC on the protection of marine biodiversity in areas beyond national jurisdiction has been advocated, among others, by the European Union.¹⁰⁴ In the biodiversity working group meeting, a number of delegations noted that an implementing agreement to the LOSC could create a new regulatory and governance regime for the establishment and management of multi-purpose MPAs.¹⁰⁵ According to these delegations, such a regime would be ‘based on the principles of ecosystem management and precaution, including imposing prior environmental impact assessments and placing the burden of proof for harm on the users’. Other delegations supported the establishment of MPAs within existing regulatory regimes.¹⁰⁶

The possible content of such an agreement is not yet clear, but, for example, one EU paper has stated that the proposed agreement is intended to ensure an integrated, cross-sectoral approach for the protection of marine biodiversity, including by setting up MPAs in the high seas. It would establish a decision-making mechanism to designate high seas MPAs. Regulatory bodies, including RFMOs, the IMO and the ISA, would need to take into consideration such a designation in their regulatory management regimes.¹⁰⁷ In that proposal, it appears that while authority to *regulate* activities in MPAs still rests on such bodies, part of the competence to *designate* MPAs is attributed to a single global authority to be established by the agreement.

102 No such statement is recorded in the Co-Chairpersons’ summary of trends. See also *ibid.*, at p. 16, para. 60.

103 *Ibid.*

104 See, e.g., Green Paper: Towards a future Maritime Policy for the Union: A European vision for the oceans and seas, at p. 17. See also EU Presidency Statement – Oceans and Law of the Sea and Sustainable Fisheries at the UNGA in 2006, available at <http://www.europa-eu-un.org/articles/en/article_6575_en.htm> (last visited 9 April 2008). For a succinct overview of this issue, see Morgera, ‘Competence or Confidence? The Appropriate Forum to Address Multi-Purpose High Seas Protected Areas’, at pp. 9-10.

105 A/61/65, at p. 16, para. 61.

106 *Ibid.*

107 Background paper No. 3, at p. 20

Similarly, since the proposed agreement does not relate to the regulation of third party vessels in MPAs, it seems that effects on third party vessels only occur where there is a separate legal ground enabling non-flag states to exercise jurisdiction on the high seas over nationals and/or vessels of other states. A document prepared for the CBD Protected Area Working Group has noted that MPAs beyond national jurisdiction could serve as a coordinating framework for existing specialized regimes, and could ultimately provide the basis for a comprehensive integrated approach to managing different threats, including from emerging uses.¹⁰⁸

In summary, first, area-based management tools have been advocated in a fisheries context for use by RFMO/As. Second, multi-purpose MPAs could affect fisheries management by RFMO/As through the potential coordinated designation of MPAs in an integrated manner, whose purpose might include the regulation of fisheries even where the regulation of activities in a given area is not necessary from the fisheries management perspective. Third, multi-purpose MPAs have received mixed reactions from states, and, if they are to be established in the future, it is uncertain which institution takes on the coordinating or leading role in the establishment of such MPAs.

3.4 CONCLUDING REMARKS

A growing awareness of the need to address conservation and management of DHSFS by incorporating new approaches found in the FSA is discernible at various global fora. While the Working Group of the CBD did not reach agreement on the application of the principles of the FSA in discussing options for cooperation for the establishment of MPAs beyond national jurisdiction, agreement was secured in all the other fora on the extended application of certain principles of the FSA to DHSFS, including the UNGA and the Review Conference.¹⁰⁹ In this regard, two points should be noted. First, a careful reading of the recommendations shows that states are recommended to recognize that some principles of the FSA *should* be applicable to DHSFS. In other words, hortatory calls are further qualified by an auxiliary verb. Second, references to the application of FSA general principles at the global level are always directed at discrete high seas 'fish' stocks. In fact, the FSA excludes sedentary species as defined in Article 77 of the LOSC from the definition of 'fish' in its application. It is therefore not clear, at least from practice at the global level, whether the exploitation of sedentary species beyond areas of national jurisdiction is also governed by the same principles.

It is not clear which principles of the FSA should be applied to DHSFS. In the documents concerned, principles or provisions of the FSA to be applied to discrete

108 CBD/WG-PA/1/2, cited in European Commission Background Paper No. 3, at pp. 18-19.

109 However, note the following comments: 'there is reportedly resistance to extending the FSA to include [stocks that are located entirely in the high seas]'. Background Paper on the Conservation Status of Migratory Sharks and Possible Options for International Cooperation under the Convention on Migratory Species, UNEP/CMS/MS/4, 23 March 2007, at p. 47.

stocks are qualified by adjectives such as ‘fundamental’, ‘general’, and ‘relevant’, while their content has yet to be clarified. As a minimum, principles applicable to DHSFS should include Articles 5 and 6 as well as annexes I and II of the FSA.¹¹⁰ Provisions relating to RFMOs, non-flag enforcement, and dispute settlement may also be applied by RFMO/As or included in a new global instrument.¹¹¹ The provision concerning compatibility between conservation and management measures for the high seas and those for the EEZ would be, *mutatis mutandis*, applicable when a discrete high seas stock occurs in areas of competence of different RFMOs (in other words, ‘straddling’ DHSFS) or when two or more RFMOs have overlapping competence in relation to certain discrete stocks in the same area.¹¹² An examination of practice would help to understand which principles should be applied and in what manner they should be applied (e.g., whether or not in the same manner as straddling and highly migratory fish stocks).

A remaining question regarding DHSFS would be whether and how to develop a legal or non-legal instrument governing the exploitation of these stocks.¹¹³ No single view on how best to proceed has been agreed at the international level.¹¹⁴

Second, the UNGA and the FAO have been addressing the management of deep-sea fisheries at the global level.¹¹⁵ Through its annual Resolutions, the General

110 See, for example, Chairman’s background paper on possible initiatives at the fourth meeting of states parties to the FSA (Report of the Fourth ICSP, at p. 20.). See also Molenaar, ‘Addressing Regulatory Gaps in High Seas Fisheries’, at p. 564.

111 Hayashi, suggesting a new global agreement for high seas fisheries, argues that the main parts of such an agreement could be modelled on the FSA and a number of provisions of the FSA, including most of the provisions in parts III to VII, in addition to Articles 5 and 6 in part II and annexes I and II, could be used with minor adjustment. Hayashi, ‘Global Governance of Deep-Sea Fisheries’, at pp. 296-297. In addition, an FAO information paper states that the recommendation in UNGA Resolution 60/31 to recognize that the general principles of the FSA should also apply to DHSFS enhances the role of high seas RFMOs, suggesting that such principles should include provisions concerning RFMOs. COFI/2007/9 Rev.1, at p. 5.

112 However, Molenaar argues that the choice of provisions to be applicable to discrete stocks should be based on whether a provision is *not* suitable for discrete fish stocks, and on that understanding that Article 7 on the compatibility of conservation and management measures is not applicable. Molenaar, ‘Addressing Regulatory Gaps in High Seas Fisheries’, at p 565.

113 On advantages and disadvantages of legally binding instruments, see D.A. Balton and D.C. Zbicz, ‘Managing Deep-Sea Fisheries: Some Threshold Questions’, 19 *International Journal of Marine and Coastal Law* (2004), at pp. 252-255. See also Oral, ‘Protection of Vulnerable Marine Ecosystems in Areas Beyond National Jurisdiction: Can International Law Meet the Challenge?’ at pp. 107-108 (stating, in the context of the conservation and management of high seas and deep ocean VMEs, ‘[t]here is no reason to attempt to create a new set of rules for the high seas as the existing ones do provide the necessary foundation’).

114 For discussions on possible future options, see further Chapter 6 below.

115 Other initiatives at the global level are not excluded. For example, initiatives launched under the Convention on Migratory Species (CMS) to negotiate a global instrument dealing with three pelagic shark species might be extended to cover fisheries for deep-water sharks that straddle the high seas and areas under national jurisdiction. In fact, a background paper prepared for a meeting to discuss the conservation of migratory sharks under the CMS referred to the possibility of pursuing this option. See Background Paper on the Conservation Status of Migratory

Assembly has been recommending actions to be taken by states and RFMO/As, while the FAO has taken on the technical work including the development of common criteria and standards for the identification of VMEs and SAIs under the International Guidelines on deep-sea fisheries. Instead of imposing a blanket moratorium on bottom trawling on the high seas, the UNGA called for addressing bottom fisheries on the high seas at the regional level in a precautionary manner in accordance with the guidance by the UNGA. Two points are of interest. First, the UNGA designated RFMO/As as a principal vehicle to carry out the management of deep-sea fisheries; individual flag states have a complementary role.¹¹⁶ Neither UNGA Resolutions nor the FAO Guidelines explicitly articulate the potential role of coastal states with regard to deep-sea fisheries on the high seas above the continental shelf. While, in theory, the jurisdiction of coastal states is safeguarded by the non-prejudice clause in the Guidelines, the primary role of RFMO/As complemented by flag states virtually means that the exercise of coastal state jurisdiction remains a last resort that may entail a risk of being accused of violating the law of the sea. Second, measures for deep-sea fisheries need to be more precautionary than those for pelagic fisheries under the UNGA recommendations and the FAO Guidelines. The UNGA Resolution, developed by the Guidelines, emphasizes the requirement of prior EIA. The prohibition of bottom fisheries where SAIs are likely, recommended in UNGA Resolution 61/105, is precautionary in nature in its own right. Furthermore, the FAO Guidelines fill a potential gap of scientific uncertainty by the further application of the precautionary approach. The burden of proof is reversed: in cases of substantial uncertainty, deep-sea fisheries need to proceed in a cautious manner. In addition, the precautionary reference points are set in a more conservative manner as far as target reference points are concerned.

Practice regarding deep-sea fisheries at the global level has not led to a modification of the LOSC regime governing fisheries on the high seas, and this will continue to be the case, at least in the near future. However, some developments should be noted as potentially interesting trends. Among others, no distinction is made by international organizations between fisheries for straddling stocks and those for DHSFS in addressing deep-sea fisheries. In fact, as will be seen in the next chapter, stock distribution is often controversial and inconclusive, and it is difficult to deter-

Sharks and Possible Options for International Cooperation under the Convention on Migratory Species, at pp. 9 and 49. Interestingly, the paper also referred to the possibility to discuss the problem of 'high seas migratory species that probably never or only rarely cross administrative boundaries between the high seas and EEZs', despite the fact that the CMS is exclusively concerned with species that cross a boundary between the maritime area of two or more states or between the maritime area under national jurisdiction and the high seas. *Ibid.*, at pp. 4 and 49.

¹¹⁶ The relevant recommendations in UNGA Resolution 61/105 also testify to the claim that the international community is not eager to accept an argument that corals are mineral resources and the International Seabed Authority has (concurrent) competence to regulate bottom trawling on the high seas above the Area. For discussions on this issue, see Section 2.2.1 above.

mine which stock is straddling and which stock is not. Therefore, to a certain extent, a possible dichotomy between the regime for DHSFS and regimes for transboundary stocks on the high seas is blurred by recent practice concerning deep-sea fisheries. This does not, however, imply that the same thing is usually true of fisheries other than deep-sea fisheries.

Third, recent calls for MPAs in the high seas as a new management tool shows that there are proponents of taking a cross-sectoral, all-encompassing approach to various activities on the high seas, including high seas fisheries, by coordinating the regulation of activities in different sectors. This may impact the regulatory framework for high seas fisheries because the designation of high seas MPAs by a global international organization may be initiated by motives distinct from fisheries management.¹¹⁷ In this regard, legal and policy issues arise. In legal terms, this concerns a balance between freedom of high seas fishing and the protection of the marine environment. The LOSC itself does not give a clear answer since, generally speaking, the LOSC provides each category of activity with a set of rules governing it even though more than one part may govern certain activities. In the policy domain, one of the main issues is the leading or coordinating role of a particular institution or institutions which could play with regard to MPAs. At the global level, this legal/policy uncertainty has led to the discussions on the need for an implementing agreement to the LOSC and its possible content. Considering the uncertainty associated with the issue of multi-purpose MPAs, it is concluded that the LOSC/FSA regulatory framework attributing the primary role in fisheries management to RFMO/As will continue in the foreseeable future, but initiatives such as the UNGA biodiversity working group might lead to reform by assigning a supervisory role to a particular global organization concerning the establishment of high seas MPAs.

¹¹⁷ The danger of potential conflicts and the need for coordination are more imminent at the regional level. The next chapter describes the relationship between RFMOs and other international organizations with regard to area-based management tools.

Existing Regional Fisheries Management Organizations

Chapter 3 observed that states have been addressing the contemporary challenges with regard to high seas fisheries in three ways. First, states have been shaping a legal regime to manage fisheries for DHSFS at the global level building upon the framework of the LOSC and principles of the FSA. Second, the UNGA has been playing a leading role in addressing deep-sea fisheries on the high seas, assigning a central role to RFMO/As in the implementation of its recommendations on the regulation of high seas deep-sea fisheries. Third, area-based management tools have been employed by RFMOs and have proven to be a useful tool in fisheries management; the coordination and cooperation in establishing and operating integrated MPAs might have impacts on fisheries management.

This chapter investigates how RFMOs with the competence to manage straddling fish stocks and DHSFS have addressed fisheries for discrete high seas stocks and deep-sea fisheries on the high seas and how they have used area-based management tools and coordinated their actions with other regional organizations. The scope of the competence of RFMOs is determined by the provisions of their constitutive instruments and their practice. The constitutive instruments of RFMOs dealing with highly migratory species, anadromous stocks and catadromous species define their competence by listing the species concerned. By definition, DHSFS do not fall within the competence of these RFMOs.¹ The constitutive instruments of RFMOs dealing with straddling stocks define the scope of their competence by delimiting areas geographically. Therefore, as a point of departure, it may be assumed that RFMO/As dealing with straddling stocks are also competent with respect to discrete high seas stocks unless certain species are excluded from the scope of these RFMO/As. In fact, the Review Conference on the FSA found that RFMO/As competent to regulate straddling fish stocks have the necessary competence to conserve and manage DHSFS.² On the basis of this assumption, each section of this chapter first examines whether five RFMOs with the competence to manage straddling fish stocks also have competence with regard to discrete high seas stocks.³

After confirming the competence to deal with fisheries for DHSFS, each section deals with the following issues: the similarity and difference in the approaches of the RFMOs concerned in managing fisheries for DHSFS and straddling fish stocks, including the application of the precautionary and ecosystem approaches; conservation measures for deep-sea fisheries, including bottom trawling, from the perspective of implementing the UNGA fisheries Resolutions as well as the influence on the

1 For the potential competence of the Western and Central Pacific Fisheries Commission, see Section 5.4.4 below.

2 See Outcome of the Review Conference, para. 16.

3 The regime dealing with Pollock stocks in the Central Bering Sea is also competent to deal with straddling stocks. Section 5.3 below discusses this regime in the context of the ongoing negotiations on the North Pacific.

actions at the global fora; the use of area-based management tools and cooperation and coordination with other organizations aimed at the protection of the marine environment in the same region.

The sections of this Chapter are organized following the chronological order of the date of the latest amendment to constitutive instruments and, if no amendment has been made to a constitutive instrument, the original date of the adoption of the constitutive instrument. By organizing its content in this way, the chapter intends to reflect trends in discussions and to illustrate interrelations in the negotiations on establishing or updating RFMOs.

4.1 COMMISSION FOR THE CONSERVATION OF ANTARCTIC MARINE LIVING RESOURCES (CCAMLR)

The exploitation of krill and fin-fish stocks in the Southern Ocean began in the mid-1960s. Later in the 1970s, it was revealed that large-scale exploitation of krill could have severe repercussions on whales, seals and birds through predator-prey relationships. For this and other reasons, at the Special Consultative Meetings in 1978 and 1980, Antarctic Treaty Consultative Parties negotiated a draft treaty dealing with the conservation of Antarctic marine living resources. The Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR Convention) was adopted in 1980 and entered into force in 1982.⁴

The Convention applies to marine living resources of the area south of 60° south latitude and those of the area between that latitude and the Antarctic Convergence which form part of the Antarctic marine ecosystem.⁵ Thus, the Convention covers the Antarctic marine ecosystem as a whole.⁶

4 See, e.g., D.G.M. Miller *et al.*, 'Managing Antarctic Marine Living Resources: The CCAMLR Approach', 19 *International Journal of Marine and Coastal Law* (2004), at pp. 317-363; R. Herr, 'The International Regulation of Patagonian Toothfish: CCAMLR and High Sea Fisheries Management', in O.S. Stokke (ed.), *Governing High Seas Fisheries: The Interplay of Global and Regional Regimes* (2001), at pp. 303-328; E.J. Molenaar, 'CCAMLR and Southern Ocean Fisheries', 16 *International Journal of Marine and Coastal Law* (2001), at pp. 465-499.

5 CCAMLR Convention, Article I(1).

6 Under the Antarctic Treaty System, claims to sovereignty or title thereto over Antarctica are frozen: nothing in the Treaty is interpreted as a renunciation of asserted rights or claims. Antarctic Treaty, Washington, 1 December 1959, entered into force 23 June 1961, Article IV. See also CCAMLR Convention, Articles III-IV (prescribing that both contracting and non-contracting parties to the Antarctic Treaty are also bound by Articles IV of the Treaty in their relations with other contracting parties to the CCAMLR Convention). In addition, claimant states have restrained from exercising enforcement jurisdiction over sections of the continent and islands or waters adjacent thereto in relation to third-state nationals. See Molenaar, 'CCAMLR and Southern Ocean Fisheries', at pp. 477-478; F. Orrego Vicuña, 'The Law of the Sea and the Antarctic Treaty System: New Approaches to Offshore Jurisdiction', in C.C. Joyner and S.K. Chopra (eds.), *The Antarctic Legal Regime* (1988), at p. 108. For the purposes of this study, waters adjacent to the continent and the islands south of 60° south latitude are treated

While only a few islands exist below 60° south, a number of islands exist in the sub-Antarctic area between that latitude and the Antarctic Convergence (referred to as ‘sub-Antarctic islands’). At the Conference which adopted the CCAMLR Convention in 1980, the Chairman made a statement concerning these islands. The Statement explicitly recognized the French claim to sovereignty over Kerguelen and Crozet Islands and its jurisdiction over waters adjacent to these islands. It would be open to France whether to agree on the application of any specific conservation measure to waters adjacent to these islands or to indicate the exclusion of its application thereto. France would be bound by any conservation measures of the Commission only with its participation as far as these islands are concerned.⁷ Moreover, the same ‘understandings [...] also apply to waters adjacent to the islands within the area to which [the] Convention applies over which the existence of State sovereignty is recognized by all Contracting Parties’.⁸ While France has often made reservations on this ground, other states have hardly made use of the Statement.⁹ If the coastal state does not make a reservation to a particular measure, however, it still has certain rights. The coastal state may regulate access (and determine allocations and obtain revenues) as it does in other territorial seas and EEZs, while such a regulation would have to be consistent with the measure concerned.¹⁰ Unless a reservation is made by coastal states to conservation measures, the analysis in this section does not distinguish among waters in the entire Convention Area.¹¹

Commercially attractive species fished in this area include krill and toothfish. The former is mainly fished for aquaculture feed and bait, while the latter is taken for human consumption.¹² Despite the intention of the drafters of the Convention, who aimed to conserve Antarctic marine living resources as a whole by extending its area of application to the outer limit of the Antarctic Convergence, species such as Patagonian toothfish occur not only within the Convention area but also in adjacent areas under national jurisdiction outside the Convention Area. It is not yet clear whether

like high seas. See Antarctic Treaty, Article VI. See also Molenaar, ‘CCAMLR and Southern Ocean Fisheries’, at p. 481.

7 See paras 2 and 3 of the Statement.

8 See *ibid.*, para. 5.

9 Molenaar, ‘CCAMLR and Southern Ocean Fisheries’, at p. 480. Note, while Australia, the UK and Norway have not done so, South Africa has done so on several occasions. However, it also incorporated measures into its legislation. See *ibid.*, at p. 480 note 82 and its accompanying text.

10 See *ibid.*, at pp. 480-481.

11 As regards islands whose sovereignty is not recognized by all contracting parties, see a description concerning South Georgia and the South Sandwich Islands over which the governments of the UK and Argentina agreed in their joint statement that measures adopted by CCAMLR were valuable but there was a need to strengthen the existing arrangements, and agreed to renew their efforts in the context of CCAMLR. E. Meltzer, ‘Global Overview of Straddling and Highly Migratory Fish Stocks: The Nonsustainable Nature of High Seas Fisheries’, 25 *Ocean Development and International Law* (1994), at p. 278.

12 Molenaar, ‘CCAMLR and Southern Ocean Fisheries’, at pp. 465-466.

that species is a single straddling stock or composed of several distinct stocks.¹³ There are very few stocks that straddle both EEZs of the sub-Antarctic islands and high seas waters within the Convention Area.¹⁴ This study analyzes conservation measures for all marine living resources within the Antarctic Convergence unless a certain species to which the measure is applied is determined as a straddling stock.¹⁵

4.1.1 The Convention

The objective of the Convention is the conservation of Antarctic marine living resources, which, for the purposes of the Convention, includes rational use.¹⁶ These living resources are defined as ‘the populations of fin fish, molluscs, crustaceans and all other species of living organisms, including birds, found south of the Antarctic Convergence’.¹⁷ Thus, living resources covered by the Convention include discrete high seas stocks, straddling stocks, and highly migratory species.¹⁸

The principles of conservation applicable to activities in the area concern not only harvested populations but also dependent and related populations and the Antarctic marine ecosystem.¹⁹ The latter means the complex of relationships of Antarctic marine living resources with each other and with their physical environment, thus including both associated or dependent species and habitats.²⁰ Provisions concerning the maintenance of the ecological relationships and the restoration of depleted populations to the designated levels make it possible for the Commission to take measures for by-catch reduction both to ensure sustainable fisheries for the target species and to seek the conservation of non-harvested species as such.

The Commission formulates, adopts and revises conservation measures on the basis of the best scientific evidence available.²¹ Even though the Convention does not explicitly employ the term ‘precautionary approach’, it is clear that the Convention bases itself on the concept of precaution. For example, any harvesting and associated activities in the Convention Area shall be conducted in accordance with the principles of conservation, including the prevention of changes which are potentially irreversible

13 Ibid., at pp. 471-472; Herr, ‘The International Regulation of Patagonian Toothfish: CCAMLR and High Sea Fisheries Management’, at notes 58-61.

14 M.L. Mooney-Seus and A.A. Rosenberg, Regional Fisheries Management Organizations (RFMOs): Progress in Adopting Precautionary Approach and Ecosystem-Based Management, 10 February 2007, at p. 6.

15 Note that where a certain species is determined as a single straddling stock, the Commission has an obligation to cooperate with these coastal states. See CCAMLR Convention, Article XI; LOSC, Articles 63(2) and 116-118. All such coastal states are members of the Commission.

16 CCAMLR Convention, Article II(1) and (2).

17 Ibid., Article I(2).

18 While marine mammals are included in the scope of this article, contracting parties may not utilize the Convention to contract out of the obligations arising from the ICRW or the Convention for the Conservation of Antarctic Seals. Ibid., Article VI.

19 Ibid., Article II(3).

20 Ibid., Article I(3).

21 Ibid., Article IX(1)(f).

in the long-term (i.e., over two or three decades) and the minimization of the risk thereof, taking into account the state of available knowledge concerning the direct and indirect impact of harvesting.²² This approach, together with the protection of the ecosystem, has been fully implemented in the practice of the Commission as stated below.

CCAMLR is to cooperate with other international organizations. The Commission shall take full account of any relevant measures or regulations of ATCMs. The same applies to measures of other fisheries commissions responsible for species which may enter the CCAMLR Convention Area, in order to ensure consistency between the rights and obligations under measures and regulations of these organizations and CCAMLR conservation measures.²³ The IWC may be considered to fall under the category of fisheries commissions mentioned in this provision. Moreover, it has been argued that there is a corresponding need for other RFMOs to respect the efforts of the Commission.²⁴

4.1.2 Implementation of the Precautionary Approach

CCAMLR has been praised by many commentators with regard to its application of the precautionary approach and ecosystem approaches.²⁵ In particular, the measures applying the precautionary approach include: (1) the control of new and exploratory fisheries; (2) setting precautionary TACs.²⁶

First, an innovative and precautionary characteristic of management by the Commission is that a new fishery is only possible when prior notification is made and certain conditions are complied with.²⁷ This applies to a fishery for a new target species, in a new fishing ground, or with new fishing gear.²⁸ Following a year of fishing as a new fishery, the fishery becomes an exploratory fishery.²⁹ This classifica-

22 Ibid., Article II(3)(c).

23 Ibid., Article IX(5). See also CCAMLR Convention, Article XXIII.

24 Molenaar, 'CCAMLR and Southern Ocean Fisheries', at p. 471. See also Section 5.2.3.2 below.

25 See, e.g., Mooney-Seus and Rosenberg, *Regional Fisheries Management Organizations (RFMOs): Progress in Adopting Precautionary Approach and Ecosystem-Based Management*, at p. 3 *et seq.*

26 In addition, CCAMLR has adopted a number of measures aimed at protecting marine ecosystems, *inter alia*, by regulating by-catch, including seabirds, which are referred to as a marine living resource in Article I(2) of the Convention. For these conservation measures, see CCAMLR, *Schedule of Conservation Measures in Force*, CM 25-02, 25-03, 33-02, 33-03, 42-01, 42-02, 43-02 to 43-04, and 52-01.

27 See *ibid.*, CM 21-01.

28 CM 21-01. See also Miller *et al.*, 'Managing Antarctic Marine Living Resources: The CCAMLR Approach', at p. 324.

29 See CCAMLR, *Conservation Measures*, CM 21-02. See also Mooney-Seus and Rosenberg, *Regional Fisheries Management Organizations (RFMOs): Progress in Adopting Precautionary Approach and Ecosystem-Based Management*, at p. 9 ('a new fishery lasts for one year unless no catch is taken at which time it retains its classification').

tion is intended to deal with a fishery which still lacks critical management information.³⁰

An exploratory fishery may become a regulated fishery when data for management purposes are sufficient to allow a regulated fishery.³¹ The Unified Regulatory Framework (URF) complements existing regulatory requirements for relevant conservation measures by, *inter alia*, mandating prior notification and the establishment of Research and Fishery Operational and Data Collection Plans and requiring the preparation of a reference document to be maintained by the CCAMLR Secretariat for each fishery in the Convention Area.³² This latter document, also known as the Fishery Plan, comprehensively summarizes information on each fishery, allowing CCAMLR to formulate conservation measures using all available information from the fishery.³³

Second, the Commission adopts 'precautionary' catch limits for determining conservation measures.³⁴ This implies that reference points are set at levels lower than those capable of achieving the MSY, ensuring that uncertainty associated with the lack of knowledge is taken into consideration and risks for irreversible changes are abated.

4.1.3 Protection of Vulnerable Marine Ecosystems from Bottom Fisheries

In the CCAMLR Convention Area, fishing vessels have been widely deploying bottom fishing gear: virtually all Patagonian toothfish fisheries on the high seas have been conducted by bottom longlines, while bottom trawl fishing on the high seas of the Southern Ocean has been rather limited.³⁵ The Commission has adopted various by-catch limits³⁶ and a number of technical measures dealing with fishing gear, including the marking of vessels and gear,³⁷ mesh size regulation,³⁸ gear weighting, construction and operation,³⁹ and gear testing.⁴⁰

30 CCAMLR, Conservation Measures, CM 21-02, paragraph (1)(ii). See also Miller *et al.*, 'Managing Antarctic Marine Living Resources: The CCAMLR Approach', at p. 325.

31 *Ibid.*, at p. 326.

32 See paragraph 10.4 of the Report of the Sixteenth Meeting of the Commission.

33 Miller *et al.*, 'Managing Antarctic Marine Living Resources: The CCAMLR Approach', at p. 327.

34 CCAMLR, Conservation Measures, CM 41-02 to 41-11, 42-01 to 42-02, 51-01 to 51-03, 52-01 and 61-01. The title of the conservation measures is not uniform. Sometimes mere 'catch limits' are used, while on other occasions 'precautionary catch limits' are employed. In the former case, sometimes the word 'precautionary' is used in the text of the conservation measures. Therefore, the title of a given measure does not indicate whether the precautionary approach is applied.

35 See M. Gianni, *High Seas Bottom Trawl Fisheries and their Impacts on the Biodiversity of Vulnerable Deep-Sea Ecosystems: Options for International Action* (2004), at p. 43.

36 CCAMLR, Conservation Measures, CM 33-01 to 33-03.

37 *Ibid.*, CM 10-01.

38 *Ibid.*, CM 22-01 to 22-03.

39 *Ibid.*, CM 25-02 and 25-03.

40 *Ibid.*, CM 24-02 and 24-03.

Recently, CCAMLR started addressing bottom fisheries from the perspective of the protection of VMEs from destructive fishing practices.⁴¹ Initially, it only took measures for gillnet and bottom trawl, but later decided to address all bottom fishing gear. Below, first, measures for bottom trawl and gillnet are analyzed and then the latest measure to address all bottom fisheries is described.

Bottom trawling is to a great extent restricted in the CCAMLR Convention Area. As early as 1999, a measure was introduced to limit fishing for several species by trawling in Statistical Division 58.4.2 to new and exploratory fisheries by Australian-flagged vessels, limiting these fisheries to the mid-water trawl method only.⁴² In addition, when the 25th meeting of CCAMLR was held, bottom trawl fishing had been prohibited in some areas adjacent to the Antarctic Continent,⁴³ and there were no plans to initiate new bottom trawl fishing.⁴⁴

At the same Commission meeting, the US proposed (1) to immediately freeze the footprint of bottom trawl fishing (i.e., no expansion into new areas or in existing areas), unless CCAMLR determines that such expansion would not cause significant adverse harm to VMEs; and (2) to end all bottom trawling by 2009, unless CCAMLR determines that its continuation would not cause significant adverse harm. The US also wished to establish rules based on sound science to enhance sustainable fishing practices and to phase out destructive fishing practices.⁴⁵ Most members supported freezing the footprint and limiting future expansion to operations which would not cause significant adverse harm to VMEs, while some members requested that the environmental impact of bottom trawl fishing be further considered by the Scientific Committee.⁴⁶ The Commission agreed that for any proposal to conduct bottom trawling on the high seas within the Convention Area to be approved, the Commission needs to be satisfied that the fishery would not have a significant impact on VMEs, including benthos and benthic communities, in the area of proposed fishing activities.⁴⁷ Such a proposal needs to be notified in accordance with the notification procedure for new fisheries, and any future notifications of new or exploratory fisheries using bottom trawl gear would need to provide information on the known

41 In 2005, the Commission requested the Scientific Committee to begin considering the issue of destructive fishing practices, including the consideration of the benthic impacts of bottom trawling, by identifying vulnerable deep-sea habitats, including deep-sea corals, which may require protection from fishing. Report of the Twenty-fourth Meeting of the Commission (Hobart, Australia, 24 October to 4 November 2005), at para. 10.23.

42 CCAMLR, Conservation Measures, CM 186/XVIII, para.1. Under this Measure, no direct fishery by trawl was allowed except for those in paragraph 1 (paragraph 6(i)). The Measure for these species was followed by CM 212/XIX, 237/XX and 43-04, which allow research programmes on shallow-water bottom trawling in accordance with research and data collection plans annexed to them requiring sampling to assess benthos.

43 Ibid., CM 41-05 and 41-11.

44 Report of the Twenty-fifth Meeting of the Commission (CCAMLR-XXV Report) (Hobart, Australia, 23 October to 3 November 2006), at para. 11.29.

45 Ibid., at paras 11.27-11.28.

46 Ibid., at paras 11.32-11.33.

47 Ibid., at para. 11.36.

and anticipated impacts of the gear on VMEs, including benthos and benthic communities.⁴⁸ Furthermore, the Commission requested the Scientific Committee to review the use of bottom trawling gear in high-seas areas of the Convention Area, including with respect to relevant criteria for determining what constitutes significant harm to benthos and benthic communities in the Convention Area.⁴⁹ A new conservation measure was adopted for fishing seasons 2006/07 and 2007/08.⁵⁰ The measure prescribes, among other things, that the use of bottom trawling in the high-seas areas of the Convention Area is restricted to areas for which conservation measures are in force for bottom trawling gear.⁵¹ The measure does not apply to the use of bottom trawling gear in scientific research in the Convention Area.⁵²

Second, deep-water gillnet fishing is now mostly prohibited. The Scientific Committee agreed that gillnets, including trammel nets, are non-selective fishing devices and, if not utilized correctly, could take mobile species indiscriminately, and that gillnets may have adverse impacts if dragged along the bottom and have the potential of ghost fishing.⁵³ Endorsing the advice from the Scientific Committee, the Commission agreed to introduce an interim ban on the use of deep-water gillnets for purposes other than scientific research in the Convention Area, unless and until the Commission would agree otherwise on the basis of advice from the Scientific Committee.⁵⁴ The use of gillnets for scientific research in waters shallower than 100 m shall be permitted subject to the requirements of Conservation Measure 24-01, while its use for scientific research in waters deeper than 100 m shall be notified in advance to the Scientific Committee and shall be approved by the Commission before such research can commence.⁵⁵

In 2007, the Commission addressed the implementation of UNGA Resolution 61/105 by considering the impacts of all bottom fisheries (not limited to bottom trawling and gillnetting) on VMEs. The Commission endorsed the view of the Scientific Committee that the existing practices can be used and tasked it with developing pragmatic and flexible guidelines for identifying VMEs and defining actions taken by vessels which may encounter evidence of VMEs during the course of fishing; the guidelines may take account, where appropriate, of relevant interna-

48 *Ibid.*, at para. 12.18. See also measures adopted in 2006. CCAMLR, Conservation Measures, CM 21-01 and 21-02.

49 CCAMLR-XXV Report (2006), at para. 11.37. CCAMLR, Conservation Measures, CM 22-05, para. 2.

50 The measure was reviewed by the Commission in 2007 based on the best scientific evidence available, as stipulated in CM 22-05. CCAMLR, Conservation Measures, CM 22-05, para. 4. The Commission decided that the Measure would remain in force for 2007/08. Report of the Twenty-sixth Meeting of the Commission (CCAMLR-XXVI Report) (Hobart, Australia, 22 October to 2 November 2007), at para. 13.3.

51 CCAMLR, Conservation Measures, CM 22-05, para. 1.

52 *Ibid.*, CM 22-05, para. 3.

53 CCAMLR-XXV Report (2006), at para. 11.25.

54 CCAMLR, Conservation Measures, CM 22-04; CCAMLR-XXV Report (2006), at paras 11.25-11.26.

55 CCAMLR-XXV Report (2006), at para. 12.26.

tional technical guidelines.⁵⁶ The Commission further noted that some assemblages may be readily classified as vulnerable when they are characterized by slow growing, habitat-forming, sessile species, including cold-water coral communities, sponge communities, hydrothermal vents and other communities associated with seamounts.⁵⁷

Conservation Measure 22-06 seeks to implement UNGA Resolution 61/105 by addressing each of the recommendations of that Resolution. The Measure applies to areas in the Convention Area south of 60 degrees south as well as to the rest of the Convention Area with the exception of sub-areas and divisions where an established fishery was in place in 2006/07 with a catch limit greater than zero.⁵⁸ The Measure addresses the use of any gear that interacts with the bottom.⁵⁹ The Measure freezes the footprint of bottom fishing and limits it to those areas for which bottom fishing activities were approved by the Commission in the 2006/07 fishing season. On the other hand, all bottom fishing activities commenced on 1 December 2008 or thereafter shall be subject to assessment by the Scientific Committee.⁶⁰

The Scientific Committee assesses, based on the best available scientific information, whether individual bottom fishing activities would contribute to having SAIs on VMEs, taking account of the history of bottom fishing in the areas proposed.⁶¹ Each contracting party proposing to participate in bottom fishing shall submit information and a preliminary assessment, where possible, of the known and anticipated impacts of its bottom fishing activities on VMEs, including benthos and benthic communities, and the submissions shall include the proposed mitigation measures.⁶² In assessing the fishing proposal, the Scientific Committee may use additional information available to it, including information from other fisheries in the region or similar fisheries elsewhere.⁶³ The Commission shall, taking account of advice and recommendations provided by the Scientific Committee concerning bottom fishing activities, adopt conservation measures to prevent SAIs on VMEs.⁶⁴ The measure would, *inter alia*, allow, prohibit or restrict bottom fishing activities within particular areas and/or with certain gear types and/or require specific mitigation measures.⁶⁵ Although the phrase ‘taking account of’ might cause fears that the Commission disregards advice and recommendations by the Scientific Committee, such fear does not seem justified as the Commission has generally followed the scientific advice of the Scientific Committee.⁶⁶

56 CCAMLR-XXVI Report (2007), at paras 5.14-5.18.

57 *Ibid.*, at para. 5.19. See also CCAMLR, Conservation Measures, CM 22-06, para. 2.

58 *Ibid.*, para. 1.

59 *Ibid.*, para. 3.

60 *Ibid.*, paras. 5 and 7.

61 *Ibid.*, para. 7 *chapeau*.

62 *Ibid.*, para. 7(i).

63 *Ibid.*, para. 7(iii).

64 *Ibid.*, para. 7(iv).

65 *Ibid.*

66 See Mooney-Seus and Rosenberg, Regional Fisheries Management Organizations (RFMOs): Progress in Adopting Precautionary Approach and Ecosystem-Based Management, at p. 21.

When evidence of VMEs is encountered, contracting parties shall require their vessels to cease bottom fishing activities, in the absence of site-specific or other conservation measures to prevent SAIs on VMEs.⁶⁷ The Measure does not in itself specify the minimum distance the vessel concerned needs to keep from the encountered site. In fact, the provision is provisional: the Scientific Committee shall recommend practices, including ceasing fishing operations if needed, when evidence of a VME is encountered in the course of bottom fishing activities, and, taking account of this advice, the Commission shall adopt initial conservation measures in 2008 to address the encountered evidence of VMEs in the course of fishing operations.⁶⁸

The Measure goes beyond the requirement of UNGA Resolution 61/105 in stipulating that each vessel carries at least one CCMLR-designated scientific observer to collect data.⁶⁹ The data collection plans for bottom fisheries will be developed by the Scientific Committee and included in conservation measures.⁷⁰

One important feature of this Measure is the treatment of bottom fishing for scientific research purposes. In the case of small-scale research taking less than 50 tonnes of finfish and meeting the requirement of Conservation Measure 24-01 Annex 24-01/B, the scientific bottom fishing research activities shall be notified in accordance with paragraph 2 of Conservation Measure 24-01, proceed according to that Measure, and be undertaken with due regard to potential impacts on VMEs.⁷¹ Conservation Measure 24-01 stipulates that any member planning such research activities shall notify the Secretariat and, as opposed to paragraph 3 of that Measure, does not need to provide the opportunity for other members to review and comment on its research plan.⁷² On the other hand, those research activities going beyond the above-mentioned criteria in Conservation Measure 24-01 shall be treated in accordance with paragraph 7 of Conservation Measure 22-06, rather than procedures in Conservation Measure 24-01.⁷³ Information regarding the location and the type of any VME encountered in the course of scientific bottom fishing research activities shall be reported to the Secretariat.⁷⁴ The relevant paragraph does not explicitly require research vessels to cease scientific bottom fishing activities where they encounter evidence of VMEs. However, lacking any exception clause like the one on the assessment procedures, it is reasonable to assume that these activities also need to cease in these circumstances.

Conservation Measure 22-06 stipulates that data shall be submitted pursuant to data collection plans for bottom fisheries to be developed by the Scientific Committee.⁷⁵ It should be noted that CCAMLR members have conducted extensive scientific

67 CM 22-06, para. 8.

68 *Ibid.*, para. 9.

69 *Ibid.*, para. 10(ii).

70 See *ibid.*, para. 10(iii).

71 *Ibid.*, para. 13 and CM 24-01.

72 *Ibid.*, paras 2-3.

73 CM 22-6, para. 13.

74 *Ibid.*

75 *Ibid.*, para. 10(iii).

research on marine ecosystems. The accumulated outcome of that research has been reflected in the ongoing bioregionalization project.⁷⁶

4.1.4 Area-Based Management Tools

CCAMLR has adopted a number of area-based management measures. The prohibition of directed fishing for certain species is imposed in a number of measures dealing with a variety of areas.⁷⁷ In particular, Sub-areas 48.1 and 48.2 are closed for all finfish fisheries.⁷⁸ Basically, the moratorium will be continued until the Commission has decided otherwise on the basis of the advice of the Scientific Committee.⁷⁹ The Scientific Committee will act in a precautionary manner in its evaluation of the stock assessment, and the Commission takes decisions by consensus.⁸⁰ Therefore, once a moratorium is set, it seems difficult to lift it. Area closures are supplemented by seasonal closures. CCAMLR has adopted a variety of measures to limit fishing in specific seasons.⁸¹ Such measures are intended for the protection of spawning stocks.

Given the frequent use of area-based management tools in CCAMLR, there is a potential for an overlap of competence between CCAMLR and other components of the Antarctic Treaty System. In particular, Antarctic Specially Protected Areas (ASPAs) as well as Antarctic Specially Managed Areas (ASMAs) have been established under Annex V of the 1991 Environmental Protocol (Madrid Protocol) to the Antarctic Treaty, replacing the earlier categories of specially protected areas.⁸² Annex V stipulates that prior approval by CCAMLR is required for the establishment of ASPAs and ASMAs in the marine area of the Antarctic Treaty area.⁸³ Thus, formally speaking, there is no potential discrepancy or divergence in the designation and management of protected areas under the CCAMLR Convention and the Antarctic Treaty.

76 For the latest developments, see CCAMLR-XXVI Report (2007), at paras 7.3-7.19.

77 See CCAMLR, Conservation Measures, CM 32-04 to 32-17.

78 Ibid., CM 32-02 and 32-03.

79 Conservation measures often use the following wording: [t]his prohibition shall apply until at least such time that a survey [...] is carried out, its results reported to and analysed by the Working Group on Fish Stock Assessment and a decision that the fishery be reopened is made by the Commission based on the advice of the Scientific Committee'.

80 CCAMLR Convention, Article XII(1).

81 CCAMLR, Conservation Measures, CM 41-02 to 41-11, 42-01 and 42-02, and 43-02 and 43-03, 51-01 to 51-03, 52-01 and 61-01.

82 As of July 2007, 67 ASPAs and 6 ASMAs had been established. Information available at the Secretariat of the Antarctic Treaty, 'Status of Antarctic Specially Protected Area and Antarctic Specially Managed Area', <http://www.ats.aq/documents/cep/register_updated_2007_e.pdf> in <<http://www.ats.aq/>> (last visited 13 June 2008).

83 '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.' Protocol on Environmental Protection to the Antarctic Treaty, Annex V, Article 6(2).

Nevertheless, it is possible that the criteria and standards employed to designate ASPAs or ASMAs in areas other than the marine area might affect the management of fisheries by CCAMLR. This also applies to proposals of ASPAs and ASMAs for the marine area. In addition, given the acknowledgement of ‘the special obligations and responsibilities of the Antarctic Treaty Consultative Parties for the protection and preservation of the environment of the Antarctic Treaty area’,⁸⁴ it would be appropriate to conclude that cooperation has to be established with other bodies in the Antarctic Treaty System, in particular the Committee for Environmental Protection.⁸⁵ Thus, once a particular area is designated as an ASPA or an ASMA under Annex V of the Madrid Protocol, CCAMLR has to cooperate in this regard.

4.2 GENERAL FISHERIES COMMISSION FOR THE MEDITERRANEAN (GFCM)

The General Fisheries Council for the Mediterranean was established within the framework of the FAO under the Agreement for the Establishment of the General Fisheries Council for the Mediterranean. The Agreement was amended several times. The major issues in the most recent amendment in 1997 included allowing regional economic integration organizations (REIOs) to participate, establishing an autonomous budget, and incorporating certain aspects of modern fisheries management. The organization was renamed as ‘General Fisheries Commission for the Mediterranean’.⁸⁶

The GFCM carries out its functions and responsibilities in the Mediterranean and the Black Sea and connecting waters.⁸⁷ No part of the Mediterranean is beyond 200 miles from the baselines of the coastal states. However, as many coastal states in the region have not declared the EEZ to the full extent, there remains a substantial area of high seas. The high seas areas of the Mediterranean are likely to remain for the foreseeable future.

The GFCM Agreement is applicable to semi-enclosed seas, and the legal regime applied to these areas is not necessarily the same as that of other areas of the high seas. For example, the provisions of Part IX of the LOSC for enclosed and semi-enclosed seas are applicable to the Mediterranean.⁸⁸ But provisions of the LOSC, including the provisions of Part VII of the LOSC, are also applicable irrespective of

84 CCAMLR Convention, Article V(1).

85 Molenaar, ‘CCAMLR and Southern Ocean Fisheries’, at p. 473.

86 See GFCM Agreement, Article I(1). Strictly speaking, the original Agreement in its title uses ‘Council’ and the title of the one adopted in 1997 uses ‘Commission’. However, for the purpose of this study, they are treated as a single instrument amended later.

87 Ibid., preamble and Article IV.

88 For the purposes of the LOSC, ‘enclosed or semi-enclosed sea’ means a gulf, basin or sea ‘surrounded by two or more States and connected to another sea or the ocean by a narrow outlet’ or ‘consisting entirely or primarily of the territorial seas and exclusive economic zones of two or more coastal States’. LOSC, Article 122. The Mediterranean satisfies, at least, the first requirement, while the latter requirement might be satisfied in the future if coastal states decide to declare the 200-mile EEZ. See also Nandan and Rosenne (eds.), *Virginia Commentary*, vol. III, at p. 352; *I.C.J. Reports 1985*, at p. 40, para. 47.

the applicability of Part IX.⁸⁹ Besides, Article 123 does not grant additional rights or jurisdiction to coastal states.⁹⁰

4.2.1 The Agreement

The purpose of the GFCM is, among others, to promote the development, conservation, rational management and best utilization of ‘living marine resources’.⁹¹ The GFCM Agreement does not expressly exclude any species from such resources. Discrete high seas stocks, whether fish or other organisms, are therefore covered by the Agreement.

The 1997 Agreement has introduced some of the modern approaches to fisheries management as evidenced by reference in its preamble to the LOSC, Agenda 21 and the FAO Code of Conduct for Responsible Fisheries. In particular, Article III(2) stipulates that the Commission shall take into account the best scientific evidence available and to apply the precautionary approach.⁹²

The GFCM Agreement does not distinguish between target species and non-target species or related ecosystems in providing for the functions of the Commission. Thus, it could be argued that the Agreement implicitly allows the GFCM to adopt measures for the conservation of non-target species and marine ecosystems, whether or not for the purpose of conservation of target species.

4.2.2 Practice

In the Agreement area of the GFCM, bottom-dwelling (demersal) fish currently account for around 40 % of catches.⁹³ The GFCM started the management of deep-sea

89 See Nandan and Rosenne (eds.), *Virginia Commentary*, vol. III, at p. 365. But at least one author casts doubt on the proposition that the LOSC is applicable to the conservation of living resources of the high seas in the Mediterranean. See M.C. Maffei, ‘The Protection of Endangered Species of Animals in the Mediterranean Sea’, in E.L. Miles and T. Treves (eds.), *The Law of the Sea: New Worlds, New Discoveries* (1993), at p. 256 note 5.

90 Nandan and Rosenne (eds.), *Virginia Commentary*, vol. III, at p. 365; Mioviski, ‘Central Bering Sea Overfishing’, at pp. 558-560; A.G. Oude Elferink, ‘Fisheries in the Sea of Okhotsk High Seas Enclave: The Russian Federation’s Attempts at Coastal State Control’, 10 *International Journal of Marine and Coastal Law* (1995), at p. 15. In fact, the text of Article 123 employs hortatory language such as ‘should cooperate’ and ‘shall endeavour’, and other interested states or international organizations are invited ‘as appropriate’, rather than obliged, to cooperate. Nandan and Rosenne (eds.), *Virginia Commentary*, vol. III, at p. 366.

91 GFCM Agreement, Article III(1).

92 ‘In formulating and recommending measures [...], the Commission shall apply the precautionary approach to conservation and management decisions, and take into account also the best scientific evidence available and the need to promote the development and proper utilization of the marine living resources.’

93 FAO press release, ‘Mediterranean fisheries: as stocks decline, management improves’, 27 July 2005, available at <<http://www.fao.org/newsroom/en/news/2005/105722/index.html>> last visited 29 May 2008). For a comprehensive study on the ecosystem impacts of fisheries in the Mediterranean, including those caused by bottom-trawling, see S. Tudela, *Ecosystem Effects*

fisheries by introducing the regulation of certain fishing techniques in 2005. It was agreed to prohibit the use of towed dredges and trawlnet fisheries at depths of more than 1000 m.⁹⁴

In 2006, upon a proposal by the European Community, the GFCM adopted a recommendation entitled 'Establishment of Fisheries Restricted Areas in order to Protect the Deep Sea Sensitive Habitats' to prohibit fishing with towed dredges and bottom trawl nets in three sites: 'Lophelia reef off Capo Santa Maria di Leuca', 'The Nile delta area cold hydrocarbon seeps' and 'The Eratosthemes Seamount'.⁹⁵ The cold water coral reef off Capo Santa Maria di Leuca is located in international waters.⁹⁶ The site is located on the continental shelf of Italy in the Ionian Sea.

The main fishery operating around the cold water coral reef off Capo Santa Maria di Leuca is that by vessels from Gallipoli. Most of them fish by means of trawling, targeting, *inter alia*, deep-water shrimps, Norway lobster and Hake, while some vessels fish with bottom longlines targeting, *inter alia*, hake, bluntnose sixgill shark and silver scabbardfish.⁹⁷ Nothing in the Recommendation indicates that either sedentary species or bottom-dwelling (non-sedentary species) fish are excluded from its scope. In fact, dredges are used to target sedentary species such as clams, scallops and oysters.⁹⁸

of Fishing in the Mediterranean: An Analysis of the Major Threats of Fishing Gear and Practices to Biodiversity and Marine Habitats, GFCM Studies and Reviews No. 74.

94 GFCM, Recommendation GFCM/29/2005/1, para. 2.

95 GFCM, Recommendation GFCM/30/2006/3, para. 1.

96 A change to the existing coordinates for this site was suggested in a workshop meeting on MPAs in 2007. The proposed coordinates straddle the Italian territorial sea and the high seas. Report of the Transversal Workshop on Marine Protected Areas (MPAs) (GFCM & RAC/SPA), Salammbô, Tunisia, 24 and 25 May 2007, at para. 26.

The two other sites appear to be located in areas under national jurisdiction in the Eastern Mediterranean. However, an EU document calls all of the three areas 'high seas'. See European Community, 'Report on Actions taken by States and Regional fisheries management organizations and arrangements to give effect to paragraphs 66 to 69 of resolution 59/25 of the General Assembly on Sustainable Fisheries, including through the 1995 UN Fish Stocks Agreement, regarding the impacts of fishing on vulnerable marine ecosystems', 28 April 2006, at p. 3, available at <http://ec.europa.eu/fisheries/publications/factsheets/legal_texts/ec_report59-25paras66to69final.pdf> (last visited 17 April 2008).

97 S. Tudela, Proposal for a representative network of protected deep-sea sensitive habitats in the Mediterranean, at p. 13. When the Sub-Committee on Marine Environment and Ecosystems considered the protection of this site as part of the network of deep-sea sensitive habitats, it stated that '[t]here is a fishery from Gallipolli [*sic*] operating around the area targeting on deep-water shrimps' and recommended the banning of demersal fishery practices over the area. Report of the Sixth Session of the Sub-Committee on Marine Environment and Ecosystems (SCMEE), Rome, Italy, 27-30 September 2005, GFCM:SAC8/2005/Dma.1, at p. 3.

98 A. Freiwald *et al.*, *Cold-water Coral Reefs: Out of Sight - No Longer Out of Mind* (2004), at p. 39. The present study is without prejudice to the question whether deep-water shrimps targeted by this fishery belong to sedentary species. Note that, at least, some states do not consider that all crustaceans belong to sedentary species. See, e.g., Agreement concerning shrimp between Brazil and the United States, Brasília, 9 May 1972, preambular para. 2; J.M. Van Dyke, 'Modifying the 1982 Law of the Sea Convention: New Initiatives on Governance

The above-mentioned GFCM recommendation further stipulates that members shall call the attention of the appropriate authorities in order to protect these areas from the impact of any other activity jeopardizing the conservation of the features that characterize these particular habitats.⁹⁹

The EU transposed this Recommendation to Council Regulation 1967/2006 of 21 December 2006. Other parties, however, have reported no action taken at the national level on this Recommendation.¹⁰⁰

In addition, it was also agreed to increase the selectivity of demersal trawlnets by the immediate implementation of at least a 40 mm mesh size opening for the whole demersal trawl cod-end. Members are also required to explore and implement additional measures to this end.¹⁰¹ This measure aims at both allowing small, juvenile fish to escape so as to conserve breeding stocks and reducing accidental catches of non-target species.

In 2006, the GFCM decided to develop management programmes of the fishing effort both concerning demersal trawling fisheries and concerning pelagic trawling and purse seines in the pelagic fisheries. To this end, it instructed the Scientific Advisory Committee (SAC) to identify the reference year, operational units and parameters to measure the fishing effort both in terms of capacity, fishing activity and, if relevant, the number and dimension of fishing gears.¹⁰² In 2007, the GFCM agreed on a common set of benchmarks for measuring the capacity of fishing fleets in the region and assessing their impacts on ‘shared fish stocks’.¹⁰³

of High Seas Fisheries Resources: The Straddling Stocks Negotiations’, 10 *International Journal of Marine and Coastal Law* (1995). Article 1)(c) of the FSA appears to recognize the above-mentioned view by stipulating that fish includes ‘crustaceans except those belonging to sedentary species’. On the other hand, see A.-K. Westberg, ‘Governance and Management of Living Marine Resources and Fisheries on the Continental Slope and in the Deep-sea: A Legal Framework and Some Points of Departure’, in R. Shotton (ed.), *Deep Sea 2003: Conference on the Governance and Management of Deep-sea Fisheries: Part 1: Conference Reports. Queenstown, New Zealand, 1-5 December 2003* (2005), at p. 713 (‘typical demersal species such as skates, some flatfish and perhaps wolf-fish, and certain benthic sharks could [...] be included in the definition of sedentary species [under Article 77(4) of the LOSC]’).

99 GFCM, Recommendation GFCM/30/2006/3, para. 2.

100 See Report of the Thirty-First Session, Rome, 9-12 January 2007, GFCM Report 31, at pp. 73-75 (Appendix F, Annex C).

101 GFCM, Recommendation GFCM/29/2005/1, para. 1. In 2007, a new recommendation allowing a derogation from Article 1 of this Recommendation was adopted under Article V of the GFCM Agreement. According to the new recommendation, the members of the GFCM may continue authorizing, until 31 May 2010, the use of mesh size smaller than 40 mm to operate in certain local and seasonal demersal trawl fisheries exploiting non-shared demersal stocks only if such fishing activities are already formally authorized by the GFCM members. GFCM, Recommendation GFCM/31/2007/1, paras 1-2. At the same time, a non-binding resolution was adopted that members of the GFCM implement on a voluntary basis at least the 40 mm square mesh cod-end in bottom trawling. GFCM, Resolution GFCM/31/2007/3, para. 1.

102 GFCM, Recommendation GFCM/30/2006/1.

103 GFCM, Resolution GFCM/31/2007/1, (Implementation of the GFCM Task 1 Statistical Matrix). The term ‘shared stock’ is used in the Sub-Committee on Stocks Assessment of the GFCM Scientific Advisory Committee as ‘stock fished by two or more countries’. Although

4.3 SOUTH EAST ATLANTIC FISHERIES ORGANIZATION (SEAFO)

Fisheries on the high seas of the South-East Atlantic Ocean were managed by the International Commission on South East Atlantic Fisheries since 1971.¹⁰⁴ Following Namibia's independence in 1990, it became inoperative and, in practical terms, no management body dealt with high seas fisheries in this region except for tuna fisheries during the 1990s.¹⁰⁵

In 1995, Namibia approached South Africa to discuss the need for an RFMO in the South East Atlantic Ocean. Namibia was concerned that unsustainable fishing practices on the high seas could undermine management efforts within its EEZ for orange roughy fisheries. Having agreed upon the need to establish an RFMO, Namibia and South Africa invited other coastal states of the South East Atlantic. Several consultations among the coastal states in 1997 resulted in adopting a coastal states' draft for the SEAFO Convention, largely based on the FSA. Following this, negotiations started in December 1997 between coastal states and distant water fishing nations identified as having an interest in the fisheries (the EC, Japan, Norway, Russia and the US). The participants in the latter category were later enlarged to include Ukraine, Iceland, South Korea and Poland. Following six sessions of the negotiation as well as one technical consultation during 1998-2000, the Conference on the South East Atlantic Fisheries Organization adopted the Convention on the Conservation and Management of Fishery Resources in the South East Atlantic Ocean (SEAFO Convention).¹⁰⁶

The Convention Area, where the Convention applies, includes waters beyond areas of national jurisdiction in the South East Atlantic Ocean as defined in Article 4. This is almost identical to FAO Statistical Area 47 exclusive of areas subject to national

the term is used in the sense of stocks migrating across EEZ boundaries in the Sub-Committee on Economic and Social Sciences, this use does not appear compatible with the circumstances in the Mediterranean. See p. 156 of Scientific Advisory Committee, 'Glossary of terms', available at <http://www.faocopmed.org/reports/sac/2001/glossary_sac.pdf> (last visited 16 April 2008).

104 Convention on the Conservation of the Living Resources of the Southeast Atlantic, Rome, 3 October 1969, entered into force 24 October 1971. The Protocol of Termination was adopted in 1990, although not ratified. No action has been taken since then and the Commission is considered to be inoperative. Information is available on the website of Internet Guide to International Fisheries Law at <<http://www.oceanlaw.net/texts/icseaf.htm>> (last visited 31 May 2007).

105 Meltzer, 'Global Overview of Straddling and Highly Migratory Fish Stocks (1994)', at pp. 293-204; Miller, 'Management and Governance Conventions and Protocols: SEAFIC, WCPFC and SADC', at p. 597; Rayfuse, *Non-Flag State Enforcement in High Seas Fisheries*, at pp. 308-309; A.K. Sydnes, 'New Regional Fisheries Management Regimes: Establishing the South East Atlantic Fisheries Organisation', 25 *Marine Policy* (2001), at p. 354. Sydnes notes that there is no relation between the SEAFO process and its predecessor. Sydnes, 'New Regional Fisheries Management Regimes: Establishing the South East Atlantic Fisheries Organisation', at p. 354.

106 For a detailed account of the entire process, see Sydnes, 'New Regional Fisheries Management Regimes: Establishing the South East Atlantic Fisheries Organisation', at pp. 355-359.

jurisdiction.¹⁰⁷ The term ‘waters’ is construed to include the water column as well as the seabed and subsoil thereof since, if the seabed and ocean floor and subsoil thereof are not included, the reference to ‘sedentary species’, which include ‘organisms which [...] are immobile on or *under* the seabed’ (emphasis added) according to Article 77(4) of the LOSC, in the definition of fishery resources would lose its meaning.

Participants in the process were conscious that the Convention would set up the first RFMO to manage straddling fish stocks following the FSA and would set an important international precedent. Consequently, the status and implementation of the FSA, rather than the actual fisheries, became a focal point during the negotiations.¹⁰⁸ One commentator argues that, as opposed to the coastal states’ draft, the negotiations gradually departed from attempting to fully reflect the provisions of the FSA and a main characteristic of the SEAFO Convention is its ‘limited’ application of the FSA.¹⁰⁹ Although the above comments appear to relate mainly to provisions on enforcement, this issue is a particularly important factor for the legal regime of discrete high seas stocks. Since the FSA as such does not apply to DHSFS, the constitutive instruments and practice of RFMOs are likely to exert more influence on the regime for DHSFS. The following analysis first attempts to investigate to what extent the provisions of the SEAFO Convention reflect the FSA with regard to the principles of conservation and management. Then, it analyzes the practice of SEAFO in respect of area closures around seamounts to protect benthic ecosystems and the setting of the TAC for Patagonian Toothfish and red crab fisheries in 2007.

107 In order to accommodate Angola’s preference, the participants in the SEAFO process met a day ahead of signing the SEAFO Convention to sign a declaration stating that the parties agreed to consider ‘to extend the boundary of the Convention Area northward to include those areas of high seas adjacent to all waters under Angolan jurisdiction [...] subject to the cooperation and agreement of other coastal states concerned’. Sydnes, ‘New Regional Fisheries Management Regimes: Establishing the South East Atlantic Fisheries Organisation’, at p. 359.

108 *Ibid.*, at pp. 356-357. Some commentators even argued that part of the driving force behind the establishment of SEAFO in spite of the low level of fishing activities was the desire of certain distant water fishing nations to put the FSA into practice so as to establish an international precedent for regional fisheries management. Henriksen *et al.*, *Law and Politics in Ocean Governance*, at p. 164. In addition to the FSA, it has been pointed out that the SEAFO Convention has been modelled on the CCAMLR Convention and ICCAT Convention. Rayfuse, *Non-Flag State Enforcement in High Seas Fisheries*, at p. 309.

109 Sydnes, ‘New Regional Fisheries Management Regimes: Establishing the South East Atlantic Fisheries Organisation’, at pp. 361-362. See also Orrego Vicuña, ‘The Law Governing High Seas Fisheries: In Search of New Principles’, at p. 390 (‘some definitions of the [FSA] seem to be generously interpreted so as to accommodate historical fishing’. A useful comparison could be made between conventions adopted at almost the same time. See, e.g., Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean, Honolulu, 5 September 2000.

4.3.1 The Convention

The objective of the Convention is to ensure the long-term conservation and sustainable use of the fishery resources in the Convention Area.¹¹⁰ ‘Fishery resources’ mean resources of fish, molluscs, crustaceans¹¹¹ and other sedentary species within the Convention Area, and excludes sedentary species subject to the fishery jurisdiction of coastal states pursuant to Article 77 of the LOSC and highly migratory species listed in Annex I of the LOSC.¹¹² Thus, the Convention applies not only to straddling stocks but also discrete high seas stocks.¹¹³ In fact, one of the participants in the negotiations commented in 2000 in retrospect as follows: the ‘first challenge is the design of an agreement to provide for conservation and management measures applicable to the [DHSFS] that occur in the proposed SEAFO area’.¹¹⁴

Contracting parties are to adopt measures based on the best scientific evidence available and to apply the precautionary approach.¹¹⁵ The Commission is to take into account recommendations and advice from the Scientific and Compliance Committees, in particular on biological unity and other biological characteristics of the stocks in formulating its decisions,¹¹⁶ while the Commission is to apply the precautionary approach widely to conservation and management and exploitation of fishery resources in order to protect those resources and preserve the marine environment.¹¹⁷ Although the Commission is to be more cautious when information is uncertain, unreliable or inadequate, the absence of adequate scientific information shall not be

110 SEAFO Convention, Article 2.

111 Red crab is among the SEAFO fish species of economic importance in the Convention Area. Information available at the website of SEAFO. See <<http://www.seafo.org/welcome.htm>> (last visited 29 May 2007).

112 SEAFO Convention, Article 1(l). Since sedentary species subject to coastal state jurisdiction are excluded from the category of sedentary species with which SEAFO has competence, by referring to ‘other sedentary species’, the SEAFO Convention recognizes the concept of sedentary species also in the context of deep seabed, and SEAFO has the competence to ensure their long-term conservation and sustainable use.

113 Fisheries resources in the SEAFO Convention Area include deep-water species such as alfonsinos, horse mackerel, orange roughy, armourhead, deep-sea red crab, octopus and squid, Patagonian toothfish, hake and oreodories. *Ibid.*, Annex, Section Two.

114 A. Jackson, ‘Developments in the Southeast Atlantic, 1997-1999: Meetings of Coastal States and Other Interested Parties on a Fisheries Management Organization for the South East Atlantic (the SEAFO Process)’, in M.H. Nordquist and J.N. Moore (eds.), *Current Fisheries Issues and the Food and Agriculture Organization of the United Nations* (2000), at p. 61. He identifies two key areas where the test of how far states are ready to bind themselves to apply the provisions of the FSA to all fishing on the high seas, and considers one area as dispute settlement measures in Part VIII of the FSA, including those relating to the application of generally accepted standards for the conservation and management of living marine resources. Jackson, ‘Developments in the Southeast Atlantic, 1997-1999’, at pp. 61-62. See also Sydnes, ‘New Regional Fisheries Management Regimes: Establishing the South East Atlantic Fisheries Organisation’, at p. 362.

115 SEAFO Convention, Article 3(a) and (b).

116 *Ibid.*, Article 6(6).

117 *Ibid.*, Article 7(1).

used as a reason for postponing or failing to take conservation and management measures.¹¹⁸ The Commission is to take cognizance of best international practices regarding the application of the precautionary approach, including Annex II of the FSA and the Code of Conduct.¹¹⁹

The preamble to the Convention expresses the commitment of the contracting parties to safeguard the environment and marine ecosystems in which living marine resources of the South-East Atlantic Ocean occur.¹²⁰ Contracting parties apply the provisions relating to fishery resources, taking due account of the impact of fishing operations on ecologically related species such as seabirds, cetaceans, seals and marine turtles.¹²¹ Measures are to be adopted not only for target species but also for species belonging to the same ecosystems as well as dependent or associated species.¹²² Due account of the need to minimize harmful impacts on living resources as a whole shall also be taken.¹²³ Contracting parties are to protect biodiversity in the marine environment.¹²⁴

The Convention explicitly refers to conservation and management measures such as the TAC, area and season closure, size and sex restrictions, fishing gear and method restrictions, fishing effort restriction.¹²⁵

In the case of straddling stocks, the interests of coastal developing states are to be taken into account in determining fishing opportunities,¹²⁶ while there is no comparable provision for discrete high seas stocks.

The SEAFO Convention provides that SEAFO is to cooperate with other relevant fisheries management organizations and to take account of their conservation and management measures which affect living marine resources in the Convention Area and to seek consistency with such measures.¹²⁷ SEAFO shares its border with CCAMLR. In addition, the South African Community Protocol on Fisheries applies to living aquatic resources of the high seas as may be considered to be of interest to states parties to the Protocol.¹²⁸ The Protocol parties do not purport to compete with SEAFO in high seas fisheries management;¹²⁹ rather, they attempt to complement

118 *Ibid.*, Article 7(2).

119 *Ibid.*, Article 7(3).

120 *Ibid.*, preambular para. 1. In 2007, the Commission agreed to the principle of the protection of the marine environment during fishing activities in the Convention Area and that this should be encompassed in the SEAFO conservation measures. Report of the 4th Annual Meeting of the Commission, 2007, at p. 6.

121 SEAFO Convention, Article 3(c).

122 *Ibid.*, Article 3(d).

123 *Ibid.*, Article 3(e). 'Living marine resources' means all living components of marine ecosystems including seabirds. *Ibid.*, Article 1(n).

124 *Ibid.*, Article 3(f).

125 *Ibid.*, Article 6(8).

126 *Ibid.*, Article 20(d).

127 *Ibid.*, Articles 6(12) and 18(4).

128 SADC Protocol, Article 2(b).

129 See Miller, 'Management and Governance Conventions and Protocols: SEAFC, WCPFC and SADC', at pp. 620-628, particularly p. 628.

SEAFO through coordinated activities under the Protocol. The Protocol stipulates that the states parties shall endeavour to establish common positions and undertake coordinated and complementary actions with regard to, *inter alia*, SEAFO.¹³⁰

4.3.2 Practice

SEAFO has taken several measures to conserve and manage fisheries as well as to protect vulnerable deep-water habitats and ecosystems, including closed areas and catch limits.¹³¹

In 2006, the Scientific Committee recommended closing 13 seamounts in the Convention Area.¹³² Five of them (numbered as 3-7) appear to be located on the outer continental shelf of Namibia and South Africa, while the other eight are beyond the outer limit of the continental shelf. Conservation Measure 06/06 stipulates that all fishing activities for species covered by the SEAFO Convention Area shall be prohibited from 1 January 2007 to 21 December 2010 in the 10 seamount areas defined in Annex 1.¹³³ Three seamount areas (Numbers 3 and 4 on the Namibian continental shelf and Number 13 in the Area) were excluded from the area closures by the Commission.¹³⁴

Contracting Parties shall communicate to the Executive Secretary information relating to fishing activities, including those by trawlers and longliners, undertaken in 2004-2006 in areas identified in Annex 1.¹³⁵

130 SADC Protocol, Article 6(1)(b) and Appendix 2. Furthermore, the States Parties undertake, among other things, to ‘collaborate in the establishment of common positions and policies with regard to the effective management of the high seas living aquatic resources’ and to ‘support the activities of international organisations which conserve and manage living aquatic resources on the high seas, and which act in non-discriminatory manner in relation to State Parties’. *Ibid.*, Article 11(c)-(d).

131 As this Part focuses on certain issues, measures concerning the reduction of seabird by-catch and those concerning the conservation of sharks are not dealt with. For those measures, see SEAFO, Conservation Measure 04/06 on the Conservation of Sharks Caught in Association with Fisheries Managed by SEAFO; SEAFO, Conservation Measure 05/06 on Reducing Incidental By-catch of Seabirds in the SEAFO Convention Area.

132 Report of SEAFO Scientific Committee, 2006, at pp. 16-18. In the same meeting, the Commission also endorsed another Scientific Committee recommendation concerning the protection of benthic ecosystems, i.e., the collection of data by the scientific observers on benthic organisms such as sponges and corals in their sampling protocols. Report of the 3rd Annual Meeting of the Commission, 2006, at p. 4.

133 SEAFO, Conservation Measure 06/06 on the Management of Vulnerable Deep Water Habitats and Ecosystems in the SEAFO Convention Area, para. 1. Note the similarity between this measure and the NAFO Conservation and Enforcement Measure, Article 12, paragraphs 5-10, adopted in September 2006.

134 While the Scientific Committee again recommended closing these three seamounts next year, the Commission did not accept the proposal; parties raised concerns that if all areas are closed, there is no other way that data will be obtained. Report of the 4th Annual Meeting of the Commission, 2007, at p. 4.

135 SEAFO, Conservation Measure 06/06 on the Management of Vulnerable Deep Water Habitats and Ecosystems in the SEAFO Convention Area, para. 4.

The measures provided in Conservation Measure 06/06 shall be reviewed by the Commission in 2010, based on the advice of the Scientific Committee, and a decision shall be taken on future management, which may include the extension of the application of these measures for an additional period or may make the closure permanent.¹³⁶

Conservation Measure 06/06 stipulated that the Commission would consider at its 2007 Annual Meeting according access to a small-scale and restricted exploratory fishery from 1 January 2008 for an area not exceeding 20 % of the fishable area of each seamount as follows:¹³⁷ vessels may fish in the defined areas only in accordance with the Commission's decision and with the protocol for data collection adopted by the Commission,¹³⁸ if such vessels encounter hard corals, immediate notification of the location of the coral area shall be provided to the Executive Secretary, who shall immediately implement a temporary closure of that area and notify this temporary closure to all Contracting Parties pending a decision of the Commission at the next Annual Meeting.¹³⁹

The Commission at its Annual meeting in 2007 decided to maintain the closure in Conservation Measure 06/06, taking into account the Scientific Committee recommendation.¹⁴⁰ The Commission stipulated processes to be followed before the resumption of fishing in the closed area. First, VMEs have been identified and mapped and an assessment of the impact of resumption on such VMEs has been made, and that information shall be submitted to the Scientific Committee.¹⁴¹ Second, contracting parties shall submit Research Fishing Plans for evaluation by the Scientific Committee on the impact of the proposed fisheries on the sustainability of the fisheries resources and on vulnerable marine habitats and the Scientific Committee shall submit its recommendation to the Commission for a decision on any reopening of the area to fishing.¹⁴²

The Scientific Committee recommended banning all forms of trawling and gillnet fishing in view of, among other things, the likely impact of trawls on vulnerable habitats on seamounts in the SEAFO Convention Area.¹⁴³ The parties did not accept the recommendation, stating that they felt that all types of fishing gears have impacts on vulnerable habitats and there is no ground for differentiating one from the others; in addition, the parties observed that as gillnet fishing was not conducted in the Convention Area, it was a 'non-issue'.¹⁴⁴

The Scientific Committee has repeatedly urged the Commission to control fishing opportunities, in view of the lack of complete and reliable data. In 2005, the Scientific

136 Ibid., para. 7.

137 Ibid., para. 2.

138 Ibid., para. 5.

139 Ibid., para. 6.

140 SEAFO, Conservation Measure 11/07 laying down conditions for the resumption of fishing activities in areas subject to closure through conservation measures 06/06, para. 1.

141 Ibid., para. 2(a).

142 Ibid., para. 2(b).

143 Report of SEAFO Scientific Committee, 2007, at pp. 7-8.

144 Report of the 4th Annual Meeting of the Commission, 2007.

Committee recommended freezing current fishing efforts. The Commission, however, deferred the consideration of the proposal to the following year, stating that since only one party had conducted fisheries in 2004, the freezing of current fishing efforts could discriminate against the possibility for other parties to deploy vessels in the area.¹⁴⁵ In 2006, the Scientific Committee furthermore recommended a considerable reduction of fishing pressure in existing fisheries as well as the establishment of relevant indicators of the status of the stocks and fishing pressure, combined with precautionary catch limits or effort limitations, in developing new fisheries or expanding existing fisheries to new areas.¹⁴⁶

In 2007, the Commission adopted catch limits for the Patagonian Toothfish and red crab fisheries in the Convention Area in 2008 and 2009.¹⁴⁷ No national quotas were agreed. When the catch limits are deemed to be exhausted, the Executive Secretary is mandated to close the fisheries.¹⁴⁸ Two points are of interest here. First, in formulating catch limits for toothfish in the entire SEAFO Area, the Scientific Committee took account of CCAMLR Conservation Measure 41/04 relating to toothfish.¹⁴⁹ Second, fisheries for deep-sea species are managed on the basis of the TAC, rather than fishing effort limitations. As elaborated in the Conclusions, this is different from NEAFC, where effort limitations were first introduced and followed by catch limitations.

4.4 NORTH-EAST ATLANTIC FISHERIES COMMISSION (NEAFC)

The conferences held in London in 1937 and 1943 to establish a fisheries commission for the entire North Atlantic did not succeed.¹⁵⁰ For the North-East Atlantic, an international conference in 1946 adopted the Convention for the Regulation of the Meshes of Fishing Nets and Size Limits of Fish.¹⁵¹ In accordance with Article 12 of the 1946 Convention, a Permanent Commission was established in 1953, which is generally regarded as the forerunner of the NEAFC.¹⁵² In the face of the need for a

145 Report of the 2nd Annual Meeting of the Commission, 2005, at p. 5.

146 Report of the 3rd Annual Meeting of the Commission, 2006, at pp. 3-4.

147 SEAFO, Conservation Measure 10/07 fixing catch limits and related conditions for the Patagonian Toothfish and red crab fisheries in the SEAFO Convention area in 2008 and 2009, paras 1-2.

148 *Ibid.*, para. 3.

149 Report of SEAFO Scientific Committee, 2007, at p. 8. CCAMLR Conservation Measure 41/04 (2006), *inter alia*, limited toothfish fisheries in Statistical Subarea 48.6 to exploratory fisheries using longlines by vessels from four parties (Japan, Korea, New Zealand and Norway) and set a precautionary catch limit of 455 tonnes north of 60 degrees south and 455 tonnes south of 60 degrees south.

150 For these conferences, see Johnston, *The International Law of Fisheries: A Framework for Policy-Oriented Inquiries*, at pp. 360-361.

151 The Convention was applicable only to the part of the North Atlantic east of 42 degrees west longitude. 1946 North-East Atlantic Fishing Convention, Article 1.

152 Rayfuse, *Non-Flag State Enforcement in High Seas Fisheries*, at p. 207.

wider range of powers to regulate the effects of technological advances in fishing methods, NEAFC was established under the 1959 North-East Atlantic Fisheries Convention, which entered into force in 1963. Following the extension of coastal state fisheries jurisdiction to 200 miles, the 1959 Convention was replaced by a new convention adopted in 1980, which entered into force in 1982.¹⁵³

The NEAFC Convention was further amended in 2004 and 2006, and the contracting parties have agreed to voluntarily use the new convention on a provisional basis, pending ratification of the new convention by parties to the 1980 Convention.¹⁵⁴ The amendments to the NEAFC Convention are primarily concerned with recommendations for procedures for dispute settlement (Article 18 bis) and Articles 1, 2 and 4.¹⁵⁵ Although the amendments to the NEAFC Convention as such remain minor, a number of modern approaches to fisheries management have been reflected in documents adopted by NEAFC during the previous period, including the Scheme of Control and Enforcement.¹⁵⁶ Given the fact that contracting parties agreed to voluntarily apply the new convention pending the ratification procedures, this section refers to the provisions of the new convention unless it is necessary to compare the texts of new and old conventions.

The Convention applies to the areas of the Northeast Atlantic and Arctic Oceans, exclusive of the Baltic Sea and the Mediterranean Sea, as provided for in the Convention.¹⁵⁷ Therefore, the Convention Area includes at least three high seas areas:¹⁵⁸ the Reykjanes Ridge-Azores Area, part of the Norwegian Sea (also known as the 'Banana Hole')¹⁵⁹ and the so-called 'Loophole' of the Barents Sea.

Fisheries management in the Loophole is a mixture of coastal state regulation and a multilateral approach. On the one hand, fisheries in the Loophole are not excluded from the NEAFC regulation, and NEAFC has in fact adopted measures for some fisheries in this area.¹⁶⁰ On the other hand, outside the framework of NEAFC, the two

153 For the history of NEAFC, see also the Performance Review Panel Report of the North East Atlantic Fisheries Commission, NEAFC, at pp. 10-11.

154 For information, see Report of the 24th Annual Meeting of the North-East Atlantic Fisheries Commission, 14-18 November 2005, at pp. 32-34.

155 See Declaration on the Interpretation and Implementation of the Convention on the Future Multilateral Cooperation in North-East Atlantic Fisheries, London. In addition, 'fisheries jurisdiction' was replaced by 'jurisdiction' in Articles 5, 6, 8, 9, 12, 13, 15, 18 and 20. See also Molenaar, 'Current Legal and Institutional Issues Relating to the Conservation and Management of High Seas Deep-Sea Fisheries', at p. 125 note 91.

156 NEAFC Control and Enforcement Scheme.

157 New NEAFC Convention, Article 1(a). But note the continued use of 'waters' in the definitions of 'Convention Area' and 'Regulatory Area' in the Scheme of Control and Enforcement. NEAFC Control and Enforcement Scheme, Article 1(a)-(b).

158 For the applicability of the NEAFC Convention to the central Arctic Ocean, see section 5.4.1 below.

159 Some authors also refer to this area as the 'Doughnut (or Donut) Hole'. See, e.g., Henriksen *et al.*, *Law and Politics in Ocean Governance*, at p. 101; Meltzer, 'Global Overview of Straddling and Highly Migratory Fish Stocks (1994)', at pp. 280-282.

160 For example, conservation and management measures for pelagic redfish in ICES Sub-areas I and II apply to the Loophole (i.e., ICES Sub-area Ia).

coastal states (i.e., Norway and Russia) have managed to restrain fishing by distant water fishing nations such as the EC, Greenland and the Faroe Islands as well as Iceland in the high seas part of the Barents Sea through the conclusion of access agreements to their EEZ.¹⁶¹ Commentators vary in their evaluation of the regime governing the management of fisheries in the Barents Sea.¹⁶² In any case, the two coastal states whose EEZ surrounds the Loophole have succeeded in persuading other interested states to refrain from fishing in that area for some species.¹⁶³ Stocks which may fall under the category of deep-sea species or DHSFS are not regulated by the above-mentioned fisheries management regime between the coastal states and the high seas fishing states.¹⁶⁴

161 For the EC, Greenland and Faroe Islands, see Meltzer, 'Global Overview of Straddling and Highly Migratory Fish Stocks (1994)', at p. 281. The conflict between the coastal states and Iceland was resolved in 1999 by a multilateral agreement among the three states concerned and two protocols between Iceland and each of the coastal states. See Agreement between the Government of Iceland, the Government of Norway and the Government of the Russian Federation concerning Certain Aspects of Cooperation in the Area of Fisheries, St. Petersburg, 15 May 1999; Protocol between the Government of Norway and the Government of Iceland under the Agreement between the Government of Norway, the Government of Iceland and the Government of the Russian Federation concerning Certain Aspects of Cooperation in the Area of Fisheries, St. Petersburg, 15 May 1999; Protocol between the Government of Iceland and the Government of the Russian Federation under the Agreement between the Government of Iceland, the Government of Norway and the Government of the Russian Federation concerning Certain Aspects of Cooperation in the Area of Fisheries, St. Petersburg, 15 May 1999. See also R.R. Churchill, 'The Barents Sea Loophole Agreement: A 'Coastal State' Solution to a Straddling Stock Problem', 14 *International Journal of Marine and Coastal Law* (1999), at pp. 468-475; Henriksen *et al.*, *Law and Politics in Ocean Governance*, at p. 143. Note that the matter was referred to NEAFC by Russia and there was a brief discussion in the 1994 annual meeting. For an account of the reason why the involvement of NEAFC did not take place in NEAFC thereafter, see Churchill, 'The Barents Sea Loophole Agreement', at pp. 479-480.

162 Compare, e.g., O.S. Stokke, 'The Loophole of the Barents Sea Fisheries Regime', in O.S. Stokke (ed.), *Governing High Seas Fisheries: The Interplay of Global and Regional Regimes* (2001), at p. 286 (arguing that the regime for the Barents Sea is clearly characterized as a regional fisheries management arrangement); Churchill, 'The Barents Sea Loophole Agreement', at pp. 476-477, 480 and 482 (arguing that the regime is characterized as 'direct cooperation' between interested states in the sense of Article 7(1)(a) of the FSA); Ørebech *et al.*, 'The 1995 United Nations Straddling and Highly Migratory Fish Stocks Agreement: Management, Enforcement and Dispute Settlement', at p. 124 (stating that the Norway-Russia Fisheries Commission is, unless expanded, no longer a valid arrangement for the management of Norwegian Arctic cod since it would be contrary to the FSA for two states to continue to cooperate within the framework of a bilateral arrangement, excluding others, if the stock distribution includes the high seas, and observing that the appropriate organization or arrangement would be NEAFC).

163 It could be argued that Iceland may conduct fisheries for species not regulated by the Loophole Agreement. Churchill observes that this could happen, while this is contrary to the Norwegian view and any such fishing would not be of real significance in practice. Churchill, 'The Barents Sea Loophole Agreement', at p. 473. See also the press release cited therein.

164 In the preamble to the Loophole Agreement, it is recognized that 'a considerable part of the living marine resources of the northern Norwegian and Barents Seas represent a single regu-

In the Norwegian Sea, NEAFC is involved in the management of a straddling stock of spring-spawning herring in the high seas areas. Coastal states first set the TAC for Norwegian spring-spawning herring for the EEZ, and NEAFC then sets its total catch for the high seas.¹⁶⁵

In the light of the above observations, no separate section needs to be devoted to fisheries management in the Barents Sea ‘Loophole’ or the Norwegian Sea ‘Banana Hole’.¹⁶⁶

4.4.1 The Convention

The objective of the new NEAFC Convention is to ensure the long-term conservation and optimum utilization of the fishery resources in the Convention Area, providing sustainable economic, environmental and social benefits, and the Commission shall perform its functions in order to fulfil this objective.¹⁶⁷

The new NEAFC Convention defines fishery resources as ‘resources of fish, molluscs, crustaceans and including sedentary species, excluding, in so far as they are dealt with by other international agreements, highly migratory species listed in Annex I of [the LOSC], and anadromous stocks’.¹⁶⁸ A major difference between the new and old conventions is that while, under the old convention, sedentary species are excluded from the scope of fishery resources, the new convention explicitly includes sedentary species in the definition of fishery resources.¹⁶⁹

4.4.1.1 Precautionary approach

The Commission shall ensure that recommendations are based on the best scientific evidence available.¹⁷⁰ In addition, contracting parties shall furnish any available scientific and statistical information needed for the purposes of the Convention at the request of the Commission, and the Commission may also make recommendations to

lated biological stock system’. Barents Sea Loophole Agreement, preambular paragraph 5. See also Churchill, ‘The Barents Sea Loophole Agreement’, at p. 468.

165 See Churchill, ‘The Barents Sea Loophole Agreement’, at pp. 480-481. He characterizes the regime as a regional fisheries arrangement utilizing an RFMO.

166 However, the analysis of fisheries management in the Barents Sea ‘Loophole’ in this section provides a useful basis for the comparative analysis of fisheries management in areas completely surrounded by the EEZ in later chapters, in particular in Sections 5.3.1 and 5.4.4 below.

167 New NEAFC Convention, Articles 2 and 4(1). Under the old convention, the Commission would perform its functions in the interests of the conservation and optimum utilization of the fishery resources of the Convention Area. 1980 NEAFC Convention, Article 4(1).

168 New NEAFC Convention, Article 1(b).

169 1980 NEAFC Convention, Article 1(2).

170 New NEAFC Convention, Article 4(2)(a). The old convention merely provides that, in performing its function, the Commission shall take into account the best scientific evidence available to it. 1980 NEAFC Convention, Article 4(1).

collect additional statistical information relating to fisheries beyond areas under the jurisdiction of contracting parties.¹⁷¹

While the 1980 Convention did not expressly refer to the precautionary approach, most contracting parties were not opposed to the application of the precautionary approach before the new convention was adopted in 2006.¹⁷² In practice, through the 2003 Memorandum of Understanding (MoU) between NEAFC and ICES, NEAFC accepted the application of the precautionary approach, including the ICES format.¹⁷³ In 2005, it was agreed to amend the convention, and the new convention provides that the Commission shall apply the precautionary approach.¹⁷⁴ The article concerned does not define the ‘precautionary approach’. In this regard, recourse could be had to the FSA and the FAO Code of Conduct for Responsible Fisheries, both of which are referred to in the preamble to the new convention.¹⁷⁵

4.4.1.2 Ecosystem approach

The 1980 NEAFC Convention only stipulated the incorporation of ecosystem considerations concerning species interrelationships. The Commission shall seek to ensure consistency between its recommendation and coastal states’ measures and decisions for fisheries for straddling stocks conducted within the area under their jurisdiction if that would have an effect on those stocks through species interrelationships. Moreover, the relevant contracting parties and the Commission shall promote the coordination of such recommendations, measures and decisions.¹⁷⁶ Thus, when a measure for discrete high seas stocks has impacts on straddling stocks, relevant national measures are taken into consideration.

Before the amendment of the Convention, there were examples in practice, albeit limited, that showed ecosystem considerations. One such initiative relates to the inclusion of ecosystem considerations in the MoU between NEAFC and ICES.¹⁷⁷ Since the latter provides scientific advice to NEAFC, the way in which it supplies the

171 New NEAFC Convention, Articles 9(1) and 16(2).

172 See further the section on deep-sea fisheries below.

173 Memorandum of Understanding 2003-2006 between the North-East Atlantic Fisheries Commission and the International Council for the Exploration of the Sea, reproduced in NEAFC Review Panel Report, at pp. 77-87 (Appendix IX).

174 New NEAFC Convention, Article 4(2)(b).

175 Henriksen *et al.*, *Law and Politics in Ocean Governance*, at p. 118. They point out that there are some variations between the ICES reference points and Annex II of the FSA. Henriksen *et al.*, *Law and Politics in Ocean Governance*, at pp. 111-112. Note that Article 4 does not refer to Annex II of the FSA, nor is Annex II mentioned in the proposed MoU between ICES and NEAFC. See Permanent Committee on Management and Science, PECMAS, of the North-East Atlantic Fisheries Commission, Report of the Second Meeting 19-21 February 2007, at pp. 12-29. Therefore, the variations concerning reference points will remain.

176 This provision remains unchanged under the new convention. New NEAFC Convention, Article 5(2).

177 For a discussion, see Henriksen *et al.*, *Law and Politics in Ocean Governance*, at pp. 114-115. For closed areas to protect VMEs, see section 4.4.2.2 below.

advice impacts upon management by NEAFC. One of the main characteristics in the proposed EU draft for the MoU was the introduction of ecosystem-based advice. An MoU for 2004-2006 was negotiated to this end and unanimously adopted by NEAFC.¹⁷⁸ The MoU stipulated that NEAFC requested ICES to advise on impacts that fisheries have on the ecosystem, and potential imbalances caused by fisheries and reference points as guidance for management purposes in an ecosystem context. The MoU expired at the end of 2006, and a draft for a new MoU developed in the Permanent Committee on Management and Science (PECMAS)¹⁷⁹ was adopted, with a minor amendment proposed by the EU, at the Extraordinary Meeting in June 2007.¹⁸⁰

The new convention gives NEAFC a clearer mandate with respect to the ecosystem approach and biodiversity protection. It provides that the Commission shall take due account of the impact of fisheries on other species and marine ecosystems, and in doing so adopt, where necessary, conservation and management measures that address the need to minimize harmful impacts on living marine resources and marine ecosystems, and shall take due account of the need to conserve marine biological diversity.¹⁸¹

In addition, the Commission shall now provide a forum for consultation and exchange of information on the state of the fishery resources in the Convention Area and on the management policies, including an examination of the overall effects of such policies on the fishery resources and, as appropriate, other living marine resources and marine ecosystems.¹⁸²

4.4.2 Practice

NEAFC has adopted a number of measures for fisheries on the high seas. The rest of this sub-section examines such measures to the extent that they may have implications for new challenges in high seas fisheries such as fisheries for DHSFS, deep-sea fisheries and area-based management tools.

Recently, discussions have taken place with respect to the stock classification of oceanic redfish in the NEAFC Convention Area. However, for the time being, it is unlikely that one of its stocks proves to be, or will become, a discrete high seas fish stock. Targeted DHSFS are thus deep-sea species. Therefore, the following parts first

178 Report of the Extraordinary Meeting of the North-East Atlantic Fisheries Commission, 14-15 May 2003, at pp. 10-12; Report of the 22nd Annual Meeting of the North-East Atlantic Fisheries Commission, 10-14 November 2003, at p. 28.

179 PECMAS Second Meeting Report, at pp. 6-7.

180 Report of the Extraordinary Meeting of the North-East Atlantic Fisheries Commission, 13-14 June 2007, at pp. 15-16.

181 New NEAFC Convention, Article 4(2)(c)-(d). The new convention defines 'living marine resources' as 'all living components of marine ecosystems'. New NEAFC Convention, Article 1(c). It also defines 'marine biological diversity' in an almost identical manner as the CBD. The only difference is that the new NEAFC Convention is only concerned with marine aspects. See New NEAFC Convention, Article 1(d).

182 New NEAFC Convention, Article 4(3).

deal with deep-sea fisheries and then analyze area-based management tools (i.e., NEAFC closed areas and cooperation with the OSPAR Commission).

4.4.2.1 *Deep-sea fisheries*

Some deep-sea species such as roundnose grenadier have been fished in the Regulatory Area of NEAFC for a long time.¹⁸³ While the issue of deep-sea fisheries was discussed and ICES advice was sought on several occasions before 2002,¹⁸⁴ intensive discussions only started after the 20th Annual Meeting in 2001, where the parties agreed to establish the Working Group on the Appraisal of Regulatory Measures for Deep-sea Species.¹⁸⁵ Since then, as predicted by the EC, the management of deep-sea fisheries became a ‘major issue for NEAFC to solve’.¹⁸⁶ Measures have been taken in five ways: information gathering; regulation of fishing effort; prohibition of new fisheries; regulation of fishing gear; and prohibition of fisheries for certain species.

The first sort of measures relate to the collection of catch and effort data and other information. The lack of information was a major source of difficulties in determining management measures for deep-sea fisheries.¹⁸⁷ Discussions took place, especially at the early stage of management, regarding the scientific basis of the measures. For example, at the 18th Annual Meeting in 1999, when the EU suggested freezing effort at current levels, all parties agreed that more input from ICES was needed before progress could be made, and the president of NEAFC stated that the meeting should encourage the compilation of catch data on these species on a voluntary basis.¹⁸⁸ Even in 2002, while all parties agreed on the need to establish management measures for deep-sea species at the outset of the discussion, Russia claimed that such measures could not be taken before more information was available.¹⁸⁹

The reporting regime was already in place as part of the Control and Enforcement Scheme. However, in relation to deep-sea fisheries, the existing regime was problematic not only because data was not split between the Regulatory Area and coastal zones prior to 2006,¹⁹⁰ but also because ICES statistical areas were too large for these

183 Mooney-Seus and Rosenberg, Regional Fisheries Management Organizations (RFMOs): Progress in Adopting Precautionary Approach and Ecosystem-Based Management, at p. 129.

184 For an overview, see NEAFC Review Panel Report, at p. 70.

185 Report of the 20th Annual Meeting of NEAFC, 5-9 November 2001, at pp. 11-12.

186 Summary Report, North East Atlantic Fisheries Commission, Nineteenth Annual Meeting: 21-24 November 2000, at p. 13.

187 For the first time in 1997, parties reported on catches of deepwater species. Report of the Sixteenth Annual Meeting, London, November 1997, at p. 14.

188 Summary Report, North East Atlantic Fisheries Commission, Eighteenth Annual Meeting: 22-25 November 1999 at p. 10. Similarly, the need for more information for managers to be able to fully comprehend the advice needed was expressed by the EU at the 19th Annual Meeting in 2000. NEAFC 2000 Annual Meeting Report, at p. 13.

189 Report of the 21st Annual Meeting of the North-East Atlantic Fisheries Commission, 12-15 November 2002, at p. 25.

190 NEAFC Review Panel Report, at p. 29.

species due to their often limited local distribution.¹⁹¹ The Commission adopted a special regime for compiling information on national measures and the submission of scientific information on deep-sea fisheries, including the development of sampling plans for deep-sea species.¹⁹² The measures use ICES statistical rectangles as the reporting unit, which are smaller and more suited for the management of deep-sea fisheries.

The second sort of measures concerns fishing effort regulation: freezing and a reduction of fishing efforts. At the 21st Annual Meeting in 2002, the capacity of the deep-sea fleet was established and then frozen. The original Norwegian-EU proposal (AM2002/41) attempted to establish the fishing effort using the period 1998-2001 as a baseline. However, in the face of Russian and Danish¹⁹³ opposition, the proposal was amended to use as the reference period the highest level in previous years, and the measure thus deviated from the original intent of freezing effort at the *current* levels.¹⁹⁴ Due to the disagreement on the scope of application of effort reduction and the definitions of deep-sea fishing activities, the Extraordinary Meeting in 2003 failed to establish conservation and management measures.¹⁹⁵ For the same reason, at the 22nd Annual Meeting in 2003, NEAFC maintained the effort freezing measure adopted at the previous annual meeting for the period of 2004.¹⁹⁶ In this regard, an issue was how to ensure the compatibility of measures between the Regulatory Area of NEAFC and areas under national jurisdiction. Because of the lack of information, stock structure was largely unknown and, therefore, the measures were not adopted based on the management unit of a single stock. In addition, while the EU, as a coastal contracting party, demanded a uniform measure throughout the Convention Area (i.e., the reduction of efforts both inside and outside the limits of national jurisdiction), other parties preferred to put in place measures only for the Regulatory Area, i.e., on the high seas, and they considered that the measures could still be compatible between the Regulatory Area and areas under national jurisdiction.¹⁹⁷

At the 23rd Annual Meeting, the reduction of fishing efforts by 30 % was finally agreed. Despite strong EU insistence, the scope of the recommendation was limited to the Regulatory Area, and was only concerned with directed fishing for deep-sea

191 This was pointed out by ICES as early as at the 19th Annual Meeting in 2000. NEAFC 2000 Annual Meeting Report, at p. 13.

192 Originally adopted in 2005 and amended in 2006. See NEAFC 2005 Annual Meeting Report, at p. 24; Report of the 25th Annual Meeting of the North-East Atlantic Fisheries Commission, 13-17 November 2006, at p. 94.

193 Although Denmark is a member of the European Union and has transferred the competence to regulate high seas fisheries to the EU, the Faroe Islands and Greenland are excluded from the application of the Common Fisheries Policy and therefore the Danish government participates on their behalf in NEAFC and other RFMOs of which it is member.

194 NEAFC 2002 Annual Meeting Report, at pp. 25-29.

195 NEAFC 2003 Extraordinary Meeting Report, at pp. 3-7.

196 NEAFC 2003 Annual Meeting Report, at pp. 20-22.

197 Ibid., at p. 22; NEAFC 2003 Extraordinary Meeting Report, at pp. 3-7.

species.¹⁹⁸ At the 24th Annual Meeting, the 70 % effort level was maintained for 2006.¹⁹⁹ At the 25th Annual Meeting, a further 10 % reduction in fishing efforts was proposed by the EU, while Russia preferred to stick to 70 %. Upon a suggestion by the President, it was agreed by consensus that the effort shall not exceed at most 65 % in 2007 of the highest level put into deep-sea fishing in previous years.²⁰⁰

Third, control of new fisheries has been attempted. The EU proposed the prohibition of new fisheries without proof of sustainability, and this proposal was referred to the Deep-Sea Working Group in 2005.²⁰¹ The Working Group recommended limiting new fisheries by adopting either of the following options: (1) fishing for deep-sea species shall be prohibited except in designated ICES rectangles; (2) fishing for deep-sea species shall be prohibited in designated ICES rectangles.²⁰² The proposal was referred to PECMAS by consensus at the Commission in 2006.²⁰³ The PECMAS meeting in February 2007 did not reach agreement on this issue. Two parties indicated that they did not consider the first approach (i.e., first close everything, and then open up) to be acceptable. It was noted that there are other measures that control new or current fisheries, especially the cap on effort in deep-sea fisheries.²⁰⁴ PECMAS agreed to propose to the Commission that PECMAS start a process of clarifying objectives of and developing criteria for closures.²⁰⁵

Fourth, limitations on the use of certain fishing gear have been adopted. At the 24th Annual Meeting, a proposal on an interim ban on the use of gillnets, entangling nets and trammel nets was adopted by consensus.²⁰⁶ The regulation of bottom fishing gear has also been addressed in the context of area closures.²⁰⁷

Fifth, fisheries for certain species were regulated in terms of catch limits. At the outset, it should be noted that it has been repeatedly emphasized that setting the TAC does not suit the management of deep-sea fisheries and effort regulation should be employed.²⁰⁸ However, when ICES proposed the introduction of catch limits for the first time in 2006, contracting parties in the Working Group on Deep Sea Species discussed the feasibility of setting catch levels. It was noted that the parties are still

198 Report of the 23rd Annual Meeting of the North-East Atlantic Fisheries Commission, 8-12 November 2004, at pp. 31-32. The EU declared that it would apply the measure of a 30% reduction of fishing efforts throughout the entire Convention Area, while Iceland stated it could only accept that that measure applied to the Regulatory Area. *Ibid.*, at p. 31.

199 NEAFC 2005 Annual Meeting Report, at p. 24.

200 NEAFC 2006 Annual Meeting Report, at p. 93. The same measure was adopted again in 2007. Report of the 26th Annual Meeting of the North-East Atlantic Fisheries Commission, 12-16 November 2007, at p. 12.

201 NEAFC 2005 Annual Meeting Report, at p. 25.

202 Report, NEAFC Working Group on Deep Sea Species, 20-21 June 2006, at p. 19.

203 NEAFC 2006 Annual Meeting Report, at p. 93.

204 PECMAS Second Meeting Report, at p. 8.

205 *Ibid.*, at pp. 4 and 8.

206 NEAFC 2005 Annual Meeting Report, at p. 25.

207 See Section 4.4.2.2 below.

208 See, e.g., NEAFC 2003 Annual Meeting Report, at p. 22 (Norway and the EU indicating that it would be difficult to advise on TACs for deep-sea species).

unable to give specific advice on individual stocks and, even if possible, there is the problem of mixed fisheries, which probably need to be regulated by effort measures. In addition, Norway pointed out that a limit in effort could lead to the required catch levels, without introducing catch limits, while the EU noted that this may not be the case where there are aggregations of fish.²⁰⁹

At the 25th Annual Meeting, the Commission discussed the proposal by the Working Group on Deep Sea Species that fishing for orange roughy should be prohibited. In response to the Danish view that there was not sufficient time to consider the proposal, the president suggested making a preliminary regulation and revising it later. The proposal to ban the fishery for the first half of 2007 was adopted by consensus, with the understanding that it would be reconsidered at the Extraordinary Meeting in June 2007.²¹⁰ At the Extraordinary Meeting in 2007, the Danish proposal for management measures for orange roughy in 2007 and 2008 was opposed by other contracting parties, including Norway, Iceland and the EU due the reason that ICES advice recommended no directed fisheries for this species. It was decided to extend the interim prohibition on directed orange roughy fisheries in the NEAFC Regulatory Area until 31 December 2007.²¹¹

At the 26th Annual Meeting in 2007, Denmark made a proposal that directed fisheries for orange roughy in the NEAFC Regulatory Area in ICES Sub-areas V-VII (i.e., the Regulatory Area adjacent to waters under the national jurisdiction of EU member states) are prohibited while the directed fisheries for orange roughy in other areas of the Regulatory Area are allowed under precautionary conditions, including: fishing activities shall be restricted to vessels of contracting parties having participated in the fishery for orange roughy in the NEAFC Regulatory Area other than Sub-areas V-VII prior to 2005; and total catches of any contracting party shall not exceed 150 tonnes.²¹² The EU opposed this proposal, submitting its own proposal to maintain the prohibition of fishery for orange roughy in the NEAFC Regulatory Area for 2008.²¹³ The Danish proposal was adopted by four votes against one.²¹⁴ Three features of the recommendation are worth commenting upon. First, it restricted the fishing opportunities to states with a fishing record.²¹⁵ Second, it adopted catch limits, rather than fishing effort limits. Third, it allocated 150 tonnes equally to all qualified contracting parties.

209 NEAFC Working Group 2006 Report, at p. 3.

210 NEAFC 2006 Annual Meeting Report, at pp. 93-94.

211 NEAFC 2007 Extraordinary Meeting Report, at pp. 5-6.

212 See AM 2007/18 rev, paras 2.1-2.2.

213 See AM 2007/57.

214 NEAFC 2007 Annual Meeting Report, at p. 13. Subsequently, an objection to this recommendation was received from the EU on 29 November 2007. See NEAFC, 'Measures 2008: Orange Roughy' <http://www.neafc.org/measures/current_measures/8_orange-roughy-08.html> (last visited 23 April 2008).

215 Ibid. This entails the issue of new entrants. In fact, the observer from the Cook Islands criticized the recommendation, invoking Article 300 of the LOSC. NEAFC 2007 Annual Meeting Report, at p. 13.

Apart from the measures mentioned above, it is interesting to note a reference to DHSFS in the measure on the collection of information adopted in 2006 (Recommendation X: 2007), which reads as follows:

‘Among the general principles of the [FSA] the states party to this agreement undertake to; [*sic*] adopt measures to ensure long-term sustainability of straddling fish stocks and highly migratory fish stocks and to promote the objective of their optimum utilization; to ensure that such measures are based on the best scientific evidence available and to collect and share, in a timely manner, complete and accurate data concerning fishing activities. The Review Conference on the UN Fish Stocks Agreement held in May 2006 agreed that these general principles should also apply to [DHSFS].’

The reference may shed some light on which principles of the FSA should be applied to DHSFS, since the reference singles out principles such as long-term sustainability, optimum utilization, the basis of best scientific evidence available, and data collection and sharing.

Furthermore, the same measure stipulates that measures that apply to deep-sea species in waters under national jurisdiction shall not undermine those established for the Regulatory Area. Since NEAFC manages deep-sea fisheries on a species basis, rather than a stock basis, the compatibility between measures for areas under national jurisdiction and those for the high seas becomes even more important.²¹⁶

In 2008, NEAFC adopted measures to address the implementation of UNGA Resolution 61/105 at the Extraordinary Meeting.²¹⁷ It provides for the mapping of existing bottom fishing areas,²¹⁸ the assessment of exploratory fisheries in new bottom fishing areas,²¹⁹ the identification of VMEs²²⁰ and unexpected encounters with VMEs.²²¹

4.4.2.2 *Closed areas*

Closely related to the issue of deep-sea fisheries is the protection of marine ecosystems through the closure of certain areas to fisheries. To protect deep-sea species and vulnerable habitats from trawl fishing, the closure of several seamounts (i.e., the Hecate and Faraday seamounts and a section of the Reykjanes Ridge, the Altair seamounts and the Antialtair seamounts) for bottom trawling and fishing with static gear was agreed at the 23rd Annual Meeting for the period from 1 January 2005 to 31

216 Compare with the management of bottom fisheries by NAFO in Section 4.5.3 below.

217 NEAFC, Recommendation by the North-East Atlantic Fisheries Commission in Accordance with Article 5 of the Convention on Future Multilateral Cooperation in North-East Atlantic Fisheries at Its Extraordinary Meeting on 1-2 July 2008 to Adopt the Following recommendation on Bottom Fishing Activities in the NEAFC Regulatory Area.

218 *Ibid.*, Article 3.

219 *Ibid.*, Articles 4-5.

220 *Ibid.*, Article 5.

221 *Ibid.*, Article 6.

December 2007.²²² All of these seamounts are entirely located in the high seas. Subsequently, the interim measure was prolonged by consensus for 2008 at the 26th Annual Meeting in 2007.²²³ On the other hand, most states pointed to the uncertainty of the scientific basis for the proposed closure of the Hatton Bank in 2004. Russia in particular expressed doubts about the effects of closures on bottom fauna and referred to the economic expediency of using effective fishing gear, pointing to the need to assess the effect of bottom trawling and to identify the most vulnerable areas and the significance of effective fisheries for food security.²²⁴

At the 24th Annual Meeting, the EU proposed a recommendation on closed areas on the Hatton Bank, North West Rockall, Logachev Mounds, South Rockall, West Rockall Mounds and South West Rockall where these were located within the NEAFC Regulatory Area. But it was decided that no further action would be undertaken until criteria and guidelines on which to base closures in the future had been established.²²⁵

Nevertheless, in response to ICES advice presented at the 25th Annual Meeting, the EU and Russia tabled proposals for closures of these areas. The only difference between these proposals was in the South West Rockall area. While all contracting parties, except the EU, supported the Russian proposal, the EU noted that it would only support it on condition that the Rockall haddock box was to remain in place in 2007, but it eventually accepted the Russian proposal. Therefore, bottom trawling and fishing with static gear, including fishing with bottom gillnets and longlines, are prohibited in areas on the Hatton Bank, and Rockall Bank in the parts of areas that fall within the NEAFC Regulatory Area (i.e., North-West Rockall, Logachev Mounds and West Rockall Mounds), as delimited in the proposal, for the period 1 January 2007 – 31 December 2009.²²⁶ The North-West Rockall Bank and the Logachev Mounds straddle the EEZ and the high seas, while the Hatton Bank is entirely located in the high seas.

At the 26th Annual Meeting in 2007, based on new data and advice by ICES, the EU and Russian proposal for the protection of cold-water corals was adopted by consensus. A new area was added to the existing closed area of the Hatton Bank, the existing boundary of the North-West Rockall closed area was adjusted, and a new closed area was established in the South-West Rockall (Empress of Britain Bank).²²⁷ It was noted that the recommendation was in full conformity with UNGA Resolution 61/105.²²⁸

222 NEAFC 2004 Annual Meeting Report, at pp. 39-41. Also note that NEAFC closed an area on the Western slope of Rockall Plateau to all fisheries except longlines in 2001, in order to protect juvenile haddock. See Report of the Extraordinary Meeting of the North-East Atlantic Fisheries Commission, 22-23 March 2001, at p. 5; A/61/154, at p. 33. For the latest measure in this regard, see Recommendation V: 2008 adopted by the 26th Annual Meeting.

223 NEAFC 2007 Annual Meeting Report, at p. 13.

224 NEAFC 2004 Annual Meeting Report, at p. 40.

225 NEAFC 2005 Annual Meeting Report, at p. 26.

226 NEAFC 2006 Annual Meeting Report, at pp. 94-95.

227 NEAFC 2007 Annual Meeting Report, at p. 14.

228 Ibid.

The accelerated progress on the establishment of closed areas from 2006 could arguably be attributed to the decision of the Commission to use the new Convention on a provisional and voluntary basis as of 2006. Under the old Convention, it was argued that the NEAFC competence to close areas outside the fisheries jurisdiction of contracting parties for fishing activities is limited to closure related to ‘fishery resources’ and the Commission does not have the right to establish closed areas in order to protect seamounts, hydrothermal vents or cold-water corals as such.²²⁹ It is conceivable that the provisions of the new Convention allowing a wider scope of measures have facilitated the proposals.

In relation to criteria for closing areas, at the 24th Annual Meeting, an Icelandic proposal to request the Working Group on the Future of NEAFC to propose criteria and procedures for closing areas to fisheries was adopted by consensus.²³⁰ At the 25th Annual Meeting, the Commission agreed by consensus on a proposal by the Working Group to mandate PECMAS to consider proposals for closures.²³¹ Paragraph 2(b) of the terms of reference of PECMAS reads:

- ‘Review proposals for management measures
- regarding the impact of fisheries on other species and marine ecosystems;
 - conserving marine biological diversity; and
 - minimising harmful impacts on living marine resources and marine ecosystems.’

In its second meeting, PECMAS discussed, *inter alia*, closing areas, and it was noted that there could be two basic approaches to area closures: (1) to copy the terrestrial model for closed areas; (2) to design a general system of sustainable use in the oceans.²³² Eventually, PECMAS agreed to propose to the Commission that it should start a process of clarifying the objectives of closures and to develop possible criteria and guidelines.²³³

At the 25th Annual Meeting, another proposal was adopted to mandate PECMAS to evaluate the appropriateness and experiences with the closed areas introduced in 2004.²³⁴ In discussing the issue of controlling the expansion of new or current fisheries, PECMAS made the following observation: the first five areas closed for 2005-2007 were based on general knowledge about the geographical distribution of habitats

229 See the Paper presented by Norway to the 23rd Annual Meeting on ‘Deep-water Habitats Vulnerable to Fishing Activities: Closing of Areas for Trawling in the Regulatory Area’, at p. 5. In that paper, Norway took the position that the establishment of protected areas in the high seas would be in conflict with the prohibition of the LOSC Articles 89 and 137(3), without amending the LOSC.

230 NEAFC 2005 Annual Meeting Report, at p. 32.

231 NEAFC 2006 Annual Meeting Report, at p. 94.

232 For the similarities and differences between terrestrial and marine protected areas, see various contributions in Report and Documentation of the Workshop on Marine Protected Areas and Fisheries Management: Review of Issues and Considerations, FAO Fisheries Report No. 825.

233 PECMAS Second Meeting Report, at pp. 4 and 8.

234 NEAFC 2006 Annual Meeting Report, at p. 94.

and fisheries, and ‘not on science’, and there were ‘hardly any data against which the impact of fisheries can be measured’.²³⁵

4.4.2.3 Cooperation with the OSPAR Commission

The Commission may establish working arrangements with any other international organization which has ‘related objectives’.²³⁶ At the regional level, interactions may occur between NEAFC and several kinds of international organizations: (1) an organization dealing with the protection of the marine environment in the region; (2) an RFMO regulating straddling stocks in the neighbouring area of the high seas (i.e., NAFO); (3) another RFMO or organization regulating marine living resources in the same area (e.g., North Atlantic Salmon Conservation Organization (NASCO)); (4) a scientific organization (i.e., ICES). The rest of this part focuses on (1).²³⁷

The Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention)²³⁸ established a Commission as the executive body of the Convention (hereinafter ‘OSPAR Commission’). The purpose of the Convention is to provide a framework for the comprehensive protection of the marine environment of the North-East Atlantic.²³⁹

The OSPAR Commission does not have competence to regulate fisheries. The penultimate recital of the preamble to the Convention recognizes that ‘questions relating to the management of fisheries are appropriately regulated under international and regional agreements dealing specifically with such questions’. Annex V to the OSPAR Convention also provides that ‘no programme or measure concerning a question relating to the management of fisheries shall be adopted under this Annex’.²⁴⁰ The phrase ‘questions relating to the management of fisheries’ includes the question of which action can be taken under instruments constituting, *inter alia*, NEAFC, ‘whether or not such action has been taken’.²⁴¹

Nevertheless, the OSPAR Commission could affect fisheries management in the North-East Atlantic in two ways. First, where the OSPAR Commission considers that

235 PECMAS Second Meeting Report, at p. 8.

236 New NEAFC Convention, Article 14(3).

237 The cooperation between NEAFC and NAFO with regard to redfish will be dealt with in Section 4.5.4 below.

238 Convention for the Protection of the Marine Environment of the North-East Atlantic, Paris, 22 September 1992. The OSPAR Convention is exceptional in the sense that most of the other regional seas conventions on the protection of the marine environment are only applicable to areas within the limits of the national jurisdiction of the contracting parties (and do not have the competence to address the establishment of MPAs in the Area). See Oude Elferink, ‘The Regime of the Area’, at pp. 171-172.

239 L. de La Fayette, ‘The OSPAR Convention Comes into Force: Continuity and Progress’, 14 *International Journal of Marine and Coastal Law* (1999), at p. 247.

240 OSPAR Annex V, Article 4(1).

241 OSPAR Agreement on the Meaning of Certain Concepts in Annex V to the 1992 OSPAR Convention on the Protection and Conservation of the Ecosystems and Biological Diversity of the Maritime Area (Reference number: 1998-15.2).

action is desirable in relation to such a question,²⁴² the Commission is to draw that question to the attention of the authority or international body competent for that question.²⁴³ In the context of high seas fisheries (for species other than salmon or tuna) in the North-East Atlantic, this is NEAFC. In fact, as part of the commitment to establish a network of MPAs in the OSPAR maritime areas by 2010, the OSPAR Commission has already drawn the attention of NEAFC to the need to protect corals on the western slopes of the Rockall Bank.²⁴⁴

Second, the establishment of MPAs by the OSPAR Commission in the North-East Atlantic might indirectly affect similar undertakings by NEAFC. The OSPAR Commission will undertake, among other things, to ‘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’ and ‘if appropriate, and in accordance with UNCLOS, consider, in consultation with the international organisations having the necessary competence, how such protection could be achieved for [the maritime area outside the jurisdiction of the Contracting Parties] and how to include such areas as components of the network’.²⁴⁵ The 2003 Strategies also stipulate that a network of MPAs will be identified on the basis of the OSPAR Guidelines for the Identification and Selection of Marine Protected Areas in the OSPAR Marine Area.²⁴⁶ The 2004 Initial OSPAR List of Threatened and/or Declining Species and Habitats identified, among others, deep-sea sponge aggregations, oceanic ridges with hydrothermal vents/fields, *lophelia pertusa* reefs, and seamounts.²⁴⁷ While the List explicitly states that the development of lists takes into account ‘relevant lists developed by other international forums’,²⁴⁸ the designation of such species and habitats, as well as the criteria employed in the selection, might influence processes to designate

242 Note, in this connection, that the 2003 Strategies provide that the Commission will continue to assess the effects on ecosystems and biological diversity of human activities in relation to which programmes and measures cannot be adopted. 2003 Strategies of the OSPAR Commission for the Protection of the Marine Environment of the North-East Atlantic (Reference number: 2003-21), para. 2.4(b). The Quality Status Report 2000 already assessed the impacts of fisheries on the marine environment in section 3.5.

243 OSPAR Annex V, Article 4(1). Where action within the competence of the Commission is desirable to complement or support action by those authorities or bodies, the Commission shall endeavour to cooperate with them. *Ibid.*

244 See Meeting of the OSPAR Commission, Stockholm, 26-30 June 2006, at Annex 6 (Briefing on OSPAR’s Work on the Protection of the Marine Environment of the High Seas), para. 19. As a response, NEAFC instructed the Secretary to answer the letter from the OSPAR Commission by drawing attention to the area already closed for bottom trawling, for different reasons (i.e., to protect juvenile haddock), on the western slopes of the Rockall Bank. NEAFC 2004 Annual Meeting Report, at p. 39.

245 2003 Strategies of the OSPAR Commission for the Protection of the Marine Environment of the North-East Atlantic (Reference number: 2003-21), para. 4.4(d)-(e).

246 *Ibid.*, para. 4.3(c).

247 2004 Initial OSPAR List of Threatened and/or Declining Species and Habitats (Reference Number: 2004-06).

248 *Ibid.*, para. 1.

similar protected areas undertaken in the North-East Atlantic, including processes undertaken by NEAFC.²⁴⁹ So far, no MPAs have been proposed in areas beyond national jurisdiction while one MPA (Rainbow Hydrothermal Vent) on the outer continental shelf of Portugal was reported.²⁵⁰

As noted earlier, NEAFC and the OSPAR Commission have already engaged in dialogue for several years.²⁵¹ However, cooperation is not yet sufficient: the relationship and future links between NEAFC and the OSPAR Commission were identified in the NEAFC Performance Review Report as the only area for potential improvement in the relationship with other organizations.²⁵² The Working Group on the Future of NEAFC has acknowledged this and recommended the Commission to develop an MoU or other working arrangements.²⁵³ At the 26th Annual Meeting, the Commission adopted terms of reference for the Working Group on the Future of NEAFC, which laid down a time plan for the development of a draft MoU with the OSPAR Commission with a view to consideration by NEAFC and OSPAR in June/July 2008.²⁵⁴

4.5 NORTHWEST ATLANTIC FISHERIES ORGANIZATION (NAFO)

Following the failure of the negotiations during the 1930s and 1940s to establish a fisheries commission for the entire North Atlantic, states adopted an agreement in 1949 aimed to protect and conserve the fishery resources in the Northwest Atlantic, which established the International Commission for the Northwest Atlantic Fisheries (ICNAF). ICNAF was reshaped in response to the extension of national jurisdiction by coastal states in the late 1970s. States agreed in 1978 to establish a new organization, the Northwest Atlantic Fisheries Organization (NAFO), under a new convention, which entered into force in 1979. The Organization is composed of a General Council, a Scientific Council, a Fisheries Commission and a Secretariat.²⁵⁵

249 For example, see the definitions of the habitats on the initial OSPAR list. Descriptions of Habitats on the Initial OSPAR List of Threatened and/or Declining Species and Habitats (Reference Number: 2004-07), amended by BDC 2006 Summary Record (BDC 06/10/1) § 3.32).

250 OSPAR Commission, 2006 Report on the status of the OSPAR Network of Marine Protected Areas OSPAR 07/6/6, at p. 12.

251 See NEAFC 2004 Annual Meeting Report, at p. 39; NEAFC 2005 Annual Meeting Report, at p. 38; NEAFC 2006 Annual Meeting Report, at p. 101.

252 NEAFC Review Panel Report, at p. 57. In the past, NEAFC members were reluctant to cooperate with the OSPAR Commission more actively: NEAFC noted that ‘the cooperation has to start on a national level and spill over to the RFMOs and [regional seas programmes] from there’. NEAFC 2005 Annual Meeting Report, at p. 38.

253 Report of the Meeting of the Working Group on the Future of the North-East Atlantic Fisheries Commission, 30-31 January and 1 February 2007, at pp. 10-11. This was agreed by the Commission. NEAFC 2007 Extraordinary Meeting Report, at p. 14.

254 NEAFC 2007 Annual Meeting Report, at p. 19. See also AM 2007/56.

255 NAFO Convention, Article II(2).

In 2005, the contracting parties to the NAFO Convention agreed to initiate a reform process within NAFO. The General Council and the Fisheries Commission established an *ad hoc* Working Group on NAFO Reform to review and, where appropriate, develop recommendations to modify and/or complete the provisions of the NAFO Convention.²⁵⁶ The contracting parties to the 1978 Convention adopted a new convention at the annual meeting in 2007.²⁵⁷ Under the new Convention, NAFO will consist of a Commission, a Scientific Council, and a Secretariat.²⁵⁸

The Convention applies to the waters of the Northwest Atlantic Ocean as defined in the Convention.²⁵⁹ The Regulatory Area is the part of the Convention Area beyond areas under national jurisdiction.²⁶⁰

Under the 1978 Convention, the object of NAFO is to contribute through consultation and cooperation to the optimum utilization, rational management and conservation of the fishery resources of the Convention Area.²⁶¹ The Fisheries Commission is responsible for the management and conservation of the fishery resources of the Regulatory Area, and its proposals are to be designed to achieve the optimum utilization of the fishery resources of the Regulatory Area.²⁶² The objective of the new NAFO Convention is to ensure the long-term conservation and sustainable use of the fishery resources in the Convention Area and, in so doing, to safeguard the marine ecosystems in which these resources are found.²⁶³ The new convention also provides that contracting parties shall promote the optimum utilization and long-term sustainability of fishery resources.²⁶⁴

The term ‘fishery resources’ is defined in the new convention as all fish, molluscs and crustaceans within the Convention Area, excluding sedentary species over which coastal states may exercise sovereign rights consistent with Article 77 of the LOSC and, in so far as they are managed by other international conventions or agreements, anadromous and catadromous stocks as well as highly migratory species listed in Annex I of the LOSC.²⁶⁵ Discrete high seas *fish* stocks, therefore, are clearly included in the species coverage of the new convention. The absence of any reference to ‘other sedentary species’, unlike the SEAFO Convention, may be interpreted to imply the

256 Meeting Proceedings of the General Council and Fisheries Commission for 2005/2006, at p. 170 (Reform of NAFO (GC Doc. 05/2), para. 1).

257 New NAFO Convention.

258 *Ibid.*, Article V(2).

259 *Ibid.*, Article IV(1).

260 *Ibid.*, Article I(p). In a previous draft, it was defined as the part ‘which lies beyond the areas in which coastal states exercise fisheries jurisdiction’ E.g., Draft New NAFO Convention (Revision 3, Corr.), Article I(1)(p). Now, it is clear that the outer continental shelf is not included in the Regulatory Area.

261 NAFO Convention, Article II(1).

262 *Ibid.*, Article XI(1) and (2).

263 New NAFO Convention, Article II.

264 *Ibid.*, Article III(a).

265 *Ibid.*, Article I(f). The 1978 Convention applied to all fishery resources of the Convention Area except for, *inter alia*, sedentary species of the continental shelf. NAFO Convention, Article I(4).

exclusion of sedentary species other than molluscs and crustaceans beyond the outer limit of the continental shelf.²⁶⁶

The new Convention is still pending ratification by members.²⁶⁷ In addition, some of the new approaches adopted in the new Convention have already been introduced in practice under the 1978 Convention. For these reasons, the rest of the present section analyzes the provisions of the new Convention and the 1978 Convention as well as practice under the 1978 Convention.

4.5.1 Precautionary approach

Under the new convention, contracting parties shall adopt measures based on the best scientific advice available to ensure that fishery resources are maintained at or restored to levels capable of producing the MSY, and to rebuild fishery resources to the said levels²⁶⁸ and they shall apply the precautionary approach in accordance with Article 6 of the FSA.²⁶⁹ In that provision, the term ‘advice’, rather than ‘evidence’, is employed. This may reflect recent calls for RFMOs to base their conservation measures on the advice of their scientific bodies, and this terminology probably allows members to avoid a controversy associated with the term ‘evidence’ (i.e., whether information is sufficiently proven).

In addition, contracting parties shall prevent or eliminate over-fishing and excess fishing capacity, and ensure that levels of fishing effort do not exceed those commensurate with the sustainable use of the fishery resources.²⁷⁰

In practice, NAFO has already adopted the precautionary approach for several years. As early as 1997, the Precautionary Approach framework (‘PA framework’) was developed by the Scientific Council, although it was not formally adopted by the Fisheries Commission.²⁷¹ In 1999, the Fisheries Commission adopted a resolution ‘to apply a precautionary approach widely for stocks under NAFO purview’ and, to achieve this goal, agreed, *inter alia*, to determine precautionary reference points for

266 Living Resources such as fauna including reefs, flora and benthic micro-organisms are therefore excluded. Note that NAFO has used the term ‘fish’ in a narrow sense, as seen in the practice of distinguishing between fish and invertebrates. See, e.g., Meeting Proceedings of the General Council and Fisheries Commission for 2005/2006, at p. 165. Compare with e.g., Molenaar, who considers that the new NAFO Convention ‘explicitly’ includes sedentary species of the Area. E.J. Molenaar, Current Legal and Institutional Issues Relating to the Conservation and Management of High Seas Deep Sea Fisheries, at p. 13 note 88 and its accompanying text.

267 For the amendment procedures, see NAFO Convention, Article XXI.

268 Under the 1978 Convention, the Commission only needed to ‘take into account any relevant information or advice provided to it by the Scientific Council’. *Ibid.*, Article XI(2).

269 New NAFO Convention, Article III(b)-(c).

270 *Ibid.*, Article III(f).

271 Concerns were expressed by fisheries managers over the 1997 framework, including: the prohibition of fishing below the buffer stock biomass reference point (‘Bbuf’); no consideration of the desirability of stable TACs; and no consideration of multi-species situations. Precautionary Approach Framework (PA Framework), at pp. 1-2.

stocks where sufficient information exists, and to determine provisional precautionary reference points, whenever possible, and a precautionary approach for other stocks.²⁷²

The 1997 framework was revised and recommended by the Scientific Council, and the revised framework was finally adopted by the Fisheries Commission in 2004.²⁷³ The new PA framework adopts five zones (Safe Zone, Overfishing Zone, Cautionary Fishing Zone, Danger Zone, and Collapse Zone), according to which management strategies and courses of action are determined, rather than the perception of a linear decrease of fishing mortality in accordance with the stock assessment.²⁷⁴ In the new framework, the fishing mortality limit should be no higher than the MSY, whereas there should be a low probability that the fishing mortality exceeds the limit reference point.²⁷⁵ Thus, in this framework, while the concept of MSY is not discarded, the adoption of new reference points substantially changed the traditional approach to fisheries management. The three sets of reference points (i.e., limit reference points, buffer reference points and target reference points) used in the 2004 framework seem to correspond to those of Annex II of the FSA, although the 2004 framework does not advise adopting pre-agreed conservation and management actions to be taken where reference points are approached or exceeded.²⁷⁶

Canada proposed to test the framework on two stocks i.e., yellowtail flounder in Division 3LNO (a straddling stock) and shrimp in Division 3M (a discrete high seas stock) before applying it to all regulated stocks and to request the Scientific Council also to provide a description of how the advice using the PA framework differs from advice provided in the traditional manner. It was stated that yellowtail flounder in Division 3LNO was a data-rich stock in good health and managed by TAC/Quota, while shrimp in Division 3M was a data-poor stock in good condition and managed by effort controls. This proposal was adopted by the Fisheries Commission.²⁷⁷ Its request in 2004 for scientific advice on management in 2006, noting the 2004 PA framework, requested information concerning: the limit and precautionary reference points as described in Annex II of the FSA indicating areas of uncertainty; the stock

272 Resolution 2/99 of the Fisheries Commission of NAFO, adopted on 17 September 1999 to guide implementation of the Precautionary Approach within NAFO.

273 Meeting Proceedings of the General Council and Fisheries Commission, September 2004-August 2005, at p. 97. In the previous year, FC WP 03/18 concerning the precautionary approach framework was not adopted by the Fisheries Commission at the 2003 annual meeting. Comments were adopted by the Fisheries Commission, stating that ‘further discussion on the practical application of the framework is required’ and ‘in the meantime the Fisheries Commission encourages Contracting Parties, in developing proposals for fisheries conservation and management, to consider the NAFO Precautionary Approach Framework in preparing choices for future action’. Meeting Proceedings of the General Council and Fisheries Commission for 2003/2004, at pp. 88 and 124.

274 PA framework, at pp. 2-3.

275 Ibid., at p. 4.

276 Henriksen *et al.*, *Law and Politics in Ocean Governance*, at p. 78. In addition, they point to the Fisheries Commission disregarding much of the information on stocks. Henriksen *et al.*, *Law and Politics in Ocean Governance*, at p. 79.

277 Meeting Proceedings of the General Council and Fisheries Commission, September 2004-August 2005, at pp. 97 and 140.

biomass and fishing mortality trajectory over time; information regarding the current Zone within which the stock is located as well as proposals regarding possible harvest strategies to move the resource to (or maintain it in) the Safe Zone including medium-term considerations and associated risk or probabilities which will assist the Commission in developing the management strategies described in paragraphs 4 and 5 of Annex II in the FSA; and a description of the advice using the Framework different from advice provided in the traditional manner.²⁷⁸

In 2005, Canada proposed to extend the PA framework to other stocks by requesting the Scientific Council to determine biological reference points for all outstanding stocks, but the US cautioned against making a ‘blanket’ request to the Scientific Council. The Fisheries Commission encouraged the continuing work of the Scientific Council in determining reference points for the PA framework.²⁷⁹ In the end, noting the PA framework, the Fisheries Commission requested that the Scientific Council provide information related to the implementation of the PA framework for *all* stocks under its responsibility, including the limit and precautionary reference points.²⁸⁰

4.5.2 Ecosystem approach

The Fisheries Commission under the 1978 Convention was only required to take into account very limited ecosystem considerations.²⁸¹ It is questionable whether the 1978 Convention provided a firm basis for the conservation of marine ecosystems.²⁸² The new convention explicitly provides that the contracting parties are ‘COMMITTED to applying an ecosystem approach to fisheries management’.²⁸³ Under the new convention, contracting parties shall take due account of the impact of fishing activities on other species and marine ecosystems and, in doing so, adopt measures to minimize harmful impact on living resources and marine ecosystems.²⁸⁴ In collaboration with the Scientific Council, the Commission is to assess the impact of fishing and other human activities on living resources and marine ecosystems.²⁸⁵ The Commission may refer to the Scientific Council any question pertaining to the scientific basis for the decisions it may need to take concerning ‘fishery resources, the impact of fishing activities on living resources, and the safeguarding of the ecosystem in which these

278 Ibid., at p. 155.

279 Meeting Proceedings of the General Council and Fisheries Commission for 2005/2006, at p. 121.

280 Ibid., at pp. 166-167 (especially, paragraph 4).

281 The Fisheries Commission shall take into account, among other things, an effect through species interrelationships. NAFO Convention, Article XI(3).

282 Henriksen and others argue that ‘it is more questionable whether the Fisheries Commission may ban all fishing in a specific area by establishing a marine protected area, or prohibit bottom trawling in areas to protect the environment’. Henriksen *et al.*, *Law and Politics in Ocean Governance*, at pp. 75 and 79-80.

283 New NAFO Convention, preambular para. 8.

284 Ibid., Article III(d). See also Ibid., Article VI(8)(b). The term ‘living resources’ is defined as ‘all living components of marine ecosystems’. Ibid., Article I(k).

285 Ibid., Article VI(6)(c).

resources are found'.²⁸⁶ Furthermore, contracting parties shall take due account of the need to minimize pollution and waste originating from fishing vessels as well as minimize discards, catch by lost or abandoned gear, catch of species not subject to a directed fishery and impacts on associated or dependent species, in particular endangered species.²⁸⁷ In addition, contracting parties shall take due account of the need to preserve marine biodiversity.²⁸⁸

While the introduction in the Convention text of an ecosystem approach is new, existing NAFO measures already reflect this approach,²⁸⁹ including a resolution to protect sea turtles in the NAFO Convention Area²⁹⁰ and a measure for the conservation of sharks.²⁹¹ More importantly, NAFO has addressed the protection of VMEs from bottom fisheries.

In 2004, during the discussion concerning implications for NAFO resulting from the JPOI, delegates were especially interested in an application of the ecosystem approach within NAFO and mentioned the ecological impact of fishing gear (bottom trawling), seamounts, marine protected areas, and by-catch problems as possible areas of attention for NAFO.²⁹² In fact, the regulation of the impacts of bottom trawl on marine ecosystems is an important topic for NAFO, given the fact that '[t]he main gear type used in the NAFO [Regulatory Area] is the bottom trawl'.²⁹³

In 2005, the Fisheries Commission adopted measures entitled 'Ecosystem Approach to Fisheries Interim Measures' as proposed by Canada. The Fisheries Commission requested the Scientific Council for advice on the development of criteria for determining areas of marine biological and ecological significance and on the identification of such areas in the NAFO Regulatory Area. In this context the Fisheries Commission also decided to amend Article 20 of CEM to invite vessels engaged in fishing in four areas in the NAFO Regulatory Area (i.e., Orphan Knoll, Corner Seamounts, Newfoundland Seamounts and New England Seamounts), where possible,

286 *Ibid.*, Article VI(7).

287 *Ibid.*, Article III(i).

288 *Ibid.*, Article III(e). The term 'marine biological diversity' is defined in an almost identical way to the NEAFC Convention, echoing the definition in the CBD. *Ibid.*, Article I(l).

289 NAFO Annual Report 2006, at p. 4. The annual report noted that despite the formal acceptance of the ecosystem approach to fisheries (EAF) by NAFO, single species assessments are still necessary for the management of the commercial target fish and this continues to form the backbone of the work of the Scientific Council. *Ibid.*, at p. 10.

290 Fisheries Commission Report at the 28th Annual Meeting in 2006, at p. 9.

291 This measure concerns, among other things, the reporting of data for all catches of sharks. NAFO, Northwest Atlantic Fisheries Organization Conservation and Enforcement Measures (CEM), Article 16. See also NAFO Annual Report 2005, at pp. 10-11. Note that while oceanic sharks are included in Annex I of the LOSC, deep-water sharks are not included in highly migratory species.

292 Meeting Proceedings of the General Council and Fisheries Commission, September 2004-August 2005, at p. 97.

293 See NAFO, 'NAFO Fishery', <<http://www.nafo.int/fisheries/frames/fishery.html>> (last visited 28 May 2007).

to provide for the collection of biological data.²⁹⁴ By subjecting any fishing activity on known seamounts found in the NAFO Regulatory Area to extensive data collection, it was expected that the measure would provide additional data for the Scientific Council to consider and eventually assist the Fisheries Commission to prioritize the areas of ecological and biological significance.²⁹⁵

In 2006, the Fisheries Commission adopted a proposal by Canada on 'Precautionary Closure to Four Seamount Areas based on the Ecosystem Approach to Fisheries'.²⁹⁶ It appears that two seamounts are located on the Canadian continental shelf and the other two on the US continental shelf, while all of them are located in the Regulatory Area.²⁹⁷ First, it decided to close the above-mentioned four seamounts to all fishing activities involving demersal fishing gears until 31 December 2010.²⁹⁸ Second, the Fisheries Commission was to consider providing access to small-scale and restricted exploratory fishery, effective as of 1 January 2008, not to exceed 20 % of the fishable area of each seamount at the 2007 Annual Meeting. These representative areas would be recommended by the Scientific Council based on existing surveys and commercial data from these seamount areas. Recommendations would be made on areas that could be fished on each seamount and on a protocol for the collection of the data required to assess these seamounts.²⁹⁹ Vessels may only fish in the defined areas in accordance with the protocol established by the Scientific Council and adopted by the Fisheries Commission.³⁰⁰ If vessels fishing in the areas encounter hard corals, notification of the location of the coral area is to be provided to the Executive Secretary who will implement an immediate temporary closure of that area to all

294 See Meeting Proceedings of the General Council and Fisheries Commission for 2005/2006, at pp. 115-116 and 140. See also FSA Review Conference Preparatory Report, at p. 37.

295 Meeting Proceedings of the General Council and Fisheries Commission for 2005/2006, at pp. 115-116. See also the Fisheries Commission's request for scientific advice, especially paragraph 9 in *ibid.*, at p. 168.

296 Fisheries Commission Report at the 28th Annual Meeting in 2006, at pp. 9 and 48. The measures shall be reviewed in 2010. *Ibid.*, at p. 49.

297 In an FAO map, the southwest portion of New England Seamounts appears to straddle the Regulatory Area and an area under national jurisdiction. The map is available at FAO, 'Marine Protected Areas in the High Seas', <<http://www.fao.org/fishery/topic/16204>> (last visited 17 April 2008). But that area under national jurisdiction does not appear in the map of NAFO, 'NAFO CONVENTION AREA', available at <http://www.nafo.int/image/maps/nafo_map_hr.jpg> (last visited 17 April 2008).

298 See Fisheries Commission Report at the 28th Annual Meeting in 2006, at p. 48. Originally, the proposal was a closure to all fishing activities, but Russia expressed its view that the closure should be limited only to bottom fishing gears. The proposal was revised by incorporating the term 'demersal' to accommodate the position of Russia, and the revised proposal was adopted with this understanding. See *ibid.*, at p. 9.

299 *Ibid.*, at p. 48. See also NAFO Annual Report 2006, at p. 7. According to the measure, Contracting parties shall provide the Executive Secretary, in advance of the June 2007 Scientific Council meeting, with all existing data from survey and commercial fisheries that have taken place in these seamount areas. Fisheries Commission Report at the 28th Annual Meeting in 2006, at p. 49.

300 *Ibid.* In addition to the protocol, vessels fishing in the areas shall have a scientific observer on board. *Ibid.*

contracting parties pending a Fisheries Commission decision at the next Annual Meeting.³⁰¹ In 2007, the Scientific Council recommended, among other things, that any research survey in the closed areas should be reviewed first by the Scientific Council before proceeding.³⁰²

In 2007, Canadian and EU proposals concerning bottom fishing restrictions to protect VMEs were discussed. Consensus was not reached on either of them; instead, interim measures were adopted to establish a Coral Protection Zone closing all fishing activity involving bottom contact gear in Division 3O from 1 January 2008 until 31 December 2012.³⁰³ This closed area straddles the Canadian EEZ and the Regulatory Area.³⁰⁴

The intersessional Meeting held in May 2008 discussed a strategy for the protection of VMEs. The meeting agreed on measures to implement UNGA Resolution 61/105, including: to promptly identify VMEs in the North-West Atlantic, assess existing bottom fishing areas and their impact on sensitive habitats and adopt conservation and management measures to prevent SAIs on such habitats.³⁰⁵ Importantly, the meeting decided that, starting in 2009, all new bottom fisheries were to be considered exploratory and have to follow a detailed protocol for data collection, including measures to prevent damage to deep-sea habitats. A new Ad Hoc Working Group of Fishery Managers and Scientists on VMEs would advise the Fisheries Commission on adequate measures for the protection of VMEs.³⁰⁶

4.5.3 Discrete high seas stocks

NAFO has taken conservation and management measures for several DHSFS in Division 3M: cod, American plaice, redfish and shrimp.³⁰⁷

With regard to cod and American plaice, in response to the Scientific Council's advice to allow no directed fishery as well as to limit by-catch to the lowest level possible, the Fisheries Commission has agreed to continue moratoria (i.e. no directed

301 Ibid.

302 Report of the Fisheries Commission, 29th Annual Meeting, 24-28 September 2007, Lisbon, Portugal, at p. 6.

303 Ibid., at pp. 10-11.

304 See Ibid., Annex 24.

305 See press release from the Special Meeting of the NAFO Fisheries Commission, 30 April – 7 May 2008, 'NAFO takes action to protect the deep seas', available at <<http://www.nafo.int/about/media/press/press-may08.html>> (last visited 22 May 2008).

306 See *ibid.*

307 The stock structure of these fish stocks as discrete high seas stocks has been indicated in the FSA Review Conference Preparatory Report, at p. 20; Maguire *et al.*, *The State of World Highly Migratory, Straddling and Other High Seas Fishery Resources and Associated Species*, at p. 39. In addition to stocks currently regulated by NAFO, one stock of witch (a name of species) is also considered to be a discrete high seas stock: the Scientific Council concluded that the witch stock in Division 3M at the depth of less than 730 m do not appear to be linked with the witch stock in Division 2J+3KL. See Meeting Proceedings of the General Council and Fisheries Commission for 2002/2003, at p. 69. Currently, no request for scientific advice has been made in relation to this stock.

fishery) for the cod stock and the American plaice stock in Division 3M as well as the by-catch provisions of the CEM in 2003-2004 and 2005-2006.³⁰⁸ In 2006, in accordance with scientific advice, it was decided that the moratorium and other provisions for these stocks be continued in 2007 and 2008.³⁰⁹ With respect to American plaice, the EU suggested in 2002 that the measure should be for 2003 only, while the US noted that in the circumstances of the moratoria, it is more appropriate to use a multi-year approach.³¹⁰

The redfish stock in Division 3M has been regulated through setting the TAC and its allocations to contracting parties. Between 2003 and 2006, while the Scientific Council advice was set at the range of 3000-5000 tonnes, the annual TAC has continued to be set at 5000 tonnes.³¹¹ In 2007, while the Scientific advice was set at 5000 tonnes, the Fisheries Commission set the TAC at 8500 tonnes for 2008 and 2009.³¹² The national quotas are the same as those for 2007.³¹³

Shrimp fisheries in Division 3M have been managed by the imposition of restrictions on fishing efforts and their allocation. Until 2006, the Scientific Council advised 45,000 or 48,000 tonnes TAC, although it advised tentatively in 2007 that exploitation levels should not exceed the 2005-2006 levels. The restrictions on fishing days were maintained.³¹⁴ It is interesting to compare these restrictions with the management of

308 Ibid., at pp. 69-70; Meeting Proceedings of the General Council and Fisheries Commission for 2003/2004, at pp. 89-90; Meeting Proceedings of the General Council and Fisheries Commission, September 2004-August 2005, at pp. 99 and 101-102.

309 Fisheries Commission Report at the 28th Annual Meeting in 2006, at p. 7.

310 Meeting Proceedings of the General Council and Fisheries Commission for 2002/2003, at p. 70.

311 Ibid., at pp. 69-70 and 109; Meeting Proceedings of the General Council and Fisheries Commission for 2003/2004, at pp. 89 and 125; Meeting Proceedings of the General Council and Fisheries Commission for 2005/2006, at p. 120.

312 Report of the Fisheries Commission, 29th Annual Meeting, 24-28 September 2007, Lisbon, Portugal, at pp. 5 and 7.

313 Ibid., at p. 7. In reality, the sum of national quotas exceeds the TAC; the footnote on the quota table specifies the procedures to be taken when the catch reaches 50 % and 100 % of the TAC.

314 Meeting Proceedings of the General Council and Fisheries Commission for 2002/2003, at p. 70; Meeting Proceedings of the General Council and Fisheries Commission for 2003/2004, at pp. 88 and 90; Meeting Proceedings of the General Council and Fisheries Commission, September 2004-August 2005, at pp. 98 and 102; Meeting Proceedings of the General Council and Fisheries Commission for 2005/2006, at p. 121. Fisheries Commission Report at the 28th Annual Meeting in 2006, at p. 7; Report of the Fisheries Commission, 29th Annual Meeting, 24-28 September 2007, Lisbon, Portugal, at pp. 5 and 7.

In addition, in 2006, a proposal to revise the CEM articles relevant to this stock in respect of Article 19 (Product Labelling Requirements) and Article 20 (Recording of Catch and Stowage) was adopted. Fisheries Commission Report at the 28th Annual Meeting in 2006, at p. 7.

Note that the United States also opposed the effort limitation scheme in 2002, when the Scientific Council advice was not ready at the time of annual meeting. It was agreed that the Scientific Council advice was relatively similar to that of the previous year, the current system should be maintained, but if it changed significantly, the decision was to be changed through a special meeting of the Fisheries Commission or by other means. Meeting Proceedings of the General Council and Fisheries Commission for 2002/2003, at p. 70.

the straddling shrimp stock in the neighbouring Division 3L, which has been managed through the TAC and quota allocation.³¹⁵ In fact, although a majority of the contracting parties wished to maintain the current fishing effort limitation scheme in the absence of any new information on the stock in Division 3M, Iceland has continuously claimed that the current system is not effective in that total catch exceeds what was advised by the Scientific Council and is thus contrary to the recommendation. In accordance with the Fisheries Commission mandate to review possible management systems and options for that stock,³¹⁶ an intersessional meeting was held in May 2008 and decided to maintain the current management regime for these stocks and not to increase the fishing effort or the TAC.³¹⁷

In the course of the amendment to the NAFO Convention, the Scientific Council proposed to redefine the boundary of Division 3M to include a small rectangle currently in 3L.³¹⁸ The proposal was not adopted in the final text of the amendment and the boundary of Division 3M remains unchanged. That amendment would have contributed to managing DHSFS on the basis of ecosystems since the current boundary does not include the south-western deeper part of the Flemish Cap where certain deep-water species live.

4.5.4 Cooperation with other organizations

The new Convention provides that the Commission shall seek to develop cooperative working relationships with other intergovernmental organizations which can contribute to its work and which have competence for ensuring the long-term conservation and sustainable use of living resources and their ecosystems.³¹⁹

The Organization shall cooperate with other relevant RFMOs taking note of their conservation and management measures.³²⁰ In recent times, as regards pelagic redfish which occur in the Norwegian EEZ as well as in the NEAFC Regulatory Area, catches were reported also in the NAFO areas. Cooperation on its management was initiated by these two RFMOs. NAFO has been allocated part of the TAC established by NEAFC, and the TAC has been allocated to NAFO contracting parties which are not members of NEAFC.³²¹

315 See NAFO Conservation and Enforcement Measure, Annex I.A.

316 Report of the Fisheries Commission, 20th Annual Meeting, 24-28 September 2007, Lisbon, Portugal, NAFO/FC Doc. 07/24, at pp. 7-8

317 See press release from the Special Meeting of the NAFO Fisheries Commission, 30 April – 7 May 2008, ‘NAFO takes action to protect the deep seas’, available at <<http://www.nafo.int/about/media/press/press-may08.html>> (last visited 22 May 2008).

318 See Report of the Working Group on the Reform of NAFO, 12-15 September 2006, 17 September 2006, Lunenburg Co., Nova Scotia, Canada, NAFO/GC Doc. 06/3, at p. 4.

319 New NAFO Convention, Article XVII(b).

320 Ibid., Article XVII(c).

321 For the latest measure, see Annex I.A (Annual Quota Table) of NAFO Conservation and Enforcement Measures.

4.6 CONCLUDING REMARKS

This chapter has examined the constitutive instruments and practice of five RFMOs that have competence to regulate straddling stocks (CCAMLR, the GFCM, SEAFO, NEAFC and NAFO). A focus has been placed on measures regulating fisheries for DHSFS and deep-water species as well as those aimed at protecting benthic ecosystems. Issues raised in this Chapter include whether these RFMOs have competence to manage the exploitation of DHSFS and sedentary species discrete to the Area; what principles apply to the management of fisheries for DHSFS and whether distinctions are made between DHSFS and straddling fish stocks under the constitutive instruments and practice of these RFMOs; whether deep-sea fisheries are addressed differently from pelagic fisheries in the constitutive instruments and practice of these RFMOs; whether and how conservation measures, especially area-based management to protect VMEs are established by these RFMOs and coordinated with other international organizations; whether these RFMOs approach the issue of area closures differently between the outer continental shelf and the Area; whether the practice of these RFMOs has led, or is likely to lead, to an implicit or explicit amendment of the legal framework under the LOSC. This section attempts to synthesize the finding in the preceding sections and to draw conclusions.

The examination of the practice of the RFMOs concerned shows that many of the (probable) DHSFS managed by these RFMOs are deep-water species.³²² The regulated DHSFS species vary from one RFMO to another. For example, most of the species managed by SEAFO are deep-water species, while stocks regulated by NAFO are mostly those not included in deep-water species.

First of all, it has been confirmed that the constitutive instruments of the five RFMOs examined in this chapter may be interpreted to give them competence to regulate fisheries for both straddling fish stocks and DHSFS.

CCAMLR and the GFCM aim to conserve 'living marine resources', while NEAFC and NAFO limit the scope of fishery resources to fish, molluscs and crustaceans. SEAFO goes beyond the latter two organizations but falls short of conserving the living marine resources as a whole: the SEAFO Convention defines fishery resources as fish, molluscs and crustaceans and 'other sedentary species'. Sedentary species beyond the outer limit of the continental shelf not classified as fish, molluscs and crustaceans (e.g., coral reefs, flora and micro-organisms) are included in fishery resources under the SEAFO Convention but not under the NEAFC or NAFO Convention.³²³ The CCAMLR Convention does not explicitly refer to sedentary species, but,

322 This observation accords with the observation made by the reports prepared for the FSA Review Conference by the FAO and the DOALOS that most of the currently known high seas stocks, i.e., not highly migratory species and that occur exclusively in the high seas, are deep-water species. FSA Review Conference Preparatory Report, at p. 23; Maguire *et al.*, *The State of World Highly Migratory, Straddling and Other High Seas Fishery Resources and Associated Species*, at p. 49. For a list of species of potential discrete high seas stocks, see the Introduction.

323 It is only the SEAFO Convention that explicitly uses the term 'sedentary species' in the context of the seabed and the subsoil thereof beyond the outer limit of the continental shelf.

since the convention is applicable to all marine living resources, such organisms are within the scope of CCAMLR.³²⁴ Benthic micro-organisms subject to bioprospecting, rather than fishing, are not explicitly included in the mandate of any of the five RFMOs.³²⁵

As far as management units for deep-water species and DHSFS are concerned, NAFO and CCAMLR contrast starkly with the GFCM, SEAFO and NEAFC. CCAMLR and NEAFC have adopted conservation and management measures on the basis of stocks. Conservation and management measures of the latter three RFMOs are mostly concerned with each species or for deep-sea fisheries in general, although NEAFC and SEAFO have recently adopted separate TACs for two management units in the Regulatory Area and the Convention Area, respectively. It remains to be seen whether the stock-based management becomes prevalent when more scientific information on, *inter alia*, the stock biomass becomes available.

The adoption of TACs by NEAFC and SEAFO in 2007 means that the TAC is now used for deep-water species by four out of the five RFMOs concerned, although NEAFC still manages most of the deep-sea fisheries by virtue of effort regulation and SEAFO has not yet adopted measures specifically targeting deep-water species except for toothfish and crab fisheries. Despite the hesitation shown in discussions within NEAFC and in the conclusion of the FAO Expert Consultation on deep-sea fisheries in 2006, it remains to be seen whether effort regulation (instead of the TAC) becomes the norm in the management of deep-sea fisheries, when sufficient information is available.

Application of the precautionary approach is found in each and every RFMO investigated in this Chapter. None of the constitutive instruments of RFMOs predating the FSA explicitly provides for the precautionary approach, but three of them (i.e., NAFO, NEAFC and the GFCM) have amended their constitutive instruments to make reference to the application of the precautionary approach. SEAFO, the only RFMO established after 1995 to manage straddling stocks, has provisions for the application of the precautionary approach.

Three RFMOs (i.e., NAFO, NEAFC and CCAMLR) have clearly adopted the precautionary approach in practice in the context of deep-sea fisheries. With regard to the GFCM, despite critical comments on its application of the precautionary approach,³²⁶ scientific advice on deep-sea fisheries and area closures seems to have been generally followed. On the other hand, critical remarks appear warranted for

324 Because the continental shelves of coastal states cover all benthic areas in the Mediterranean and the Black Sea, there is by definition no sedentary species beyond the outer limit of the continental shelf within the GFCM Convention Area. See also Molenaar, 'Current Legal and Institutional Issues Relating to the Conservation and Management of High Seas Deep-Sea Fisheries', at p. 125.

325 This seems true even for CCAMLR. See *ibid.*, at p. 131 note 121.

326 Mooney-Seus and Rosenberg, Regional Fisheries Management Organizations (RFMOs): Progress in Adopting Precautionary Approach and Ecosystem-Based Management, at p. 44 (arguing that the GFCM has not really done much more than just state its intention to implement the precautionary approach).

SEAFO.³²⁷ Despite its adoption of TACs in 2007, scientific advice on other matters is not yet fully reflected in its conservation measures.

Some of the provisions of the constitutive instruments explicitly refer to the FSA in the application of the precautionary approach. The application of the precautionary approach in practice is generally compatible with the provisions concerning the precautionary approach in the FSA and other relevant international instruments.³²⁸

The provisions for the precautionary approach in the constitutive instruments do not distinguish between straddling stocks and discrete high seas stocks.³²⁹ Nevertheless, the vulnerability of deep-water species and VMEs has given rise to arguments in favour of more precautionary measures for deep-sea fisheries than those for other regulated fisheries. However, measures applying the precautionary approach are different from one another, and the degree to which the conservation measures reflect scientific advice varies among the RFMOs concerned. It is therefore not yet possible to argue that because of the characteristics of deep-water species such as the paucity of scientific information and data, stricter measures are adopted for deep-sea fisheries. It is still to be seen whether or not this sort of management approach, which was advocated in the 2006 FAO Expert Consultation, will be accepted in the actual practice of RFMOs. Stricter measures include: setting very precautionary TAC or fishing effort restrictions, much lower than the MSY level, and provisional closures.

All five RFMOs incorporate ecosystem considerations in various ways and to a varying degree. In response to the concerns of the international community, many regional *fisheries* management organizations and arrangements are now competent to protect marine ecosystems even though such measures are not taken with a view to maximizing the yield of fish. But their measures are still part of the management of fisheries: no RFMO attempts to regulate activities not related to fisheries in order to protect marine ecosystems.

All of the five RFMOs examined in this Chapter have taken measures to protect benthic habitats from deep-sea fisheries. This is because of the characteristics of deep-sea fisheries, which are likely to impact on benthic communities and, thus, to affect VMEs such as seamounts, hydrothermal vents and coldwater corals. Some of the areas closed for bottom fisheries are located within the continental shelf of the coastal states, while others exist in the Area. There is no discernible difference between measures taken to protect ecosystem features within and beyond the outer limit of the continental shelf.

In many cases, the coastal members of the RFMOs have proposed that high seas areas should be closed (especially Canada in NAFO and the EC in the GFCM and NEAFC), regardless of whether or not the area concerned is located within the outer

327 For such a view, see *ibid.*, at p. 144 (observing that the reluctance to institute provisional reference points analogous to those for similar or better known stocks or to establish interim measures is not in keeping with the precautionary approach). See also *ibid.*, at p. 146.

328 For possible (minor) departures, see Section 4.4.1.1 (NEAFC) and Section 4.5.1 (NAFO) above.

329 As noted earlier, this is quite different in other issues such as the role of coastal states in decision-making and the compatibility of conservation measures.

limit of the continental shelf.³³⁰ Nothing in the record indicates that coastal members of the RFMOs have been given a special right to initiate proposals to address impacts on benthic ecosystems in the five RFMOs unless the area concerned partly covers the EEZ or the territorial sea, but it is reasonable to assume that the coastal state proposals were at least partly motivated by concerns about the impacts of high seas fisheries on ecosystem features of their continental shelf.

So far, measures are focused on the protection of seamounts and, to a lesser degree, cold water corals. Hydrothermal vents (e.g., the Rainbow Hydrothermal Vent in the NEAFC Regulatory Area) appear to have escaped the attention of RFMOs in spite of the relevant recommendations in the UNGA Resolutions.

The above observation leads to the next issue, namely the collaboration between RFMOs and regional environmental protection mechanisms. The RFMOs have retained independent authority to establish area-based conservation measures: formally, CCAMLR and NEAFC may control the designation of MPAs in their Convention areas;³³¹ the GFCM and the SPAMI List under the Mediterranean environmental regime have no formal relationship. But, the regional environmental protection regimes may exert an indirect influence on their practice, *inter alia*, through establishing standards and criteria for the designation of such areas. So far, cooperation with regional environmental protection mechanisms in the establishment of protected areas by RFMOs has not yet materialized for two reasons. First, RFMOs have not established mechanisms to take into account criteria or considerations of regional environmental protection mechanisms. Second, regional environmental protection mechanisms have mostly focused on the establishment of protected areas within areas under national jurisdiction. Ongoing developments at the global level, however, will undoubtedly accelerate the pace of establishing high seas MPAs and collaboration (or conflicts) between RFMOs and regional environmental protection mechanisms that have the competence to establish high seas MPAs will likely occur in the years to come.

The implementation of UNGA Resolution 61/105 with regard to deep-sea fisheries has yet to be done in the RFMOs examined in this chapter. In fact, apart from the closure of known seamounts and coral reefs, the GFCM and SEAFO have not implemented the relevant paragraphs of the Resolution: in depths less than 1000 m, deep-sea fisheries are largely unregulated in the GFCM Agreement Area; SEAFO will also need to discuss the issue in an upcoming meeting. On the other hand, CCAMLR, NAFO and NEAFC have already addressed the Resolution, but detailed criteria and standards to be employed must be determined by their scientific bodies before the conservation measures concerned are actually implemented.

330 SEAFO measures were considered on the basis of recommendations by the Scientific Committee, rather than proposals by members.

331 As noted in Section 4.1.4 above, CCAMLR's authority with regard to the approval of proposals for ASPAs and ASMAs goes beyond fisheries.

Other Practice at the Regional and National Levels

In contrast to the regions examined in the previous chapter, there are various regions where no regional fisheries management organizations with competence to regulate fisheries for DHSFS exist. This chapter examines the state practice in these regions and national legislation addressing deep-sea fisheries and their impact on benthic marine ecosystems. The first section analyzes a regional fisheries management arrangement concluded for the Southern Indian Ocean, which still awaits entry into force. The next two sections deal with regions where states have already engaged in initiatives to establish an RFMO/A, focusing on the interim measures aimed at addressing the impacts of bottom fisheries and draft texts for the proposed RFMO/As. The fourth section deals with other areas with a view to examining practice which may have implications for the conservation and management of discrete high seas stocks at the international level, exploring the possibility of establishing RFMO/As in these regions and analyzing factors which are potentially relevant to the establishment and structure of such RFMO/As. The final section seeks to examine two types of national legislation addressing deep-sea fisheries and the protection of VMEs.

5.1 SOUTHERN INDIAN OCEAN

In the high seas area of the South-western part of the Indian Ocean, relatively large-scale fishing operations for orange roughy began in the 1990s by vessels from Australia, New Zealand and South Africa. In 2000, Namibian vessels, and probably vessels from Russia and China, were also involved in the fisheries. Two parallel negotiations took place for the management of these fisheries.¹

On the one hand, in November 1999, Australia invited New Zealand and South Africa for preliminary talks on the negotiation of an RFMO to manage the fisheries. At the end of July 2000, Australia forwarded a draft text for an RFMO to the two negotiating partners for their consideration and comment. Australia's intention, it is argued, was that, after an initial round of drafting, the draft would be lodged with the FAO to allow other states with a real interest to participate in the finalization of the draft.²

1 For an account of the negotiating history as well as the status of the fisheries, see Molenaar, 'Management and Conservation of Orange Roughy', at pp. 109-115; Possible Options Regarding Issues Central to the Negotiations for the Establishment of a South West Indian Ocean Fisheries Commission, SAFR/DM/SWIO/04/4, at pp. 1-8; Mooney-Seus and Rosenberg, Regional Fisheries Management Organizations (RFMOs): Progress in Adopting Precautionary Approach and Ecosystem-Based Management, at p. 158.

2 Molenaar, 'Management and Conservation of Orange Roughy', at pp. 109-110.

On the other hand, under FAO Council Resolution 1/116 in June 1999,³ the FAO Council authorized the Director-General of the FAO to convene *ad hoc* meetings of the members of the former Committee for the Development and Management of Fisheries in the Southwest Indian Ocean (a subsidiary body of the IOFC); the meetings were aimed at completing the process of the establishment of a new fisheries commission for the area under Article XIV of the FAO Constitution and taking such interim action as may be required regarding the management of the fisheries resources of the area covered by the former Committee (i.e., FAO Statistical Area 51) pending the formal establishment of the new body. Two technical meetings attended by coastal states were held in 2000.⁴ At the second technical meeting participants agreed on the establishment of an Article XIV body under the FAO. The focus of the discussions at the meeting remained on the common interest of the coastal states in the management of fisheries. But, it was recognized that deepwater fisheries were developing on the high seas in the southern Indian Ocean. In view of this, the technical meetings were followed by Intergovernmental Consultations with the broad participation of both coastal states and high seas fishing nations.⁵ The above-mentioned negotiating track started by high seas fishing states was discontinued after the participants in that track took part in this process.

The first Intergovernmental consultation agreed on a new definition of the area of competence of the proposed Commission that would exclude areas under national jurisdiction, and the second Intergovernmental consultation reaffirmed this view.⁶ However, the recognition of the special interests of developing states as well as the desirability of some form of consultative mechanism that would assist coastal states in developing their coastal fisheries and in confronting common problems posed a challenge.⁷ Doubts concerning the advisability of an Article XIV body were expressed due to the awareness that the present state of the resources and fishing activities does not warrant the establishment of heavy and expensive management machinery.

In January 2004, the third Intergovernmental Consultation decided to split the negotiation of the South West Indian Ocean Fisheries Commission (SWIOFC) into

3 That resolution abolished the Indian Ocean Fishery Commission (IOFC).

4 Participants in these meetings were Comoros, France, Kenya, Madagascar, Mauritius, Mozambique, Seychelles, Somalia and Tanzania. See Molenaar, 'Management and Conservation of Orange Roughy', at p. 110.

5 Among others, Australia, the EC, Namibia, New Zealand and South Africa participated in this Consultation. See Report of the Intergovernmental Consultation on the Establishment of a Southwest Indian Ocean Fisheries Commission, Saint-Denis, Réunion, 6-9 February 2001, FAO Fisheries Report No. 647, SAFR/R647(Bi), at p. 1, para. 2.

6 See *ibid.*, at p. 5 (Article III); Report of the Second Intergovernmental Consultation on the Establishment of a Southwest Indian Ocean Fisheries Commission, Antananarivo, Madagascar, 25-28 September 2001, Fisheries Report No. 664, SAFR/R664 (Bi), at pp. 5-6 (Article 4).

7 See Report of the Intergovernmental Consultation on the Establishment of a Southwest Indian Ocean Fisheries Commission, Saint-Denis, Réunion, 6-9 February 2001, at pp. 10-11 (Article VI and the comments thereon).

two tracks, one for coastal areas and the other one for the high seas.⁸ The track for coastal areas resulted in the establishment of the Statutes of the SWIOFC by FAO Council Resolution 1/127, as an advisory body under Article VI of the FAO Constitution.⁹ Subsequently, the high seas track adopted SIOFA on 7 July 2006.

The Agreement does not establish an RFMO, but fisheries are to be managed through Meetings of Parties.¹⁰ This is one of the few fisheries management mechanisms after the adoption of the FSA that may be qualified as ‘arrangement’ in the sense of the FSA.

5.1.1 The Southern Indian Ocean Fisheries Agreement (SIOFA)

The Agreement applies to the area of the Southern Indian Ocean defined in Article 3, excluding waters under national jurisdiction.¹¹ Waters under national jurisdiction bordering or enclosed by the high seas area are the area of competence for the SWIOFC.

Fishery resources in the Agreement mean fish, molluscs, crustaceans and other sedentary species within the area, but sedentary species subject to the jurisdiction of coastal states and highly migratory species are excluded from the application of the Agreement.¹² The formulation of fishery resources in SIOFA is the same as that contained in the SEAFO Convention.

A distinctive characteristic of the negotiation which led to the adoption of the Agreement is that participants were fully aware of the existence of DHSFS throughout the process. One would even argue that these fish stocks were the essential catalyst of the entire process of negotiations on the management of high seas fisheries. In fact, Australia, New Zealand and South Africa proceeded from the presumption that the orange roughy stock in the region is a discrete high seas fish stock.¹³

8 Report of the Third Intergovernmental Consultation on the Establishment of a Southwest Indian Ocean Fisheries Commission, Nairobi, Kenya, 27-30 January 2004, Fisheries Report No. 742, SAFR/R742, at pp. 3-5, paras 20-28.

9 Report of the Council of FAO, Hundred and Twenty-seventh Session, Rome, 22-27 November 2004, CL 127/REP, at para. 99.

10 During the negotiation, it was emphasized that the proposed Agreement should be ‘as light and inexpensive as possible’. See, e.g., Report of the Third Intergovernmental Consultation on the Establishment of a Southwest Indian Ocean Fisheries Commission, Nairobi, Kenya, 27-30 January 2004, at p. 5, para. 25. As a matter of fact, it is claimed that the orange roughy fishery already collapsed before the management mechanism was established. See press release by the Deep Sea Conservation Coalition on 5 July 2006, ‘The Southern Indian Ocean needs real protection, not voluntary half measures’, available at <http://www.savethehighseas.org/publicdocs/DSCC_PR_sealordresp_050706.pdf> (last visited 25 May 2007). During the negotiations, participants were aware that, because of the longevity and aggregated distribution of the species targeted, there was an expressed urgent need for a management mechanism. See, e.g., Possible Options Regarding Issues Central to the Negotiations for the Establishment of a South West Indian Ocean Fisheries Commission, at p. 6.

11 SIOFA, Article 3(1).

12 Ibid., Article 1(f).

13 Molenaar, ‘Management and Conservation of Orange Roughy’, at p. 109.

The objectives of the Agreement are to ensure the long-term conservation and sustainable use of the fishery resources and to promote the sustainable development of fisheries in the Agreement's area of application.¹⁴ Fishery resources are to be managed so that they are maintained at the levels capable of producing the MSY, and depleted stocks of fishery resources are to be restored to the said levels.¹⁵

Measures are to be adopted based on the best scientific evidence available to ensure the long-term conservation of fishery resources, taking into account the sustainable use of such resources and implementing an ecosystem approach to their management.¹⁶ Due account shall be taken of the need to minimize harmful impact that fishing activities may have on the marine environment.¹⁷ Biodiversity in the marine environment shall be protected: in formulating the conservation and management measures necessary for ensuring the long-term sustainability of the fishery resources, the Meeting of the Parties shall take into account the need to protect marine biodiversity, based on the best scientific evidence available.¹⁸

At the same time, the precautionary approach shall be applied in accordance with the Code of Conduct and the FSA, whereby the absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures.¹⁹ Measures shall be taken to ensure that the level of fishing activity is commensurate with the sustainable use of fishery resources.²⁰ The reference to the prevention or elimination of over-fishing and excess fishing capacity, which was included as one option in the previous draft discussed at the fourth Intergovernmental Consultation, was not adopted in the final text of the Agreement.²¹ In addition, the Meeting of the Parties shall adopt generally recommended international minimum standards for the responsible conduct of fishing operations.²²

Contracting parties, acting jointly under the Agreement, shall cooperate closely with other international fisheries and related organizations in matters of mutual interest, in particular with the SWIOFC and any other RFMO with competence over high seas waters adjacent to the Agreement's area of application.²³ In addition, in developing advice and recommendations, the Scientific Committee shall take into consideration the work of the SWIOFC as well as that of other relevant research organizations and RFMOs.²⁴

14 SIOFA, Article 2.

15 *Ibid.*, Article 4(d). Note the suggested reference to the maximum economic yield at a previous meeting. Report of the Fourth Intergovernmental Consultation on the Establishment of a Southwest Indian Ocean Fisheries Commission, Mahe, Seychelles, 13-16 July 2004, Fisheries Report No. 776, SAFR/R776, at Appendix F, Article 4(d).

16 SIOFA, Article 4(a).

17 *Ibid.*, Article 4(e).

18 *Ibid.*, Articles 4(f) and 6(d).

19 *Ibid.*, Article 4(c).

20 *Ibid.*, Article 4(b).

21 For a comparison, see Fisheries Report No. 776, at Appendix F, Article 4(b).

22 SIOFA, Article 6(1)(e).

23 *Ibid.*, Article 16.

24 *Ibid.*, Article 7(1)(b).

5.1.2 Practice

The Agreement enters into force 90 days from the date of receipt by the depositary of the fourth instrument of ratification, acceptance or approval, at least two of which have been deposited by coastal states bordering the area.²⁵ So far, it has been ratified by one state (the Seychelles) and signed by another eight states and the European Community.²⁶

The Conference on the Southern Indian Ocean Fisheries Agreement, in adopting SIOFA, also adopted, by unanimity, the Resolution on interim arrangements concerning the high seas in the Southern Indian Ocean and called on all interested states and REIOs to cooperate on a voluntary basis and in accordance with the Resolution towards the conservation and management of the fishery resources covered by the Agreement, while awaiting the entry into force of the Agreement.²⁷ The Resolution called upon all states, REIOs and fishing entities that have participated in the Inter-governmental Consultations or that have carried out or carry out fishing activities in the high seas in the Southern Indian Ocean to implement, among others, the measures outlined in the resolution on data collection originally adopted in the Seychelles in July 2004.²⁸ The information recommended to be collected includes tow-by-tow information on target species, trawl type (bottom or mid-water), depth of gear and vessel latitude and longitude and net opening.²⁹ In response to a questionnaire circulated by the UN Secretary-General, both the European Community and New Zealand indicated that they were committed to implementing the interim measures.³⁰

At the side-event following the signing ceremony for SIOFA, four fishing companies, which are members of the Southern Indian Ocean Deepwater Fishers Association (SIODFA), announced voluntary closures to high-seas deepwater trawling.³¹ The SIODFA, using the scientific knowledge gathered over a decade of activity in the

25 Ibid., Article 24.

26 FAO Legal Office, 'Southern Indian Ocean Fisheries Agreement', <<http://www.fao.org/Legal/treaties/035s-e.htm>> (last visited 30 May 2008). The European Community is in the process of launching the ratification procedure of the Agreement. See A/62/260, at p. 48, para. 155.

27 Final Act of the Conference on the Southern Indian Ocean Fisheries Agreement, para. 15. The Final Act, the Resolution and other relevant instruments are available at FAO Legal Office, 'Final act of the Conference on the Southern Indian Ocean Fisheries Agreement', <<http://www.fao.org/Legal/treaties/035t-e.htm>> (last visited 30 May 2008).

28 Para. 1.

29 Annex 1 of the Resolution on data collection concerning the high seas in the Southern Indian Ocean.

30 A/62/260, at pp. 48-49, para. 155. In addition, the EU seeks to adopt interim measures implementing UNGA Resolution 61/105 in this region. See Communication from the Commission to the Council and the European Parliament, Destructive fishing practices in the high seas and the protection of vulnerable deep sea ecosystems, COM(2007) 604 final, 17.10.2007, at p. 9.

31 For information, see FAO press release, 'New agreement governing high-seas fishing in Indian Ocean', 12 July 2006, <<http://www.fao.org/newsroom/en/news/2006/1000360/index.html>>; IUCN press release, 'Fishing companies announce world's first voluntary closures to high-seas deepwater trawling', 6 July 2006, <http://www.iucn.org/en/news/archive/2006/07/2_pr_fishing_high_seas.htm#> (last visited 20 June 2008).

Indian Ocean and in consultation with the FAO, has delimited 309,000 km² of the ocean floor in eleven separate benthic protected areas to be closed for fishing by vessels of its members.³²

5.2 SOUTH PACIFIC OCEAN

In the vast high seas areas of the South Pacific Ocean, the desire to resolve conflicts concerning fishery resources has led to the establishment of regional and sub-regional arrangements dealing with or focusing on fisheries for certain species. Furthermore, there are ongoing negotiations among the coastal states and high seas fishing nations for the establishment of a new RFMO. The first sub-section deals with the conflict between Chile and the EU concerning swordfish and jack mackerel. The next sub-section examines fisheries for orange roughy in some areas of the South Pacific as well as management arrangements between Australia and New Zealand. The final sub-section analyzes the ongoing negotiations among states, REIOs and fishing entities with regard to the establishment of a South Pacific Regional Fisheries Management Organization (SPRFMO).

5.2.1 Disputes in the South-East Pacific

During the 1990s, Chile enacted a series of legislation for the conservation of swordfish and jack mackerel in the high seas area of the South-East Pacific applicable to foreign vessels, including Spanish vessels. After Chile and the EU failed to solve conflicts concerning swordfish through direct cooperation, the EU and Chile separately began procedures to initiate proceedings before a WTO panel and a Special Chamber of ITLOS, respectively, in 2000.³³

32 IUCN press release, 'Fishing companies announce world's first voluntary closures to high-seas deepwater trawling', 6 July 2006, http://www.iucn.org/en/news/archive/2006/07/2_pr_fishing_high_seas.htm#> (last visited 20 June 2008).

33 For the conflicts involving Chile and distant water fishing nations in this region, see M.C. Engler, Establishment and Implementation of a Conservation and Management Regime for High Seas Fisheries, with Focus on the Southeast Pacific and Chile: From Global Developments to Regional Challenges, Research Paper (UN - Nippon Foundation Fellow 2006-2007), at p. 105; Miles and Burke, 'Pressures on the United Nations Convention on the Law of the Sea of 1982 Arising From New Fisheries Conflicts: The Problem of Straddling Stocks', at pp. 347-348; M.A. Orellana, 'The Swordfish Dispute between the EU and Chile at the ITLOS and the WTO', 71 *Nordic Journal of International Law* (2002), at pp. 55-81; Rau, 'Comment: The Swordfish Case: Law of the Sea v. Trade', 62 *Zeitschrift für ausländisches öffentliches Recht und Völkerrecht* (2002), at pp. 37-42; Rayfuse, *Non-Flag State Enforcement in High Seas Fisheries*, at pp. 315-318; P.-T. Stoll and S. Vöneky, 'The Swordfish Case: Law of the Sea v. Trade', 62 *Zeitschrift für ausländisches öffentliches Recht und Völkerrecht* (2002), at pp. 21-35; Orrego Vicuña, *The Changing International Law of High Seas Fisheries*, at p. 57 *et seq.* In this connection, see also discussions on the Chilean Presential Sea Doctrine: T.A. Clingan, Jr., 'Mar Presencial (The Presential Sea): *Deja vu* all over again? A response to Francisco Orrego Vicuña', 24 *Ocean Development and International Law* (1993), at pp. 93-97; J.G. Dalton, 'The

Amid the conflict, Chile negotiated an agreement with other coastal states of the South-East Pacific to establish an RFMO within the framework of the Permanent Commission for the South Pacific (CPPS). In 1997, its member states agreed to prepare a framework agreement for the conservation of marine resources. The meeting also agreed on certain guidelines, including the accession of third states with an established interest in the South-East Pacific high seas marine resources.³⁴ Negotiations culminated in the conclusion of the Galapagos Agreement in August 2000. The Agreement was negotiated among coastal states, and was finalized in the absence of distant water fishing nations, although the Agreement applies exclusively to the high seas of the South-East Pacific.³⁵ This particular point is highly controversial as pointed out by the EC in its claim before the ITLOS Special Chamber.³⁶

The objective of the Agreement is the conservation of living marine resources in the high seas zones of the South-East Pacific, 'with special reference to straddling and highly migratory fish populations'.³⁷ The Agreement stipulates various provisions giving effect to the rights and interests of coastal states concerning straddling and highly migratory fish stocks.³⁸

Given the controversy surrounding the conclusion of the Agreement as well as diverging opinions over its provisions, it is not certain whether the Commission to be established, if ever, under the Agreement may have legitimacy as a competent RFMO. For example, Orrego Vicuña, judge *ad hoc* appointed by Chile in the swordfish case before ITLOS, comments that the Agreement 'does not seem to have clearly understood the manner how the compatibility of measures adopted under national jurisdic-

Chilean Mar Presencial: A Harmless Concept or a Dangerous Precedent?' 8 *International Journal of Marine and Coastal Law* (1993), at pp. 397-418; Joyner and De Cola, 'Chile's Presential Sea Proposal', at pp. 99-121; Kwiatkowska, 'The High Seas Fisheries Regime: At a Point of No Return?' at pp. 340-341; F. Orrego Vicuña, 'The 'Presential Sea': Defining Coastal States' Special Interests in High Seas Fisheries and Other Activities', 35 *German Yearbook of International Law* (1992), at pp. 264-292; F. Orrego Vicuña, 'Toward an Effective Management of High Seas Fisheries and the Settlement of the Pending Issues of the Law of the Sea', 24 *Ocean Development and International Law* (1993), at pp. 81-92; Orrego Vicuña, *The Changing International Law of High Seas Fisheries*, at pp. 107-111; J.A. de Yturriaga, *The International Regime of Fisheries: From UNCLOS 1982 to the Presential Sea* (1997), at pp. 228-238.

34 Orellana, 'The Swordfish Dispute', at pp. 63-64.

35 See Galapagos Agreement, Article 3.

36 *Case concerning the Conservation and Sustainable Exploitation of Swordfish Stocks in the South-Eastern Pacific Ocean (Chile/European Community)*, Order 2000/3, 20 December 2000, Case No. 7, at para. 3(f).

37 Galapagos Agreement, Article 2.

38 See, e.g., *ibid.*, Articles 5(1)(e), 7(i) and 9. Note that Article 23(1) of the FSA provides for the right and the duty to take measures to promote the effectiveness of sub-regional, regional and global conservation and management measures, while Article 23(4) stipulates that nothing in that article affects the exercise by states of their sovereignty over ports in their territory in accordance with international law.

tion with those adopted for the high seas is ensured. Problems concerning participation are also apparent.³⁹

Provisions concerning the principles of conservation (except for the requirement of compatibility between coastal state measures and high seas measures) largely reflect modern approaches to fisheries management, *inter alia*, in the FSA, even though the signatories of the Galapagos Agreement are not parties to it.

Conservation measures are defined as measures aimed at the sustainable exploitation of fish populations.⁴⁰ For the purposes of the Agreement, the term ‘conservation’ includes the concept of the sustainable exploitation of living marine resources.⁴¹ The term ‘living marine resources’ is defined as straddling or highly migratory fish stocks and such other living marine resources as their associated or dependent species.⁴² Thus, conservation measures adopted under the Agreement may be aimed at the conservation of DHSFS and, to the extent considered as being associated with or dependent on straddling or highly migratory fish stocks, discrete high seas non-fish stocks as well.

It is recalled that the objective of conservation is ‘with special reference to straddling and highly migratory’ fish stocks.⁴³ Conservation measures are to be adopted for particular species of high priority on the basis of commercial interests or conservation requirements, although in the determination of regulated species the states parties shall also consider the need to preserve the ecological equilibrium between those species and associated or dependent species.⁴⁴

The measures shall be based on appropriate scientific and technical information, with the aim of long-term conservation of marine living resources, while the scarcity or lack of available information shall not be construed as a reason to prevent or delay the adoption of precautionary measures, including reference points. The effects of fishing on the populations of associated or dependent species, as well as on the marine ecosystem as a whole, shall be taken into account. These effects, as well as environmental changes, shall be taken into account in order to reduce or prevent the risk of potentially irreversible alternations. Appropriate measures shall be adopted to prevent incidental catches as well as excessive fishing capacity.⁴⁵ The states parties shall gather scientific, technical and statistical information about the fish populations and, as far as possible, about associated or dependent species, and make it available.⁴⁶ Although various provisions refer to the protection of the marine ecosystem, a question remains as to how a balance should be struck between the focus of the

39 Orrego Vicuña, ‘The Law Governing High Seas Fisheries: In Search of New Principles’, at p. 390.

40 Galapagos Agreement, Article 1(11).

41 *Ibid.*

42 *Ibid.*, Article 1(13).

43 *Ibid.*, Article 2.

44 *Ibid.*, Article 4(1)-(2) and (5).

45 *Ibid.*, Article 5(1)(a)-(d) and (f).

46 *Ibid.*, Article 7(e).

Agreement on the straddling and highly migratory fish stocks and the conservation of DHSFS.

In the meantime, proceedings before the WTO panel and the Special Chamber of ITLOS, respectively, were formally started in parallel during 2000-2001. Before the WTO panel, the EC argued that Chile made the transit of swordfish through Chilean ports and the importation of the affected catches into Chile impossible, and the EC claimed that 'the above mentioned prohibition is inconsistent with Articles V: 1-3 and XI: 1 of the GATT 1994 and, as a result, nullifies benefits accruing to the EC under that agreement'.⁴⁷ Before the ITLOS Special Chamber, Chile requested to the Chamber to decide, *inter alia*, whether the EC had complied with its obligations under Articles 64, 116-119, 297(1)(b) and 300 and whether the EC had challenged the sovereign right and duty of Chile as a coastal state to prescribe measures within its national jurisdiction for the conservation of swordfish and to ensure their implementation. On the other hand, the EC requested to the panel to decide, *inter alia*, whether the 1999 Chilean Decree No. 598 is in breach of Articles 87, 89 and 116-119 of the LOSC, whether the Galapagos Agreement was negotiated in keeping with the provisions of the LOSC and whether its substantive provisions are in consonance with Articles 64 and 116-119.⁴⁸

In 2001, Chile and the EU agreed on a provisional arrangement and suspended the proceedings in both fora.⁴⁹ The provisional arrangement stipulates, *inter alia*, the resumption of the work of the bilateral scientific and technical commission (BSTC), a joint research fisheries programme on swordfish in international waters in the South-East Pacific, requirements of the vessel monitoring system (VMS) and of the collection of data on the catch as well as the location of fisheries and fishing effort, and access to three designated Chilean ports by the Community vessels participating in the programme. The provisional arrangement also envisaged a series of joint international consultations starting in 2001 with all the parties having an interest in the fishery to promote multilateral cooperation for the conservation and management of swordfish, leading to the establishment of an RFMO or arrangement through a diplomatic conference in 2002.⁵⁰ In this regard, a Multilateral Arrangement on Exchange of Information concerning the swordfish stocks was established, to which the EC, Chile, Taiwan, Colombia, Ecuador, Japan and Peru are parties.⁵¹ To date, Chile

47 WT/DS193/2.

48 ITLOS *Swordfish case*, Order 2000/3, at para. 3.

49 *Case concerning the Conservation and Sustainable Exploitation of Swordfish Stocks in the South-Eastern Pacific Ocean (Chile/European Community)*, Order 2001/1, 15 March 2001, Case No. 7; *Measures Affecting the Transit and Importation of Swordfish*, Communication from the European Communities, 6 April 2001 WT/DS193/3. See also WT/DS193/3/Add.1, 9 April 2001. For the text of the arrangement, see *WTO Swordfish case*, WT/DS193/3.

50 On the issue of 'real interest' in the context of swordfish fisheries in the South East Pacific, see Orellana, 'The Swordfish Dispute', at pp. 74-75.

51 Interaction with Other Regional Fisheries Management Organisations, Paper Submitted by Australia, Chile and New Zealand to the First International Meeting on the Establishment of the South Pacific Regional Fisheries Management Organisation, SP/01/Inf4 rev2, at p. 12. For

and the EU have continued the suspension of proceedings before the WTO and ITLOS.⁵²

Since the signatories to the Galapagos Agreement have been engaged in negotiations for the establishment of a new RFMO in the region as analyzed in section 5.2.3 below, it is not likely that the provisions of the Galapagos Agreement will be implemented with regard to straddling fish stocks pending the negotiations for the new RFMO. In fact, the Galapagos Agreement has not entered into force. It was to enter into force with ratification by all the four coastal states.⁵³ Three (Chile, Ecuador and Peru) have already ratified the Agreement, while Colombia indicated that it was unable to ratify, while not excluding the possibility of ratification in the future.⁵⁴ In 2003, the four coastal states adopted a Modification Protocol, which amends the requirement for entry into force of the Agreement in Article 19 and only requires ratification by three of the coastal states.⁵⁵ Whereas Article 2 of the Protocol requires ratification by three of the signatories for the Protocol to enter into force, it has been thus far ratified by Chile and Ecuador.⁵⁶ Thus, currently, no legally binding international instrument exists with regard to straddling fish stocks or DHSFS in the South-East Pacific.

5.2.2 Orange Roughy Fisheries in the South-West Pacific

Orange roughy has been caught in the South Pacific by fishers mainly from New Zealand, Australia and South Africa for more than 20 years; in the South-West Pacific, there are several orange roughy fisheries in the Australian and New Zealand EEZs and in the high seas bordered by these EEZs.⁵⁷ High seas areas where orange

an analysis of differences between Chile and the EU on the possible RFMO for swordfish, see Orellana, 'The Swordfish Dispute', at pp. 72-74.

52 See WT/DS193/3/Add.2, 17 November 2003; WT/DS193/3/Add.3, 22 December 2005.

53 Galapagos Agreement, Articles 16(1) and 19(1).

54 Molenaar, 'Addressing Regulatory Gaps in High Seas Fisheries', at p. 543 note 60. The text of the Agreement and information on ratification are available at the website of the CPPS, 'Acuerdo Marco para la Conservación de los Recursos Vivos Marinos en la Alta Mar del Pacífico Sudeste', <<http://www.cpps-int.org/spanish/tratadosyconvenios/tratadosregionales/acuerdodegalapagos.htm>> (last visited 24 October 2008).

55 Modification Protocol for the Framework Agreement for the Conservation of the Marine Living Resources in the High Seas of the South-East Pacific, Lima, Peru, 27 November 2003, Article 1.

56 The text of the Protocol and information on ratification are available at the website of the CPPS, 'Protocolo Modificadorio del Acuerdo Marco para la Conservación de los Recursos Vivos Marinos en la Alta Mar del Pacífico Sudeste. Acuerdo de Galápagos', <<http://www.cpps-int.org/spanish/tratadosyconvenios/tratadosregionales/protocolomodificadorio.htm>> (last visited 24 October 2008).

57 The fishing history and other facts in this sub-section are based on the following literature: Lack *et al.*, *Managing Risk and Uncertainty in Deep-sea Fisheries*; Molenaar, 'Management and Conservation of Orange Roughy', at pp. 77-124; D. Staples, 'Management of Shared Fish Stocks: Australian Case Studies', Papers Presented at the Norway-FAO Expert Consultation on the Management of Shared Fish Stocks - Bergen, Norway, 7-10 October 2002, reproduced

roughy fisheries have been reported include the Challenger Plateau, the Lord Howe Rise, the Louisville Ridge and the South Tasman Rise.⁵⁸ Some of the orange roughy stocks are considered to be DHSFS.⁵⁹

The Louisville Ridge is a seamount area in the high seas area east of the New Zealand EEZ in the South-West Pacific Ocean. An orange roughy fishery has been developed there since the 1990s. Populations of orange roughy in the area of the Louisville Ridge are considered to be a discrete high seas fish stock. Australian vessels have not been engaged in the fishery there since 1998/99, although New Zealand vessels have fished consistently since 1993/94. The fishery expanded rapidly, so that its commercial viability diminished and New Zealand efforts in the fishery have declined. Attempts by New Zealand to estimate pre-fished and current biomass for the fishery have been largely unsuccessful.⁶⁰

Another area of orange roughy fisheries in the South-West Pacific is the South Tasman Rise. The South Tasman Rise is an area south of Tasmania, adjacent to the Australian EEZ. While modest amounts of orange roughy had been caught within the Australian EEZ, commercial fishing was primarily on the seamount in the high seas. Australian and New Zealand vessels were engaged in the fisheries there. In late 1997, fishing activities increased over a short period of time, although the aggregation was concentrated in a small area. Officials from Australia approached New Zealand raising concerns about the sustainability of the resource and the need to find a way to manage the fishery. The negotiations between the two governments led to the adoption of an arrangement in 1998 for the management of orange roughy on the South Tasman Rise that took effect as from 1 March 1998.⁶¹ A precautionary TAC (2100 tonnes) for the high seas was agreed based on the 1997 catches, but Australian vessels landed 2052 tonnes in February 1998 before the Arrangement became effective. To obtain samples during the July-August spawning season, the two states agreed to set aside a further 150 tonnes for each party for scientific research. The Arrangement expired on 28 February 1999, as stipulated in the arrangement; negotiations on an

in FAO Fisheries Report No. 695 Supplement, pp. 159-179, at pp. 160-163; J. Willing, 'Arrangement between the Government of Australia and the Government of New Zealand for the Conservation and Management of Orange Roughy on the South Tasman Rise', Papers Presented at the Norway-FAO Expert Consultation on the Management of Shared Fish Stocks - Bergen, Norway, 7-10 October 2002, reproduced in FAO Fisheries Report No. 695 Supplement, pp. 200-205.

58 Lack *et al.*, *Managing Risk and Uncertainty in Deep-sea Fisheries*, at pp. 63-66.

59 For further details, see section 5.2.3 below.

60 See Lack *et al.*, *Managing Risk and Uncertainty in Deep-sea Fisheries*, at pp. 43-44 and 47. For the population structure, see also the Working Draft for Information describing orange roughy *Hoplostethus atlanticus* fisheries relating to the South Pacific regional Fishery Management Organisation, as updated on 4 May 2007, at p. 7, available at <<http://www.southpacificrfmo.org/assets/Science%20IV/orange%20roughy%20species%20profile%20040507.pdf>> (last visited 16 June 2008).

61 Arrangement between the Government of Australia and the Government of New Zealand for the Conservation and Management of Orange Roughy on the South Tasman Rise, Signed on 12 January 1998 and 18 February 1998, respectively.

extension failed, largely due to disagreement on, *inter alia*, how to address over-fishing.⁶² Eventually, the two governments agreed on a new arrangement in 2000.⁶³ The 1998 and 2000 Arrangements primarily focused on three aspects: scientific research, conservation and management, and control of third party vessels.

At the early stages of the discussions, the debate focused on whether the stock was a straddling stock occurring both in the Australian EEZ and in the high seas adjacent thereto. Australia took a position that the resource is a single straddling stock, while New Zealand argued that two distinct stocks exist (one in the Australian Fishing Zone (AFZ) and the other one in the high seas). Due to the disagreement between the two governments, there was a need to establish whether or not the orange roughy populations on the South Tasman Rise were a discrete high seas stock. Therefore, the 1998 Arrangement provided that the parties would carry out a scientific research programme from 1 March 1998 to 28 February 1999 'to provide clear information on the stock structure and relationship between orange roughy taken on the high seas and orange roughy occurring within the [AFZ]' and to 'obtain information to enable a preliminary assessment of the status and productivity of the fishery'.⁶⁴ The 1998 Arrangement provided that, during the period, the parties would prohibit fishing on the high seas except with the authorization to be given for the purposes of implementing the above-mentioned scientific research programme;⁶⁵ the parties would exchange all relevant scientific information relating to orange roughy on the South Tasman Rise including associated species and by-catch.⁶⁶ The parties would prepare a joint report on the outcomes of analyses of scientific information, with particular emphasis on the best available information in relation to stock structure, and consider new conservation and management measures in February 1999.⁶⁷ The 2000 Arrangement extended the prohibition from the orange roughy fishery to trawling and other demersal fishing

62 Willing, 'Arrangement between the Government of Australia and the Government of New Zealand for the Conservation and Management of Orange Roughy on the South Tasman Rise', at p. 204; Staples, 'Management of Shared Fish Stocks: Australian Case Studies', at p. 161.

63 Arrangement between the Government of Australia and the Government of New Zealand for the Conservation and Management of Orange Roughy on the South Tasman Rise, Signed for New Zealand on 17 February 2000 and for Australia on 25 February 2000.

64 1998 South Tasman Rise Arrangement, para. 2. A 'precautionary' total catch limit of 2100 tonnes of orange roughy for this scientific research programme was shared between Australia and New Zealand in the proportion of verified catches made by vessels of each state in the high seas area of the South Tasman Rise during the period 1 January to 17 December 1997. 1998 South Tasman Rise Arrangement, paras 3 and 8. Initially, Australia allegedly took a position in which it claimed *exclusive rights* to catch and manage the orange roughy fishery in the high seas area of the South Tasman Rise. Willing, 'Arrangement between the Government of Australia and the Government of New Zealand for the Conservation and Management of Orange Roughy on the South Tasman Rise', at p. 201. But, this statement was denied by a former Australian official. Serdy, 'Schrödinger's TAC', at p. 495 note 4. For the purpose of assessing the stock structure, several other provisions were made. 1998 South Tasman Rise Arrangement, paras 5-7.

65 *Ibid.*, para. 8.

66 *Ibid.*, para. 9.

67 *Ibid.*, para. 18.

targeting *all species* on the high seas area of the South Tasman Rise except with the authorization of the appropriate authorities.⁶⁸ The 2000 Arrangement provided that the parties would still carry out a scientific research programme for the purposes of ‘obtaining information to enable an assessment of the size of the stock(s) of orange roughy on the South Tasman Rise and of the sustainable yield’ and ‘providing further information on the stock structure and relationship between orange roughy found in the high seas area of the South Tasman Rise and orange roughy found within the AFZ’.⁶⁹

Despite references to the FSA and some provisions implicitly confirming Australia’s interest, these Arrangements appear to avoid definite identification of the orange roughy stock as a straddling stock.⁷⁰ In fact, both Arrangements contained a non-prejudice clause with regard to any future arrangements or agreements with respect to Tasman Sea fisheries generally and/or orange roughy in the high seas area.⁷¹

Scientific research conducted in accordance with these Arrangements has two major implications for fisheries in the Tasman Sea region beyond orange roughy fisheries on the South Tasman Rise. First, the 1998 Arrangement provided that if it was to turn out that the orange roughy stock was a straddling stock, the parties would establish a consistent approach towards conservation, management and allocation for

68 2000 South Tasman Rise Arrangement, para. 2.

69 Ibid., para. 12. Any catch under the scientific programme would be taken within the TAC. Ibid., para. 13. The initial catch was set at 2400 tonnes for the 2001-2002 season and the TAC for subsequent seasons is subject to the variation made by decisions of the parties taking into account the outcomes of the scientific research and other circumstances and its quotas will remain in the same proportions. See Ibid., paras 3-6. The Australian and New Zealand fisheries ministers agreed in 2002 to management arrangements for the 2003-2004 to 2006-2007 seasons. They provide for the TAC to be lowered to 800 tonnes for the 2003-2004 season and then to be further reduced in each subsequent season unless fish in sufficient numbers are caught to trigger additional TAC. Information is available from the Australian Government, Department of Agriculture, Fisheries Forestry, ‘New Zealand – Australia Fisheries Cooperation’, <<http://www.daff.gov.au/fisheries/international/regional/newzealand>> (last visited 11 June 2007). Available data indicate that recent catch records remain at a very low level. See ‘Australian Fishing for Non-Highly Migratory Fish (1987 – 2006) in the Area of the Proposed South Pacific Regional Fisheries Management Organisation’, available at <http://www.southpacificfmo.org/assets/D%20and%20I%20WG/Australia_Country_Report%20180407.pdf> and ‘Working Draft for Information describing orange roughy *Hoplostethus atlanticus* fisheries relating to the South Pacific regional Fishery Management Organisation’, as updated on 4 May 2007, at pp. 8 and 12, available at <<http://www.southpacificfmo.org/assets/Science%20IV/orange%20roughy%20species%20profile%20040507.pdf>> (last visited 16 June 2008).

70 Now, the stock is regarded as a straddling stock. See ‘Working Draft for Information describing orange roughy *Hoplostethus atlanticus* fisheries relating to the South Pacific regional Fishery Management Organisation’, as updated on 4 May 2007, at p. 7, available at <<http://www.southpacificfmo.org/assets/Science%20IV/orange%20roughy%20species%20profile%20040507.pdf>> (last visited 16 June 2008).

71 See 1998 South Tasman Rise Arrangement, para. 22; 2000 South Tasman Rise Arrangement, para. 36. See also Molenaar, ‘Management and Conservation of Orange Roughy’, at p. 88.

all straddling fish stocks in the South Tasman Sea region, consistent with the FSA.⁷² It could be inferred from this that if the stock was found to be a discrete high seas fish stock or, perhaps, if it was not conclusively determined either way, an approach to the management of the (probable) discrete high seas fish stock would be different from the approach to straddling stocks in other areas of the Tasman Sea region. Second, the methodologies developed through a scientific research programme for orange roughy on the South Tasman Rise, including mutually acceptable criteria for determining whether or not a stock is a straddling stock, will assist in broader assessments of orange roughy stock characteristics in the Tasman Sea region.⁷³ In other words, it is likely that assessments of stock characteristics of newly discovered stocks in other areas of the region will be carried out in accordance with the methodologies developed in the research programmes for the South Tasman Rise.⁷⁴

As regards third parties, the 2000 Arrangement in its Paragraph 31 stipulates that '[t]he Parties will jointly consider in terms of Article 11 of the [FSA] any request by a third country referred to in paragraph 30 to become a Party to this Arrangement'.⁷⁵ Currently, Australia and New Zealand are the only parties to the Arrangement.⁷⁶ Since the Arrangement is essentially a bilateral endeavour to deal with high seas fisheries, the weakness of the 2000 Arrangement persists: in the future when the stock is rebuilt, the parties will again need to address third-party issues in order to ensure the effectiveness of the Arrangement unless an effective multilateral management scheme, whether legally-binding or not,⁷⁷ is established with the involvement of all states having an interest in high seas fisheries.⁷⁸

72 1998 South Tasman Rise Arrangement, para. 23.

73 *Ibid.*, para. 7; 2000 South Tasman Rise Arrangement, preambular para. 8.

74 This may be relevant for the work of the Scientific Working Group in the proposed South Pacific RFMO. See section 5.2.3 below.

75 However, Willing observes that since the 1998 Arrangement was between the two states and the issue of further membership was not anticipated, it had 'many of the features usually found in a cooperative transboundary regime rather than a straddling or high seas regime'. Willing, 'Arrangement between the Government of Australia and the Government of New Zealand for the Conservation and Management of Orange Roughy on the South Tasman Rise', at p. 203.

76 FSA Review Conference Preparatory Report, at p. 53, para. 252.

77 Neither the 1998 Arrangement nor the 2000 Arrangement is considered to be a treaty. The texts of the arrangements are carefully drafted so as not to give an impression of creating obligations (e.g., the use of 'will' instead of 'shall'). Staples calls these arrangements 'MOU'. Staples, 'Management of Shared Fish Stocks: Australian Case Studies', at pp. 161-162. See also Molenaar, 'Management and Conservation of Orange Roughy', at p. 104 note 111; Molenaar, 'Unregulated Deep-Sea Fisheries', at p. 237 note 70 and its accompanying text. Both states implemented the Arrangements in their domestic legislation. See Australia, Fisheries Management Regulations 1992, Regulation 4B(n); New Zealand, Fisheries (South Tasman Rise Orange Roughy Fishery) Regulations 2000 (SR 2000/11).

78 For the potential overlap between the coverage of the 2000 Arrangement and that of the proposed RFMO in the South Pacific and its consequences, see Section 5.2.3.1 and Section 5.2.3.2 below.

5.2.3 International Consultations on the Establishment of the Proposed South Pacific Regional Fisheries Management Organization

As illustrated above, fisheries management for the high seas, including the management of DHSFS, has been problematic in several parts of the South Pacific because of the lack of legitimacy, the lack of wide participation, or even the non-existence of a management system. The need to establish a broader fisheries management mechanism has been recognized.⁷⁹

In 2006, Australia, New Zealand and Chile, three coastal states in the South Pacific, started negotiations to establish a regional fisheries management organization or arrangement dealing with predominantly discrete high seas and straddling fish stocks in the entire South Pacific.⁸⁰ The negotiations are open to coastal states in the South Pacific and other interested states, including Canada, China, the EU, the Republic of Korea, Japan, Russia, Ukraine and the US as well as the Chinese Taipei fishing entity as a special observer.

Participants in the negotiations have been aware of the existence of DHSFS of both pelagic and deep-sea species.⁸¹ A paper submitted by the co-sponsors discussing

79 For example, see the media release by W. Truss, Australian Minister for Agriculture, Fisheries and Forestry, 'Orange Roughy Agreement', 7 February 2000, available at <<http://pandora.nla.gov.au/pan/54888/20051219-0000/www.maff.gov.au/releases/00/012wt.html>> (last visited 21 August 2008) ('Australia and New Zealand have also agreed to explore the possible development of a broad Tasman Sea Fisheries arrangement').

80 Information is available at the website of the International Consultations on the Establishment of the South Pacific Regional Fisheries Management Organisation, <<http://www.southpacificrfmo.org/>>. Hereinafter, the term 'non-highly migratory species' in this sub-section means discrete high seas stocks and straddling stocks to be managed by the proposed RFMO.

81 An information paper submitted at an initial stage of the negotiation even stated that fisheries for species other than highly migratory species in the high seas areas of the South Pacific are 'mainly discrete high seas stocks'. Information Paper (SP/01/Inf3 rev1), at p. 1. Although this statement does not seem correct in view of the subsequent fishery research, there are still some DHSFS. For example, the Central Pacific stock of Chilean jack mackerel (*Trachurus murphyi*) has been suggested to be a discrete high seas fish stock whereas stocks of orange roughy on the Louisville Ridge and the Lord Howe Ridge appear to be DHSFS. The fish stock profiles also provide information on other high seas fish stocks which might potentially be regarded as discrete high seas stocks and subject to commercial fisheries, including chub mackerel at the southern end of the South-East Pacific (250 or 300 m depth), and invertebrates such as deep-water rock lobster (*Projasus parkeri*) and rock lobster (*Jasus caveorum*) on the Foundation Seamounts, south-east of Pitcairn Island. Information available at International Consultations on the Establishment of the South Pacific Regional Fisheries Management Organisation, 'SWG profiles', <<http://www.southpacificrfmo.org/science-working-group/swg-profiles/>> (last visited 14 June 2007). The list of other commercially fished species includes: pelagic species such as Kingfish (*Seriola lalandi*; *Seriola spp.*), Rudderfish (*Centrolophus niger*); demersal species such as Alfonsino (*Beryx splendens*), Black cardinalfishes (*Epigonus telescopus*), Bluenose (*Hyperoglyphe antarctica*), Oreos (*Oreosomatidae*), Patagonian toothfish (*Dissostichus eleginoides*), Pelagic armourhead (*Pseudopentaceros richardsoni*), Bass/groper (*Polyprion americanus*), Hapuka (*Polyprion xygeneios*), Ribaldo (*Mora moro*), Rubyfish (*Plagiogeneion rubiginosum*), Snappers (*Etelis spp.*, *Pristipomoides spp.*); invertebrates such as Chilean jaggged lobster

governance principles and their application devoted one section to ‘Specific Regimes’. The paper states that it may be ‘worthwhile considering establishing more specific fisheries management regimes for particular species [i.e., species of discrete high seas stocks and straddling stocks] that take into account their unique characteristics’. The paper continues:

‘For discrete high seas [stock] species, a specific fisheries management regime could be developed for these species that takes into account their unique biology and habitat. The regime should be sufficiently flexible to respond to the discovery of new fish stocks. Although the UNFSA applies to straddling and highly migratory fish stocks, its principles could usefully be applied, as a minimum, to the management of discrete high seas stocks.’

The need for a regime for discrete high seas stocks which is different from that for straddling stocks is further underlined where the paper states that for straddling stock species, ‘consideration should be given to establishing decision making processes (such as separate chambers) that allow for the adoption of effective conservation and management measures, while preserving the rights of coastal and fishing states under international law’.⁸² In other words, the co-sponsors’ paper illustrates distinct points for the management of fisheries for discrete high seas stocks. First, principles of the FSA could be used as a minimum, while *additional* principles taking into account their unique biology and habitat should be applied. Second, the regime should accommodate the possibility that new fish stocks will be discovered. Third, a consideration of coastal states interests is less important, if not totally irrelevant, for discrete high seas stocks.

So far, five meetings have been held to discuss interim measures and the content of the proposed Convention. At the third meeting, the negotiations succeeded in adopting interim measures. The rest of this sub-section examines the interim measures and discusses drafts for the proposed Convention.

5.2.3.1 *Interim measures*

The participants in the negotiations to establish the SPRFMO were aware of the need to control fisheries through interim measures pending the establishment of the RFMO and discussed interim measures from the outset of the process. They adopted interim measures at the third meeting in April-May 2007.

The interim measures are voluntary and are not legally binding.⁸³ They are to be effective from 30 September 2007 and to apply until the entry into force of the proposed Convention and the adoption of conservation and management measures;

(*Projasus bahamondei*). Information available at ‘Species profiles’, <<http://www.southpacificrfmo.org/science-working-group/swg-profiles/species-profiles/>> (last visited 21 August 2008).

82 Governance Principles and Their Application (SP/01/Inf6), at pp. 3-4.

83 Interim Measures adopted by Participants in Negotiations to Establish South Pacific Regional Fisheries Management Organisation, Reñaca, Chile, 30 April-4 May 2007, preambular para. 2.

the participants are to review these interim measures, as necessary, so that they may be revised at future meetings.⁸⁴

The interim measures state that the participants are to take the interim measures, ‘taking into account an ecosystem approach to fisheries management and the precautionary approach’, in order to achieve ‘the sustainable management of fish stocks and the protection of vulnerable marine ecosystems’ in the high seas of the South Pacific (hereinafter ‘the area’).⁸⁵ While the northern boundary of the proposed RFMO is still under discussion, the northern boundary of the area of application of the interim measures is defined as south of the Equator.⁸⁶

Both pelagic fisheries and bottom fisheries in the high seas of the South Pacific Ocean are addressed in the interim measures.⁸⁷ The interim measures stipulate various measures separately for pelagic fisheries and for bottom fisheries as well as a handful of measures common to both fisheries. As opposed to the Chair’s draft presented to the second meeting, fisheries managed by existing (sub-regional) arrangements are not excluded from the scope of the interim measures.⁸⁸ The following paragraphs focus on the regulation of bottom fisheries by the interim measures, highlighting the difference between the measures for bottom fisheries and those for pelagic fisheries.

In respect of bottom fisheries, the participants agreed on the following, *inter alia*: freezing fishing efforts, identifying, mapping and closing VME sites, and assessing impacts of individual bottom fishing activities.

First, the participants are to limit the bottom fishing effort or catch to existing levels in terms of the number of fishing vessels and other parameters.⁸⁹ The criteria

84 See the section entitled ‘Period of Application and Review’ of these Interim Measures.

85 SPRFMO Interim Measures, preambular para. 1. The chair’s draft for interim measures stated various principles and measures applicable to both pelagic and bottom fisheries, including reference to the commitment to conservation and management in accordance with the LOSC and the FSA.

86 For other boundaries of the proposed RFMO, see Section 5.2.3.2 below.

87 The interim measures, in paragraph 9 of the Pelagic Fisheries part, provide that these interim measures do not apply to squid fisheries in the area concerned. It is not clear from the text whether the Pelagic Fisheries part does not apply (and the Bottom Fisheries part *does* apply) to the squid fishery or whether the entire interim measures do not apply to the squid fishery at all. There is no definition of pelagic fisheries or bottom fisheries agreed by the participants in the negotiation. Note that the squid fishery in the South Atlantic was listed as one of the deep-sea fisheries in the Report of the 2006 FAO Expert Consultation on deep-sea fisheries in the high seas. See Report and Documentation of the Expert Consultation on Deep-sea Fisheries in the High Seas, Bangkok, Thailand, 21-23 November 2006, at p. 30 (Annex II).

88 The chair’s draft, in preambular paragraph 1, stated that the proposed resolution would have been applicable to the high seas area of the South Pacific Ocean under discussion for fishery resources ‘not currently managed through a regional fisheries management organisation or arrangement’. See also a paper entitled ‘Interim Arrangements’, SP/01/Inf5, at para. 14 (raising the issue of, *inter alia*, the amalgamation of existing arrangements (e.g., the South Tasman Rise Arrangement) into the competence of the SPRFMO).

89 SPRFMO Interim Measures, Bottom Fisheries, para. 1.

used here are obviously ambiguous, compared to those for pelagic fisheries.⁹⁰ Participants are not to expand bottom fishing activities into new regions where such fishing is not currently occurring.⁹¹ There is no exception clause for non-fishing states with a catch history unlike that in pelagic fisheries.⁹² As regards pelagic fisheries, states not engaged in fisheries in 2007 may enter the fishery in the area in 2008 and 2009, if they have a catch history in the pelagic fisheries in the South Pacific; they will exercise a voluntary restraint of fishing efforts.⁹³ Before opening new regions or expanding fishing efforts or catch beyond existing levels in 2010 or later, the participants are to establish conservation and management measures to prevent SAIs from individual bottom fishing activities or to determine that such activities will not have adverse impacts.⁹⁴

Second, participants agreed to cooperate to identify VMEs, on the basis of the best available scientific information, and to map sites of their location.⁹⁵ They are to require that their vessels cease bottom fishing activities within five miles of any site where evidence of VMEs is encountered in the course of fishing operations, and to report the encounter to the interim Secretariat so that appropriate measures can be adopted in respect of the relevant site.⁹⁶ In respect of areas where VMEs are known to occur or are likely to occur based on the best available scientific information, including the reporting of VME sites encountered during bottom fishing activities as provided in paragraph 7, the participants are to close such areas to bottom fishing

90 As for pelagic fisheries, participants are to commit themselves to limit the total level of gross tonnage (GT) of their vessels fishing for pelagic stocks in 2008 and 2009 to the levels of total GT recorded in 2007. *Ibid.*, Pelagic Fisheries, para. 1.

91 *Ibid.*, Bottom Fisheries, para. 2. Notwithstanding this, participants are to undertake, as appropriate, scientific research activities for stock assessment purposes in identified parts of such regions and only in accordance with a research plan provided to the interim Secretariat in advance. *Ibid.*, para. 8. Flag states are required to submit the research plan in advance, but are not required to obtain approval from the meeting of the participants or the Scientific Working Group. This is the same in the case of pelagic fisheries. See SPRFMO Interim Measures, Pelagic Fisheries, para. 6.

92 Russia noted that it accepted these interim measures except paragraphs 1 and 2 of the bottom fisheries section. Report of the Third International Meeting on the Establishment of the Proposed South Pacific Regional Fisheries Management Organisation (SPRFMO 3rd Meeting Report), Reñaca, Chile, 30 April-4 May 2007, at para. 11. As of 2007, it has no bottom trawl vessel operating in this area. See press release by the Deep Sea Conservation Coalition, 'Landmark Agreement First of Its Kind to Stop Destruction from High Seas Bottom Trawling', 4 May 2007, available at <<http://www.savethehighseas.org/display.cfm?ID=155>> (last visited 11 May 2007).

93 SPRFMO Interim Measures, Pelagic Fisheries, para. 2.

94 *Ibid.*, Bottom Fisheries, para. 3. There is no qualifier of 'significant' in the latter clause. However, it is reasonable to assume that this does not require the prevention of adverse impacts in an absolute manner, given the context of this provision and other comparable provisions.

95 *Ibid.*, para. 5. For the purposes of the interim measures, VMEs include seamounts, hydrothermal vents, cold water corals and sponge fields. SPRFMO Interim Measures, note 3 to Bottom Fisheries, para. 3.

96 SPRFMO Interim Measures, Bottom Fisheries, para. 7.

unless conservation and management measures have been established to prevent SAIs or it has been determined that such bottom fishing will not have SAIs.⁹⁷

Third, participants agreed to assess, on the best available scientific information, whether individual bottom fishing activities would have SAIs on VMEs, and, if it is assessed that these activities would have SAIs, to ensure that they are managed to prevent such impacts, or they are not authorized to proceed.⁹⁸ In undertaking the assessments, participants are to take into account any international technical guidelines regarding standards, criteria or specifications for identifying VMEs and the impacts of fishing activities on such ecosystems that may have been developed.⁹⁹

Procedures regarding the assessments are applied as follows. Participants are to submit to the interim Science Working Group their assessments, including the proposed management measures, and the Working Group will review the assessments and proposed measures and provide comments to the submitting participant.¹⁰⁰ Pending such comments, submitting participants may provisionally apply their proposed management measures. On the basis of their own assessments and comments by the Working Group, participants may authorize their vessels to undertake bottom fishing activities and require such vessels to implement conservation and management measures to prevent SAIs.¹⁰¹

It is not entirely clear to what extent impacts on the long-term sustainability of deep-sea fish stocks, apart from those on VMEs, need to be prevented under the interim measures. On the one hand, in relation to the establishment of conservation and management measures to prevent SAIs and the determination that such impacts will not occur, the words 'significant adverse impacts' relate to those both on VMEs and on the long-term sustainability of deep-sea fish stocks.¹⁰² On the other hand, assessments provided in paragraphs 11-13, on which conservation and management

97 *Ibid.*, para. 6.

98 *Ibid.*, para. 11. It is not clear whether or not the assessment is required only under circumstances specified in paragraphs 3 and 6. Given the explicit references to paragraphs 11 and 12 in paragraphs 3 and 6 as well as the lengthy procedures provided in paragraph 12, it appears that such assessments are required only in relation to the specified circumstances, rather than each and every individual bottom fishing activity planned to be undertaken. This, however, allows all individual bottom fishing activities to proceed unchecked except in the area of known or encountered VME sites.

99 *Ibid.*, para. 13.

100 The role of the interim Scientific Working Group is more limited for pelagic fisheries: paragraph 3 of the Pelagic Fisheries section of the interim measures provides that the Working Group will give advice to the meeting of the participants on the status of the pelagic stocks.

101 SPRFMO Interim Measures, Bottom Fisheries, para. 12. Paragraph 12(c) or any other paragraph relating to conservation and management measures does not specify who may definitely determine the conservation and management measures after comments on the assessment and proposed measures are received by flag states. However, in view of the commitment of participants to notify the interim Secretariat of the measures required under paragraph 12(c) and a list of vessels to which the measures relate, only flag states may ultimately determine the conservation and management measures applicable to their vessels. See *ibid.*, para. 12(d). See also *ibid.*, Pelagic Fisheries, para. 4.

102 *Ibid.*, Bottom Fisheries, paras 3 and 6.

measures and the determination of impacts are based, are only concerned with whether individual bottom fishing activities would have significant impacts on VMEs.¹⁰³

With respect to observer coverage, participants agreed to appoint observers to each of their bottom trawling vessels, but, with regard to vessels with other bottom fishing gear, they only agreed to ensure an appropriate level of observer coverage.¹⁰⁴

Participants also agreed to request, individually or jointly, those states fishing for non-highly migratory fish species in the area but not participating in the negotiations to cooperate fully in the implementation of these interim measures and to consider participating in the negotiations.¹⁰⁵

5.2.3.2 *Draft Convention*

At an initial stage, the three coastal states had not decided whether or not to establish an RFMO. The paper submitted by Australia, Chile and New Zealand on Governance Principles and Their Application states that the legal framework ‘should establish an organisation that promotes the cooperation of coastal States and States with a real fishing interest in the region’, but it also refers to the possibility to manage fisheries through Meetings of the Parties.¹⁰⁶ Although the chair’s first draft was based on SIOFA, the great majority of participants in the second meeting made it clear that they were in a position to support from the outset a ‘fully-fledged’ organization with a commission and a permanent secretariat and enjoying separate legal personality. Therefore, the revised version of the chair’s draft, prepared for the third meeting, reflected these views and provided for the structure of a proposed ‘South Pacific Regional Fisheries Management Organisation’.¹⁰⁷ The revised draft drew heavily on an EC non-paper presented prior to the second meeting, which in turn was based on the proposed revision of the NAFO Convention.¹⁰⁸ The following analysis of the Draft

103 Ibid., paras 11 and 12(a).

104 Ibid., para. 9. As for pelagic fisheries, the provision is further qualified by the words ‘to the extent practicable’. Ibid., Pelagic Fisheries, para. 7. The provision for bottom fisheries does not explicitly indicate the purposes of the observer, while the provision for pelagic fisheries stipulates that the purposes of observer coverage are ‘to observe the pelagic fisheries in the area and collect relevant scientific information’. Ibid., para. 7. Despite the omission of the purpose for observer coverage in bottom fisheries, nothing in the interim measures indicates that the purpose of observer coverage is different between pelagic fisheries and bottom fisheries.

105 SPRFMO Interim Measures, Cooperation with other States. In the negotiations, the term ‘non-highly migratory fish species’ has been often used to denote fish species which the proposed RFMO aims to conserve and manage. For the definition of fishery resources in the proposed Convention, see section 5.2.3.2 below.

106 Governance Principles and Their Application (SP/01/Inf6), at pp. 1 and 5.

107 Vanuatu suggested a wider mandate for the proposed organization conserving and managing marine living resources and protecting the integrity of marine ecosystems, while its proposal still uses the words ‘South Pacific Regional Fisheries Management Organisation’. See SP/05/INF/10.

108 SPRFMO, 3rd meeting, Chair’s Cover Letter, at pp. 1-2.

Convention is based on the third revision of the draft prepared by the chair for consideration at the fifth meeting in March 2008, taking into account previous drafts as well as in the light of comments made to the series of drafts.

The Chair's draft provides that the Organization consists of a Commission, a Scientific Committee, a Compliance Committee, an Eastern Sub-regional Management Committee, a Western Sub-regional Management Committee, any other subsidiary bodies and sub-committees to be established by the Commission, and a Secretariat.¹⁰⁹ Each Sub-regional Management Committee is to develop and make recommendations to the Commission on conservation and management measures and on participation in fisheries in respect of fishery resources in that part of the area for which that Committee has responsibilities. In developing its recommendations, each Management Committee shall take into account the advice and recommendations of the Scientific Committee.¹¹⁰ As will be noted in the section 'Participatory rights' below, the issue of Sub-regional Management Committees lies at the heart of the disagreements in the ongoing negotiations.

The proposed Convention applies to the high seas area of the South Pacific Ocean as defined in Article 3: (western boundary) the eastern boundary of SIOFA; (southern boundary) the northern boundary of the convention area of CCAMLR; (eastern boundary) the outer limit of the maritime jurisdictions of South American states.¹¹¹ Originally, the northern boundary was proposed to be the southern boundaries of the EEZs of Pacific Island states, extending northwards to 1°30' North. However, it was decided at the first meeting that it should not be delineated until the meeting had discussed the species to be managed as well as the regulation of high seas enclaves within the proposed area and it had received further scientific and technical information.¹¹² One proposal preferred that the proposed RFMO would not include the area

109 Revision 3 of the Draft SPRFMO Agreement, Article 5(1)-(2). The EC proposed to avoid establishing Sub-regional Management Committees in the proposed Convention itself and to defer the establishment of such sub-regional management mechanisms to a future decision of the contracting parties whether or not to divide the Regulatory Area into appropriate regulatory divisions and subdivisions. EC Amendments to Chair's Text (SP/03/Inf8), 4 May 2007, Articles 5(2) and 31(7). This view is echoed by Australia, which 'does not hold a firm view on the overall establishment of eastern and western sub-regional management committees or whether these should be made mandatory through inclusion in the convention text'. Specific Australian Comments on the Agreement Text (SP/03/Inf10), 20 June 2007, at para. 10.

110 Revision 3 of the Draft SPRFMO Agreement, Article 11(2).

111 *Ibid.*, Article 4(1). While it was decided that the proposed RFMO covers only high seas, one proposal stated that the EEZ should also be covered. EC Amendments to Chair's Text Revision 2, 14 September 2007.

112 Information Paper (SP/01/Inf3 rev1), at p. 3; Report of the First International Meeting on the Establishment of the Proposed South Pacific Regional Fisheries Management Organisation, Wellington, New Zealand, 14-17 February 2006, at para. 4.

adjacent to the EEZ of Pacific Island states.¹¹³ An idea was also put forward by the EC to establish one Commission for the North and South Pacific at the second meeting.¹¹⁴

The objective of the Convention is, through the application of the precautionary approach and an ecosystem approach to fisheries management, to ensure the long-term conservation and sustainable use of fishery resources in the area and, in so doing, to safeguard the marine ecosystems in which those resources occur.¹¹⁵ The proposed Convention appears to address fisheries only; it does not aim to regulate activities other than fisheries or ecosystem impacts caused by such other activities.¹¹⁶

The Commission shall adopt conservation and management measures for fishery resources, associated or dependent species and the impacts of fishing on the marine ecosystems.¹¹⁷ It is notable that the measures for the impacts of fishing on the marine ecosystem were explicitly inserted in the third revision of the draft.¹¹⁸ The measures are to ensure the long-term sustainability of fishery resources and to promote the objective of their responsible utilization.¹¹⁹

Fishery resources are defined in the Convention as resources of fish, molluscs, crustaceans and other sedentary species within the area, but exclude sedentary species subject to the fishery jurisdiction of coastal states pursuant to Article 77(4) of the LOSC, highly migratory species listed in Annex 1 of the LOSC and anadromous and catadromous species.¹²⁰ The definition of fishery resources implies two points which are relevant to this study. First, the Commission is competent to deal with the conservation and management of DHSFS. Second, like the SEAFO Convention and SIOFA, the category of sedentary species is recognized also in the context of the area beyond the outer limit of the continental shelf, and the proposed management regime is competent to manage the exploitation of such resources.

113 Ukraine proposed that the Convention area correspond to FAO Statistical Areas 81 and 87, thus excluding the high seas areas adjacent to the EEZ of Pacific Island states as well as the South Tasman Rise south of the Australian EEZ. See SP/05/INF/7. See also the Japanese proposal using the Equator as the Northern boundary. Japan's Proposed Amendments to the Revision 2 of Chair's Draft Text, 17 October 2007.

114 Opening speech by the EC (on file with the author).

115 Revision 3 of the Draft SPRFMO Agreement, Article 2.

116 The original draft prepared for the second meeting was different in this regard, reading as follows: 'to ensure the long-term conservation and sustainable use of fishery resources in the Area through the implementation of effective conservation and management measures and responsible fishing practices; to avoid adverse impacts on the marine environment and its ecosystems in the Area through fishing; and to promote the protection of the marine habitats in the Area on which fishery resources are reliant'. Draft SPRFMO Agreement, Article 2. The subtle difference in wording between the first two objectives and the third objective could have been interpreted to suggest promoting the protection of marine habitats from all activities, including *non-fishing* activities.

117 Revision 3 of the Draft SPRFMO Agreement, Article 17(1).

118 Compare with previous drafts, e.g., Revision 2 of the Draft SPRFMO Agreement, Article 17(1).

119 Revision 3 of the Draft SPRFMO Agreement, Article 17(1)(a).

120 *Ibid.*, Article 1(g).

In the Convention, fishing is defined very broadly.¹²¹ Particularly contentious was the treatment of fisheries for scientific research. The definition of fishing in the first revised draft included scientific research.¹²² In that draft, conservation and management measures included measures to regulate, where necessary, the conduct of fishing for scientific purposes.¹²³

The United States opposed the inclusion of this issue in the chair's draft and it proposed that rules to govern research fishing (i.e., exploratory or test fishing) should be developed as a special category separate from commercial or recreational fishing activities. The US proposal set forth principles according to which rules for scientific research activities should be drafted. According to its paper, while a research plan shall be developed and circulated prior to the commencement of the activities and it shall be subjected to review and comment, the sponsors of the research plan are only encouraged to take into account the results of the review and any comments received. In other words, the prior approval or modification of a plan upon review or comments is not required. Furthermore, the paper stated that the Meeting of Parties may, when considering specific conservation and management measures, include application to activities of fisheries research vessels.¹²⁴

The present draft no longer explicitly includes scientific research in the definition of fishing.¹²⁵ On the other hand, the draft still retains references to fishing for scientific purposes in three Articles. First, it stipulates that the Commission shall promote the conduct of scientific research to improve knowledge of fishery resources and marine ecosystems in the area, and establish procedures for the conduct of fishing for scientific purposes.¹²⁶ Second, the Commission shall determine catch or effort for scientific research included in a TAC or total allowable fishing effort.¹²⁷ Third, each flag state contracting party shall ensure that vessels flying its flag engaged in or intending to engage in research into fishery resources comply with any procedures established by the Commission for the conduct of scientific research in the area.¹²⁸

121 A proposal by Vanuatu explicitly includes bunkering vessels in the definition of 'fishing support vessel'. SP/05/INF/10, Article 1(k).

122 Revised Draft SPRFMO Agreement, Article 1(f)(ii). Furthermore, the EC proposal explicitly included vessels engaged in experimental or exploratory fishing activities within the definition of fishing vessels. EC Amendments to Chair's Text, Article 1(i).

123 Revised Draft SPRFMO Agreement, Article 17(2)(g).

124 Revised U.S. Discussion Paper: Treatment of 'Fishing Research Vessels'.

125 See Revision 3 of the Draft SPRFMO Agreement, Article 1(i). Therefore, concerns over the inclusion of 'pure' MSR involving no taking of fish in the draft appear to have been eliminated: most of the references to the potential for the regulation of such MSR have been eliminated, although the determination of effort for scientific research as part of the determination of the total allowable fishing effort required under Article 18 might be interpreted to cover such MSR.

126 *Ibid.*, Article 7(1)(d). Australia opposed the establishment of procedures for the conduct of fishing for scientific purposes. Australian drafting suggestions circulated, 11 September 2007.

127 *Ibid.*, Article 18(1) chapeau.

128 *Ibid.*, Article 23(4). A Russian proposal on this article would totally change its tone, by adding 'fishing' after 'scientific research' and a totally new sentence that the contracting parties shall be afforded the opportunity to conduct scientific research fishing and the conservation measures

Read together, these provisions will prevent commercial fisheries from being engaged in fishing under the guise of scientific research. This is very significant in the context of fisheries for deep-sea species, which are vulnerable to fishing efforts and may be fished down in a short period.

Precautionary approach

Decisions shall be based on the best scientific information available.¹²⁹ In this connection, full and accurate data on fishing *and impacts on the marine ecosystems* shall be collected, verified, reported and shared in a timely and appropriate manner.¹³⁰ Contracting parties shall collect, verify and report scientific, technical and statistical data pertaining to the fishery resources and the marine ecosystems in the area.¹³¹ The Commission shall, taking full account of Annex I of the FSA, develop standards, rules and procedures for, *inter alia*, the collection, verification and timely reporting of all relevant data by contracting parties, and the compilation and management of accurate and complete data to facilitate effective stock assessment and to ensure that the provision of the best scientific advice is enabled.¹³² This is intended, *inter alia*, to enhance the information base for the conservation and management of fishery resources, associated and dependent species and safeguarding the marine ecosystems in which those resources occur.¹³³

At the same time, the precautionary approach as described in the FSA, including Annex II, and the Code of Conduct shall be applied.¹³⁴ Previous drafts singled out some aspects of the precautionary approach, including: the contracting parties shall be more cautious when information is uncertain, unreliable or inadequate, shall not use the absence of adequate scientific information as a reason for postponing or failing to take conservation and management measures, and shall take account of best international practices regarding the application of the precautionary approach, including Annex II of the FSA and the Code of Conduct.¹³⁵

shall provide for such scientific research fishing and shall not be unduly restrictive in this respect. SP/05/INF/11, Article 23(4).

129 Revision 3 of the Draft SPRFMO Agreement, Article 3(1)(e). In addition, the EC proposal stipulated as follows: ‘adopt measures to ensure that fishery resources are maintained at levels capable of producing maximum sustainable yield, and rebuild fishery resources to the said levels’. EC Amendments to Chair’s Text, Article 3(1)(b).

130 Revision 3 of the Draft SPRFMO Agreement, Article 3(1)(d).

131 *Ibid.*, Article 22(1)(e).

132 *Ibid.*, Article 21(1)(a)-(b).

133 *Ibid.*, Article 21(1).

134 *Ibid.*, Articles 1(q) and 3(1)(f). The EC proposal only stipulated that the precautionary approach would be applied in accordance with Article 6 of the FSA, and there is no direct reference to Annex II. EC Amendments to Chair’s Text, Article 3(1)(c).

135 E.g., Revision 2 of the Draft SPRFMO Agreement, Article 3(2). Note that although the reference to the international best practice has been struck out in the context of the precautionary approach, the draft retains two references to the international best practice in the context of ‘conservation and management principles’ and ‘reviews’, respectively. Revision 3 of the Draft SPRFMO Agreement, Articles 3(1)(a) and 29(2). In this connection, South Korea proposed to eliminate these references and instead use wording similar to the LOSC including

Fishing shall be commensurate with the sustainable and efficient use of fishery resources taking into account the impacts on associated and dependent species and the general duty to protect and preserve the marine environment.¹³⁶ The Commission shall determine a TAC or total allowable fishing effort for all fisheries within three years of the entry into force of the Convention, taking into account all of the factors specified in the Convention, including measures adopted by other intergovernmental organizations.¹³⁷

Conservation and management measures shall include measures to determine specific biological reference points above which the sustainability of a fishery is ensured, consistent with Article 6 of the FSA, and to ensure that when such reference points are approached, further measures are taken to ensure they are not exceeded.¹³⁸ If the reference points are exceeded, contracting parties shall take action to restore the fishery within a reasonable period of time.¹³⁹

A fishery resource that is not subject to fishing at the time of the entry into force of the Convention shall be subject to fishing only when the Commission has adopted cautious preliminary conservation and management measures in respect of that fishery resource and any associated or dependent species, and to protect the marine ecosystem in which that fishery resource occurs from adverse impacts of fishing activities.¹⁴⁰ Such measures shall ensure that the new fishery is developed on a precautionary and gradual basis until sufficient information is acquired to enable the Commission to adopt appropriately detailed conservation and management measures.¹⁴¹ The Commission may adopt standard minimum conservation and management measures that are to apply in respect of some or all new fisheries prior to their commencement.¹⁴²

A slightly less restrictive approach proposed by Russia concerning new fisheries is to allow the commencement of a new fishery under an experimental regime unless conservation measures are adopted within 12 months after an application for the new fishery and until such measures are adopted.¹⁴³ A more liberal approach was proposed

‘generally recommended international minimum standards’ in Article 3. See SP/05/INF/8. See also Japan’s Proposed Amendments to the Revision 2 of Chair’s Draft Text, 17 October 2007.

136 Revision 3 of the Draft SPRFMO Agreement, Article 3(1)(b). See also *ibid.*, Article 17(1)(b)-(c).

137 *Ibid.*, Article 18(1).

138 *Ibid.*, Article 17(1)(d). Article 3(1)(e) of the EC amendments to the chair’s text Revision 2 (14 September 2007) stipulated that decisions shall ensure that fishery resources are maintained at levels capable of producing MSY. A proposal by Vanuatu stipulated that measures shall include those to determine specific socio-economic reference points. SP/05/INF/10, Articles 17(1)(d) and 19.

139 Revision 3 of the Draft SPRFMO Agreement, Article 17(1)(e).

140 *Ibid.*, Article 20(1). The last requirement concerning the protection of the marine ecosystem was included for the first time in the third revised draft.

141 *Ibid.*, Article 20(2).

142 *Ibid.*, Article 20(3).

143 Proposal on the Article dealing with ‘Development of new target fisheries’ in SP/03/Inf11.

by Japan in that members of the Commission shall adopt as soon as possible cautious conservation and management measures for new or exploratory fisheries.¹⁴⁴

The determination of existing and new fisheries seems to be understood, at least by one participant, to be based on species rather than stocks. Australian comments reject the formulation of the definition of ‘target fishery’ used in Revision 2 of the chair’s text, stating as follows: the ‘current definition based on a species-wide, convention-area wide definition is too generic to capture the reality of individual high seas stocks [...]. We would like previously unfished stocks of a species to be treated as new/exploratory, rather than as a target fishery simply because the same species has been fished elsewhere in the Convention Area. [...] [W]e will be seeking ways in which the definition can better respond to the needs of stocks management’.¹⁴⁵ Although the definition of ‘target fishery’ was dropped from the draft, the ambiguity concerning the management unit of fishery resources remains with regard to, *inter alia*, the control of new fisheries.¹⁴⁶

Where fishing presents a serious threat to the sustainability of fishery resources or the marine ecosystem in which these fisheries resources occur or when a natural phenomenon has an SAI on the status of fishery resources, the Commission shall adopt emergency measures to ensure that fishing does not exacerbate such a threat or adverse impact.¹⁴⁷ Such measures shall be temporary and be based on the best scientific evidence available.¹⁴⁸

Ecosystem considerations

The proposed RFMO shall adopt the ecosystem approach to fisheries management.¹⁴⁹ The term ‘ecosystem approach to fisheries management’ is defined in Article 1(f) of Revision 3: “‘ecosystem approach to fisheries management’ means an integrated approach under which decisions in relation to the management of fisheries resources are considered in the context of the functioning of the wider marine ecosystems in which they occur with the aim of ensuring long-term conservation and sustainable use of those resources and in so doing safeguard those ecosystems’.

The Draft Convention states that the Commission shall adopt conservation and management measures not only for fishery resources, but also for associated or dependent species and the impacts of fishing on the marine ecosystem.¹⁵⁰ Moreover,

144 Japan’s proposed amendments to Revision 2 of the Chair’s Draft Text, 17 October 2007, Article 20(1). See also a proposal by Ukraine to allow ‘Unlimited new fishing (for example, 1 year)’ to be followed by the submission of ‘information to Scientific Committee’ and then ‘recommendation’ and completed by ‘limited new fishing’. SP/05/INF/7.

145 Australian Comments, at para. 20.

146 See also the similar problem with regard to the compatibility requirement between coastal state measures and measures for the high seas in the section entitled ‘Ecosystem considerations’ below.

147 Revision 3 of the Draft SPRFMO Agreement, Article 17(2).

148 Ibid.

149 Ibid., Article 3(1)(g). For a counterproposal, see Korea’s Proposals, October 2007, Article 17(1).

150 Revision 3 of the Draft SPRFMO Agreement, Article 17(1).

catches of non-target and associated and dependent species and impacts on the marine ecosystems in which the fishery resources occur are among the factors to be taken into account in determining the TAC or total allowable effort.¹⁵¹ Several kinds of measures aimed at protecting the marine environment are explicitly mentioned in Article 17(1)(f).¹⁵²

Biodiversity in the marine environment shall be protected, in particular marine ecosystems which have long recovery times.¹⁵³ Although specific references to deep-sea ecosystems found in previous drafts¹⁵⁴ no longer exist in the current draft, this should not be considered to imply a loss of interest in the protection of deep-sea ecosystems: the insertion of the words ‘ecosystems which have long recovery times’ certainly covers deep-sea ecosystems and appears to be aimed at expanding the scope of protection.

Conservation and management measures established for the area shall take into account the conservation and management measures adopted and applied in respect of the same fishery resources by coastal states under national jurisdiction, and ensure that the measures established for the area do not undermine the effectiveness of the coastal state measures.¹⁵⁵ Since the term ‘fishery resources’ is used, rather than ‘fish stocks’, this provision could be interpreted to mean that measures for a particular stock shall take into account measures by coastal states for another stock of the same species under their national jurisdiction and shall ensure that the measures adopted by the Commission do not to undermine the effectiveness of such coastal state measures.¹⁵⁶ As a result, coastal state measures for a stock that is confined to its EEZ or straddles the high seas and its EEZ may influence measures for a discrete high seas fish stock. In addition, as pointed out in the Russian comments,¹⁵⁷ the area where compatibility is required is not specified. As no requirement of adjacency is in place, as opposed to the LOSC and the FSA, the area can be the whole convention area or certain parts thereof. Thus, there is a potential for discrepancy between the draft, on the one hand, and the LOSC and the FSA, on the other.

Participatory rights

As noted earlier, the Draft stipulates that organs of the proposed RFMO include Sub-regional Management Committees. The membership of each Sub-regional Committee

151 Ibid., Article 18(1)(f).

152 In a previous draft, an article entitled ‘Marine environment’ stipulated these measures. Revised Draft SPRFMO Agreement, Article 21(1).

153 Revision 3 of the Draft SPRFMO Agreement, Article 3(1)(i). A preceding proposal by the United States specified the period ‘exceeding two or three decades’. U.S. Proposals (11 September 2007), Article 3(k).

154 E.g., Revised Draft SPRFMO Agreement, Article 3(1)(h).

155 Revision 3 of the Draft SPRFMO Agreement, Article 3(1)(h).

156 Elsewhere, the term ‘straddling stocks’ is used. See *ibid.*, Articles 22(2) and 34(1). As noted earlier, the term ‘fishery resource’ was understood, at least by one participant, to mean ‘species’ rather than ‘stock’. See the comments on the Australian Comments in the context of new fisheries cited above.

157 Comments on Article 3(1)(g) in SP/03/Inf11.

is limited to those contracting parties which are situated adjacent to, or whose vessels are fishing in, the area for which that Committee is responsible.¹⁵⁸ Decisions of the Commission on conservation and management measures which are applicable only to a specific part of the area shall be based on the recommendations of the Committee responsible for that part of the area.¹⁵⁹ Recommendations of a Committee shall be adopted by a two-thirds majority, which must include at least two coastal states and two fishing states of the Committee.¹⁶⁰ If the Commission does not accept the recommendation of the relevant Sub-regional Management Committee, it shall return the matter to that Committee for further consideration in the light of the views expressed by the Commission.¹⁶¹ Put differently, these provisions safeguard the interests of both members and non-members of each Committee: while members of the Committee (by a two-thirds majority) may prevent decision-making from taking place in disregard of their view, non-members may prevent harm to their interests in that part of the area or in the whole area of the Convention through the decision-making procedures in the Commission. However, as Australia argued, these provisions put the Commission at risk of repeating ‘an eternal loop of (non) decision-making’, a circumstance which should be avoided.¹⁶² In the light of these comments, the draft was modified after the third meeting. It now reads that if a Sub-regional Management Committee fails to recommend appropriate conservation and management measures within a reasonable time, specified in advance by the Commission to the Sub-regional Management Committee, the Commission may proceed to adopt appropriate conservation and management measures.¹⁶³ By this change, at first sight, the competence of Sub-regional Committees (and thus the influence of coastal states in each sub-region) are substantially curtailed, while potential conflicts over the interpretation of the term ‘appropriate conservation and management measures’ may give rise to uncertainty concerning the concrete circumstances where the Commission may proceed to the adoption of conservation and management measures inconsistent with the recommendations of the Sub-regional Committee.

While several coastal states consider the creation of sub-regional management committees to be essential to the proposed RFMO,¹⁶⁴ a number of distant water fishing states have strongly opposed such committees.¹⁶⁵ While most of the proposals of distant water fishing states intended to establish one Committee dealing with all fisheries covered by the Convention, Ukraine proposed to establish committees on the

158 Revision 3 of the Draft SPRFMO Agreement, Article 11(4).

159 *Ibid.*, Article 14(5).

160 *Ibid.*, Article 11(5).

161 *Ibid.*, Article 14(6).

162 Australian Comments, at paras 10 and 15.

163 Revision 3 of the Draft SPRFMO Agreement, Article 14(6)(b).

164 See, e.g., Permanent Commission for the South Pacific (CPPS) Resolution No. 17, November 2007, para. 2.

165 The EU (EC amendments to the chair’s text Revision 2, 14 September 2007), Japan (Japan’s Proposed Amendments to Revision 2 of the Chair’s Draft Text, 17 October 2007), South Korea (Korea’s Proposals, October 2007; SP/05/INF/8), Russia (Proposals, 14 September 2007; SP/05/INF/11) and Ukraine (SP/05/INF/7).

basis of biological characteristics such as one for ‘Fish of submerged ridges (beryx and other)’ whose membership was not limited to coastal states and high seas fishing states.¹⁶⁶

As the Commission shall take decisions regarding participation in fisheries, including the allocation of the TAC or total allowable fishing effort, by consensus, each contracting party has a veto, whether it is a coastal state or a distant water fishing nation.¹⁶⁷ The Commission shall take into account the following factors in decision-making concerning participation in fisheries: compliance with measures of the SPRFMO and other RFMOs, a demonstrated capacity and willingness to exercise effective flag state control, a contribution to the conservation and management of fishery resources in the area, past and present fishing patterns, practices and catches in the area,¹⁶⁸ the interests of developing states and of territories and possessions in whose areas of national jurisdiction the same fishery resources occur, the needs of coastal states and of territories and possessions whose economies are overwhelmingly dependent on the exploitation of fishery resources, the needs of coastal fishing communities which are dependent mainly on fishing for the fishery resources, and a contribution to the responsible development of new fisheries.¹⁶⁹ Special requirements of developing states shall be taken into account, consistent with the FSA.¹⁷⁰ The Commission shall regularly review decisions regarding participation in fisheries, including allocation, taking into account the above-mentioned matters and the interests of new contracting parties.¹⁷¹ Again, it is possible that the TAC is set for species, not for stocks. In this regard, Russia proposed to explicitly stipulate a TAC for each stock.¹⁷²

Cooperation with other organizations

The Commission shall cooperate, as appropriate, with other RFMOs, the FAO, other UN specialized agencies and other relevant organizations on matters of mutual

166 Comments on Article 11 in SP/05/INF/7.

167 Revision 3 of the Draft SPRFMO Agreement, Article 19(2).

168 A Chilean proposal would make it clear that fishing patterns, practices and catches concern those on the stock. Article 19(1) of Chilean Proposed Amendments, 12 September 2007. Russia, which first developed deep-sea fisheries in the area concerned, insisted on the inclusion of the phrase such as past and present fishing patterns, practices and catches ‘of the Contracting Parties in the Area since the beginning of fishing activities in the Convention area’ and ‘contribution of the Contracting Parties to the discovery and scientific research fisheries in the [a]rea since the beginning of fishing activities in the Convention area’ in Article 19, respectively. Russia, Proposals, 14 September 2007, Article 19(1)(d). See also SP/05/INF/11, Article 19(1). A Vanuatu proposal stipulated that when taking decisions regarding participation in fisheries, the Commission shall not consider catch histories as a relevant factor, except, among others, for bottom fisheries catches taken or effort used in the area in the period 1 January 2002 to 31 December 2006. SP/05/INF/10, Article 19(3).

169 Revision 3 of the Draft SPRFMO Agreement, Article 19(1).

170 Ibid., Articles 3(1)(j) and 16.

171 Ibid., Article 19(3).

172 See proposed Article 17(n) in SP/03/Inf11. Subsequent Russian proposals do not appear to take that approach.

interest.¹⁷³ In particular, the Commission shall take account of the conservation and management measures or recommendations adopted by RFMOs or other intergovernmental organizations that have competency in relation to adjacent areas (e.g., CCAMLR and SIOFA)¹⁷⁴ or in respect of living marine resources not covered by the Convention, including dependent or associated species (e.g., tuna covered by the IATTC, the CCSBT, the WCPFC and the IOTC as well as whales by the IWC) and that have objectives that are consistent with, and supportive of, the objectives of the Convention. The Commission shall also endeavour to ensure that its decisions are compatible with, and supportive of, such conservation and management measures.¹⁷⁵

5.3 NORTH-WEST PACIFIC OCEAN

This section investigates state practice relating to or having a potential to impact on fisheries for DHSFS and/or deep-sea fisheries on the high seas of the North-West Pacific. The first sub-section provides background information on state practice with respect to existing fisheries, including two regional fisheries management regimes. The next two sub-sections introduce an initiative recently launched to establish a regional fisheries management mechanism in the North-West Pacific, analyzing the interim mechanism and negotiations for a long-term mechanism.

5.3.1 Background

In the North-West Pacific, in addition to the vast area south of the US and Russian EEZs and east of the Japanese EEZ, the central Sea of Okhotsk and the central part of the Bering Sea are high seas areas. These two high seas areas have been subject to extensive fisheries for straddling stocks, and coastal and distant water fishing states have attempted to establish regimes regulating these fisheries.

First, as distant water fishing nations were displaced from the US EEZ and, to a lesser extent, the Russian EEZ, they started intensifying fishing efforts in the high seas part of the Central Bering Sea (the so-called ‘Donut Hole’ or ‘Doughnut Hole’), part of which is included in the North-West Pacific. The Donut Hole is a high seas enclave surrounded by the US and Russian EEZs.¹⁷⁶ Pollock fisheries in the Donut Hole grew rapidly to more than 1.4 million tonnes in 1989. Concerns over decline in the stock abundance of pollock in the Bering Sea prompted the two coastal states to take action to address high seas fisheries for pollock in this area, including calls for the extension of coastal state jurisdiction. During 1991-1994, both coastal states and

173 Revision 3 of the Draft SPRFMO Agreement, Article 30(1).

174 The term used here is RFMOs, but it is reasonable to assume that this provision extends to ‘arrangements’.

175 Ibid., Article 30(2).

176 The term ‘high seas enclave’ is not a legal concept, but it is often referred to in a sense that a sea area is completely surrounded by 200-mile zones of one or more coastal states. See Oude Elferink, ‘Fisheries in the Sea of Okhotsk High Seas Enclave’, at p. 3 note 5.

distant water fishing nations (i.e., Japan, China, Poland and the Republic of Korea) held ten diplomatic conferences to negotiate an agreement, and concluded a multilateral convention in 1994.¹⁷⁷ This Convention aims to establish an international regime for the conservation, management and optimum utilization of pollock resources in the high seas area of the Bering Sea. While views vary on the distribution of the pollock stocks in the Donut Hole,¹⁷⁸ none of the distant water fishing nations ever publicly questioned the right of the United States to take a leading role in the negotiations.¹⁷⁹

During the negotiations, the coastal states desired to create a forum for cooperative efforts on all species related to pollock while distant water fishing nations wanted the Convention to deal only with pollock. However, due to the intense political pressure to wrap up negotiations, the scope of the Convention is limited to pollock species only, unless the parties subsequently agree to consider additional species.¹⁸⁰ The objectives of the Convention include: 'to cooperate in the gathering and examining of factual information concerning pollock and other living resources in the Bering Sea'; and 'to provide, if the Parties agree, a forum in which to consider the establishment of necessary conservation and management measures for living marine resources other than pollock in the Convention Area as may be required in the future'.¹⁸¹ While

177 For the fisheries in the region and the CBS Convention, see D.A. Balton, 'The Bering Sea Doughnut Hole Convention: Regional Solution, Global Implications', in O.S. Stokke (ed.), *Governing High Seas Fisheries: The Interplay of Global and Regional Regimes* (2001), at 143-177; W.V. Dunlap, 'The Donut Hole Agreement', 10 *International Journal of Marine and Coastal Law* (1995), at pp. 114-126; Kaye, *International Fisheries Management*, at 305-353; Miovski, 'Central Bering Sea Overfishing', at pp. 525-574.

178 See, e.g., Yonezawa, 'Some Thoughts on the Straddling Stock Problem in the Pacific Ocean', at pp. 128-129 (arguing that three major spawning areas are identified in the Bering Sea, one of which is the basin in the central Bering Sea); Miovski, 'Central Bering Sea Overfishing', at p. 529 (arguing that there is one stock of pollock in the Bering Sea); Balton, 'The Bering Sea Doughnut Hole Convention: Regional Solution, Global Implications', at p. 148 (arguing that there are three stocks, one of which migrates between the Donut Hole and the Russian EEZ, but none is thought to spawn in the Donut Hole). Kaye observes the Japanese view concerning the three stocks theory, according to which one of these stocks is, in his words, unique to that region and does not straddle an EEZ. He argues that if the Japanese view is upheld, it deprives the coastal states of a perceived preferential interest in the management of the stock and states that it was clear that there was some scientific support for the Japanese point of view, albeit this was open to dispute. Kaye, *International Fisheries Management*, at pp. 323-325. In any case, a recent study suggests no evidence for the Donut Hole stock component being genetically distinct from, *inter alia*, that of the Bogoslof region in the eastern Bering Sea (i.e., within the US EEZ). M. Canino, 'Summary of Genetic Stock Identification Studies in the Bering Sea', Central Bering Sea Pollock Workshop on Allowable Harvest Level and Stock Identification, Seattle, Washington, USA, 6-9 June 2005, at p. 1.

179 Kaye, *International Fisheries Management*, at p. 35 note 63.

180 Balton, 'The Bering Sea Doughnut Hole Convention: Regional Solution, Global Implications', at p. 157.

181 CBS Convention, Article II. Balton suggests that other provisions also provide for the possibility that activities concerning species other than pollock can take place under the auspices of the CBS Convention, including Articles IV(1)(f) and (i), IX(1) and X(1). Balton, 'The Bering Sea Doughnut Hole Convention: Regional Solution, Global Implications', at p. 175 note 31.

not legally binding, a statement in the Record of Discussions provides that fishing operations for species other than pollock, which could occur in the future, by vessels of any party, should only be conducted pursuant to specific authorization issued by that party.¹⁸² Due to the scarcity of pollock resources in this area, a moratorium has been placed on this fishery since 1993.¹⁸³ In relation to marine living resources other than pollock, no major development was reported.¹⁸⁴ The parties only agreed that information on species composition of all catch taken during trial fishing should routinely be provided to all members of the Convention.¹⁸⁵

Second, following the collapse of pollock fisheries in the Donut Hole of the Bering Sea, large-scale commercial fisheries for Alaska pollock by distant water fishing nations, including China, Poland and the Republic of Korea, started in the central part of the Sea of Okhotsk in 1991. This area (also referred to as the 'Peanut Hole') is a high seas enclave, of which Russia is the single coastal state.¹⁸⁶ Russia argued that the

182 Cited in Balton, 'The Bering Sea Doughnut Hole Convention: Regional Solution, Global Implications', at p. 157.

183 Note that the CBS Convention addresses the problem of possible disagreements between parties by prescribing a default procedure in case of a failure to reach consensus which is required to establish an allowable harvest level (AHL). CBS Convention, Article VII and Annex, Part I.

184 For the latest COP, see Report of the Twelfth Annual Conference of the Parties to the Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea, September 4-5, 2007, Beijing, China, at p. 5.

185 Report of the Ninth Annual Conference of the Parties to the Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea, September 7-10, 2004, Kushiro, Japan, at p. 8. Note that any agreement to consider marine living resources other than pollock requires consensus among the parties. CBS Convention, Article V(2).

186 While the high seas enclave itself is surrounded only by Russia's EEZ, Japan is also a coastal state of the southern part of the Sea of Okhotsk. For doubts on the appropriateness of the Russian attitude from this perspective, see Oude Elferink, 'Fisheries in the Sea of Okhotsk High Seas Enclave', at p. 16; Dunlap, 'The Donut Hole Agreement', at p. 125. Even if all the four islands disputed between Japan and Russia become Japan's territory, Japan's EEZ will not extend to the high seas enclave; Japan has in fact maintained a low profile as a coastal state at the international level. Oude Elferink, 'Fisheries in the Sea of Okhotsk High Seas Enclave', at pp. 4-5. At the domestic level, Japan purported to have a role as a coastal state. See parliamentary debates (in the Committee on Budget of the House of Councillors of Japan on 21 March 1992) on this issue, in which Toshihiko Tsuruoka (then Director-General of the Fisheries Agency) referred to Japan's position as a 'coastal state' in the high seas fishery in the Sea of Okhotsk and explained its failure in a multilateral negotiation in March 1992 to continue operations on the basis of scientific research through, *inter alia*, setting quota and to avoid imposing a moratorium suggested by Russia. It is doubtful that this position has since been maintained, given the voluntary termination of fishing in this area since 1991. Moreover, Japan has not protested against the examination by the CLCS in respect of the high seas part of the Sea of Okhotsk, which Russia claims to be included in its juridical continental shelf. (But also note its reservation to further comments: 'inasmuch as a qualified assessment based on scientific data has not yet been conducted, the Government of Japan reserves its right to submit its further comments in relation to the Russian Federation's submission'.) See Executive Summary of the submission of the Russian Federation and a note verbale by Japan, No. SC/02/084, 25 February 2002.

A special regime governing fisheries in 'an area of the high seas surrounded entirely by an area

area is of particular importance for regulating the fishing of Alaska pollock in the whole area of the Sea of Okhotsk since subpopulations of pollock in the Sea of Okhotsk intermingle there.¹⁸⁷

Russia has taken unilateral measures and engaged in multilateral and bilateral negotiations with interested states. This has not resulted in the adoption of any multilateral treaty or the establishment of an RFMO. Russia established a temporary moratorium on fishing in the high seas enclave for Russian and foreign fishing vessels from 15 June 1993 until an international agreement on this issue was reached. Japan agreed to abide by a three-year moratorium on fisheries in the Peanut Hole on a voluntary basis while it had already ceased fishing for Alaska pollock from 1 January 1991. All states which had previously fished in the high seas enclave ceased to fish in that area in exchange for access to the Russian EEZ.¹⁸⁸ In addition, Russia and the United States have concluded an agreement which prohibits Russian and American nationals and vessels from fishing for pollock resources in the central Sea of Okhotsk and which subjects American nationals to Russian unilateral measures for the conservation and management of the pollock resources in the entire Sea of Okhotsk.¹⁸⁹ The agreement also addresses fishing by third party vessels. The United States supports Russia in ensuring respect for Russian conservation and management measures by third party vessels.¹⁹⁰ All in all, the present regime in this area is advantageous to

under the national jurisdiction of a single State' is recognized in the FSA. FSA, Article 16. For the implication of Articles 15 and 16, see A.G. Oude Elferink, 'The Sea of Okhotsk Peanut Hole: De facto Extension of Coastal State Control', in O.S. Stokke (ed.), *Governing High Seas Fisheries: The Interplay of Global and Regional Regimes* (2001), at pp. 187-190.

187 Consequences of Unscientific Fishing for Alaska Pollack in the Enclave of the Sea of Okhotsk (Submitted by the Delegation of the Russian Federation), A/CONF.164/L.21, 22 July 1993, at p. 2.

188 For an overview, see Oude Elferink, 'Fisheries in the Sea of Okhotsk High Seas Enclave', at pp. 4-8; Oude Elferink, 'The Sea of Okhotsk Peanut Hole', at pp. 182-186. It is reported that Russia concluded bilateral agreements with Poland, the Republic of Korea and China in 1997 which allocated catches in the Russian EEZ as part of the overall TAC in the entire Sea of Okhotsk established by Russia. See 'U.S.-Russia Intergovernmental Consultative Committee ICC', <<http://www.shaps.hawaii.edu/fishing/regulatory/fish-usrussia.html>> (last visited 20 April 2007).

189 See Agreement on the Conservation of Straddling Fish Stocks in the Central Part of the Sea of Okhotsk, Moscow, 13 June 1996, Articles 2-3. Note that the central Sea of Okhotsk is used to denote the high seas enclave beyond the 200-mile limit from the Russian baselines. *Ibid.*, Preamble para. 6. In addition, the Agreement stipulates that the parties recognize that 'any fishing for straddling stocks in the central Sea of Okhotsk is subject to the rights, duties and interests of the Russian Federation'. *Ibid.*, Article 1. Before concluding this agreement, the United States had already prohibited US fishing vessels and nationals from conducting fishing operations in the Central Sea of Okhotsk, except where such fishing operations are conducted in accordance with an international fisheries agreement to which the United States and Russia are parties (US Public Law 104-43, title V, section 502).

190 Agreement on the Conservation of Straddling Fish Stocks in the Central Part of the Sea of Okhotsk, Article 5. See also Oude Elferink, 'The Sea of Okhotsk Peanut Hole', at p. 199 note 52. In this respect, the provision of this convention is similar to that of the CBS Convention. See CBS Convention, Article XII.

Russia. At the same time, Russia must continue to take into account the interests of distant water fishing nations because high seas fisheries could be resumed.¹⁹¹ It appears that the moratorium on fishing in this area is still in place.¹⁹² Even though the Russian actions were prompted by concerns about over-fishing of pollock resources, the moratorium under this regime appears to be applicable to fisheries for any species in the high seas area, whether or not a specific stock straddles the Russian EEZ and the high seas, except for the above-mentioned US-Russian bilateral Agreement of 1996.

5.3.2 The Interim Mechanism

The existing regimes described above are mostly concerned with pollock stocks. However, there are also bottom fisheries targeting other species in the North-West Pacific, some stocks of which may be discrete high seas stocks.¹⁹³ Following UNGA Resolution 59/25, three states whose nationals engaged in bottom trawling in the North-West Pacific, i.e., Japan, the Republic of Korea and Russia, started an initiative to establish a mechanism for the management of such fisheries in the area.¹⁹⁴ Later, the three high seas fishing states and the United States (coastal state) met to exchange

191 Oude Elferink, 'The Sea of Okhotsk Peanut Hole', at p. 193. While Orrego Vicuña links the Russian approach to the presential sea concept, Churchill argues that arrangements for the Peanut Hole are an example of direct negotiation between the coastal and high seas fishing states concerned. See Orrego Vicuña, *The Changing International Law of High Seas Fisheries*, at pp. 93-95 and 109-110; Churchill, 'The Barents Sea Loophole Agreement', at p. 481. For an analysis of linkages between global and regional regimes and between regional regimes *inter se*, including the regime for the Sea of Okhotsk, see Oude Elferink, 'The Sea of Okhotsk Peanut Hole', at pp. 191-194.

192 E. Meltzer, 'Global Overview of Straddling and Highly Migratory Fish Stocks: Maps and Charts Detailing RFMO Coverage and Implementation', 20 *International Journal of Marine and Coastal Law* (2005), at p. 589. See also Office of International Affairs, the National Oceanic and Atmospheric Administration, U.S. Department of Commerce, *International Agreements concerning Living Marine Resources of Interest to NOAA Fisheries 2005-2006*, at p. 125, available at <<http://www.nmfs.noaa.gov/ia/docs/iagreements.pdf>> (last visited 22 April 2007).

193 Key fish stocks affected by bottom fisheries on the high seas within the North Western Pacific Ocean include pelagic armourhead (*Pseudopentaceros wheeleri*) and alfonsino (*Beryx splendens*). Associated and dependent species affected by bottom fisheries in the area include alfonsino (*Beryx decadactylus*), mirror dory (*Zenopsis nebulosa*), *Epigonus denticulatus*, *Coelorhynchus asperocephalus*, scorpionfish (*Helicolenus spp.*), *Physiculus spp.*, oreo (*Allocytus verrucosus*), anglerfish (*Lophiodes miacanthus*) and northern spiny dogfish (*Squalus mitsukuri*). Record of the Second Inter-governmental Meeting on Management of High Seas Bottom Fisheries in the North Western Pacific, Busan, Republic of Korea, 31 January-2 February 2007 (Advance, Unedited Copy) (hereinafter 'Record of the Second Inter-governmental Meeting on NWP Bottom fisheries'), NWPBT/02/Rec Rev 1, at Attachment 5 (Identification of information requested by the First Intergovernmental Meeting). Note that the latter five species are demersal.

194 FSA Review Conference Report, at p. 13, para. 61. Japan and Russia are also coastal states of the high seas area in the region.

information and discuss the issue in August 2006.¹⁹⁵ China also expressed its willingness to participate in the work to establish an RFMO in the North-West Pacific.¹⁹⁶ The participants at the second meeting agreed that any new participants with a real interest should be encouraged to respect the previous decisions of the meeting.¹⁹⁷ The participants have held four meetings and the next meeting is scheduled to take place in Tokyo on 14-18 October 2008.

The Second Meeting adopted a document entitled 'Establishment of new mechanisms for protection of vulnerable marine ecosystems and sustainable management of high seas bottom fisheries in the North Western Pacific Ocean'. In the document, participating states agreed to take urgent action on an interim basis, including interim measures set out in paragraph 4, while working on a long-term agreement to achieve the identified objectives.¹⁹⁸ The interim mechanism is not limited to interim measures *per se*. It also provides a (provisional) framework for future negotiations on the establishment of a permanent mechanism. The interim mechanism consists, *inter alia*, of general provisions (i.e., scope, purpose and principles), the regulation of bottom fishing activities (i.e., interim measures, contingent action and control of bottom fishing vessels) and scientific activities (i.e., a scientific working group and the collection and sharing of scientific information).

Measures specified in the document will be applied on a voluntary basis.¹⁹⁹ Since measures in the interim mechanism are applied on a voluntary basis, it is not unlikely that changes will be made to the framework, including the scope and principles of the proposed permanent mechanism, in the future, especially if more states having an interest participate in the negotiations.

The scope of coverage of the interim mechanism extends to high seas areas of the North Western Pacific Ocean, defined as those occurring within FAO statistical area No. 61. Within this statistical area, all areas and marine species are included except for those already covered by existing international fisheries management instruments and for high seas areas surrounded by the EEZ of a single country.²⁰⁰ By way of the latter saving clause, it is clear that the high seas enclave surrounded solely by the Russian EEZ is excluded from the scope of this arrangement.

This provision is interpreted to exclude, among others, pollock fisheries in the western part of the so-called Donut Hole, which is covered by the CBS Convention,

195 Fisheries Agency of Japan, Press release on 25 August 2006.

196 *ENB*, vol. 7, No. 62, at p. 3

197 Record of the Second Inter-governmental Meeting on NWP Bottom fisheries, at p. 3.

198 See *ibid.*, at pp. 2-3.

199 Establishment of New Mechanisms for Protection of Vulnerable Marine Ecosystems and Sustainable Management of High Seas Bottom Fisheries in the North Western Pacific Ocean, reproduced in Record of the Second Inter-governmental Meeting on Management of High Seas Bottom Fisheries in the North Western Pacific, Busan, Republic of Korea, 31 January-2 February 2007, Attachment 6 (hereinafter 'North Western Pacific Ocean Interim Mechanism'), at para. 10. The document stipulates that paragraph 4 (interim measures) will become effective upon the adoption of the document, while the other provisions of the document will become applicable and operational no later than 31 December 2007. *Ibid.*, at para. 11.

200 *Ibid.*, at para. 1A.

from the scope of the interim mechanism. It is less clear, however, whether other fisheries in that area are subject to the interim mechanism. On the one hand, as stated above, one of the objectives of the CBS Convention is ‘to provide, if the Parties agree, a forum in which to consider the establishment of necessary conservation and management measures for living marine resources other than pollock in the Convention Area as may be required in the future’.²⁰¹ On the other hand, annual conferences of the parties to the CBS Convention have not attempted to manage species other than pollock.²⁰² It could be argued that bottom fisheries for resources other than pollock are not excluded from the scope of the interim mechanism unless the meetings of the parties to the CBS Convention become operational in this regard.²⁰³ For instance, Churchill argues that ‘[i]f and when the pollock stock recovers and the [CBS] Convention thus becomes operational, it will clearly constitute a regional fisheries arrangement within the meaning of the [FSA]’.²⁰⁴

The management target of the interim mechanism is bottom fisheries conducted by vessels operating on the high seas.²⁰⁵ The document states that the general purpose of the action to be taken by the participants is the sustainable management of fish stocks and the protection of VMEs in the high seas areas of the North Western Pacific Ocean.²⁰⁶ Although the term ‘vulnerable marine ecosystems in the high seas’ is different from that used in the relevant UNGA resolution (‘vulnerable marine ecosystems in areas beyond national jurisdiction’), this does not necessarily mean that the drafters intended to imply something different from the UNGA Resolution. In fact, the document recognizes ‘the importance of adopting and implementing conservation and management measures as called for in paragraphs 83 to 87 of A/61/L.38 [i.e., UNGA Resolution 61/105]’.²⁰⁷

The principles of the interim mechanism set out in the document are as follows: the implementation of the interim mechanism will be based on the best scientific information available, be in accordance with existing international laws and agreements, establish appropriate and effective conservation and management measures, be in accordance with the precautionary approach, and incorporate an ecosystem approach to fisheries management.²⁰⁸ The articulation of these principles in the document contrasts the proposed mechanism with the CBS Convention since the text of the CBS Convention lacks any reference to the precautionary approach or the

201 CBS Convention, Article II(4).

202 See Section 5.3.1 above.

203 But, see Molenaar, ‘Current Legal and Institutional Issues Relating to the Conservation and Management of High Seas Deep-Sea Fisheries’, at p. 124.

204 Churchill, ‘The Barents Sea Loophole Agreement’, at p. 481. See also a critique of the legitimacy of the CBS Convention regime in Beer-Gabel and Lestang, *Les Commissions de Pêche et Leur Droit*, at pp. 44-46.

205 North Western Pacific Ocean Interim Mechanism, at para. 1B. It is recalled that the target of management was extended from bottom trawling to bottom fisheries in general after the first meeting. In this regard, the title of the meeting was changed after the first meeting.

206 *Ibid.*, at para. 2.

207 *Ibid.*, at preambular para. 4.

208 *Ibid.*, at para. 3.

protection of the ecosystem of the Bering Sea and may not provide a basis to implement UNGA Resolution 61/105 concerning the sustainable management of bottom fisheries and the protection of VMEs.²⁰⁹

Interim measures are composed of several elements. First, the participants agreed to freeze bottom fisheries at the current level. Each country will limit its fishing efforts in bottom fisheries in the high seas part of the area covered by the interim mechanism in terms of the number of fishing vessels and other parameters which reflect the level of fishing effort, fishing capacity or potential impacts on marine ecosystems.²¹⁰ Furthermore, each country will not allow bottom fisheries to expand into areas of the North Western Pacific Ocean where no such fishing is currently occurring, in particular by limiting such bottom fisheries to seamounts located south of 45 degrees and provisionally prohibit them in other areas of coverage.²¹¹

Second, the participants will work to establish science-based standards and criteria for determining that any proposed fishing activity will not have an SAI on marine species or any VMEs.²¹² Upon the adoption of such criteria, exceptions to the above restrictions may be provided in cases where increased fishing activity or fisheries in new areas would not have an SAI on marine species or any VME.²¹³ Such determinations may be made by any flag state or pursuant to any subsequent arrangement, and will be made publicly available through agreed means.²¹⁴

In this regard, it should be noted that a meeting of the Scientific Working Group, which was established by the participating states, held before the Second Meeting highlighted the need to achieve a common understanding of the terms ‘vulnerable marine ecosystem’ and ‘significant adverse impact’.²¹⁵ The meeting discussed initial thoughts on the meaning of those terms but it was agreed that the meeting was not able to provide a concrete definition of such terms at that time and such work should also be informed by similar work to be undertaken in broader international fora.²¹⁶

Third, in areas where, in the course of fishing operations, evidence of VMEs, such as cold water corals or other associated species, is encountered, the participants will require their vessels to cease bottom fishing activities. The location and species will be reported to the interim secretariat. The latter will notify the other parties so that appropriate measures can be adopted in respect of the relevant site.²¹⁷ In the Third Meeting, a new requirement was added, stipulating that, when such ecosystem features are encountered in the course of operations, the vessel concerned should

209 On these aspects of the CBS Convention, see Kaye, *International Fisheries Management*, at pp. 336-337.

210 North Western Pacific Ocean Interim Mechanism, at para. 4A.

211 *Ibid.*, at para. 4B.

212 *Ibid.*, at para. 4D.

213 *Ibid.*, at para. 4C and 4E.

214 *Ibid.*, at para. 4F.

215 Record of the Second Inter-governmental Meeting on NWP Bottom fisheries, at p. 1.

216 *Ibid.*, at p. 2.

217 North Western Pacific Ocean Interim Mechanism, at para. 4G.

leave the site and should move to an area, at least 5 miles away from the ecosystem, where no such ecosystems exist.²¹⁸

In addition to interim measures, the document specifies contingent action. In areas where VMEs are known to occur or are likely to occur, based on the best available scientific information, bottom fisheries shall cease by 31 December 2008, unless conservation and management measures have been established to prevent SAIs on VMEs, consistent with the relevant provisions of A/61/L.38 and such international standards as may be developed pursuant thereto.²¹⁹ Put differently, this provision appears to allow bottom fisheries on known or likely VME sites between February 2007 and December 2008 even if these operations would have SAIs on VMEs.²²⁰ The relationship between paragraphs 4G and 5 is not clear but, given the wording 'In addition to the interim measures contained in paragraph 4' as well as the intention of the participants to implement UNGA Resolution 61/105, this provision should be interpreted in a way which is most consistent with the said Resolution. In other words, this provision should be regarded as prohibiting bottom fisheries causing SAIs by the deadline *even if* the known or likely VME site has not yet been closed in accordance with paragraph 4.

The Scientific Working Group will provide scientific advice and recommendations; in particular it will first determine what information is needed, *inter alia*, to identify VMEs, including seamounts, hydrothermal vents and cold-water corals, and to assess whether bottom fishing activities would have an SAI on such VMEs, and will develop and propose a working plan for obtaining the necessary information.²²¹ In this regard, the Scientific Working Group agreed that the best approach to developing a definition is to use existing documentation in an international collaborative

218 See press release by the Japanese Fisheries Agency on the outcome of the third inter-governmental consultations on the management of bottom fisheries in the North-West Pacific, 30 October 2007, available at <<http://www.jfa.maff.go.jp/j/press/kokusai/071030.html>> (last visited 27 April 2008).

219 North Western Pacific Ocean Interim Mechanism, at para. 5. Interestingly, this paragraph, together with paragraph 7 on the collection of scientific information, uses 'shall', while other paragraphs use 'will' or 'should'.

220 In fact, the National Resources Defense Council (NRDC) expressed concern that the interim provisions do not fulfil UNGA Resolution 61/105 requirements for the protection of vulnerable ecosystems, but instead specifically permit bottom trawling to continue in vulnerable areas. *ENB*, vol. 7, No. 62, at pp. 3-4. See also Report of the Sixth Round of Informal Consultations of States Parties to the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (New York, 23-24 April 2007), at p. 9.

221 North Western Pacific Ocean Interim Mechanism, at para. 6; Record of the Second Inter-governmental Meeting on NWP Bottom fisheries, at Attachment 3 (Scientific Working Group Terms of Reference) and Attachment 4 (Scientific Working Group Draft Elements of Work Plan). The Scientific Working Group acknowledged that examples of VMEs provided by the UN include seamounts, cold-water corals, hydrothermal vents and sponge fields. Record of the Second Inter-governmental Meeting on NWP Bottom fisheries, at Attachment 5 (Identification of information requested by the First Intergovernmental Meeting).

effort such as through the FAO.²²² To facilitate scientific work, each country shall undertake the collection of information and observer data and sharing of information.²²³ In the Third Meeting, it was agreed that: (1) the parties would submit data on the number of vessels, the gear used in the fishery, tonnages, the number of fishing operation days, total catches by species and seamounts where operations took place, during the period 2002-2006; (2) observers on board would make efforts to collect scientific information and the parties would report on the period of observer status as soon as possible, including the name of the observer, the vessel name, seamounts and other relevant information.²²⁴

Countries will exercise full and effective control over each of their bottom fishing vessels operating in the coverage area, including by means of fishing licences, authorizations or permits, and will ensure the maintenance of a record of these vessels.²²⁵ Collection and exchange of information as required in the FAO Compliance Agreement will be carried out, and each participant will ensure that all these vessels are equipped with an operational VMS no later than 31 December 2007 or earlier if so decided by the flag state.²²⁶

5.3.3 Negotiation for a Long-Term Management Mechanism

While adopting an interim mechanism for the management of bottom fisheries, the second meeting discussed the elements of a long-term mechanism for the international management of high seas bottom fisheries in the North Western Pacific Ocean, and the participants agreed that the mechanism should be consistent with established principles of international law, as outlined in the LOSC, the FSA and other relevant instruments, and should build on the best practices of existing RFMO/As.²²⁷ Given the low level of existing fisheries not regulated by other RFMO/As, it may be the case that the proposed mechanism takes the form of a meeting of parties, rather than an RFMO.

Discussions took place over the long-term mechanism in the third and fourth meetings in 2007 and 2008, respectively. In these meetings, the United States put forward a proposal to extend the geographical scope of the proposed mechanism to the entire North Pacific as well as to cover all species that are not regulated by other existing international agreements.²²⁸ At the fourth meeting, Japan and South Korea

222 Record of the Second Inter-governmental Meeting on NWP Bottom fisheries, at Attachment 5 (Identification of information requested by the First Intergovernmental Meeting).

223 North Western Pacific Ocean Interim Mechanism, at para. 7.

224 See the press release on 30 October 2007 above.

225 North Western Pacific Ocean Interim Mechanism, at para. 8A.

226 Ibid., at para. 8B and 8C.

227 Record of the Second Inter-governmental Meeting on NWP Bottom fisheries, at p. 3.

228 See press releases by the Fisheries Agency of Japan on the outcome of the third inter-governmental consultations on the management of bottom fisheries in the North-West Pacific, 30 October 2007, available at <<http://www.jfa.maff.go.jp/j/press/kokusai/071030.html>> (last visited 27 April 2008) and on the outcome of the fourth intergovernmental consultations on the management of bottom fisheries in the North-West Pacific, 20 May 2008 available at <<http://www.jfa.maff.go.jp/j/press/kokusai/080520.html>> (last visited 27 April 2008).

supported this proposal although Russia pointed out that the negotiations were started to address the regulation of bottom fisheries and that the extension of the geographical area and species covered by the proposed mechanism needed to be further discussed.²²⁹

The extension of the geographical coverage of the proposed Convention to the North-East Pacific can be attempted in several ways. One option would be to cover the entire North Pacific with a view to filling a remaining gap in the RFMO/A geographic coverage in the Pacific in coordination with the proposed South Pacific RFMO. In this case, not only the US and Canada but also Mexico, the Central American states and Pacific island states may be included in the coastal states in the region.

In addition, the unclear situation with regard to fisheries targeting non-pollock species in the Donut Hole may be more salient in negotiating for the permanent mechanism, especially if fisheries other than bottom fisheries are included. Poland is a party to the CBS Convention.²³⁰ One would imagine that the coastal states in the region do not wish to expand the scope of high seas fishing nations participating in the negotiations. Three options are available: (1) to give an explicit mandate for the management of non-pollock fisheries in the Donut Hole to the proposed new mechanism while the CBS Convention continues to manage pollock fisheries in the area concerned; (2) to exclude any fisheries in the Donut Hole from the scope of the new mechanism and to operationalize the CBS Convention with regard to non-pollock fisheries; (3) to restructure the CBS Convention regime by activating it with regard to non-pollock species and by extending its scope to the entire North Pacific. The first option creates a very complex mixture of regional fisheries management mechanisms, muddling up the already complicated multi-layered situation in the North Pacific. The third option, which requires the amendment of the CBS Convention, virtually demands that the US and Russia abandon their preferential treatment. The preferential treatment in the decision-making process under the CBS Convention would not be justified if the Convention Area is extended southward to include other states as coastal states unless sub-regional management committees are introduced for the new regime; these complicated and time-consuming processes are likely to discourage any states concerned to follow. Thus, the second option is the most feasible and seems attractive to the coastal states (especially, the United States) in the sense that the European Community is kept outside the new regime while the advantageous position in the CBS Convention of the United States and Russia remains intact. In this case,

[//www.jfa.maff.go.jp/j/press/kokusai/080520_1.html](http://www.jfa.maff.go.jp/j/press/kokusai/080520_1.html)> (last visited 21 May 2008). Also note the testimony by David Balton before the Senate Subcommittee on Oceans, Atmosphere, Fisheries, and Coast Guard on 3 April 2008, available at <<http://commerce.senate.gov/public/index.cfm?FuseAction=Audio.Home>> (last visited 5 April 2008).

229 Press release by the Fisheries Agency of Japan on the outcome of the fourth intergovernmental consultations on the management of bottom fisheries in the North-West Pacific, 20 May 2008, <http://www.jfa.maff.go.jp/j/press/kokusai/080520_1.html> (last visited 21 May 2008).

230 For information on the parties to the CBS Convention, see its website operated by NOAA, <<http://www.afsc.noaa.gov/REFM/CBS/Default.htm>> (last visited 17 June 2008).

the members of the CBS Convention should take action to address impacts of bottom fisheries in the Convention Area no later than 31 December 2008 to implement UNGA Resolution 61/105.

5.4 OTHER AREAS

There are several more areas with no RFMO/A competent to deal with DHSFS and/or deep-sea fisheries.²³¹ These include: areas of the Arctic, the Western and Eastern Central Atlantic, the South-West Atlantic, the Central Pacific and the North-East Pacific.²³² The rest of this section examines the practice of states and international organizations in these regions with a view to considering the possibility of establishing RFMO/As.

5.4.1 Arctic Ocean

The maritime area north of the Arctic Circle (66°30' north) is bordered by five coastal states, namely, Canada, Denmark (Greenland), Norway, Russia and the United States (hereinafter the 'Arctic coastal states').²³³

A notable characteristic of the central Arctic Ocean, which includes high seas,²³⁴ is that a large part of the seabed and ocean floor of the high seas area may be considered to be outer continental shelves.²³⁵ Russia made its submission to the CLCS in 2001; the CLCS required Russia to submit additional documents. Norway made its submission concerning the Arctic Ocean, the Loop Hole in the Barents Sea and the Banana Hole in the Norwegian Sea in November 2006 and still awaits a CLCS

231 For example, see A/59/298 and Report and Documentation of the Expert Consultation on Deep-sea Fisheries in the High Seas, Bangkok, Thailand, 21-23 November 2006, at para. 137.

232 In addition, there are high seas areas north of the Convention Area of SIOFA (i.e., FAO Statistical Area 04) but, according to a European Commission staff working paper, these areas are not significant in terms of hosting high seas fisheries. Commission Staff Working Document, Accompanying document to the Communication from the Commission to the Council and the European Parliament, Destructive fishing practices in the high seas and the protection of vulnerable deep sea ecosystems, SEC(2007) 1314, 17 October 2007, at p. 3.

233 While a tiny part of the Icelandic coastline is within the Arctic Circle, it is not normally characterized as an Arctic coastal state. See D.M. Johnston, 'The Future of the Arctic Ocean: Competing Domains of International Public Policy', 17 *Ocean Yearbook* (2003), at p. 596 note 3. Finland, Iceland and Sweden have Arctic territories and are also considered to be Arctic states.

234 See R.R. Churchill, 'Claims to Maritime Zones in the Arctic: Law of the Sea Normality or Polar Peculiarity?' in A.G. Oude Elferink and D.R. Rothwell (eds.), *The Law of the Sea and Polar Maritime Delimitation and Jurisdiction* (2001), at p. 123 ('the prevalent view is that Arctic waters beyond national maritime zones, even if ice-covered, are high seas').

235 See, e.g., A.G. Oude Elferink, 'The Outer Continental Shelf in the Arctic: The Application of Article 76 of the LOSC Convention in a Regional Context', in A.G. Oude Elferink and D.R. Rothwell (eds.), *The Law of the Sea and Polar Maritime Delimitation and Jurisdiction* (2001), at pp. 139, 147-151.

recommendation.²³⁶ Other states such as Canada, Denmark (Greenland) and, if it accedes to the LOSC, the United States have yet to submit their information to the CLCS.²³⁷ The existence of vast continental shelves in this area would lead to a potential RFMO/A with competence to regulate almost only non-sedentary species since sedentary species on the continental shelves fall under the sovereign rights of coastal states. It is still to be seen to what extent such an RFMO/A may regulate deep-sea fisheries given the ambiguity in relationships between the jurisdiction of coastal states over the exploitation of sedentary species and the competence of RFMO/As to regulate fisheries employing fishing gear which may affect marine ecosystems, including benthic communities.²³⁸

The Atlantic part of the central Arctic Ocean, the Norwegian Sea and the Barents Sea are already covered by NEAFC. Article 1 of the new NEAFC Convention provides that the Convention Area means the areas 'within those parts of the Atlantic and Arctic Oceans and their dependent seas which lie north of 36° north latitude and between 42° west longitude and 51° east longitude' and 'within that part of the Atlantic Ocean north of 59° north latitude and between 44° west longitude and 42° west longitude'. Thus, high seas parts of the Arctic between 44° west longitude and 51° east longitude are covered by the NEAFC Convention.²³⁹

236 Information concerning documents of submission and examination by the CLCS is available at the website of the CLCS, <http://www.un.org/Depts/los/clcs_new/clcs_home.htm> (last visited 25 June 2007).

237 On the submission of information by non-parties to the LOSC, see reports by the International Law Association's Committee on the Outer Continental Shelf. E.g., Second Report, Legal Issues of the Outer Continental Shelf, Toronto Conference (2006), at pp. 20-21 (Conclusion No. 16 and its Explanatory Note).

238 See sections 2.1.1.3 and 3.2.2 above. See also R. Rayfuse, 'Melting Moments: The Future of Polar Oceans Governance in a Warming World', 16 *Review of European Community & International Environmental Law* (2007), at p. 209 (referring to 'a patchwork of multiple small, discrete pockets of the Area completely surrounded by extended continental shelf as 'managerial wastelands').

239 See also Molenaar, 'Current Legal and Institutional Issues Relating to the Conservation and Management of High Seas Deep-Sea Fisheries', at p. 128 note 107 and its accompanying text (arguing that the Convention Area extends to the North Pole and the proposed amendments to the Convention do not change that). The map attached to the press release of the 2008 Extraordinary Meeting of NEAFC in July 2008 shows the central Arctic Ocean as part of the NEAFC Regulatory Area. See Report of the Extraordinary Meeting of the North-East Atlantic Fisheries Commission, 1 and 2 July 2008, vol. II, Annex J. Nevertheless, one phrase in the NEAFC Convention might qualify the competence of NEAFC with regard to a slender portion in the Arctic Ocean. The second delineation of the scope ('within that part of the Atlantic Ocean north of 59° north latitude and between 44° west longitude and 42° west longitude') does not refer to the Arctic Ocean as opposed to the former delineation which refers to both the Atlantic and Arctic Oceans. Thus, it may be argued that the Arctic part of the area between 44° west longitude and 42° west longitude (i.e., north of Greenland) is not included within the scope of the NEAFC Convention. Another possible argument would be that under the 1980 NEAFC Convention, the Convention applies to 'waters' so that it does not include ice-covered areas since the ordinary meaning of water connotes liquid. This argument is not relevant in the

Except for the Atlantic side of the Arctic Ocean, there exists no RFMO/A dealing with straddling fish stocks or DHSFS for the high seas part of the area north of the Arctic Circle. Therefore, the following paragraphs examine the current and likely future situations concerning the management of high seas fisheries in this region.

During the Cold War, due to its strategic importance, international cooperation did not take place in the Arctic Ocean. Upon the initiative of Finland and Canada, the governments of the eight Arctic states established a cooperative mechanism to address environmental protection in this area.²⁴⁰ Subsequently, the Arctic Council was established in 1996, to provide a high-level forum to discuss issues relating to the Arctic.²⁴¹ It aims to provide 'a means for promoting cooperation, coordination and interaction among the Arctic States [...] in particular issues of sustainable development and environmental protection in the Arctic'.²⁴² Three working groups within the Arctic Council have the potential to discuss fisheries issues: the Programme for the Conservation of Arctic Flora and Fauna (CAFF),²⁴³ the Sustainable Development Working Group (SDWG),²⁴⁴ and the programme on Protection of the Arctic Marine Environment (PAME).²⁴⁵

The existing practice of these working groups indicates no sign of attempting to regulate high seas fisheries. In fact, it has been pointed out that the main actions by the Arctic Council and its bodies have been limited to the identification of environmental threats, rather than addressing such threats through providing remedial action, and the potential role of the Arctic Council is also limited.²⁴⁶

context of this study since ice will no longer exist when commercial fisheries in this area become feasible in that part of the ocean.

240 Arctic Environmental Protection Strategy (AEPS), Rovaniemi, 14 June 1991.

241 Declaration on the Establishment of the Arctic Council, Ottawa, 19 September 1996.

242 *Ibid.*, Article 1(a).

243 CAFF was originally established within the framework of the AEPS. The 1997 'Cooperative Strategy for the Conservation of Biological Diversity in the Arctic Region' and the 1998 'Strategic Plan for the Conservation of Arctic Biological Diversity' provide framework goals, strategic directions, rationale and action plans in this regard, including species and habitat conservation and restoration, protected areas and sustainable use of biological resources. As the CAFF Work Plan for 2006-2008 indicates, 'current projects will provide data for informed decision making in resolving conflicts which are now arising in trying to both conserve the natural environment and permit regional growth'. CAFF Work Plan, at p. 1, available at <<http://archive.arcticportal.org/255/01/work-plan-all.pdf>> (last visited 18 June 2008).

244 The SDWG was established in 1998 at the First Ministerial Meeting in Iqaluit. See Iqaluit Declaration, para. 9. Its Work Plan 2006-2008 includes 'Sustainable Use of Natural, including Living, [*sic*] Resources'. See SDWG Work Plan 2006-2008, at pp. 2-3, available at <<http://arctic-council.org/filearchive/SDWG%20Workplan%202006%20to%202008.pdf>> (last visited 18 June 2008).

245 PAME was established in 1993. The PAME programme now operates under the Arctic Council. The working group provides a unique forum for collaboration on a wide range of Arctic marine environmental issues. For its work, see PAME Work Plan 2006-2008.

246 R. Huebert, 'The Law of the Sea and the Arctic: An Unfulfilled Legacy', 18 *Ocean Yearbook* (2004), at pp. 213 and 218; D. VanderZwaag *et al.*, 'The Arctic Environmental Protection Strategy, Arctic Council and Multilateral Environmental Initiatives: Tinkering while the Arctic Marine Environment Totters', in A.G. Oude Elferink and D.R. Rothwell (eds.), *The Law of the*

At present, almost all of the high seas area of the central part of the Arctic Ocean is covered by ice for most of the year, and the possibility of major fishing to take place in the high seas area is limited.²⁴⁷ Nevertheless, climate change caused by global warming might alter the situation.²⁴⁸ It is possible that some marine capture fisheries will take place on the high seas part since climate change will result in the reduction of ice and fish population shifts.²⁴⁹ In particular, areas north of the Atlantic and the Central and Eastern Canadian Arctic and West Greenland are likely to see an increase in fisheries.²⁵⁰

Two issues affect the future governance of Arctic fisheries: the applicability and desirability of the existing framework, including the LOSC; and the special role of coastal states.

Arguments have been made that the existing framework is not applicable to or is undesirable for the Arctic. First, from the perspective of the drafting history of the LOSC, it has been argued that ‘the tacit understanding at UNCLOS III to leave the Arctic out of account has created uncertainties regarding the applicability of certain other provisions [than Article 234] to these waters’.²⁵¹ Second, recently, calls for establishing a legally-binding instrument were made in some fora to build a comprehensive international regime and/or sectoral regimes.²⁵²

Notwithstanding the above views emphasizing the special characteristics of the Arctic Ocean, state practice indicates that the existing legal framework is being, and should be, used for the Arctic as well. For example, the five coastal states bordering on the Arctic Ocean stated in the 2008 Ilulissat Declaration issued at the Arctic Ocean Conference on 27-29 May 2008 that the existing legal framework, including the law of the sea, ‘provides a solid foundation for responsible management [...] of this Ocean through national implementation and application of relevant provisions’ and they ‘see

Sea and Polar Maritime Delimitation and Jurisdiction (2001), at pp. 233-240; E.T. Bloom, ‘Establishment of the Arctic Council’, 93 *American Journal of International Law* (1999), at pp. 719-720.

247 See Johnston, ‘The Future of the Arctic Ocean’, at pp. 616-617; Molenaar, ‘Current Legal and Institutional Issues Relating to the Conservation and Management of High Seas Deep-Sea Fisheries’, at p. 128.

248 For an account of the potential effects on animal species in general, see ACIA, *Impacts of a Warming Arctic: Arctic Climate Impact Assessment* (2004), at pp. 58-76.

249 For an account of the potential effects on fisheries in particular, see *ibid.*, at pp. 62-64. See also Huebert, ‘The Law of the Sea and the Arctic’, at p. 200.

250 ACIA, *Impacts of a Warming Arctic: Arctic Climate Impact Assessment*, at pp. 18-19.

251 Johnston, ‘The Future of the Arctic Ocean’, at p. 597 note 4.

252 See, e.g., 6th Conference of Parliamentarians of the Arctic Region, Nuuk, Kalaallit Nunaat, Greenland, 3-6 September, Conference Statement, 5 September 2004, para. 39, asking the Standing Committee of Parliamentarians of the Arctic Region to ‘Consider possibilities to initiate a process which over time could lead to a binding legal regime for conservation and sustainable use of the Arctic and its marine environment’. See also O.S. Stokke, ‘A Legal Regime for the Arctic?: Interplay with the Law of the Sea Convention’, 31 *Marine Policy* (2007); H. Corell, ‘Reflections on the Possibilities and Limitations of a Binding Legal Regime for the Arctic’, Seventh Conference of Parliamentarians of the Arctic Region, Kiruna, Sweden, 3 August 2006.

no need to develop a new comprehensive international legal regime to govern the Arctic Ocean'. In its conclusions and recommendations, the report jointly submitted by the High Representative and the European Commission to the European Council refers to 'addressing a possible need to strengthen certain rules of international law, including the Law of the Sea' in the section entitled 'EU multilateral leadership to promote global climate security' and states that possible actions include 'Develop an EU Arctic policy based on the evolving geo-strategy of the Arctic region, taking into account i.a. access to resources and the opening of new trade routes' in the section entitled 'Cooperation with third countries'.²⁵³

With regard to the special role of coastal states, an approach to endow coastal states with special responsibilities has been advanced in various ways.²⁵⁴ Various legal arguments in favour of the special role of coastal states have been put forward, ranging from the 'Arctic lake' theory and the sector theory to the concept of 'Arctic Mediterranean' based on provisions concerning enclosed or semi-enclosed seas.²⁵⁵ In the context of fisheries, a cooperative regime reconciling special responsibilities of coastal states for the high seas enclave and non-coastal states' claim to access by reference to the freedom of the high seas has been advanced.²⁵⁶ On the other hand, some commentators advocate an approach involving both Arctic and non-Arctic states in the future regime.²⁵⁷

Some international instruments have already endorsed special responsibilities of coastal states of the Arctic. For example, the 1973 Polar Bear Agreement in its

253 Climate Change and International Security, Paper from the High Representative and the European Commission to the European Council, S113/08, 14 March 2008, at pp. 10-11.

254 A variation of this approach is 'a gradual incorporation of additional Arctic space under U.S. control, if not as part of U.S. territory then perhaps initially through some kind of quasi-federational arrangement with Canada and Denmark/Greenland'. Johnston, 'The Future of the Arctic Ocean', at p. 614.

255 Ibid., at pp. 600 and 616; D.R. Rothwell and S. Kaye, 'Law of the Sea and the Polar Regions: Reconsidering the Traditional Norms', 18 *Marine Policy* (1994), at pp. 50-51 and 58 (introducing these theories and observing that the best solution is to treat the area as sui generis and to develop a specific regime). Rayfuse argues that as navigational opportunities increase in the face of global warming, the rejection of high seas status becomes less persuasive, while suggesting the possibility of Articles 122 and 123 of the LOSC on special rights and duty of cooperation of coastal states over semi-enclosed sea. Rayfuse, 'Melting Moments: The Future of Polar Oceans Governance in a Warming World', at pp. 209-210. Some writers argue that claims to maritime territory based on the sector principle have been made by Russia and Canada – and rejected by Denmark, Norway and the United States. See E. Franckx, *Maritime Claims in the Arctic: Canadian and Russian Perspectives* (1993), at p. 237; Churchill, 'Claims to Maritime Zones in the Arctic: Law of the Sea Normality or Polar Peculiarity?' at pp. 121-123 (concluding that such claims will be incompatible both with Article 2 of the High Seas Convention and with Article 89 of the LOSC).

256 See Johnston, 'The Future of the Arctic Ocean', at pp. 599-600 and 616-617 (a proposition for cooperative arrangements between the surrounding states 'would lack credibility, given the near-absence of fishery stocks in 'extra-national' Arctic waters'). He also bases non-coastal state claims on the common heritage doctrine.

257 R. Rayfuse, 'Protecting Marine Biodiversity in Polar Areas Beyond National Jurisdiction', 17 *Review of European Community & International Environmental Law* (2008), at pp. 10-11.

preamble recognizes ‘the special responsibilities and special interests of the States of the Arctic Region in relation to the protection of the fauna and flora of the Arctic Region’.²⁵⁸ In addition, Article 234 of the LOSC is applicable to the Arctic.²⁵⁹ Furthermore, in the above-mentioned 2008 Ilulissat Declaration, the reference to the use of the existing framework for the Arctic Ocean is preceded by an observation that ‘[b]y virtue of their sovereignty, sovereign rights and jurisdiction in large areas of the Arctic Ocean the five coastal states are in a unique position to address these possibilities and challenges’.

With regard to fisheries in particular, the United States Senate launched an initiative by passing a resolution to recommend the executive to initiate negotiations for the international management of Arctic fisheries.²⁶⁰ Among other things, it stipulated that the US should take the necessary steps with other *Arctic nations* to negotiate an agreement or agreements for managing migratory, transboundary and straddling fish stocks in the Arctic Ocean and to establish a new international fisheries management organization or organizations for the region;²⁶¹ the above-mentioned agreement or agreements to be negotiated should conform to the requirement of the FSA,²⁶² and that until the agreement or agreements come into force and measures consistent with the FSA are in effect, the US should support international efforts to halt the expansion of commercial fishing activities in the high seas of the Arctic Ocean.²⁶³

The Senior Arctic Official of the United States brought the issue to the attention of the Senior Arctic Officials in the Arctic Council in November 2007. The participants at the meeting expressed strong support for building on and considering this issue within the context of existing mechanisms.²⁶⁴ From the very brief explanation of the discussion in the report, it is difficult to understand precisely what the participants intended.²⁶⁵

258 Agreement on the Conservation of Polar Bears, Oslo, 15 November 1973, Preambular para. 1.

259 Rosenne and Yankov (eds.), *Virginia Commentary*, vol. IV, at pp. 392-398.

260 The 2007 Senate Joint Resolution 17, directing the United States to initiate international discussions and take necessary steps with other nations to negotiate an agreement for managing migratory and transboundary fish stocks in the Arctic Ocean, having been passed in the House in May 2008, was signed by President Bush into law on 4 June 2008. See the website of Senator Ted Stevens, <http://stevens.senate.gov/public/index.cfm?FuseAction=NewsRoom.PressReleases&ContentRecord_id=5538fa34-d757-3e73-f6cd-ec6c3628762c> (last visited 5 June 2008).

261 Para. 1.

262 Para. 2.

263 Para. 4.

264 Meeting of Senior Arctic Officials, Final Report, 28-29 November 2007, Narvik, Norway, at p. 12.

265 At least four views may be inferred: they wished (1) that the Arctic Council as such should embark on the management of fisheries (at least for the high seas part of the Arctic Ocean); (2) to use the Arctic Council as an institutional basis for negotiations for the future fisheries management regime; (3) to discourage member states to start negotiations outside the Arctic Council (in multilateral fora, such as the FAO and the UN, open to both coastal or Arctic states and (potential) distant water fishing states); or (4) to use the existing legal and other normative

If the process of negotiations for an Arctic RFMO (or arrangement) starts in multilateral settings (e.g., COFI of the FAO), in addition to bilateral negotiations for the management of shared stocks with neighbouring states,²⁶⁶ the geographical scope of the proposed regime will be a critical issue: high seas only or also the EEZ?; the entire Arctic Ocean or part of it (e.g., separate negotiations for the Atlantic part and the part north of Alaska)?²⁶⁷ And, will the negotiations be limited to Arctic states only or open to all interested states? The choice of the geographical scope would determine the relevant coastal and high seas fishing states and, eventually, influence the substance of the proposed regime. If the proposed management regime only intends to regulate high seas fishing on the Atlantic side, one may argue that it is sufficient to activate NEAFC to perform its management function in that area. On the other hand, if one attempts to fill a coverage gap by addressing any potential fisheries, a new RFMO/A needs to be negotiated with the geographical coverage of either the entire high seas part of the central Arctic Ocean or that part excluding the NEAFC Regulatory Area in the Arctic.²⁶⁸

5.4.2 Central Atlantic Ocean

In the Central Atlantic, there is no regional fishery body with a management mandate with respect to straddling stocks or DHSFS. On the other hand, there are several regional fishery bodies with an advisory mandate, including the Fisheries Committee for the Eastern Central Atlantic (CECAF) and the Western Central Atlantic Fishery Commission (WECAFC). These two bodies have for several years discussed the potential to transform them into RFMOs.

CECAF has for several years discussed possibilities for upgrading it to a management body under Article XIV of the FAO Constitution, but so far has decided not to do so.²⁶⁹ In 2004, the Committee adopted a resolution calling on all members of

instruments (e.g., the LOSC, the FSA and the FAO Code of Conduct) as a basis for future management. The first three views focus on the institutional settings of the proposed management mechanism, while the last one is concerned with its normative content; both of these two aspects might have been implied simultaneously by the participants.

266 At the bilateral level, discussions for the management of shared stocks already took place with Canada and Russia, respectively. Senate hearings on 3 April 2008 above.

267 For an argument in favour of a regional fisheries management regime applicable to all Arctic high seas areas, see Rayfuse, 'Melting Moments: The Future of Polar Oceans Governance in a Warming World', at pp. 212-213.

268 In the first option, the proposed mechanism needs to coordinate fisheries management in the overlapping area.

269 For the history of discussions within CECAF, see Report of the Fifteenth Session of the Fishery Committee for the Eastern Central Atlantic, Abuja, Nigeria, 1-3 November 2000, FAO Fisheries Report No. 642, RAFI/R642, at pp. 4-5, paras 27-34; Report of the Technical Consultation on the Future of the Fishery Committee for the Eastern Central Atlantic (CECAF), Lagos, Nigeria, 27-30 November 2001, FAO Fisheries Report No. 687, RAFI/R687, at p. 6, paras 32-33; Report of the Sixteenth Session of the Fishery Committee for the Eastern Central Atlantic, Santa Cruz de Tenerife, Spain, 22-24 October 2002, FAO Fisheries Report No. 693, RAFI/R693, at pp. 6-7, paras 37-38 and 40-41; Report of the Seventeenth Session of the

CECAF and non-members fishing in the high seas in the CECAF region for species other than tuna to provide reports on their catches to CECAF.²⁷⁰ The resolution refers to ensuring the long-term conservation and sustainable use of all living resources and safeguarding the environment and marine ecosystems in which the resources occur, and implementing the precautionary approach in the management of fishery resources; it recognizes, in particular, the fragility of the ecosystems of seamounts on which exploratory fisheries have taken place; it calls on members of the Committee fishing for species other than tuna in the high seas to report on their fishing activities and on the state of the fishery stocks on which their activities are based; it also invites non-members to submit the same information on a voluntary basis.²⁷¹

In 2002, the Committee also reviewed its revised Terms of Reference as prepared at the 2001 Technical Consultation, and endorsed the revision.²⁷² The old terms of reference referred to giving advice ‘to promote, co-ordinate and assist national and regional programmes of research and development, leading to the rational utilization of the marine fishery resources of the area’.²⁷³ The new version in its preamble provides that the purpose of the Committee shall be to promote the sustainable utilization of the living marine resources of the area by the proper management and development of the fisheries and fishing operations, and to this end its functions include ‘to promote, encourage and coordinate research in the area related to the

Fishery Committee for the Eastern Central Atlantic, Dakar, Senegal, 24-27 May 2004, FAO Fisheries Report No. 754, RAFI/R754, at p. 7, para. 44; Report of the Eighteenth Session of the Fishery Committee for the Eastern Central Atlantic, Douala, Cameroon, 3-5 October 2006, FAO Fisheries Report No. 828, RAFI/R828, at p. 8, para. 53. In the course of the discussions, the Committee noted that an option to establish a new body competent for the high seas and to continue with CECAF competence limited to areas under national jurisdiction could constitute a general orientation of work for long-term arrangements, although it considered that that option would not be an option for immediate implementation. Report of the Sixteenth Session of the Fishery Committee for the Eastern Central Atlantic, Santa Cruz de Tenerife, Spain, 22-24 October 2002, at pp. 6-7, para. 37.

270 Report of the Seventeenth Session of the Fishery Committee for the Eastern Central Atlantic, Dakar, Senegal, 24-27 May 2004, at p. 7, paras 44-45 and p. 45 (Appendix F).

271 The words used for members and those used for non-members are slightly different because the latter invitation is concerned with ‘fishing activities that their vessels may conduct’. This wording could be interpreted as addressing not only states and fishing entities currently engaged in fishing but also states and fishing entities whose vessels are not currently engaged in fishing but intend to be so in the future. On the other hand, the term ‘may’ could also have been chosen to indicate that it is not entirely clear if and which non-members have vessels that are currently engaged in high seas fishing.

272 Report of the Sixteenth Session of the Fishery Committee for the Eastern Central Atlantic, Santa Cruz de Tenerife, Spain, 22-24 October 2002, at p. 7, para. 42. The terms of reference were approved by the 124th session of the FAO Council in June 2003.

273 For the old version, see Options for Future Arrangements for Cooperation in Fisheries Management in the Area of Competence of the Fishery Committee for the Eastern Central Atlantic, CECAF/XVI/2002/7, at p. 22.

living resources [...] and to draw up programmes required for this purpose and to organize such research as may appear necessary'.²⁷⁴

In the Western Central Atlantic, the geographical area of competence of WECAFC is partly covered by the Caribbean Regional Fisheries Mechanism (CRFM) within the context of the Caribbean Community (CARICOM). On the one hand, WECAFC is composed of Members and Associate Members of the FAO that are coastal states in that region or non-coastal states whose vessels engage in fishing in the area of competence of the Commission.²⁷⁵ The area of competence of WECAFC covers the entire Western Central Atlantic, as provided in its Statutes and the Commission covers all living marine resources in the area.²⁷⁶ On the other hand, the CRFM is primarily concerned with EEZ and transboundary aquatic resources in the Caribbean region. The objectives of the Mechanism are, *inter alia*, the efficient management and sustainable development of marine and other aquatic resources within the jurisdictions of Member States and the promotion and establishment of co-operative arrangements among interested states for the efficient management of shared, straddling or highly migratory marine and other aquatic resources.²⁷⁷ The representatives of the CRFM Secretariat attended meetings of WECAFC and the contribution of the CRFM to the process of strengthening WECAFC was acknowledged by the UNGA.²⁷⁸

The poor state of many resources in the Western Central Atlantic led WECAFC to discuss on its transformation to an FAO Article XIV body (an FAO body with a management mandate), but WECAFC decided to remain an advisory body.²⁷⁹ Instead,

274 For the new version, see Appendix E of the Report of the 124th FAO Council that approved them.

275 Revised Statutes of the Western Central Atlantic Fishery Commission, Rome, 20-25 November 2006, Adopted at the Hundred and Thirty-first Session of the Council of the FAO, Article 5.

276 *Ibid.*, Articles 3-4.

277 Agreement establishing the Caribbean Regional Fisheries Mechanism, Belize City, Belize, 4 February 2002, Article 4. See also the information available at the website of the CRFM, <http://www.caricom-fisheries.com/main/about_us.asp> (last visited 14 May 2007).

278 UNGA Resolution 59/25, para. 55.

279 For the history of the discussions, see Restructuring of WECAFC: Options and Implications, WECAFC/IX/99/5, at para. 33; Report of the Ninth Session of the Western Central Atlantic Fishery Commission and of the Sixth Session of the Committee for the Development and Management of Fisheries in the Lesser Antilles, Castries, Saint Lucia, 27-30 September 1999, FAO Fisheries Report No. 612, SLAC/R612, at p. 8, paras 46-47; Report of the Tenth Session of the Western Central Atlantic Fishery Commission and of the Seventh Session of the Committee for the Development and Management of Fisheries in the Lesser Antilles, Bridgetown, Barbados, 24-27 October 2001, FAO Fisheries Report No. 660, SLAC/R660, at p. 11, para. 70; Report of the Eleventh Session of the Western Central Atlantic Fishery Commission and of the Eighth Session of the Committee for the Development and Management of Fisheries in the Lesser Antilles, St George's, Grenada, 21-24 October 2003, FAO Fisheries Report No. 725, SLAC/R725, at p. 12, paras 64-67; Report of the First Meeting of the Intersessional Working Group on the Strengthening of WECAFC, Punt Cana, Dominican Republic, 12-14 July 2005, WECAFC/XII/05/11, at pp. 2-3, paras 9-12; Report of the Twelfth Session of the Western Central Atlantic Fishery Commission and of the Ninth Session of the Committee for the Development and Management of Fisheries in the Lesser Antilles, Port of Spain, Trinidad and Tobago, 25-28 October 2005, FAO Fisheries Report No. 788, at p. 14, para. 75.

the Commission adopted a ‘recommendation on strengthening WECAFC as an organization’ and recommended the establishment of an Intersessional Working Group in 2003.²⁸⁰ In response to the work of the Working Group, members of the Commission have cooperated to strengthen it through the revision of its statutes. The revised Statutes were subsequently adopted by the Council of the FAO in November 2006. The general objective of the Commission includes promoting effective conservation, management and development of the living marine resources of the area of competence of the Commission, in accordance with the FAO Code of Conduct.²⁸¹ To this effect, the Statutes, in their general principles, provide that the Commission shall have due regard for and promote the application of the provisions of the FAO Code of Conduct and its related instruments, including the precautionary approach and the ecosystem approach to fisheries management.²⁸²

Its revised Statutes now explicitly state that the Commission covers all living marine resources.²⁸³ While no reference is made to DHSFS as opposed to trans-boundary and straddling stocks (whose conservation, management and development under Members’ respective national jurisdictions is explicitly mentioned), this does not necessarily imply that discrete high seas stocks are excluded from the mandate of the Commission.

The Commission is to contribute, among other things, to improved governance through institutional arrangements that encourage cooperation amongst Members.²⁸⁴ The Commission may, as appropriate, organize or undertake research related to the living marine resources in the Commission’s area of competence, including on the interactions between fisheries and the ecosystem, and design programmes required for this purpose and undertake the collection, exchange and dissemination of statistical, biological, environmental and socio-economic data and other marine fishery information as well as its analysis or study.²⁸⁵ The Commission is to provide the necessary support and advice to enable Members to ensure that fishery management decisions are based on the best available scientific evidence, and to provide advice on management measures to Member Governments and competent fisheries organizations.²⁸⁶ The Commission is to promote and encourage the utilization of, *inter alia*, the most appropriate gear and fishing techniques in accordance with the FAO Code of Conduct.²⁸⁷

The Commission discussed the issue of MPAs in 2005. One delegate raised the issue of MPAs on the high seas and expressed the view that these were unnecessary,

280 Report of the Eleventh Session of the Western Central Atlantic Fishery Commission and of the Eighth Session of the Committee for the Development and Management of Fisheries in the Lesser Antilles, St George’s, Grenada, 21-24 October 2003, at pp. 12 and 70-71 (Appendix D).

281 WECAFC Revised Statutes, Article 1.

282 *Ibid.*, Article 2(a).

283 *Ibid.*, Article 4.

284 *Ibid.*, Article 6(a).

285 *Ibid.*, Article 6(e)-(f).

286 *Ibid.*, Article 6(g)-(h).

287 *Ibid.*, Article 6(k).

while it was suggested that national fisheries agencies should monitor discussions within the CBD and participate in the process as appropriate.²⁸⁸

If CECAF and WECAFC seek to establish a management body or bodies in the future, factors to be taken into consideration include: the area of coverage (i.e., one for the entire Central Atlantic or one for each region (east and west)); the form (i.e., RFMO or arrangement); the relationship with the existing bodies; interaction with areas under national jurisdiction (i.e., whether only high seas or both the high seas and areas under national jurisdiction); and the relationship with the FAO (i.e., Article XIV body or autonomous body).

As noted above, CECAF preferred the division between the high seas and areas under national jurisdiction. If this option is pursued in the eastern region in the negotiation for a single organization for the entire Central Atlantic, it is likely that the same will happen for the western region. Then, the coverage area of the new RFMO/A in the Western Central Atlantic part will be split into two areas, namely, the open ocean area and the Caribbean Sea. In fact, it was recognized in WECAFC that the Caribbean Sea can be considered as a semi-enclosed sea and that countries in the region 'have a common interest in protecting the ecosystem, conserving its resources and managing its use'.²⁸⁹ Moreover, the overlap of the areas of competence between WECAFC and the CRFM may lead to a division of work between them. Although there are still discussions over the scope of the proposed Agreement Establishing the Common Fisheries Policy and Regime of the CRFM,²⁹⁰ Article 7.2(q) of the Draft Agreement relates to the high seas part of the Caribbean Sea.²⁹¹ With regard to the

288 Report of the Twelfth Session of the Western Central Atlantic Fishery Commission and of the Ninth Session of the Committee for the Development and Management of Fisheries in the Lesser Antilles, Port of Spain, Trinidad and Tobago, 25-28 October 2005, at p. 8, para. 40.

289 Report of the Ninth Session of the Western Central Atlantic Fishery Commission and of the Sixth Session of the Committee for the Development and Management of Fisheries in the Lesser Antilles, Castries, Saint Lucia, 27-30 September 1999, at p. 4, para. 22.

290 Barbados requested that it should be restricted to activities associated with the Common Fisheries Zone, but it was also proposed that it should extend to all the fishing and aquaculture activities in the Participating States' territory and waters under their jurisdiction as well as those conducted by vessels or nationals of the Participating States. See Draft Agreement Establishing the Common Fisheries Policy and Regime (12 October 2006), Article 4.1 and comments on it. The Common Fisheries Zone is defined as 'waters under [the Participating States'] jurisdiction beyond the twelve mile territorial limit'. Draft Agreement Establishing the Common Fisheries Policy and Regime (12 October 2006), Article 5.1.

291 Article 7.2(q) reads as follows: 'Create new fishing opportunities for fishing vessels of Participating States through, inter alia, the negotiation of fishing access agreements with Third States, and adoption of measures to facilitate and encourage vessels of Participating States to take advantage of high seas fishing opportunities'. The successive meetings of the Caribbean Fisheries Forum of the CRFM have discussed the Draft Agreement. The latest (sixth) meeting took place in Surinam in May 2008. There are still disagreements on the transfer of management authority within the EEZ. See Caribbean Net News, 'Suriname advises cautious approach to fishing in the region', 10 May 2008, <http://www.caribbeanetnews.com/article.php?news_id=7715>; Caribbean360.com, 'Region moving towards common fisheries zone', <<http://www.caribbean360.com/News/Business/Stories/2008/05/08/NEWS0000005803.html>> (last visited 12 June 2008).

institutional design of the new RFMO/A, if the states concerned decide to exclude areas under national jurisdiction from the scope of the new RFMO/A(s), the relatively low amount of existing fisheries for straddling fish stocks in the high seas area of the Central Atlantic would be one of the factors in the consideration of balancing the possible financial burdens and potential interests in establishing an organization exclusively for the high seas. As Sydnes commented in the context of SEAFO, although the lack of vested interests might facilitate the process, '[i]t is doubtful that States will [...] commit resources to [an] RFMO managing 'paper fish', without any benefits in return'.²⁹²

5.4.3 South-West Atlantic Ocean

In the high seas area of the South-West Atlantic, EU (Spanish), Korean, Chinese and Taiwan vessels are engaged in high seas deep-sea fisheries.²⁹³ Currently, there is neither an RFMO/A nor an advisory body competent to deal with straddling fish stocks or DHSFS in the region. Until 1997, there was a regional fisheries advisory body under Article VI of the FAO Constitution. However, the Regional Fisheries Advisory Commission for the Southwest Atlantic (CARPAS), which last met in 1974, was abolished by FAO Conference Resolution 13/97. Membership of CARPAS was limited to FAO Members which belong to the American Continent and have coasts bordering on the Western Atlantic Ocean south of the Equator. In fact, the only members were Argentina, Brazil and Uruguay.²⁹⁴ At the time of abolishment, the area of competence of CARPAS partly overlapped with those of CCAMLR and WECAFC.²⁹⁵

The Falklands/Malvinas conflict between Argentina and the UK is a factor that needs to be taken into account in any attempt to establish an RFMO/A in high seas areas of this region.²⁹⁶ The UK and Argentina agreed to cooperate on fisheries management in areas surrounding the islands: they established the Falklands Outer Conservation Zone (FOCZ) on 28 November 1990, starting from the outer limit of the 150-mile Falkland Islands Interim Conservation and Management Zone (FICZ) and extending up to 200 miles from the baseline of the islands in the north, east and south of the islands. In the FOCZ, the two states were to cooperate through the establishment of the South Atlantic Fisheries Commission (SAFC) and the temporary total prohibition of commercial fishing by vessels of any flag in the maritime area defined

292 Sydnes, 'New Regional Fisheries Management Regimes: Establishing the South East Atlantic Fisheries Organisation', at p. 361.

293 Based on Commission Staff Working Document, Accompanying document to the Communication from the Commission to the Council and the European Parliament, Destructive fishing practices in the high seas and the protection of vulnerable deep sea ecosystems, at p. 8.

294 S.H. Marashi, The Role of FAO Regional Fishery Bodies in the Conservation and Management of Fisheries, Fisheries Circular No. 916, FIPL/C916, at section IV(6).

295 Molenaar, 'Addressing Regulatory Gaps in High Seas Fisheries', at p. 541.

296 The above-mentioned Working Paper, at p. 8, notes that two out of three main harvesting areas are located in international waters bordering the Argentine EEZ. For an overview of the conflict in relation to fisheries, see G.A. Bisbal, 'Fisheries Management on the Patagonian Shelf: A Decade After the 1982 Falklands/ Malvinas Conflict', 17 *Marine Policy* (1993), at pp. 213-229.

in the Annex to the Joint Statement for conservation purposes.²⁹⁷ There had been 27 meetings of the SAFC and 23 meetings of its scientific sub-committee by mid-2005; but, since late 2005, a number of meetings of the SAFC have been suspended.²⁹⁸

Although the Argentina-UK Joint Statement of July 1999 gave an impetus to the negotiation of a multilateral fisheries arrangement to extend conservation measures to the high seas, there has been little progress on this issue.²⁹⁹ Any attempt to establish an RFMO with the participation of all coastal and fishing states may encounter a revived territorial dispute since Argentina would oppose the involvement of the UK as a coastal state. At the sixth Informal Consultations of States Parties to the FSA in 2007, the Republic of Korea expressed interest in the development of a new RFMO for the South-West Atlantic.³⁰⁰ To date, nevertheless, no formal negotiations have been initiated to this end.³⁰¹

5.4.4 Western, Central and North-East Pacific Ocean

In the Western, Central and North-East Pacific, there is no RFMO/A which is competent to deal with DHSFS or straddling fish stocks at present. If the ongoing negotiations in the South Pacific and the North-West Pacific do not cover the entire Pacific, there will remain a regulatory gap in the coverage of RFMO/As. With respect to bottom trawling, the Pacific Islands Forum called upon its members

‘to take actions consistent with international law to prevent destructive fishing practices on seamounts in the Western Tropical Pacific Islands Area (WTPIA) and to prevent destruc-

297 Joint Statement on the Conservation of Fisheries between the Government of the Argentine Republic and the Government of the United Kingdom of Great Britain and Northern Ireland, London and Buenos Aires, 28 November 1990, para. 2. In the same paragraph, the two Governments further agreed to review the Joint Statement annually.

298 Information is available at the website of the Falkland Islands Government, ‘International Relations’, <<http://www.falklands.gov.fk/international-relations.php>> (last visited 10 June 2008).

299 Information, including the summary of the Joint Statement, is available at the website of the Falkland Islands Government, ‘International Relations’ <<http://www.falklands.gov.fk/international-relations.php>> (last visited 10 June 2008).

300 *ENB*, vol. 7, No. 62, at p. 3, available at <<http://www.iisd.ca/download/pdf/enb0762e.pdf>> (last visited 2 July 2007).

301 For the proposed European Council regulation on destructive fishing practices, see Section 5.5.1 below. This Commission initiative as such appears to be an indication that any multilateral management mechanism involving both coastal and high seas fishing states is not forthcoming. Also note that one European Commission document refers to the requirement of a specific licence to fish in the high seas of the region as part of the licences delivered by the Falkland Islands Government under which Spanish bottom trawling vessels operate within the FICZ and in the high seas. Commission Staff Working Document, Accompanying document to the Communication from the Commission to the Council and the European Parliament, Destructive fishing practices in the high seas and the protection of vulnerable deep sea ecosystems, at p. 8. On the other hand, see Schiffman, *Marine Conservation Agreements: The Law and Policy of Reservations and Vetoes*, at p. 19 (commenting that a new body is under negotiation for the South-West Atlantic).

tive fishing practices in other areas of high seas in the WTPIA until an appropriate environmental impact assessment has been carried out, effective conservation and management measures are implemented to protect affected ecosystems, and effective monitoring, control, surveillance and enforcement measures are in place to ensure [*sic*] that the measures are properly implemented and adhered to'.³⁰²

This commitment falls short of a call for a moratorium on bottom trawling in the high seas areas. In fact, this paragraph is contrasted with the following paragraphs, which refer to a moratorium by calling upon the members to *advocate* (rather than to take actions) for an interim prohibition on destructive fishing practices, including bottom trawling in areas beyond national jurisdiction until appropriate conservation and management measures are in place.³⁰³

In May 2008, the fisheries ministers of the eight parties to the Nauru Agreement (Federated States of Micronesia (FSM), Kiribati, Marshall Islands, Nauru, Palau, Papua New Guinea (PNG), Solomon Islands and Tuvalu) adopted conservation and management measures within the framework of the Nauru Agreement (Third Implementing Arrangement to the Nauru Agreement). It subjects the granting of fishing licences in their EEZs to any foreign fishing vessels to the prohibition of fishing in the two high seas pockets adjacent to the EEZs of the parties to the Nauru Agreement.³⁰⁴ Although the measures are intended to protect tuna resources in the EEZ of these states,³⁰⁵ they apply to any foreign fishing vessels. Therefore, they will result in prohibiting fishing for non-tuna species, including deep-water species, on the high seas as long as they wish to fish within the EEZ of the parties to the Nauru Agreement.

It is still to be determined to what extent the Western, Central and North-East Pacific is covered by the proposed RFMO/As in the North and South Pacific. In particular, it is not clear whether the high seas enclaves surrounded by Pacific Island states will be included in the proposed area of competence of the SPRFMO. In fact,

302 Declaration on Deep-sea Bottom Trawling to Protect Biodiversity in the High Seas, Nadi, Fiji, 24-25 October 2006, para. 13. In 2007, the Pacific Islands Forum reaffirmed the 2006 Declaration and welcomed UNGA Resolution 61/105. See Vava'u Declaration on Pacific Fisheries Resources, Nuku'alofa, Tonga, 16-17 October 2007.

303 Pacific Islands Forum Declaration on Deep-sea Bottom Trawling to Protect Biodiversity in the High Seas, paras 14-15.

304 Third Arrangement Implementing the Nauru Agreement Setting Forth Additional Terms and Conditions of Access to the Fisheries Zones of the Parties, Koror, Palau, 16 May 2008, Article I(3). The first high seas pocket is bound by the waters of the FSM, Indonesia, Palau and PNG; the second area is bound by the waters of the FSM, Fiji, Kiribati, Marshall Islands, Nauru, PNG, Solomon Islands and Tuvalu.

305 See the following press statements: 'PNA ministers adopt tough conservation and management measures to address over fishing', 19 May 2008, <<http://www.ffa.int/node/1083>>; 'PNA adopts conservation and management measures to address concerns over tuna depletion', <<http://www.ffa.int/node/1075>> (last visited 18 June 2008).

Pacific Island states referred to an option to include areas of the high seas surrounded by their EEZs within the area of competence of the proposed SPRFMO.³⁰⁶

At present, the participants in the negotiations for the establishment of the SPRFMO have decided not to determine the area of competence until scientific information concerning stock distribution is available. The interim measures are not applicable to the North-East Pacific, and in the Central Pacific they are only applicable to the area south of the Equator.³⁰⁷

In the negotiations on the North Pacific, as noted earlier, the Convention Area of the proposed RFMO/A has not yet been agreed. In the event that the proposed RFMO/A does not cover FAO Statistical Area 67 and part of FAO Statistical Area 77 is not covered by the South Pacific RFMO, there remains a gap in the RFMO/A coverage in the Pacific.

The WCPFC indicated in its reply to a questionnaire by the DOALOS that although it had no direct mandate to regulate bottom fisheries, some issues could be addressed through the general power given to the WCPFC and its members to protect marine biodiversity in the Convention Area and to protect dependent and associated species.³⁰⁸ Furthermore, the WCPFC has the potential competence to regulate non-tuna fisheries. The Convention defines ‘highly migratory fish stocks’ as ‘all fish stocks of the species listed in Annex 1 of the [LOSC] occurring in the Convention Area, and such other species of fish as the commission may determine’ (emphasis added).³⁰⁹ If the Commission so determines, it needs to designate only some part of the Convention Area in this regard; otherwise, there will be overlaps of Convention Areas between the WCPFC and other RFMO/As such as those proposed for the South Pacific and the North Western Pacific.

5.5 NATIONAL LEGISLATION

Chapter 2 suggested that RFMO/As have assumed a central role in managing high seas fisheries under the contemporary international law of high seas fisheries. Nevertheless, the flag state³¹⁰ remains responsible for determining its own conservation measures individually for its vessels in areas, *inter alia*, where there is no competent RFMO/A. In particular, UNGA Resolution 61/105 calls upon flag states to implement

306 Pacific Islands Forum Declaration on Deep-sea Bottom Trawling to Protect Biodiversity in the High Seas, para. 17(1). Note that the states concerned were not in a determined position in this regard, and the declaration also suggested the possibility of inclusion within another RFMO and of the establishment of a separate arrangement. *Ibid.*, para. 17(1)-(2).

307 See the note to the preamble to the interim measures.

308 A/62/260, at p. 29, para. 92.

309 WCPFC Convention, Article 1(f). If the regulatory scope of the WCPFC is extended to DHSFS, this appears to be contrary to the intention of the drafters of the WCPFC Convention.

310 In this section, the use of the term ‘state’ is not intended to exclude other entities. In this regard, see Article 306 of the LOSC. In addition, as noted earlier, Taiwan has participated in the negotiations for the proposed RFMO in the South Pacific; it also participated in the work of the WCPFC.

its recommendations for their own vessels where neither a competent RFMO/A nor interim measures exist. As Sections 2.1.2.2 and 2.1.3.2 indicated, a number of high seas fishing states have controlled the fishing activities of their vessels on the high seas. Their laws, regulations and policies have sought to prevent unregulated fishing activities on the high seas by refusing to grant fishing permits to fishery plans that are likely to cause harm to the sustainability of fisheries and/or to the marine ecosystem.

In addition to high seas fisheries in general, some states have taken steps to specifically address unregulated deep-sea fisheries with a view to protecting VMEs. Notably, two actors have initiated legislative reform potentially leading to the better protection of VMEs from destructive fishing practices with a focus on deep-sea fisheries. The EU approach could be characterized as a flag state approach controlling its vessels by law. On the other hand, an approach seeking to protect VMEs through diplomatic action against third states and trade-related measures against third state vessels has been initiated by the United States.³¹¹ This type of action may be adopted in addition to legislation discharging flag state responsibilities such as the new EU regulation. In the following two sub-sections, these two initiatives are described in turn.

5.5.1 The European Union

When flag states address deep-sea fisheries, in particular the implementation of UNGA Resolution 61/105 paragraph 86, they could either prohibit fishing altogether or manage it through the issuance of permits and enforcing the conditions attached thereto. In the latter case, the guidelines provided in paragraph 83 of UNGA Resolution 61/105 need to be implemented *mutatis mutandis*. In this regard, a recently adopted EU Regulation on bottom fishing is notable, given the fact that not only are the European Community fleets engaged in deep-sea fisheries in various areas of the oceans, but also that they are engaged in deep-sea fisheries in high seas areas where no competent RFMO/A or interim measures exist. It may be used as a model for other flag states intending to allow their vessels to continue engaging in deep-sea fisheries in such areas. In addition, some of the provisions of the Regulation may be seen as going beyond what was agreed in Resolution 61/105. The rest of this sub-section describes the content of the Regulation.

In 2007, the European Commission put forward a proposal for a Council Regulation on the protection of VMEs in the high seas from the adverse impacts of bottom fishing gear, among others, to implement UNGA Resolution 61/105.³¹² The resultant

311 This should not be taken as implying that the US does not control high seas fishing activities by its vessels. Under US legislation, US vessels are required to obtain a high seas fishing permit before engaging in high seas fisheries. Although US vessels are not prohibited from fishing on the high seas where no competent RFMO exists, they are required to conduct environmental impact assessments before a high seas fishing permit is granted. See Sections 2.1.2.2 and 2.1.3.2 above.

312 EU, Proposal for a Council Regulation on the protection of vulnerable marine ecosystems in the high seas from the adverse impacts of bottom fishing gears.

Regulation applies to Community fishing vessels carrying out fishing activities with bottom gears in the high seas where there is neither an RFMO/A nor interim measures to protect VMEs from the destructive impacts resulting from the use of bottom gear.³¹³ Therefore, it does not apply to bottom fisheries in areas covered by RFMOs (the North Atlantic, the South-East Atlantic, the Mediterranean and the Antarctic Ocean) or by multilaterally-agreed interim measures (the South Pacific and the North-West Pacific). The Commission plans to agree on interim measures for the SIOFA area in 2008,³¹⁴ although such measures have not yet been agreed upon and the SIOFA area currently falls within the geographic scope of the Regulation. Among several regions where the Regulation applies, it is primarily intended to address fisheries in high seas areas of the South-West Atlantic.³¹⁵

First of all, in order to conduct the fishing activities concerned, Community fishing vessels must have a special fishing permit.³¹⁶ By means of this provision, all high seas bottom fisheries become subject to the permit requirement under Community law. Currently, this is not the case for all fisheries in the areas concerned:³¹⁷ while bottom fisheries in the East Central Atlantic are subject to the permit requirement under Regulation 2347/2002,³¹⁸ Community vessels may continue bottom fisheries without permits in, among others, the South-West Atlantic as far as EC law is concerned.³¹⁹

Second, the Regulation intends to make bottom fisheries conditional upon prior environmental impact assessments, as other marine resource exploitation activities.³²⁰ It does so by requiring the submission of detailed fishing plans specifying, *inter alia*, the intended location of the activities, the depth of the gear deployment and the configuration of the bathymetric profile of the seabed in the intended fishing grounds³²¹ and by subjecting the issuance of the special fishing permit to an assessment on the potential impacts of the proposed fishing activities on VMEs.³²² Where the assessment indicates SAIs to VMEs, the competent authorities shall specify the

313 EU, Council Regulation (EC) No. 734/2008 of 15 July 2008 on the protection of vulnerable marine ecosystems in the high seas from the adverse impacts of bottom fishing gears, Article 1.

314 Communication from the Commission to the Council and the European Parliament, Destructive fishing practices in the high seas and the protection of vulnerable deep sea ecosystems, at p. 9.

315 See, e.g., *ibid.*, at p. 10.

316 EU, Council Regulation (EC) No. 734/2008, Article 3(1).

317 A Commission proposal for a Regulation seeks to change this situation. See EU, Proposal for a Council Regulation concerning authorisations for fishing activities of Community fishing vessels outside Community waters and the access of third country vessels to Community waters, Article 15(1).

318 EU, Council Regulation (EC) No. 2347/2002 of 16 December 2002 establishing specific access requirements and associated conditions applicable to fishing for deep-sea stocks. Both the proposed regulation and Council Regulation 2347/2002 apply in this region simultaneously. See Article 11.

319 This is also the case for the Southern Indian Ocean and the Pacific.

320 Communication from the Commission to the Council and the European Parliament, Destructive fishing practices in the high seas and the protection of vulnerable deep sea ecosystems, at p. 6.

321 EU, Council Regulation (EC) No. 734/2008, Article 4(1).

322 *Ibid.*, Article 4(2). See also *ibid.*, Article 4(4). The Regulation defines, for the purpose of the regulation, 'vulnerable marine ecosystem'. *Ibid.*, Article 2(b).

assessed risks and allow applicants to amend the fishing plan to avoid them. In the absence of such amendments, they shall refrain from issuing the permit.³²³ The competent authorities of Member States shall rely on the best scientific information available concerning the location of VMEs, including scientific data on the basis of which the likelihood of the occurrence of such ecosystems can be estimated.³²⁴ In other words, with regard to the standards of information the competent authorities of Member States examine, it is sufficient if VMEs are *likely* to occur. The information does not need to prove the existence of VMEs. The competent authorities shall apply precautionary criteria and, in case of doubt, they shall consider that the likely adverse impacts resulting from the scientific advice provided are significant.³²⁵ The main effect of these clauses is that the applicant needs to persuade the competent authorities that the proposed fishing activities are very unlikely to result in SAIs on (identified or estimated) VMEs.

It is recalled that the collection of information on VMEs, including their identification, can be pursued both by conducting independent scientific research and by collecting data from individual fisheries.³²⁶ Whereas the Regulation does not attempt to encourage improved scientific research in itself,³²⁷ it seeks to achieve that individual fishing activities contribute to data collection with regard to scientific observers.

Third, in the case of unforeseen encounters with VMEs, the Regulation allows the resumption of operations only when the vessel concerned has reached an alternative site at a minimum distance of five miles from the site of the encounter³²⁸ and, if a new encounter takes place in the alternative site, the vessel shall keep relocating until a site where no VMEs are found is reached.³²⁹

Fourth, on the basis of the best scientific information available on the occurrence or on the likelihood of the occurrence of VMEs, Member States shall identify areas to be closed to bottom fishing.³³⁰ The Commission shall submit, where appropriate, proposals to the Council for the adoption of Community measures to protect these areas on the basis of the examination of information contained in the report submitted by Member States in accordance with Article 12 or it shall consider such measures on its own initiative.³³¹

In addition, the Commission proposal for the Regulation provided for, among others, two ancillary requirements that are not included in the relevant UNGA Resolution. First, apart from the area closure on the basis of the best scientific information available on the occurrence of VMEs and the likelihood of the occurrence

323 Ibid., Article 4(6).

324 Ibid., Article 4(3).

325 Ibid., Article 4(5).

326 Communication from the Commission to the Council and the European Parliament, Destructive fishing practices in the high seas and the protection of vulnerable deep sea ecosystems, at p. 6.

327 Note that the European Union has already significantly contributed to the improvement of scientific research in deep-sea ecosystems. Ibid., at p. 4 note 2 and its accompanying text.

328 EU, Council Regulation (EC) No 734/2008, Article 7(1).

329 Ibid., Article 7(2).

330 Ibid., Article 8(1).

331 Ibid., Article 8(2).

of VMEs, the use of bottom gears at depths beyond 1000 m would have been prohibited under the draft Regulation.³³² The same provision was already in place in Council Regulation 1967/2006 concerning Mediterranean fisheries and GFCM Recommendation 2005/1. The Commission considered that the expansion of the same obligation into all oceans would be appropriate. However, this provision is not retained in the adopted Regulation. Second, full onboard observer coverage is stipulated in the Regulation. All vessels to which a special fishing permit is issued shall operate with scientific observers onboard, who shall, among other tasks, document any instances of unforeseen encounters with VMEs, including the gathering of information that may be of use in relation to the protection of the site and record depths at which gear is deployed.³³³

5.5.2 The United States

The United States has taken a step to protect VMEs from destructive fishing practices through recent amendments to its legislation and a presidential memorandum. The 2006 Magnuson-Stevens Reauthorization Act stipulates various actions against IUU fishing.³³⁴ Defining IUU fishing under the Act may serve two purposes: first, the definition serves the immediate purpose of clarifying the scope of activities addressed by the law concerned, including diplomatic actions, the subsequent denial of port privileges and the prohibition of importing fish and fish products;³³⁵ it may also contribute to facilitating a common understanding of what activities fall within the category of fishing activities ‘in areas or for fish stocks in relation to which there are no applicable conservation or management measures and where such fishing activities are conducted in a manner inconsistent with State responsibilities for the conservation of living marine resources under international law’.³³⁶ In accordance with the instruction in the law, the federal regulations define the term ‘IUU fishing’: IUU fishing means, *inter alia*, ‘[f]ishing activity that has an adverse impact on seamounts, hydrothermal vents, and cold water corals located beyond national jurisdiction, for which there are no applicable conservation or management measures or in areas with no applicable international fishery management organization or agreement’.³³⁷ The presidential memorandum of 3 October 2006 aims to promote sustainable fisheries

332 EU, Proposal for a Council Regulation on the protection of vulnerable marine ecosystems in the high seas from the adverse impacts of bottom fishing gears, Article 6. This provision was opposed by the European Parliament, which questioned the adequacy of this particular depth. See Committee on Fisheries, Report on the proposal for a Council regulation on the protection of vulnerable marine ecosystems in the high seas from the adverse impacts of bottom fishing gears (COM(2007)0605 - C6-0453/2007 - 2007/0224(CNS) A6-0183/2008, 14.5.2008, at p. 11 (Amendment 14).

333 EU, Council Regulation (EC) No. 734/2008, Article 11(1)-(2).

334 United States, Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006, Pub. L. 109-479, title IV, sections 402-403: 16 U.S. Code 1801(a) and 1826h-826j.

335 U.S. Code, 1826a, (A)-(B)

336 See IPOA-IUU, para. 3.3.2.

337 United States, Electronic Code of Federal Regulations (e-CFR), Section 300.201(3).

and, to that end, commands the Secretaries of State and Commerce to take various actions; in the memorandum, the term ‘destructive fishing practices’ is used as ‘practices that destroy the long-term natural productivity of fish stocks or habitats such as seamounts, corals, and sponge fields for short term gain’.³³⁸

Neither instrument purports to manage high seas fisheries by third state vessels through unilateral action. In fact, the presidential memorandum commands the Secretary of State to work with other countries and within RFMOs and through other cooperative arrangements and, in order to implement the policy set out above, requires the Secretary of State to carry out diplomatic activities for the purposes of ending destructive fishing practices and promoting rules based on sound science.

However, some of the provisions of the 2006 Act might lead to unilateral actions in the future when the requirements stipulated in the Act have been met. The Secretary of Commerce is: (1) to identify and list in the report to Congress a nation whose vessels are engaged in IUU fishing, either where the relevant international fisheries management organization (IFMO) has failed to implement effective measures to end the IUU fishing activity or that nation is a non-cooperating non-party or where no IFMO exists with a mandate to regulate the fishing activity in question; (2) to notify that nation of such identification and to initiate consultations for the purpose of encouraging such nations to take the appropriate corrective action; (3) to certify to Congress whether the government of each nation identified has provided documentary evidence that it has taken corrective action or whether the relevant international fishery management organization has implemented measures that are effective in ending the IUU fishing activity by vessels of that nation. Sanctions will be imposed against that state unless appropriate corrective action has been taken or negative certification has been issued. In general, the denial of port privilege, the prohibition on imports of fish and fish products and possible additional economic sanctions will be imposed on any identified nation.³³⁹ Exceptions to this provision are provided, including vessels not engaged in IUU fishing if there is no applicable international fishery agreement.³⁴⁰

5.6 CONCLUDING REMARKS

This chapter has examined two main topics: sections 1-4 have analyzed state practice in regions not dealt with in Chapter 4; section 5 has analyzed two types of regulation (i.e., that of the EU and the US) addressing new challenges in high seas fisheries, especially those concerning deep-sea fisheries. The first issue is subdivided in accordance with the circumstances of each region: section 1 deals with the Southern Indian Ocean, where a multilateral agreement has been concluded and is pending entry into force; sections 2 and 3 respectively deal with the South Pacific and the

338 United States, Memorandum for the Secretary of State and the Secretary of Commerce on Promoting Sustainable Fisheries and Ending Destructive Fishing Practices.

339 16 U.S. Code 1826a(a) and (b)(3)-(4) and 1826j(d)(3)(A).

340 16 U.S. Code 1826j(d)(3)(B)(ii).

North Western Pacific, where negotiations are underway to establish regional fisheries management mechanisms; section 4 deals with other regions, where no formal negotiations are ongoing.

First of all, SIOFA was negotiated and concluded in order to address deep-sea fisheries, keeping in mind that many of the target stocks in the region may be DHSFS. SIOFA is furthermore different from the mechanisms examined in Chapter 4: it is to manage fisheries through meetings between contracting parties, rather than establishing an RFMO. Notwithstanding these characteristics, the substantive, as opposed to institutional, provisions of SIOFA are not dissimilar to the RFMOs examined in Chapter 4. This characteristic might suggest that ongoing or future negotiations for establishing RFMO/As in other regions need not be specially tailored to deep-sea fisheries even if the proposed mechanism aims to address deep-sea fisheries: all-encompassing mechanisms filling regulatory or institutional gaps in fisheries management in each region would be a better course of action. Interim measures, on the other hand, need to address specific threats caused by particular fisheries. A particular characteristic in the SIOFA negotiations was the lack of a cautious attitude before the Agreement was concluded. No multilateral interim measures limiting existing deep-sea fisheries were agreed and the fishery collapsed before the Agreement was adopted.

As regards the two regions in which there are ongoing processes, it is noted that the existing fisheries management mechanisms are problematic. This is especially clear in the South Pacific. In one area, problems have been caused by limitations on the effectiveness of the existing management mechanism (e.g., the 2000 South Tasman Rise Arrangement). In another area, no management mechanism exists (e.g., the Louisville Ridge). In still another area, the existing management mechanism lacks legitimacy (e.g., the Galapagos Agreement). In fact, the South Tasman Rise Arrangement is a bilateral arrangement and primarily limited to orange roughy fisheries; the Galapagos Agreement is not in force and is unlikely to be implemented as long as the South Pacific negotiation process succeeds. This is why coastal states in the region recognize the need for a new, effective and comprehensive mechanism for fisheries management and that they launched such an initiative in a transparent way inclusive of other coastal states and distant water fishing nations. The content of the existing sub-regional management mechanisms in the South Pacific have so far had a very limited influence on the substance of the documents currently under negotiation; instead, developments in other regions (e.g., SIOFA and the new NAFO Convention) and at the global level (e.g., UNGA Resolution 61/105) have contributed more to the ongoing negotiations for the proposed new RFMO.

In the North Pacific, the existing regimes analyzed in this chapter have simply maintained a moratorium on fisheries for straddling stocks in the high seas, especially for pollock stocks. The momentum behind the new initiative in this region is obviously different from the one in the South Pacific, however. The negotiations have been attempting to address bottom fisheries (for species other than pollock), rather than reforming or replacing the existing regimes. The major states engaged in bottom fisheries in this region are largely limited to the coastal states of the region; the

negotiations have been conducted among a limited number of states concerned in a less transparent manner, compared to the negotiations for the SPRFMO.

Both ongoing negotiations have succeeded in adopting interim measures to address certain high seas fisheries pending the negotiations for the establishment of RFMO/As. Both interim measures attempt to control bottom fisheries in accordance with UNGA Resolution 61/105, in particular paragraph 83. However, they are different from one another and from the interim measures adopted within the existing RFMOs examined in Chapter 4.³⁴¹

First, the interim measures both in the South Pacific and in the North Western Pacific seek to implement paragraph 83(a) (i.e., the assessment of impacts on VMEs by individual bottom fisheries) and 83(b) (i.e., the identification of VMEs and the determination of impacts thereon). For the time being, however, these two processes remain at an early stage in determining standards and criteria to be employed in such actions. In this respect, both interim measures refer to the incorporation of internationally developed criteria in other fora, and consequently it is likely that these two processes would employ the same criteria. Such criteria would in particular include the work currently underway in the FAO. When standards and criteria for the identification of VMEs and the assessment of potential impacts are available, it remains to be seen how identification and assessments are conducted and whether there emerges any discernible difference in the implementation of UNGA Resolution 61/105 in this regard between the North Pacific and South Pacific processes.

Second, the requirements of paragraph 83(c) (i.e., the closure of known or likely VME sites) and 83(d) (i.e., the temporary closure of VME sites when encountering these VMEs) of UNGA Resolution 61/105 are almost literally incorporated in these interim measures. However, it should be noted that these two processes have yet to agree on a common understanding of 'VMEs' or 'significant impacts'. Without such a common understanding of these terms, the closure of VME sites is likely to remain uncoordinated. Again, the commitment of these two processes to take into account the similar work in other fora is an element that contributes to the coordination of measures.

As far as VMEs are concerned, a sign of a potential divergence between the two processes is already found in the difference in the treatment of seamounts, hydrothermal vents and sponge fields. The North-West Pacific interim measures explicitly refer to 'coldwater corals or other associated species' (but not to seamounts, hydrothermal vents and sponge fields) in the context of ceasing operations when encountering VMEs, while the South Pacific interim measures state that VMEs 'include seamounts, hydrothermal vents, cold water corals and sponge fields' for the purposes of the interim measures. Although the lack of an explicit reference to any particular ecosystem feature by no means implies that that feature is not considered to be a VME feature, it might be an indication of the lack of focus on that feature in the scientific

341 For a detailed analysis of the interim measures in the South Pacific and the North-West Pacific, see Sections 5.2.3.1 and 5.3.2 above. For the interim measures adopted by the existing RFMO/As, see chapter 4.

work of that process. It could be argued that, as threats to VMEs are not the same, different VMEs require different conservation and management measures. For example, while seamounts are susceptible to fisheries, threats to hydrothermal vents mainly come from bioprospecting and the exploitation of mineral resources of the seabed.³⁴²

With regard to the closure of known or likely VME sites, the interim measures do not aim to suspend existing bottom fisheries immediately. In particular, in the case of the North-West Pacific, existing fisheries are allowed to continue until 31 December 2008 (i.e., the deadline established in UNGA Resolution 61/105). On the other hand, in the South Pacific, once the interim measures became effective as from 30 September 2007, regardless of when standards and criteria for assessment would be available, existing fisheries on known or likely VME sites have been required to cease unless conservation and management measures have been established or these fisheries have been assessed as not causing SAIs.

Third, in addition to the requirements specified in UNGA Resolution 61/105, the interim measures both in the North Pacific and in the South Pacific attempt to control bottom fisheries by freezing fishing efforts at the current levels and limiting fishing areas to those currently subject to bottom fisheries. However, since these measures lack a precise definition of the current level of fishing effort, it is questionable to what extent the interim measures will be effective in this respect.

Fourth, the interim measures in these two regions intend to prevent SAIs both on VMEs and on the sustainability of deep-sea fish stocks. This trend is contrasted with the text of paragraph 83 of UNGA Resolution 61/105, whose emphasis is on the protection of VMEs.³⁴³

A major difference between these two processes is that the South Pacific process attempts to control both pelagic and bottom fisheries. In the North-West Pacific, the negotiations started with the aim being to establish a management mechanism only for bottom fisheries and it is not yet certain whether the process will be extended to cover pelagic fisheries. In addition, whereas it is not clear from the text of the North-West Pacific interim measures if the CBS Convention area is excluded from the scope of these interim measures, the CBS Convention may not live up to the standards required in modern approaches to fisheries such as an ecosystem approach. Nor does it appear that the parties to the CBS Convention are ready to address bottom fisheries through meetings of the parties. The high seas part of the Sea of Okhotsk continues

342 J.-P. Lévy, 'La Première Décennie de l'Autorité Internationale des Fonds Marins', 109 *Revue Générale de Droit International Public* (2005), at pp. 117-118. In addition, note a conclusion from the 2000 InterRidge Workshop referred to by Glowka: 'participants concluded that the management of all hydrothermal vent sites was not only unnecessary but unrealistic. Instead efforts should focus on the most visited sites whether within or beyond the limits of national jurisdiction'. Glowka, 'Putting Marine Scientific Research on a Sustainable Footing at Hydrothermal Vents', at p. 305.

343 Only sub-paragraph (b) refers to both VMEs and the long-term sustainability of deep-sea fish stocks.

to be governed by an informal regime taking into account Russian interests in fisheries in the sub-region.

It is noteworthy that none of the interim measures define ‘bottom fisheries’ to which they are applied. Perhaps this lack of definition reflects the absence of a common understanding on deep-sea fisheries at the global level, as seen in the discussions on the scope of the International Guidelines on high seas deep-sea fisheries.³⁴⁴ In the South Pacific, standards for the collection, reporting, verification and exchange of data were agreed at the third meeting, but they refer to the collection of data by both pelagic and bottom fishing gear (i.e., trawling, purse seine and bottom long line fisheries) and do not distinguish between them.

The negotiations on the proposed RFMO/As in the two areas are still at an early stage. In the negotiations on the fisheries management mechanism for the North-West Pacific, states have agreed to establish an RFMO/A, but only a handful of principles have been (provisionally) agreed to provide a framework for the proposed RFMO/A, including implementation based on the best scientific information available and the application of the precautionary and ecosystem approaches.³⁴⁵ On the contrary, negotiations for the South Pacific have already discussed the several versions of the Chair’s draft for the proposed management mechanism. Participants in the negotiations have agreed on several important issues. Among others, the proposed Convention will establish an RFMO with competence to regulate fisheries for DHSFS and straddling fish stocks.³⁴⁶ Since the views of the participants are not uniform on several important issues, it is difficult to precisely predict the content of the future Convention. However, discussions on these issues are worth singling out because of their potential implications for future negotiations in the South Pacific and other regions.

First, the participants in the negotiations appear to have agreed that modern approaches to fisheries management should inform the principles applicable to DHSFS and straddling fish stocks in the proposed RFMO. In fact, many documents, including the chair’s drafts for the Convention, refer to the FSA.³⁴⁷ So far, the drafts have drawn on SIOFA (e.g., the chair’s first draft) and the 2006 draft for the new NAFO Convention (e.g., the chair’s revised draft),³⁴⁸ and it has also been suggested to use the text of some provisions of the SEAFO Convention and the WCPFC Convention.³⁴⁹ It remains to be seen how principles of the FSA will be reflected in the final text of the Convention taking into account the characteristics of fisheries in the region and the political positions of the participants in the process.³⁵⁰

344 See Section 3.2.2 above.

345 See Section 5.3.2 above.

346 See Section 5.2.3.2 above.

347 The FAO observes that the negotiations have been using the FSA as a framework. FAO Fisheries and Agriculture Department, *SOFIA 2006*, at p. 56.

348 See Section 5.2.3.2 above.

349 Australian Comments, at paras 5, 19, 21-22.

350 In particular, many Latin American states involved in the negotiations are not party to the FSA and have expressed opposition to it on several occasions. See, e.g., Declaration of the Latin American and Caribbean countries ahead of the Review Conference on the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of

Second, despite the initial call for a special regime for discrete high seas stocks by the three coastal states,³⁵¹ existing drafts indicate that the same principles are applied to straddling stocks and discrete high seas stocks, except for the requirement of compatibility between measures for the high seas and those for the EEZ with regard to the same ‘fishery resources’.³⁵² In particular, under the highly controversial Sub-regional Management Committees proposed by the Chair, coastal states might have a special role not only for straddling stocks but also for discrete high seas stocks in decision-making.³⁵³

Third, the Draft Convention applies the precautionary approach. In connection with this, two provisions are especially worth noting. First, the draft allows new fisheries only when the Commission has adopted preliminary conservation and management measures. Second, although the draft no longer purports to include scientific research as part of ‘fishing’, there are provisions aimed at regulating fishing for scientific purposes. The latter provision effectively supplements the former, filling the potential regulatory gaps in the management of newly discovered fisheries.³⁵⁴ In fact, it is of interest to note that both of the other two RFMO/As mainly aimed to address deep-sea fisheries (i.e., SEAFO and SIOFA) explicitly include fisheries for scientific research in the definition of fishing, while the parties to the NAFO Convention did not accept the draft explicitly including ‘scientific research’ in the definition of fishing.³⁵⁵

Conflicts might occur, however, when the proposed RFMO implements the provision concerning fisheries for scientific purposes. A balance needs to be struck between filling any possible gaps that may arise out of exploratory fisheries in the guise of scientific research and jeopardizing genuinely scientific research by adopting an excessively wide scope for regulation. Measures upsetting the delicate balance may risk blurring a distinction between the regime of high seas fisheries and that of MSR: the freedom of MSR might be curtailed inadvertently.

10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, Lima, 9 March 2006.

351 See Section 5.2.3 above.

352 The Chair’s drafts continue to use ‘fishery resources’ in the context of resources straddling the high seas and areas under national jurisdiction. In fact, the latest text suggested by the Chair on the compatibility requirement uses the term ‘straddling fishery resources’ rather than ‘straddling fish stocks’. If the final text of the proposed Convention uses the same term, it may be subject to arguments as to whether the concept is different from the term ‘straddling fish stocks’. See the Chair’s informal discussion paper (Annex B), Guayaquil, March 2008.

353 It is noted in passing that membership of each Management Committee is reserved for coastal and fishing contracting parties in the respective sub-region; in other words, non-coastal contracting parties solely interested in the conservation of fishery resources and marine ecosystems without engaging in fisheries may not participate in the management of the fishery resource concerned in the Management Committees. Also note that Article 8(3) of the FSA, which refers to a ‘real interest’, is concerned with membership of RFMOs and participation in regional fisheries management arrangements, not with the organs thereof.

354 See Section 5.2.3.2 above.

355 See the Draft New NAFO Convention (Revision 3, Corr.), Article I(g).

Fourth, the chair's revised draft does not make reference to the concept of MSY. It rather indicates the setting of precautionary reference points in accordance with Annex II of the FSA. On the other hand, the EU proposal aims to achieve levels capable of producing MSY and, interestingly, only refers to Article 6 of the FSA and does not directly refer to Annex II.³⁵⁶ It remains to be seen how these two claims are reconciled and, in particular, whether and how the methods stipulated in Annex II to determine precautionary reference points are incorporated in the Commission's decision-making.

In regions other than the North-West and South Pacific, there is no formal ongoing negotiation to establish an RFMO/A with competence to regulate fisheries for straddling stocks or discrete high seas stocks. The circumstances in these regions are very different from one another. Therefore, future development depends on the peculiar factors of each region.

In the Arctic Ocean, part of the high seas is not covered by any existing RFMO/A. The existing cooperative mechanisms for the protection of the Arctic environment have hardly addressed high seas fisheries. As global climate change continues, it is not unlikely that commercial fisheries will take place in the Arctic Ocean where ice melts in the summer. The practice of Arctic states shows that they are willing to build on the existing legal framework, including the LOSC. The US Senate has initiated a step to negotiate the establishment of a new RFMO in the central Arctic high seas area in conformity with the FSA. Initiatives for the establishment of one or more RFMO/As in the region need to take account of the existing mechanisms and various kinds of interests, including the geographic coverage of the proposed RFMO.

In the Central Atlantic, repeated calls have been made for upgrading fisheries advisory bodies to fisheries management bodies. These initiatives resulted in the revision of their mandates reflecting modern approaches to fisheries management, rather than structural changes. Notwithstanding this, the recent calls for filling regulatory gaps in high seas fisheries certainly strengthen arguments for such a reform, and this momentum may bring about the establishment of one or more RFMO/As dealing with, *inter alia*, deep-sea fisheries in high seas areas of the region. But, before any initiative starts, general agreement on pivotal issues such as the scope of the proposed RFMO/A is essential.

In the South-West Atlantic, there is no regional fishery body for the high seas. Any initiative to involve coastal states in the establishment of a new RFMO which is competent to regulate high seas fisheries is likely to result in a deadlock due to the recurring question of sovereignty over the Falkland (Malvinas) Islands, in view of the current strained relations between Argentina and the UK as witnessed by the suspended operation of the SAFC. Given these circumstances, a feasible course of action to be taken by fishing states is to hold negotiations only between some high seas fishing states themselves with a view to agreeing on an arrangement for their fishing vessels, or to individually adopt regulations for their own vessels at the national level.

³⁵⁶ See the section entitled 'Precautionary approach' in Section 5.2.3.2 above.

The new EU Regulation shows that the latter option is likely to be relevant, at least for the time being.

In the Western and Central Pacific, while a call was made for regulating bottom trawling and the establishment of an RFMO was suggested by the coastal states in the region, the ongoing negotiations for the SPRFMO as well as those for the North Western Pacific, in particular the scope of the proposed Conventions, ultimately determine whether or not coastal states will initiate separate negotiations. The realization of the involvement of Pacific Island states as coastal states in the final Convention in the South Pacific will disperse initiatives to establish a separate RFMO. On the other hand, if high seas enclaves surrounded by the Pacific Island states are not included in the SPRFMO, there will likely be a new initiative to establish a separate management mechanism, probably an arrangement rather than an organization, given the relatively small size of these high seas areas. Another possibility is a coastal state approach similar to a series of treaties concluded between Iceland, Norway and Russia concerning the Loophole in the Barents Sea or informal arrangements between Russia and distant water fishing nations for the Peanut Hole in the Sea of Okhotsk. In these instances, coastal states requested distant water fishing nations to refrain from fishing in the high seas enclaves in exchange for access to fisheries resources in the surrounding EEZ. Those solutions were primarily aimed at the conservation of straddling fish stocks, but could be made applicable to DHSFS by imposing a moratorium on straddling fish stocks and DHSFS in the high seas area of the region altogether. In fact, the parties to the Nauru Agreement recently adopted this approach. Although their primary focus appears to be on highly migratory species, the text of the Arrangement is formulated so broadly that fishing vessels targeting non-highly migratory species are also prohibited from fishing in the high seas pockets of the parties to the Arrangement as long as they fish in the EEZ of these states. If this approach is followed by other coastal states in the region, it will effectively lead to a moratorium on high seas fisheries in that region.³⁵⁷ As long as the measures are conditional upon access to fisheries resources in the EEZ, over which coastal states have wide discretion, the legality of such measures for straddling fish stocks are presumed. When they are concerned with DHSFS, the link between the high seas resources and the EEZ becomes indirect.

As a matter of fact, this is not the first time for the South Pacific Island states to attempt to regulate activities of foreign (third party) vessels in the high seas area of the South Pacific. The Convention for the Protection of the Natural Resources and Environment of the South Pacific Region stipulates the prohibition of the disposal into

357 See also Van Dyke, 'Modifying the 1982 Law of the Sea Convention: New Initiatives on Governance of High Seas Fisheries Resources: The Straddling Stocks Negotiations', at pp. 225-226 (arguing for the legitimacy of the coastal state regulation of high seas fisheries by conditioning access to the EEZ resources on compliance with non-discriminatory and consistent management regulations in the areas outside the EEZ in the context of the Forum Fisheries Agency (FFA), while observing that the FFA needs to be expanded in order to allow the participation of distant water fishing nations or a new regional fishery organization will have to be established).

the seabed and subsoil of the convention area (which includes the high seas pockets surrounded by the EEZ of the South Pacific island states) of radioactive waste or other radioactive matter.³⁵⁸ One commentator notes that this provision appears to imply that the parties agree to prohibit non-parties from dumping in the convention area and constitutes ‘a claim for jurisdiction over disposal beyond the ratifying states’ 200-mile zones’.³⁵⁹

As regards the North-East Pacific, the negotiations for the North-Western Pacific may extend to cover the North-East Pacific, or at least part of it. The remaining issue would be whether the remaining gap in the geographic coverage of the RFMO/As could be filled by the coordination between the South Pacific process and the North Pacific process. In addition, it is noted that the WCPFC has the potential to regulate species not listed in Annex I of the LOSC in parts of the Western, Central and North-East Pacific.

Turning to the second issue, namely legislation by the EU and the US, on the one hand, the new EU Regulation stipulates regulations of Community vessels conducting bottom fisheries in areas where there is no RFMO/A or interim measures, implementing UNGA Resolution 61/105 and imposing additional requirements; on the other hand, the US legislation against third states may potentially lead to a unilateral determination of appropriate conservation measures in areas where no RFMO/A exists.³⁶⁰ Yet, the sections concerned are carefully drafted to eschew the risk of being accused of unilateralism. The basic principle underlying the 2006 Act as well as the 2006 US presidential memorandum is international cooperation; trade-related and port measures remain the last resort.

All in all, in the short term, these actions taken by the EU and the United States would not endanger the cooperative nature of high seas fisheries management and the central role of RFMO/As assigned in recent global fisheries instruments including the FSA. These actions are likely to lead to the better implementation of fisheries related obligations of states. The proposed EU regulation on bottom fisheries may be regarded as model legislation dealing with deep-sea fisheries, discharging flag state responsibilities. As regards the US, although it is unlikely that a law like the 2006 Reauthorization Act will be adopted in many other countries, this law might contribute to facilitating cooperation from states that are unable or unwilling to discharge flag state responsibilities with regard to their fishing vessels.

358 Convention for the Protection of the Natural Resources and Environment of the South Pacific Region, Noumea, 24 November 1986, Article 10(1).

359 J.M. Van Dyke, ‘The United States and Japan in Relation to the Resources, the Environment, and the People of the Pacific Island Region’, 16 *Ecology Law Quarterly* (1989), at p. 222. Note that at least part of the seabed of these high seas pockets may be considered to be the outer continental shelf. See Churchill and Lowe, *The Law of the Sea*, at p. 159.

360 As noted above, under its legislation, the US has also controlled fishing activities by its own vessels on the high seas.

Part III

Conclusions

At the beginning of this study, the main research questions were formulated as follows: (1) what general principles are applicable to high seas fisheries?;¹ (2) what implications do these general principles have for new problems in high seas fisheries, including deep-sea fisheries?; (3) how have states, collectively or individually, addressed regulatory gaps in high seas fisheries at the global, regional and national levels? This study has attempted to answer these research questions from the perspective of international law by looking at treaties and other international instruments, national legislation, state practice at the global, regional and national levels as well as the literature on international law. Part I identified the general principles of high seas fisheries and their potential implications for addressing the new challenges in high seas fisheries. Chapter 1 traced the development of the general principles up to the adoption of the LOSC in 1982. Chapter 2 firstly examined the provisions of the LOSC in the light of the practice of states and international organizations after the adoption of the LOSC; then, it identified the potential implications of the general principles with a view to examining the impacts of these general principles on the management of high seas fisheries. Part II examined the practice of states and international organizations in the field of new challenges in high seas fisheries, namely, DHSFS, deep-sea fisheries and area-based management tools. Chapter 3 examined the relevant practice in international institutions at the global level. Chapter 4 examined the practice of the relevant RFMOs. Chapter 5 investigated state practice in areas where there is no competent RFMO, focusing on the regional fisheries management agreement for the South Indian Ocean, the ongoing processes for the establishment of RFMO/As in the South Pacific and the North Pacific, situations in other areas and national legislation specifically addressing high seas fisheries in areas where there is no competent RFMO/As.

The final chapter draws some conclusions from the findings of the preceding chapters. The first three sections recapitulate and synthesize the content of Chapters 1-5 in the light of the above-mentioned research questions. Section 4 attempts to articulate suggested actions that the international community may take in addressing new challenges in high seas fisheries. The last section is devoted to some brief general comments.

¹ Note that, as pointed out in Chapter 2, special regimes apply to anadromous and catadromous species, marine mammals, highly migratory species and straddling stocks. These regimes have not been considered in this study.

6.1 GENERAL PRINCIPLES APPLICABLE TO HIGH SEAS FISHERIES

Chapters 1 and 2 have examined what principles are applicable to high seas fisheries. As a point of departure, it was noted that the LOSC provides for an overall framework in which all activities in the oceans, including high seas fisheries, shall be conducted. Chapter 1 traced the development of the general principles of high seas fisheries up to the adoption of the LOSC with a view to understanding the content of the general principles. Chapter 2 examined the general principles of high seas fisheries in the light of the drafting history of the LOSC, case law, subsequent agreements and the practice of contracting parties to the LOSC and other states. On the basis of these two chapters, the present study concludes that there are three general principles applicable to high seas fisheries, namely: (1) freedom of fishing on the high seas; (2) cooperation between states; and (3) the conservation of marine living resources, ecosystems and biological diversity.

First, states may exercise the restricted freedom of fishing on the high seas. This freedom is contrasted with the absolute freedom prevalent in the period up to the Second World War. Before the Second World War, the need to regulate high seas fisheries was not generally recognized except in a handful of special regimes. The freedom of fishing was therefore the single dominant principle of high seas fisheries. The technological developments and aspirations for more control over resources led to a change in the legal regime of high seas fisheries from the 1950s onwards. Although most of the detailed rules of the regime of high seas fisheries discussed in the ILC as well as at the Geneva Conferences concerned fisheries in areas adjacent to the territorial sea and few regimes were in place with regard to fisheries conducted in offshore areas, these developments had considerable impacts on the regime of high seas fisheries in general. Notably, this is reflected in the HSC and the HSFC: the former clarified that the freedom of the high seas is subject to reasonable regard for the interests of other states in their exercise of high seas freedoms and the latter formulated the freedom of high seas fishing as a 'right'. In the judgments in the *Fisheries Jurisdiction* cases, the ICJ explicitly denied the concept of absolute freedom and considered the due regard requirement to be a rule of general international law. Under the LOSC the freedom of fishing, which remains applicable to areas beyond the 200-mile EEZ, is formulated as a right and is circumscribed by the following four considerations.

Freedoms of the high seas are subject to restraints of a general nature. As the formulation as a 'right' suggests, an abusive exercise of freedom of fishing on the high seas is prohibited. Furthermore, just as other freedoms of the high seas, the freedom of high seas fishing needs to be exercised with due regard to the exercise of high seas freedoms by other states and rights with respect to activities in the Area. The latter aspect stipulated in Article 87(2) of the LOSC is novel: under Articles 87(2) and 147 of the LOSC, freedom of high seas fishing and activities in the Area need to be reconciled. This might be implemented by restricting mining activities in order to protect existing, important fishing activities on a certain scale targeting bottom-dwelling species in the same area, if mining activities render continuing bottom fisheries virtually impossible in a wide area.

The scope of freedom of fishing is determined by the scope of the term ‘fishing’. In this regard, related activities such as trans-shipment, processing and refuelling are considered to be part of fishing, or fishing-related activities, in the case law of international tribunals as well as in recent international fishery-related instruments. Fishing for scientific purposes, on the other hand, is not necessarily considered to be part of fishing. Exploratory or scientific fisheries are often subject to a regime different from that for commercial fisheries, although this does not imply that exploratory fisheries are governed by the regime for MSR. In practical terms, however, a distinction between exploratory fisheries and MSR is difficult to make.²

Under Article 116(a)-(c) of the LOSC, freedom of fishing is subject, *inter alia*, to rights, interests and duties of coastal states as well as to the rules of conservation and management in Part VII section 2 of the LOSC. It could be argued that the words ‘subject to’ could be regarded as depriving flag states of the right to fish on the high seas if their vessels are in serious and repeated breach of the rules for the conservation and management of the marine living resources. With regard to the special position of coastal states, the sovereign rights of the coastal state for the purpose of exploring the continental shelf and exploiting its resources allow the coastal state to regulate fisheries in the water column of the high seas superjacent to its continental shelf. The jurisdiction of the coastal state in this matter is restrained by Article 78(2) of the LOSC: it needs to be exercised in a manner which does not infringe or result in unjustifiable interference with the rights and freedoms of other states as provided for in the LOSC. For instance, a blanket ban on fishing for bottom-dwelling species on the high seas above the entire continental shelf of a particular state appears to be incompatible with the LOSC.³

The right to fish on the high seas is formulated as the right of states concerning their nationals. Although the drafters of the LOSC appear to have intended that the term ‘nationals’ denotes vessels flying the flag of the state concerned, the term is used in a number of recent international fishery-related instruments to mean natural and juridical persons rather than vessels. However, this should not be taken to imply that the essential aspect of freedom of fishing has been modified in state practice. These changes appear to be aimed at improving control of fishing activities by urging non-flag states to exercise jurisdiction over (beneficial owners as well as) operators and crew of the vessel engaged in IUU fishing on the high seas.⁴

Second, cooperation between states is another pillar of the regime for high seas fisheries. States engaged in high seas fisheries are required to cooperate with each other with a view to taking conservation measures. The duty to cooperate assumed by high seas fishing states does not by itself command a particular course of action to be taken by the states concerned. But some particular forms of cooperation are required in a specific context: negotiations in good faith; the establishment of RFMO/As as appropriate; the exchange of data on catches and efforts and other information. In

2 See Sections 2.1.1.2 and 5.2.3.2 above.

3 See Section 2.1.1.3 above. See also Section 3.2.2 above.

4 See Section 2.1.1.4 above.

particular, the duty to participate in the existing RFMO/As developed in the years after the LOSC was adopted. Under the present legal regime, high seas fishing states and RFMO/As have reciprocal duties: states fishing on the high seas are to participate in the regulatory regime of the competent RFMO/A either as members/participants or as cooperating non-members; the RFMO/A, for its part, is to accept high seas fishing states as members or participants.⁵ New entrants are also required to cooperate through RFMO/As in order for their nationals to engage in high seas fisheries regulated by RFMO/As. The major difference between new entrants and non-member states whose vessels are already engaged in the high seas fishery concerned is that the former are not given the 'right' to participate in the work of the RFMO/As as members or participants; the existing members or participants in the RFMO/A have discretion to decide whether or not to accept new entrants.⁶

Recently, the duty of states to take measures in their ports for the conservation and management of fishery resources has been contained in some treaties; some other international fishery-related instruments also stipulate actions that should be taken by port states and/or market states. A precursor of this approach already appeared in Article 8 of the HSFC; the participants in the Geneva Conference discussed the role of market states in a regulatory regime for high seas fisheries in connection with Draft Article 56 of the 1956 ILC draft articles.⁷

In addition, coastal states are entitled to participate in RFMO/As regardless of the involvement of their vessels in the high seas fishery concerned. With regard to straddling and highly migratory fish stocks, coastal states are required to give effect to the duty to cooperate by actually participating. In the case of DHSFS, there is no equivalent link between high seas fisheries and coastal states and therefore no obligation for the coastal states in the region to join the RFMO/A concerned. In reality, however, coastal states are likely to participate in the regulatory regime simply because, in the practice of RFMOs, both straddling fish stocks and DHSFS are managed in a single organization and all members take part in the decision-making concerning the management of any fishery conducted in the region. The draft for the South Pacific RFMO may go beyond this by granting coastal states a special role in decision-making in the Sub-regional Management Committees, whether it concerns straddling fish stocks or DHSFS.⁸ On the other hand, the entitlement of non-coastal states to participation without any intention to engage in fishing or research is not widely recognized in treaties or state practice.⁹

Third, states are required to take measures for their nationals as may be necessary for the conservation of the marine living resources of the high seas. The duty of conservation is reinforced by the provisions concerning the protection and preservation of the marine environment. In other words, international environmental law has been integrated as an essential part of the international law of high seas fisheries.

5 See Section 2.1.2.2 above.

6 See Section 2.1.2.1 above.

7 See Section 1.2.2 above.

8 See 'Participatory rights' in Section 5.2.3.2 above.

9 See Section 2.1.2.2 above.

CONCLUSIONS

After the adoption of the LOSC, the duty to take conservation measures has been developed in two ways: flag state responsibilities have been strengthened; and the concept of conservation was elaborated in the light of the contemporary development of international environmental law.

The LOSC does not specify the way in which the duty to take conservation measures is to be performed. While the genuine link requirement obliges flag states to exercise effective jurisdiction and control, the provisions of the LOSC do not stipulate how flag states should control their vessels. In recent international fishery-related instruments, the duty to take conservation measures has been fortified by strengthening flag state responsibilities. The flag state is required to grant authorization before its vessels engage in high seas fisheries. The flag state may grant authorization only when it can ensure that the vessel concerned does not undermine the conservation and management measures taken by the RFMO/As.¹⁰

In the codification process during the 1950s, the concept of conservation was formulated in respect of the management of fishery resources in high seas areas adjacent to the territorial sea: the maximization of sustainable yields became the primary objective, to be pursued on the basis of scientific information.¹¹ The LOSC establishes a framework for the determination of conservation measures – rather than detailed rules for this purpose – specifying the factors to be taken into account: the maintenance or restoration of harvested populations to levels capable of producing the MSY, qualified by environmental and economic factors, taking into account, among other things, generally recommended international minimum standards.¹²

These standards and criteria for conservation and management measures have been developed, taking into account the development of international environmental law. Four interconnected aspects in the development of this issue are discernible.¹³ First, a major shift is found in the objective(s) of fisheries management: while it still contains the utilization aspect, emphasis is placed on the sustainability aspect as seen in phrases such as ‘sustainable fisheries’ and ‘long-term conservation and sustainable use’. One may even imagine that the utilization aspect will be outweighed by environmental concerns with regard to high seas fisheries, as in the regime for the exploitation of marine mammals.¹⁴ Second, the consideration of ecosystem impacts has been strengthened and now fisheries management needs to adopt an ecosystem approach. Attempts to define the term ‘ecosystem approach’ have not yet succeeded, but its main elements are three-fold: consideration of species interactions such as the conservation of associated or dependent species and by-catch reductions, habitat protection and the compatibility of conservation measures in spatial terms. Third, in addition to ecosystem considerations, it is now required to conserve biodiversity as such. This means that diversity between ecosystems, between species and within

10 See ‘Strengthening flag state responsibilities’ in Section 2.1.3.2 above.

11 See Section 1.2.3 above.

12 See ‘Conservation and management of the marine living resources of the high seas’ in Section 2.1.3.1 above.

13 See Section 2.1.3.2 above.

14 See ‘Sustainable fisheries’ in Section 2.1.3.2 above. See also Section 1.4 above.

species is to be conserved, in addition to each component of ecosystems. Fourth, the precautionary approach needs to be adopted. The application of the precautionary approach to fisheries management means that states are obliged to prevent serious or irreversible harm to the target species as well as to the marine ecosystem in which they occur; uncertainty surrounding fisheries management may not be an excuse for postponing action; and, as actions to be taken depend on a concrete circumstance, possible precautionary measures range from enhanced scientific research to setting precautionary reference points to imposing a moratorium on fishing.

6.2 IMPLICATIONS OF THE GENERAL PRINCIPLES

As Chapter 2 indicated, while the general principles provide a useful framework to address high seas fisheries problems, there are ambiguities in the scope and implications of the general principles for high seas fisheries. For instance, the application of the precautionary approach to high seas fisheries does not generally specify concrete measures to be taken. Similarly, in a situation where the existing knowledge of the population distribution does not conclusively indicate whether the population is composed of a single straddling stock or two or more stocks (e.g., a discrete high seas fish stock and an EEZ stock), the requirement of compatibility may indicate the need for addressing the fishery as a single stock in an integrated manner, while the consideration of biodiversity may suggest considering the population concerned as two stocks and dealing with them separately.¹⁵ With regard to newly developed fishing methods such as bottom fisheries on the high seas in particular, the following two issues should be considered for the purpose of gauging the extent to which the general principles of high seas fisheries impact on contemporary challenges in high seas fisheries.

First, it is not clear from the text of the LOSC how the general principles need to be implemented with regard to fisheries for DHSFS. This is due to the following factors: (1) the main concerns of the negotiators at UNCLOS III did not relate to the issue of the conservation and management of DHSFS; (2) the FSA does not apply to DHSFS because the scope of the FSA is limited to straddling fish stocks and highly migratory fish stocks; (3) although modern approaches to the management of high seas fisheries reflected in other international fisheries-related instruments are formulated in an all-inclusive manner, the primary focus of these instruments is on the conservation and management of straddling fish stocks and highly migratory fish stocks; (4) ostensibly, the special interests of coastal states are irrelevant to DHSFS.¹⁶

Second, it is not clear whether or not the general principles reflected, *inter alia*, in Part VII of the LOSC are applicable to organisms belonging to sedentary species that occur beyond the outer limit of the continental shelf. This is because: (1) the concept of sedentary species in international law was developed for the regime of the

¹⁵ See the discussions on orange roughy in Section 5.2.2 above.

¹⁶ See Section 2.2.2 above.

continental shelf; (2) as the ongoing debates over the legal regime governing bioprospecting for genetic resources indicate, it is controversial whether the principles of Part XI of the LOSC apply to living resources of the Area.¹⁷

Part II (Chapters 3-5) examined how the ambiguities about the implications of the general principles have been addressed in state practice at the global, regional and national levels, including within RFMOs.

6.3 PRACTICE AT THE GLOBAL, REGIONAL AND NATIONAL LEVELS

States and international organizations have addressed new challenges in high seas fisheries at the global, regional and national levels. Chapter 3 of this study analyzed the practice of global international institutions, including the UNGA, the FAO and the CBD regime. Chapter 4 examined the constitutive instruments and practice of five existing RFMOs: CCAMLR, the GFCM, SEAFO, NEAFC and NAFO. In Chapter 5, the present study examined state practice in other areas. As indicated in Chapters 4 and 5, the constitutive instruments and/or practice of the five RFMOs, SIOFA and the drafts for the South Pacific RFMO have all adopted modern approaches to high seas fisheries, including the precautionary approach and an ecosystem approach. While the CCAMLR Convention does not explicitly use the term 'precautionary approach', the practice of CCAMLR has been the model for other RFMO/As in applying it. The other three existing RFMOs predating the FSA have amended their constitutive instruments since 1995, although the revision of the GFCM Agreement was rather limited except for institutional restructuring.¹⁸

In the South-West Atlantic, the Central Atlantic, part of the Arctic, some parts of the Pacific and the Northern Indian Ocean, no formal negotiations to establish an RFMO/A have been initiated at the multilateral level. For the Arctic, multilateral negotiations might start to establish an RFMO/A, at least for the high seas part. On the other hand, other high seas pockets such as the Sea of Okhotsk and those surrounded by the Pacific Island states may not be covered by the proposed RFMO/As. The Sea of Okhotsk is likely to remain outside the proposed RFMO/A for the North-West Pacific. There are still discussions on the scope of the South Pacific RFMO and some states have opposed the inclusion of high seas areas adjacent to the EEZs of Pacific Island states. If the area concerned is not covered by multilateral RFMO/As, coastal states are likely to control high seas fisheries by vessels from distant water fishing states through granting access to their EEZ fishery resources. Russia has done so for pollock resources in the Sea of Okhotsk since the 1990s, and the Pacific Island states have recently started to pursue this approach. Although one might consider such informal regimes as unstable, experiences from the Sea of Okhotsk and the Barents Sea Loophole suggest that they can continue to work effectively.

17 See Section 2.2.1 above.

18 The revision of the NEAFC Convention was not significant in terms of the number of amended provisions but, in terms of substance, major changes were made such as its objective, general principles and dispute settlement procedures.

6.3.1 Discrete High Seas Fish Stocks

In a number of international fora at the global level, including the UNGA, participants recommended recognizing that some principles of the FSA should be made applicable to DHSFS. The UNGA further called on states to address fisheries for DHSFS by adopting necessary measures aimed at ensuring long-term conservation and sustainable use, applying the precautionary approach and an ecosystem approach, and collecting and reporting data and other information. Consensus now exists that some principles of the FSA should be applied to the conservation and management of DHSFS. State practice at the global level is insufficient to conclude which principles should be applied under general international law and, more importantly, how they should be applied in the management of DHSFS.¹⁹

With regard to management bodies for DHSFS, new cooperative mechanisms need not be established separately from the existing and proposed RFMO/As dealing with straddling fish stocks. In fact, the Review Conference on the FSA found that RFMO/As with the competence to regulate straddling fish stocks also have the necessary competence with regard to DHSFS.²⁰ Nevertheless, it is not clear which states are entitled or required to participate in the regulatory mechanism.²¹

At the regional level, there are five RFMOs that have competence to regulate DHSFS. In the constitutive instrument of these RFMOs, there is no distinction between straddling fish stocks and DHSFS. This is true for SIOFA and the drafts for the South Pacific RFMO as well. This finding is important, given the fact that the participants in the negotiations for SEAFO, SIOFA and the proposed South Pacific RFMO have been fully aware of the existence of DHSFS within the proposed regulatory area of these RFMO/As and, in the case of SEAFO and SIOFA, the main target of the regulatory mechanism was potential DHSFS. Although a paper prepared for the negotiations for the proposed South Pacific RFMO stated that a separate regime should be established for DHSFS, such a regime has not yet materialized in the successive drafts under consideration. This suggests that a difference may occur only when actual management begins.²² Similarly, the amendments to the NEAFC and NAFO Conventions do not show any distinction between DHSFS and straddling fish stocks, even though the NAFO members were aware that certain stocks of its Regulatory Area are DHSFS and NEAFC members knew that some stocks of deep-sea species in its Regulatory Area may be DHSFS.

In NAFO, CCAMLR and NEAFC, fishing opportunities have been allocated to members with regard to (potential) DHSFS. Allocation keys differ from one stock to

19 See Section 3.1 above.

20 See *ibid.*

21 Note that UNGA Resolutions call on 'States' in respect of bottom fisheries, as opposed to 'relevant Coastal States and States fishing on the high seas' in respect of straddling fish stocks and highly migratory fish stocks, to cooperate to establish RFMO/As. Given the fact that most of the currently known DHSFS are deep-water species, the same ambiguities exist in respect of DHSFS.

22 See Section 5.2.3.2 above.

another and sometimes more fishing opportunities are allocated to coastal states for DHSFS in comparison with straddling fish stocks. Thus, it cannot be said that coastal state interests are irrelevant with regard to DHSFS.

In short, DHSFS are under the competence of relevant RFMOs and have been managed without notable differences from straddling fish stocks. The only potential distinction lies in the irrelevance of the consideration of coastal state interests, but in some cases coastal state interests appear to have been taken into account in the wording of constitutive instruments of the relevant RFMOs and/or in the actual management of DHSFS.

6.3.2 Deep-Sea Fisheries

The UNGA and the FAO, among others, have addressed the management of deep-sea fisheries at the global level. It seems that there now is a common understanding among states that the UNGA is the main forum to address the governance of deep-sea fisheries at the global level and the FAO supports it by dealing with the technical aspect of the same topic.²³

The successive UNGA Resolutions assigned a principal role to regulate deep-sea fisheries on the high seas to the regional cooperative mechanism and, only where there are no RFMO/A or interim measures, the flag state has the primary role of determining conservation and management measures by itself. The Resolutions called for (1) the adoption of appropriate conservation and management measures in accordance with, among others, the guidance in UNGA Resolution 61/105, (2) the expansion of the substantive competence of the existing RFMO/As and (3) the establishment of a competent RFMO/A in areas where there is no RFMO/A. The Resolutions do not require different types of management bodies for deep-sea fisheries and other fisheries on the high seas. Nevertheless, as pointed out in the sub-section on DHSFS above, the scope of states that are called on to participate in regional cooperative mechanisms is left ambiguous in the relevant UNGA Resolutions as far as deep-sea fisheries are concerned. While the recommendation to participate in the establishment of an RFMO/A for straddling and highly migratory fish stocks fisheries is addressed to the relevant coastal states and high seas fishing states, the corresponding recommendation for deep-sea fisheries is addressed to 'States' in general.

Standards and criteria employed for determining conservation and management measures for deep-sea fisheries are different from those used for pelagic fisheries. At the global level, there is wide agreement on the need for stricter measures for deep-sea fisheries on the high seas applying the precautionary and ecosystem approaches, as illustrated by the UNGA Resolutions and the FAO International Guidelines on the Management of Deep-sea Fisheries on the High Seas. Both the UNGA Resolutions and the FAO International Guidelines adopt the requirement of prior environmental impact assessments; fisheries are prohibited unless it is shown that they do not have an SAI on VMEs or until appropriate conservation and management measures have

23 See Section 3.2 above.

been taken. The Guidelines have further advanced this requirement by stipulating that if it is not determined whether the proposed activity causes an SAI on VMEs, that activity can only be conducted with precautionary measures.

At the regional level, five existing RFMOs have the competence to address fisheries for deep-sea species. SIOFA, the proposed South Pacific RFMO and the proposed RFMO/A in the North-West Pacific will have the competence to manage deep-sea fisheries.

The five existing RFMOs have adopted measures to address bottom fisheries on the high seas. CCAMLR and NEAFC have adopted data collection schemes specifically tailored to deep-sea fisheries. CCAMLR, NAFO and NEAFC have adopted fishing effort regulations for all fisheries or for some stocks. CCAMLR, NAFO, NEAFC and SEAFO have adopted catch limitations on some stocks or species. CCAMLR and, to some extent, NEAFC have controlled new fisheries. All five RFMOs have adopted area closures to protect benthic ecosystems from bottom fisheries. Similarly, these RFMOs have imposed various gear restrictions, including the prohibition of fishing with gears such as gillnets and trammel nets in all parts of their regulatory areas.

Some of the existing RFMOs and ongoing negotiations on the establishment of an RFMO/A in the South and North Pacific also addressed the implementation of UNGA Resolution 61/105. These measures have incorporated important parts of the UNGA recommendations. They include prior environmental impact assessments, the prohibition of fishing until it is proven that they do not involve SAIs and closures of VMEs to bottom fisheries. The GFCM and SEAFO have yet to address the implementation of UNGA Resolution 61/105, including additional closures of seamounts and cold water coral reefs as suggested by their scientific bodies. Some of these measures have imposed additional requirements. They include freezing and/or reduction of fishing efforts in CCAMLR, NEAFC, NAFO and the North Pacific and South Pacific processes.

Interestingly, many of the existing measures stipulate that they will take into account standards and criteria at the global level, including the FAO International Guidelines. This will facilitate the coordination of measures among different RFMO/As. Whether or not this will actually happen is, however, still to be seen.

In addition to national legislation addressing high seas fisheries in general, two types of national legislation specifically address bottom fisheries in areas where there is no RFMO/A or multilaterally-agreed interim measures: legislation of the flag state to control operations of its vessels engaged in bottom fisheries when it does not completely ban high seas fisheries by its vessels in areas where no RFMO/A exists; and legislation seeking to influence the behaviour of foreign flag states and/or their vessels.

The first type of legislation was recently adopted by the European Union. A number of Community vessels are engaged in deep-sea fisheries in high seas areas where there are neither competent RFMO/A nor interim measures. The new Regulation seeks to control these fishing activities through the requirement of fishing permits and prior environmental impact assessments. In addition, the new Regulation also imposes requirements on member states to adopt more stringent measures than

required under the relevant UNGA Resolutions, including the presumption of SAIs in case of uncertainty and the prohibition of bottom fisheries in an area where no proper scientific assessment has been carried out and made available.²⁴ The new Regulation may be considered as model legislation for states whose vessels are engaged in deep-sea fisheries in high seas areas not covered by any RFMO/A or interim measures.

The second type of legislation was already enacted by the United States in 2006 and is being implemented by its governmental agencies.²⁵ In addition to its legislation as a flag state, the 2006 Magnuson-Stevens Reauthorization Act, together with the 2006 presidential memorandum on promoting sustainable fisheries and ending destructive fishing practices, urges diplomatic demarches and consultations with foreign governments whose vessels engage in fisheries inflicting adverse impacts on benthic ecosystems such as seamounts, cold water corals and hydrothermal vents in high seas areas where no competent RFMO exists. The Act stipulates that if diplomatic steps do not yield the intended results, port state measures and trade-related measures against these vessels, among others, may be taken. The first reporting to Congress is scheduled in 2009.

6.3.3 High Seas MPAs

Area-based management tools for regulating activities in the high seas have been used in many regions. In fisheries, states have supported the use of closed areas for the sustainability of fishery resources and for the protection of the marine ecosystem.

Disagreements emerged after states started discussing the establishment of integrated, multi-purpose MPAs. There are controversies over the compatibility of such MPAs with international law, including the provisions of the LOSC. Moreover, there are conflicts over which entity should have a leading role in designing and operating such MPAs. At the global level, there seems to be a general agreement on the leading role of the UNGA in policy discussions. Other organizations have refrained from discussing future policies as a primary forum. However, this does not mean that all states agree that the UNGA has a leading role in designing and managing the MPAs.²⁶

Other remaining issues include: (1) whether global networks of MPAs, only in the high seas or including both the high seas and areas under national jurisdiction, should be established in a coordinated manner or whether regional mechanisms should coordinate MPAs within their respective areas; (2) which entity (or entities) should designate and manage MPAs (i.e., whether single criteria or sector-based criteria should be employed).

At the regional level, consultations between RFMOs and regional environmental protection mechanisms have yielded some cooperation with regard to MPAs in the

24 EU, Council Regulation (EC) No. 734/2008, Articles 4(5) and 6(1), respectively.

25 As noted in Chapter 5, US law targeting third-state fishing activities exists in parallel with a law regulating high seas fishing activities by its own vessels.

26 See Section 3.3 above.

North-East Atlantic, the Mediterranean and the Southern Ocean. NEAFC has held a dialogue with the OSPAR Commission for several years and the closure of cold water coral reefs to fishing was adopted by NEAFC. The GFCM adopted a fisheries closure for marine mammal protection, incorporating the SPAMI List under the 1995 Barcelona Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean. CCAMLR has approved a number of ASPAs and ASMAs and adopted corresponding measures.

In all three regions mentioned above, these RFMOs have independent authority to establish area closures for fisheries: the OSPAR Commission does not have the competence to adopt measures for fisheries (North-East Atlantic); no formal relationship exists between the GFCM and regional environmental protection mechanisms such as the 1995 Barcelona Protocol (Mediterranean); and the establishment of an ASPA or an ASMA needs to be preceded by an approval from CCAMLR (Southern Ocean). Nevertheless, it is likely that criteria and standards employed by the regional environmental protection mechanisms affect the use of area-based management tools by the RFMOs concerned.²⁷

6.4 SUGGESTED ACTIONS ADDRESSING NEW CHALLENGES IN HIGH SEAS FISHERIES

6.4.1 Discrete High Seas Fish Stocks

As noted above, while it is now agreed that some principles of the FSA are applicable to DHSFS, discussions at the global level have left open the question of which principles should be made applicable. Chapter 3 briefly mentioned that two approaches could be taken towards identifying principles of the FSA which are applicable to DHSFS.²⁸ First, states could select a group of principles to be applied to DHSFS. Second, and conversely, states could exclude some principles in the FSA as being inappropriate because of their inherent links to straddling and highly migratory fish stocks. Typical of this approach would be to remove the compatibility requirement from the list of applicable principles. It is submitted, however, that the difference between these two approaches is a matter of emphasis, rather than substance.

Recent global fisheries instruments explicitly refer to DHSFS when they call for the application of the precautionary and ecosystem approaches.²⁹ Such recognition is implicit in some other instruments: they stipulate that the precautionary and ecosystem approaches are applied to high seas fisheries in general. While it is likely that general agreement exists on the proposition that these principles should be applied to DHSFS, states would not necessarily agree what is meant by these principles and what

²⁷ See, e.g., Section 4.4.2.3 above.

²⁸ See Section 3.4 above.

²⁹ E.g., UNGA Resolution 62/177, para. 5.

specific measures would flow from them. In particular, it is illustrative that the ICP in 2006 failed to agree on a uniform definition of the ‘ecosystem approach’.³⁰

It is submitted that attempts to further elaborate the applicable principles at the global level will not by themselves result in better conservation of DHSFS for the following two reasons. First, negotiations would not be easy and might result in watering down to the very common denominator (e.g., the precautionary and ecosystem approaches as well as timely, complete and accurate data collection and sharing). Second, disagreement on which provisions of the FSA constitute a ‘principle’ might hamper such negotiations.

Instead of efforts at the global level, an inductive approach to find principles commonly applied in practice at the regional level would be more meaningful as the practice of RFMO/As generally shows no distinction between DHSFS and straddling fish stocks. In this way, we can see which principles are considered to be useful, at least by members of RFMO/As, for the conservation of DHSFS.

In addition to the precautionary and ecosystem approaches and timely, complete and accurate data collection and sharing, it can be concluded that most of the general principles enumerated in Article 5 of the FSA are applicable in practice, including: ensuring the long-term sustainability of fish stocks; science-based management; promotion and conduct of scientific research; and effective monitoring, control and surveillance.³¹

Apart from Article 5 (General Principles), some other provisions found in the FSA could be recognized as suitable principles for DHSFS, including: compatibility between conservation measures (of neighbouring RFMO/As), the entitlement of high seas fishing states to participate in the work of RFMO/As, the prohibition of fishing without becoming a member of or a participant in RFMO/As competent to regulate high seas fisheries or by cooperating with them, and the denial of fishing without authorization from flag states. Some of the other provisions of the FSA, including Annexes on data collection and on the application of the precautionary approach, are also useful tools of reference for fisheries management.³²

States may wish to conclude a global legally-binding instrument governing DHSFS such as: an Implementation Agreement to the LOSC, the FSA or the CBD; an Annex to the FSA; a Protocol to the FSA. Filling regulatory gaps by extending the

30 See ‘Ecosystem approaches’ in Section 2.1.3.2 above.

31 However, see Section 4.4.2.1 above.

32 Article 1(1) of the FSA is useful in considering the meaning of some terms under international law, but in some cases questions may arise. For example, the exclusion of sedentary species from the scope of the FSA leaves room for different interpretations and it is an interesting issue when considered in the context of general international law. If the term ‘sedentary species’ in the FSA is considered to include organisms belonging to sedentary species in areas beyond the outer limit of the continental shelf, one might wonder whether or not a distinction between organisms belonging to sedentary species and other species also exists under general international law. If the term is intended to simply mean sedentary species on the continental shelf, no problem occurs and it is concluded that the same regime applies, in the area beyond the outer limit of the continental shelf, to organisms belonging to sedentary species and those not belonging to sedentary species. See also Section 2.2.1 above.

detailed co-operative regime in the FSA in respect of DHSFS is a feasible option and some have already suggested doing so. For example, it has been argued that the adoption of a protocol to the FSA that would achieve the proposed extension without reopening the FSA's provisions to negotiations seems an effective avenue for progress.³³ An annex under Article 48 of the FSA is another option: if the annex is adopted by consensus at a meeting of states parties, the revision can be effective from the date of its adoption.³⁴ In this way, problems associated with the lack or delay of ratification of a new legally-binding instrument may be avoided. Alternatively, states might wish to address the issue of DHSFS by producing a non-legally binding instrument such as technical guidelines and/or through governance by COFI or another organization (or organ). In addition, it is also possible to leave the issue to management by RFMO/As without any more guidance at the global level. For the time being, it is not problematic to refrain from producing a legally-binding instrument, but such an instrument is essential in the long term. To strike a balance between the danger of renegotiating the FSA and the disadvantage of allowing some RFMO/As and flag states lagging behind others with regard to DHSFS, the adoption of an annex to the FSA is the best option. But, given the potential disagreement on the content of such a global legally-binding instrument, the annex remains a general declaration stating the obligation to apply the provisions of the FSA to DHSFS *mutatis mutandis*. The choice of principles to be applied will be left to RFMO/As.

6.4.2 Deep-Sea Fisheries

For the time being, deep-sea fisheries on the high seas will be managed by RFMO/As and flag states in accordance with the guidance provided by the UNGA and the FAO International Guidelines.

At the moment, there is no globally agreed standard for determining VMEs and SAIs on VMEs. However, although the International Guidelines for deep-sea fisheries will only be presented to COFI in 2009, the process of producing them will assist states in implementing UNGA Resolution 61/105. In particular, states agreed the standards and criteria for the determination of VMEs and SAIs on VMEs. This process will undoubtedly affect the implementation of the UNGA Resolutions concerned,³⁵ but the need to take into account the characteristics of each region remains in managing deep-sea fisheries.

Future action to be taken by states depends on the outcome of the above-mentioned FAO Technical Consultation. While the 2006 FAO Expert Consultation on

33 European Commission Background Paper No. 3, at p. 6. Note that the paper also states that 'most of [discrete high seas stocks] consist of deep species whose fragility justifies particular care and rigour in their management'. European Commission Background Paper No. 3, at p. 6. This could be interpreted to imply the need for a regime which is different from that for straddling and highly migratory fish stocks.

34 FSA, Article 48(2).

35 In fact, impacts are already seen in, e.g., the above-mentioned EU Council Regulation as well as measures adopted by NEAFC in July 2008.

deep-sea fisheries in the high seas referred to an International Plan of Action to follow the Technical Guidelines, COFI did not refer to any follow-up action for the International Guidelines in this regard. As the drafted document takes the form of ‘International’ (rather than ‘Technical’) Guidelines and states have discussed and will agree on the content of the Guidelines, it is doubtful whether the production of another non-legally binding instrument is useful. It is desirable to start negotiations for a legally-binding instrument if and only if the International Guidelines have not been implemented properly by the RFMO/As or individual flag states. Otherwise, given the divergence in the biological characteristics of target species as well as the difference in fishing patterns in each region, it is desirable to leave the management of deep-sea fisheries to the discretion of RFMO/As based on the UNGA Resolutions and the FAO International Guidelines. In areas where no RFMO/A is likely to be established, practical support to developing states, including capacity-building, from international organizations such as the FAO or its subsidiary body will be useful.

6.4.3 High Seas MPAs

Two points should be borne in mind when discussing integrated, multi-purpose MPAs on the high seas. First, in order to remove fears of excessive pressure for a blanket moratorium on fishing, there is a need to clarify the purposes to be pursued and the activities to be regulated. Second, legal and policy ambiguities exist, especially legal issues with regard to the freedom of the high seas and institutional issues such as which entity should take a lead.

Given the uncertainty with regard to legal and policy issues concerning integrated high seas MPAs, there is a pressing need for the clarification of legal policy ambiguities if states wish to establish such MPAs at the global or regional level. Guidelines for the criteria and standards for MPAs are under preparation by the CBD regime. Policy aspects, as opposed to scientific and technical aspects, should be agreed in explicit terms as well. One feasible and desirable way forward is to negotiate an implementation agreement to the LOSC, in which the compatibility of integrated high seas MPAs with the law of the sea, including the LOSC, is to be declared and an entity or entities that are capable of designating and/or operating such MPAs are to be specified. Another way would be to enhance cooperation and coordination between RFMO/As and other regional mechanisms in the establishment and management of area-based management tools.

6.5 FINAL REMARKS

The analysis of this study has shown that the LOSC still serves as an overall framework to meet the new challenges in high seas fisheries examined in this study. Within the constraints set by the general principles of high seas fisheries, states have been taking action to address problems caused by the new challenges at the global, regional and national levels. Action at these levels has complemented, rather than contradicted, each other.

The issues of DHSFS, deep-sea fisheries and the protection of VMEs remain a subject of discussion in the international community for the upcoming years. It should still be observed whether the urgency required for these issues is being matched by actions at the global, regional and national levels. In addressing the issues, the international community chose not to resort to radical actions such as a blanket moratorium on deep-sea fisheries on the high seas. However, uncertainty remains concerning the effectiveness of measures that have been already taken.

This study has exemplified that the international community may have confidence in the LOSC in dealing with issues of the law of the sea that may arise in the coming decades. A 'Constitution for the Oceans' serves to provide an order for the oceans which is stable and flexible. What the international community needs is not a revolution concerning the existing order, but a resolution to make every effort to address new challenges ahead.

Bibliography

- ACIA, *Impacts of a Warming Arctic: Arctic Climate Impact Assessment* (Cambridge: Cambridge University Press, 2004).
- Allen, Craig H., 'Protecting the Oceanic Gardens of Eden: International Law Issues in Deep-Sea Vent Resource Conservation and Management', 13 *Georgetown International Environmental Law Review* (2001), pp. 563-660.
- Allott, Philip, 'Power Sharing in the Law of the Sea', 77 *American Journal of International Law* (1983), pp. 1-30.
- Anderson, David, 'The Regulation of Fishing and Related Activities in Exclusive Economic Zones', in Erik Franckx and Philippe Gautier (eds.), *The Exclusive Economic Zone and the United Nations Convention on the Law of the Sea, 1982-2000: A Preliminary Assessment of State Practice* (Bruxelles: Bruylant, 2003), pp. 31-49.
- Anderson, David H., 'The Straddling Stocks Agreement of 1995: An Initial Assessment', 45 *International and Comparative Law Quarterly* (1996), pp. 463-475.
- Armas Pfirter, Frida M., 'The Management of Seabed Living Resources in 'the Area' under UNCLOS', 11 *Revisita Electrónica de Estudios Internacionales* (2006), 29 p.
- Attard, David Joseph, *The Exclusive Economic Zone in International Law* (Oxford: Clarendon Press, 1987).
- Aust, Anthony, *Modern Treaty Law and Practice* (Cambridge: Cambridge University Press, 2000).
- Balton, D.A., 'Strengthening the Law of the Sea: The New Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks', 27 *Ocean Development and International Law* (1996), pp. 125-151.
- Balton, David A., 'The Compliance Agreement', in Ellen Hey (ed.), *Developments in International Fisheries Law* (The Hague: Kluwer Law International, 1999), pp. 31-53.
- Balton, David A., 'The Bering Sea Doughnut Hole Convention: Regional Solution, Global Implications', in Olav Schram Stokke (ed.), *Governing High Seas Fisheries: The Interplay of Global and Regional Regimes* (New York: Oxford University Press, 2001), pp. 143-177.
- Balton, David A. and Dorothy C. Zbicz, 'Managing Deep-Sea Fisheries: Some Threshold Questions', 19 *International Journal of Marine and Coastal Law* (2004), pp. 247-258.
- Bangert, Kaare, 'The Effective Enforcement of High Seas Fishing Regimes: The Case of the Convention for the Regulation of the Policing of the North Sea Fisheries of 6 May 1882', in Guy S. Goodwin-Gill and Stefan Talmon (eds.), *The Reality of International Law: Essays in Honour of Ian Brownlie* (Oxford: Clarendon Press, 1999), pp. 1-20.
- Baslar, Kemal, *The Concept of the Common Heritage of Mankind in International Law* (The Hague: Martinus Nijhoff Publishers, 1998).
- Beer-Gabel, Josette and Véronique Lestang, *Les Commissions de Pêche et Leur Droit* (Brussels: Bruylant, 2003).
- Bernhardt, Rudolf, 'Custom and Treaty in the Law of the Sea', 205 *Recueil des Cours* (1987-V), pp. 251-330.
- Birnie, Patricia W. and Alan. E. Boyle, *International Law and the Environment* (New York: Oxford University Press, 2nd edition, 2002).
- Bisbal, Gustavo A., 'Fisheries Management on the Patagonian Shelf: A Decade After the 1982 Falklands/ Malvinas Conflict', 17 *Marine Policy* (1993), pp. 213-229.

- Bloom, Evan T., 'Establishment of the Arctic Council', 93 *American Journal of International Law* (1999), pp. 712-722.
- Bowman, Michael and Catherine Redgwell, 'Introduction', in Michael Bowman and Catherine Redgwell (eds.), *International Law and the Conservation of Biological Diversity* (London: Kluwer Law International, 1996), pp. 1-4.
- Boyle, Alan and David Freestone (eds.), *International Law and Sustainable Development: Past Achievements and Future Challenges* (New York: Oxford University Press, 1999).
- Brierly, James Leslie, *The Law of Nations: An Introduction to the International Law of Peace* (Oxford: Clarendon Press, 6th edition, 1963).
- Brown, E.D., *The International Law of the Sea*, vol. I (Aldershot: Dartmouth, 1994).
- Buck, Eugene H., U.N. Convention on the Law of the Sea: Living Resources Provisions, CRS Report for Congress, Updated January 7, 2004.
- Burke, William T., 'U.S. Fishery Management and the New Law of the Sea', 76 *American Journal of International Law* (1982), pp. 24-55.
- Burke, William T., *The New International Law of Fisheries: UNCLOS 1982 and Beyond* (Oxford: Clarendon Press, 1994).
- Caddy, J.F. and R.C. Griffiths, Living Marine Resources and Their Sustainable Development: Some Environmental and Institutional Perspectives, Fisheries Technical Paper No. 353 (1995).
- Canino, Mike, 'Summary of Genetic Stock Identification Studies in the Bering Sea', Central Bering Sea Pollock Workshop on Allowable Harvest Level and Stock Identification, Seattle, Washington, USA, 6-9 June 2005.
- Carroz, J.E., 'Institutional Aspects of Fishery Management under the New Regime of the Oceans', 21 *San Diego Law Review* (1984), pp. 513-540.
- Churchill, Robin R., 'The Barents Sea Loophole Agreement: A 'Coastal State' Solution to a Straddling Stock Problem', 14 *International Journal of Marine and Coastal Law* (1999), pp. 467-483.
- Churchill, Robin R., 'Claims to Maritime Zones in the Arctic: Law of the Sea Normality or Polar Peculiarity?' in Alex G. Oude Elferink and Donald R. Rothwell (eds.), *The Law of the Sea and Polar Maritime Delimitation and Jurisdiction* (The Hague: Martinus Nijhoff Publishers, 2001), pp. 105-124.
- Churchill, R.R. and A.V. Lowe, *The Law of the Sea* (Manchester: Manchester University Press, 3rd edition, 1999).
- Clingan, Thomas A., Jr, 'An Overview of Second Committee Negotiations in the Law of the Sea Conference', 63 *Oregon Law Review* (1984), pp. 53-72.
- Clingan, Thomas A., Jr, 'Dispute Settlement among Non-parties to the LOS Convention with Respect to the Outer Limits of the Continental Shelf', in Thomas A. Clingan, Jr (ed.), *The Law of the Sea: What Lies Ahead?* (Honolulu: The Law of the Sea Institute, 1988), pp. 495-500.
- Clingan, Thomas A., Jr., 'Mar Presencial (The Presential Sea): *Deja vu* all over again? A response to Francisco Orrego Vicuna', 24 *Ocean Development and International Law* (1993), pp. 93-97.
- Corell, Hans, 'Reflections on the Possibilities and Limitations of a Binding Legal Regime for the Arctic', Seventh Conference of Parliamentarians of the Arctic Region, Kiruna, Sweden, 3 August 2006.
- Daggett, A.P., 'The Regulation of Maritime Fisheries by Treaty', 28 *American Journal of International Law* (1934), pp. 693-717.

BIBLIOGRAPHY

- Dalton, Jane Gilliland, 'The Chilean Mar Presencial: A Harmless Concept or a Dangerous Precedent?' 8 *International Journal of Marine and Coastal Law* (1993), pp. 397-418.
- Davies, Peter G.G. and Catherine Redgwell, 'The International Legal Regulation of Straddling Fish Stocks', 67 *British Year Book of International Law* (1996), pp. 199-274.
- de La Fayette, Louise, 'The OSPAR Convention Comes into Force: Continuity and Progress', 14 *International Journal of Marine and Coastal Law* (1999), pp. 247-297.
- de Yturriaga, José A., *The International Regime of Fisheries: From UNCLOS 1982 to the Presential Sea* (The Hague: Martinus Nijhoff Publishers, 1997).
- Division for Ocean Affairs and the Law of the Sea, *The Regime for High-Seas Fisheries: Status and Prospects* (New York: United Nations, 1992).
- Division for Ocean Affairs and the Law of the Sea and International Seabed Authority, *Marine Mineral Resources: Scientific Advances and Economic Perspectives* (2004).
- Dunlap, William V., 'The Donut Hole Agreement', 10 *International Journal of Marine and Coastal Law* (1995), pp. 114-126.
- Edeson, William, 'Soft and Hard Law Aspects of Fisheries Issues: Some Recent Global and Regional Approaches', in Myron H. Nordquist, John Norton Moore and Said Mahmoudi (eds.), *The Stockholm Declaration and Law of the Marine Environment* (The Hague: Martinus Nijhoff Publishers, 2003), pp. 165-182.
- Edeson, William R., David Freestone and Elly Gudmundsdottir, *Legislating for Sustainable Fisheries: A Guide to Implementing the 1993 FAO Compliance Agreement and 1995 UN Fish Stocks Agreement* (Washington: World Bank, 2001).
- Engler, M. Cecilia, Establishment and Implementation of a Conservation and Management Regime for High Seas Fisheries, with Focus on the Southeast Pacific and Chile: From Global Developments to Regional Challenges, Research Paper (UN - Nippon Foundation Fellow 2006-2007).
- FAO Fisheries and Agriculture Department, *The State of World Fisheries and Aquaculture 2006*.
- FAO Fisheries Department, *World Review of Highly Migratory Species and Straddling Stocks*, FAO Fisheries Technical Paper No. 337.
- FAO Fisheries Department, *The State of World Fisheries and Aquaculture 2004*.
- Fleischer, Carl August, 'The New Régime of Maritime Fisheries', 209 *Recueil des Cours* (1988-II), pp. 95-222.
- Fleischer, Carl August, 'Fisheries and Biological Resources', in René-Jean Dupuy and Daniel Vignes (eds.), *A Handbook on the New Law of the Sea* (Dordrecht: Martinus Nijhoff Publishers, 1991), pp. 989-1126.
- Franckx, Erik, *Maritime Claims in the Arctic: Canadian and Russian Perspectives* (Dordrecht: Nijhoff, 1993).
- Freestone, David, 'International Fisheries Law Since Rio: The Continued Rise of the Precautionary Principle', in Alan Boyle and David Freestone (eds.), *International Law and Sustainable Development: Past Achievements and Future Challenges* (New York: Oxford University Press, 1999), pp. 135-164.
- Freestone, David, 'A Decade of the Law of the Sea Convention: Is It a Success?' 39 *George Washington International Law Review* (2007), pp. 499-542.
- Freiwald, André, Jan Helge Fosså, Anthony Grehan, Tony Koslow and J. Murray Roberts, *Cold-water Coral Reefs: Out of Sight – No Longer Out of Mind* (Cambridge, UK: UNEP-WCMC, 2004).

- Fulton, Thomas Wemyss, *The Sovereignty of the Sea: An Historical Account of the Claims of England to the Dominion of the British Seas, and of the Evolution of the Territorial Waters: With Special Reference to the Rights of Fishing and the Naval Salute* (Edinburgh: Blackwood, 1911).
- Garcia-Amador, *The Exploitation and Conservation of the Resources of the Sea: A Study of Contemporary International Law* (Second and enlarged edition, 1963).
- Garcia, S.M. and J. Majkowski, 'State of High Seas Resources', in Tadao Kuribayashi and Edward L. Miles (eds.), *The Law of the Sea in the 1990s: A Framework for Further International Cooperation* (Honolulu: The Law of the Sea Institute, 1992), pp. 175-236.
- Garcia, S.M., 'The Precautionary Approach to Fisheries and its Implications for Fishery Research, Technology and Management: An Updated Review', in *Precautionary Approach to Fisheries*, FAO Fisheries Technical Paper No. 350-2 (1996).
- Bryan A. Garner (ed.), *Black's Law Dictionary* (St. Paul, Minnesota: West, Second pocket edition, 2003).
- Gavouneli, Maria, *Functional Jurisdiction in the Law of the Sea* (Leiden: Martinus Nijhoff Publishers, 2007).
- Gianni, Matthew, *High Seas Bottom Trawl Fisheries and their Impacts on the Biodiversity of Vulnerable Deep-Sea Ecosystems: Options for International Action* (Gland, Switzerland: IUCN, 2004).
- Gidel, Gilbert, *Le Droit International Public de la Mer: Le Temps de Paix*, vol. I (Chateauroux: Mellottée, 1932).
- Gjerde, Kristina M., 'High Seas Fisheries Management under the Convention on the Law of the Sea', in David Freestone, Richard Barnes and David M. Ong (eds.), *The Law of the Sea: Progress and Prospects* (New York: Oxford University Press, 2006), pp. 281-307.
- Gjerde, Kristina M. and David Ong, 'Protection of Particularly Sensitive Sea Areas under International Marine Environmental Law: Report of the International Meeting of Legal Experts on Particularly Sensitive Sea Areas University of Hull, 20-21 July 1992', 26 *Marine Pollution Bulletin* (1993), pp. 9-13.
- Glowka, Lyle, 'Putting Marine Scientific Research on a Sustainable Footing at Hydrothermal Vents', 27 *Marine Policy* (2003), pp. 303-312.
- Gordon, J.D.M., 'Environmental and Biological Aspects of Deepwater Demersal Fishes', in R. Shotton (ed.), *Deep Sea 2003: Conference on the Governance and Management of Deep-sea Fisheries: Part 1: Conference Reports. Queenstown, New Zealand, 1-5 December 2003* (Rome: FAO, 2005), pp. 70-88.
- Grigg, Richard W., 'Precious Coral Fisheries of Hawaii and the U.S. Pacific Islands', 55 *Marine Fisheries Review* (1993), pp. 50-60.
- Grotius, Hugo, *The Freedom of the Seas, or the Right Which Belongs to the Dutch to Take Part in the East Indian Trade* (New York: Oxford University Press, 1916).
- Hayashi, Moritaka, 'The 1995 Agreement on the Conservation and Management of Straddling and Highly Migratory Fish Stocks: Significance for the Law of the Sea Convention', 29 *Ocean & Coastal Management* (1995), pp. 51-69.
- Hayashi, Moritaka, 'The Role of the United Nations in Managing the World's Fisheries', in Gerald H. Blake, William J. Hildesley, Martin A. Pratt, Rebecca J. Ridley and Clive H. Schofield (eds.), *The Peaceful Management of Transboundary Resources* (London: Graham & Trotman/Martinus Nijhoff, 1995), pp. 373-393.

BIBLIOGRAPHY

- Hayashi, Moritaka, 'Global Governance of Deep-Sea Fisheries', 19 *International Journal of Marine and Coastal Law* (2004), pp. 289-298.
- Hayashi, Moritaka, 'Regional Fisheries Management Organisations and Non-Members', in Tafsir Malick Ndiaye and Rüdiger Wolfrum (eds.), *Law of the Sea, Environmental Law and Settlement of Disputes: Liber Amicorum Judge Thomas A. Mensah* (Leiden: Martinus Nijhoff Publishers, 2007), pp. 751-765.
- Henriksen, Tore, Geir Hønneland and Are K. Sydnes, *Law and Politics in Ocean Governance: The UN Fish Stocks Agreement and Regional Fisheries Management Regimes* (Leiden: Martinus Nijhoff Publishers, 2006).
- Herr, Richard, 'The International Regulation of Patagonian Toothfish: CCAMLR and High Sea Fisheries Management', in Olav Schram Stokke (ed.), *Governing High Seas Fisheries: The Interplay of Global and Regional Regimes* (New York: Oxford University Press, 2001), pp. 303-328.
- Hewison, Grant J., 'The Precautionary Approach to Fisheries Management: An Environmental Perspective', 11 *International Journal of Marine and Coastal Law* (1996), pp. 301-332.
- Hey, Ellen, *The Regime for the Exploitation of Transboundary Marine Fisheries Resources: The United Nations Law of the Sea Convention Cooperation between States* (Dordrecht: Martinus Nijhoff Publishers, 1989).
- Hey, Ellen, 'The Provisions of the United Nations Law of the Sea Convention on Fisheries Resources and Current International Fisheries Management Needs', in *The Regulation of Driftnet Fishing on the High Seas: Legal Issues*, FAO Legislative Study No. 47 (Rome: FAO, 1991), pp. 1-11.
- Hey, Ellen, 'Global Fisheries Regulations in the First Half of the 1990s', 11 *International Journal of Marine and Coastal Law* (1996), pp. 459-490.
- Hey, Ellen, 'Reviewing Implementation of the LOS Convention and Emerging International Public Law', in Alex G. Oude Elferink (ed.), *Stability and Change in the Law of the Sea: The Role of the LOS Convention* (Leiden: Martinus Nijhoff Publishers, 2005), pp. 75-88.
- Holmila, Erkki, 'Common Heritage of Mankind in the Law of the Sea', 1 *Acta Societatis Martensis* (2005), pp. 187-205.
- Howarth, William, 'The Interpretation of 'Precaution' in the European Community Common Fisheries Policy', 20 *Journal of Environmental Law* (2008), pp. 213-244.
- Huebert, Rob, 'The Law of the Sea and the Arctic: An Unfulfilled Legacy', 18 *Ocean Yearbook* (2004), pp. 193-219.
- Infante, María Teresa, 'The Settlement of Disputes regarding the Law of the Sea and its Bearing on the Legal Nature of the Exclusive Economic Zone', in Francisco Orrego Vicuña (ed.), *The Exclusive Economic Zone: A Latin American Perspective* (Boulder, CO: Westview Press, 1984), pp. 159-171.
- Jackson, Andrew, 'Developments in the Southeast Atlantic, 1997-1999: Meetings of Coastal States and Other Interested Parties on a Fisheries Management Organization for the South East Atlantic (the SEAFO Process)', in Myron H. Nordquist and John Norton Moore (eds.), *Current Fisheries Issues and the Food and Agriculture Organization of the United Nations* (The Hague: Martinus Nijhoff Publishers, 2000), pp. 55-67.
- Johnston, Douglas M., *The International Law of Fisheries: A Framework for Policy-Oriented Inquiries* (New Haven: Yale University Press, 1965).

- Johnston, Douglas M., 'The Future of the Arctic Ocean: Competing Domains of International Public Policy', 17 *Ocean Yearbook* (2003), pp. 596-624.
- Joyner, Christopher C. and Peter N. De Cola, 'Chile's Presential Sea Proposal: Implications for Straddling Stocks and the International Law of Fisheries', 24 *Ocean Development and International Law* (1993), pp. 99-121.
- Juda, Lawrence, *International Law and Ocean Use Management* (London: Routledge, 1996).
- Kanehara, Atsuko, 'A New or Pathological Tendency in the International Regulation of Sovereign States: From the Perspective of the International Regulation of Whaling', 47 *Japanese Annual of International Law* (2004), pp. 34-68.
- Kaye, Stuart M., *International Fisheries Management* (The Hague: Kluwer Law International, 2001).
- Kimball, Lee A., 'Deep-Sea Fisheries of the High Seas: The Management Impasse', 19 *International Journal of Marine and Coastal Law* (2004), pp. 259-287.
- Kindt, John Warren and Charles J. Wintheiser, 'The Conservation and Protection of Marine Mammals', 7 *University of Hawaii Law Review* (1985), pp. 301-375.
- Kiss, Alexandre, 'The Rights and Interests of Future Generations and the Precautionary Principle', in David Freestone and Ellen Hey (eds.), *The Precautionary Principle and International Law: The Challenge of Implementation* (The Hague: Kluwer Law International, 1996), pp. 19-29.
- Koers, Albert W., *International Regulation of Marine Fisheries: A Study of Regional Fisheries Organizations* (West Byfleet, Surrey: Fishing News Books Ltd., 1973).
- Kwiatkowska, Barbara, 'The High Seas Fisheries Regime: At a Point of No Return?' 8 *International Journal of Marine and Coastal Law* (1993), pp. 327-358.
- Kwiatkowska, Barbara, 'The 2006 Barbados/Trinidad and Tobago Award: A Landmark in Compulsory Jurisdiction and Equitable Maritime Boundary Delimitation', 22 *International Journal of Marine and Coastal Law* (2007), pp. 7-60.
- Lack, M., K. Short and A. Willock, *Managing Risk and Uncertainty in Deep-sea Fisheries: Lessons from Orange Roughy* (TRAFFIC Oceana and WWF Australia, 2003).
- Lagoni, Rainer, 'Offshore Bunkering in the Exclusive Economic Zone', in Tafsir Malick Ndiaye and Rüdiger Wolfrum (eds.), *Law of the Sea, Environmental Law and Settlement of Disputes: Liber Amicorum Judge Thomas A. Mensah* (Leiden: Martinus Nijhoff Publishers, 2007), pp. 613-627.
- Leonard, L. Larry, *International Regulations of Fisheries* (Washington: Carnegie Endowment for International Peace, 1944).
- Lévy, Jean-Pierre, 'La Première Décennie de l'Autorité Internationale des Fonds Marins', 109 *Revue Générale de Droit International Public* (2005), pp. 101-122.
- Lodge, Michael W., 'Improving International Governance in the Deep Sea', 19 *International Journal of Marine and Coastal Law* (2004), pp. 299-316.
- Maffei, Maria Clara, 'The Protection of Endangered Species of Animals in the Mediterranean Sea', in Edward L. Miles and Tullio Treves (eds.), *The Law of the Sea: New Worlds, New Discoveries* (Honolulu: The Law of the Sea Institute, 1993), pp. 253-298.
- Maguire, J.-J., M. Sissenwine, J. Csirke, R. Grainger and S. Garcia, *The State of World Highly Migratory, Straddling and Other High Seas Fishery Resources and Associated Species*, FAO Fisheries Technical Paper No. 495 (2006).
- Mahmoudi, Said, 'Common Heritage of Mankind, Common Concern of Humanity', in Jean-Pierre Beurrier, Alexandre Kiss and Said Mahmoudi (eds.) *New Technologies and*

BIBLIOGRAPHY

- Law of the Marine Environment* (The Hague: Kluwer Law International, 2000), pp. 215-223.
- Marashi, S.H., The Role of FAO Regional Fishery Bodies in the Conservation and Management of Fisheries, Fisheries Circular No. 916, FIPL/C916.
- McConnell, Moira L., '... Darkening Confusion Mounted Upon Darkening Confusion: The Search for the Elusive Genuine Link', 16 *Journal of Maritime Law and Commerce* (1985), pp. 365-396.
- McDorman, T.L., 'The Role of the Commission on the Limits of the Continental Shelf: A Technical Body in a Political World', 17 *International Journal of Marine and Coastal Law* (2002), pp. 301-324.
- McDougal, Myres Smith and William T. Burke, *The Public Order of the Oceans: A Contemporary International Law of the Sea* (New Haven: Yale University Press, 1962).
- McNair, Arnold Duncan, *The Law of Treaties* (Oxford: Clarendon Press, 1961).
- Meltzer, Evelyne, 'Global Overview of Straddling and Highly Migratory Fish Stocks: The Nonsustainable Nature of High Seas Fisheries', 25 *Ocean Development and International Law* (1994), p. 255-344.
- Meltzer, Evelyne, 'Global Overview of Straddling and Highly Migratory Fish Stocks: Maps and Charts Detailing RFMO Coverage and Implementation', 20 *International Journal of Marine and Coastal Law* (2005), pp. 571-604.
- Meseguer, José Luis, 'Le Régime Juridique de l'Exploitation de Stocks Communs de Poissons au-delà des 200 Milles', XXVIII *Annuaire Français de Droit International* (1982), pp. 885-899.
- Meyers, Herman, *The Nationality of Ships* (The Hague: Martinus Nijhoff Publishers, 1967).
- Miles, Edward L. and William T. Burke, 'Pressures on the United Nations Convention on the Law of the Sea of 1982 Arising From New Fisheries Conflicts: The Problem of Straddling Stocks', 20 *Ocean Development and International Law* (1989), pp. 343-357.
- Miller, D.G.M., 'Management and Governance Conventions and Protocols: SEAFWC, WCPFC and SADC', in R. Shotton (ed.), *Deep Sea 2003: Conference on the Governance and Management of Deep-sea Fisheries: Part 1: Conference Reports. Queenstown, New Zealand, 1-5 December 2003* (Rome: FAO, 2005), pp. 596-637.
- Miller, Denzil G.M., Eugene N. Sabourenkov and David C. Ramm, 'Managing Antarctic Marine Living Resources: The CCAMLR Approach', 19 *International Journal of Marine and Coastal Law* (2004), pp. 317-363.
- Miovski, Lourene, 'Solutions in the Convention on the Law of the Sea to the Problem of Overfishing in the Central Bering Sea: Analysis of the Convention, Highlighting the Provisions Concerning Fisheries and Enclosed and Semi-Enclosed Seas', 26 *San Diego Law Review* (1989), pp. 525-574.
- Molenaar, Erik Jaap, *Coastal State Jurisdiction over Vessel-Source Pollution* (The Hague: Kluwer Law International, 1998).
- Molenaar, Erik Jaap, 'The Concept of Real Interest and Other Aspects of Co-operation through Regional Fisheries Management Mechanisms', 15 *International Journal of Marine and Coastal Law* (2000), pp. 475-531.
- Molenaar, Erik Jaap, 'CCAMLR and Southern Ocean Fisheries', 16 *International Journal of Marine and Coastal Law* (2001), pp. 465-499.
- Molenaar, Erik Jaap, 'The South Tasman Rise Arrangement of 2000 and Other Initiatives on Management and Conservation of Orange Roughy', 16 *International Journal of Marine and Coastal Law* (2001), pp. 77-124.

- Molenaar, Erik Jaap, 'Regional Fisheries Management Organizations: Issues of Participation, Allocation and Unregulated Fishing', in Alex G. Oude Elferink and Donald R. Rothwell (eds.), *Oceans Management in the 21st Century: Institutional Frameworks and Responses* (Leiden: Martinus Nijhoff Publishers, 2004), pp. 69-86.
- Molenaar, Erik Jaap, 'Unregulated Deep-Sea Fisheries: A Need for a Multi-Level Approach', 19 *International Journal of Marine and Coastal Law* (2004), pp. 223-246.
- Molenaar, Erik Jaap, 'Addressing Regulatory Gaps in High Seas Fisheries', 20 *International Journal of Marine and Coastal Law* (2005), pp. 533-570.
- Molenaar, Erik Jaap, 'Marine Biodiversity in Areas Beyond National Jurisdiction', 22 *International Journal of Marine and Coastal Law* (2007), pp. 89-124.
- Molenaar, Erik J., 'Current Legal and Institutional Issues Relating to the Conservation and Management of High Seas Deep-Sea Fisheries', in *Report and Documentation of the Expert Consultation on Deep-sea Fisheries in the High Seas, Bangkok, Thailand, 21-23 November 2006, FAO Fisheries Report, No. 838* (Rome: FAO, 2007), pp. 113-139.
- Mooney-Seus, Marjorie L. and Andrew A. Rosenberg, Regional Fisheries Management Organizations (RFMOs): Progress in Adopting Precautionary Approach and Ecosystem-Based Management, 10 February 2007.
- Moore, Gerald, 'The Food and Agriculture Organisation Compliance Agreement', 10 *International Journal of Marine and Coastal Law* (1995), pp. 412-425.
- Morgera, Elisa, 'Competence or Confidence? The Appropriate Forum to Address Multi-Purpose High Seas Protected Areas', 16 *Review of European Community & International Environmental Law* (2007), pp. 1-11.
- Morishita, Joji, 'What is the ecosystem approach for fisheries management', 32 *Marine Policy* (2008), pp. 19-26.
- Mossop, Joanna, 'Protecting Marine Biodiversity on the Continental Shelf Beyond 200 Nautical Miles', 38 *Ocean Development and International Law* (2007), pp. 283-304.
- Mouton, M. W., *The Continental Shelf* (The Hague: Nijhoff, 1952).
- Munro, G., A. Van Houtte and R. Willmann, The Conservation and Management of Shared Fish Stocks: Legal and Economic Aspects, FAO Fisheries Technical Paper No. 465 (2004).
- Murombo, Tumai, 'The Role of International Environmental Diplomacy in the Sustainable Use of Marine Biodiversity in Areas Beyond National Jurisdiction: Ending Deep Sea Trawling', 40 *Comparative and International Law Journal of Southern Africa* (2007), pp. 172-192.
- Nandan, Satya N., Michael W. Lodge and Shabtai Rosenne (eds.), *United Nations Convention on the Law of the Sea 1982: A Commentary*, vol. VI (The Hague: Martinus Nijhoff Publishers, 2002).
- Nandan, Satya N. and Shabtai Rosenne (eds.), *United Nations Convention on the Law of the Sea 1982: A Commentary*, vol. II (Dordrecht: Martinus Nijhoff Publishers, 1993).
- Nandan, Satya N. and Shabtai Rosenne (eds.), *United Nations Convention on the Law of the Sea 1982: A Commentary*, vol. III (The Hague: Martinus Nijhoff Publishers, 1995).
- Nelson, Dolliver, 'The Development of the Legal Regime of High Seas Fisheries', in Alan Boyle and David Freestone (eds.), *International Law and Sustainable Development: Past Achievements and Future Challenges* (New York: Oxford University Press, 1999), pp. 113-134.

BIBLIOGRAPHY

- Nelson, L.D.M., 'Declarations, Statements and 'Disguised Reservations' with Respect to the Convention on the Law of the Sea', 50 *International and Comparative Law Quarterly* (2001), pp. 767-786.
- O'Connell, D.P., 'Sedentary Fisheries and the Australian Continental Shelf', 49 *American Journal of International Law* (1955), pp. 185-209.
- O'Connell, D.P., *The International Law of the Sea*, vol. I (Oxford Clarendon Press, 1982).
- Oda, Shigeru, *International Control of Sea Resources* (Leyden: Sijthoff, 1963).
- Oda, Shigeru, 'Sharing of Ocean Resources: Unresolved Issues in the Law of the Sea', 3 *New York Law School Journal of International and Comparative Law* (1981), pp. 1-14.
- Oda, Shigeru, 'Fisheries under the United Nations Convention on the Law of the Sea', 77 *American Journal of International Law* (1983), pp. 739-755.
- Oda, Shigeru, 'Proposals Regarding a 12-mile Limit for the Territorial Sea by the United States in 1970 and Japan in 1971: Implications and Consequences', 22 *Ocean Development and International Law* (1991), pp. 189-197.
- Oral, Nilufer, 'Protection of Vulnerable Marine Ecosystems in Areas Beyond National Jurisdiction: Can International Law Meet the Challenge?' in Anastasia Strati, Maria Gavouneli and Nikos Skourtos (eds.), *Unresolved Issues and New Challenges to the Law of the Sea: Time Before and Time After* (Leiden: Martinus Nijhoff Publishers, 2006), pp. 85-108.
- Örebech, Peter, Ketill Sigurjonsson and Ted L. McDorman, 'The 1995 United Nations Straddling and Highly Migratory Fish Stocks Agreement: Management, Enforcement and Dispute Settlement', 13 *International Journal of Marine and Coastal Law* (1998), pp. 119-142.
- Orellana, Marcos A., 'The Swordfish Dispute between the EU and Chile at the ITLOS and the WTO', 71 *Nordic Journal of International Law* (2002), pp. 55-81.
- Orrego Vicuña, Francisco, *The Exclusive Economic Zone: Regime and Legal Nature under International Law* (Cambridge: Cambridge University Press, 1989).
- Orrego Vicuña, Francisco, 'The 'Presential Sea': Defining Coastal States' Special Interests in High Seas Fisheries and Other Activities', 35 *German Yearbook of International Law* (1992), pp. 264-292.
- Orrego Vicuña, Francisco, 'Toward an Effective Management of High Seas Fisheries and the Settlement of the Pending Issues of the Law of the Sea', 24 *Ocean Development and International Law* (1993), pp. 81-92.
- Orrego Vicuña, Francisco, *The Changing International Law of High Seas Fisheries* (Cambridge: Cambridge University Press, 1999).
- Orrego Vicuña, Francisco, 'The Law Governing High Seas Fisheries: In Search of New Principles', 18 *Ocean Yearbook* (2004), pp. 383-394.
- Orrego Vicuña, Francisco 'The Law of the Sea and the Antarctic Treaty System: New Approaches to Offshore Jurisdiction', in Christopher C. Joyner and Sudhir K. Chopra (eds.), *The Antarctic Legal Regime* (Dordrecht: Martinus Nijhoff Publishers, 1988), pp. 97-127.
- Oude Elferink, Alex G., 'Fisheries in the Sea of Okhotsk High Seas Enclave: The Russian Federation's Attempts at Coastal State Control', 10 *International Journal of Marine and Coastal Law* (1995), pp. 1-18.
- Oude Elferink, Alex G., 'The Outer Continental Shelf in the Arctic: The Application of Article 76 of the LOSC Convention in a Regional Context', in Alex G. Oude Elferink

- and Donald R. Rothwell (eds.), *The Law of the Sea and Polar Maritime Delimitation and Jurisdiction* (The Hague: Martinus Nijhoff Publishers, 2001), pp. 139-156.
- Oude Elferink, Alex G., 'The Sea of Okhotsk Peanut Hole: De facto Extension of Coastal State Control', in Olav Schram Stokke (ed.), *Governing High Seas Fisheries: The Interplay of Global and Regional Regimes* (New York: Oxford University Press, 2001), pp. 179-205.
- Oude Elferink, Alex G., 'The Genuine Link Concept: Time for a Post Mortem?' in Ige Dekker and Harry Post (eds.), *On the Foundations and Sources of International Law* (The Hague: T.M.C. Asser Press, 2003), pp. 41-63.
- Oude Elferink, Alex G., 'Reviewing the Implementation of the LOS Convention: The Role of the United Nations General Assembly and the Meeting of States Parties', in Alex G. Oude Elferink and Donald R. Rothwell (eds.), *Oceans Management in the 21st Century: Institutional Frameworks and Responses* (Leiden: Martinus Nijhoff Publishers, 2004), pp. 295-312.
- Oude Elferink, Alex G., 'The Regime of the Area: Delineating the Scope of Application of the Common Heritage Principle and Freedom of the High Seas', 22 *International Journal of Marine and Coastal Law* (2007), pp. 143-176.
- Owen, Daniel, 'The Application of the Wild Birds Directive Beyond the Territorial Sea', 13 *Journal of Environmental Law* (2001), pp. 39-78.
- Owen, Daniel, *The Powers of the OSPAR Commission and Coastal State Parties to the OSPAR Convention to Manage Marine Protected Areas on the Seabed Beyond 200 nm From the Baseline: A Report for WWF Germany* (Frankfurt: WWF Germany, 2006).
- Oxman, Bernard H., 'The Third United Nations Conference on the Law of the Sea: The Seventh Session (1978)', 73 *American Journal of International Law* (1979), pp. 1-41.
- Oxman, Bernard H., 'The Territorial Temptation: A Siren Song at Sea', 100 *American Journal of International Law* (2006), pp. 830-851.
- Prows, Peter, 'Tough Love: The Dramatic Birth and Looming Demise of UNCLOS Property Law (and What is to be Done about it)', 42 *Texas International Law Journal* (2007), pp. 241-309.
- Rau, 'Comment: The Swordfish Case: Law of the Sea v. Trade', 62 *Zeitschrift für ausländisches öffentliches Recht und Völkerrecht* (2002), pp. 37-42.
- Rayfuse, Rosemary Gail, *Non-Flag State Enforcement in High Seas Fisheries* (Leiden: Martinus Nijhoff Publishers, 2004).
- Rayfuse, Rosemary, 'Countermeasures and High Seas Fisheries Enforcement', 11 *Netherlands International Law Review* (2004), pp. 41-76.
- Rayfuse, Rosemary, 'Melting Moments: The Future of Polar Oceans Governance in a Warming World', 16 *Review of European Community & International Environmental Law* (2007), pp. 196-216.
- Rayfuse, Rosemary, 'Protecting Marine Biodiversity in Polar Areas Beyond National Jurisdiction', 17 *Review of European Community & International Environmental Law* (2008), pp. 3-13.
- Rosenne, Shabtai, *The Law and Practice of the International Court, 1920-2005* (Leiden: Martinus Nijhoff Publishers, Fourth edition, 2006).
- Rosenne, Shabtai and Louis B. Sohn (eds.), *United Nations Convention on the Law of the Sea 1982: A Commentary*, vol. V (Dordrecht: Martinus Nijhoff Publishers, 1989).
- Rosenne, Shabtai and Alexander Yankov (eds.), *United Nations Convention on the Law of the Sea 1982: A Commentary*, vol. IV (Dordrecht: Martinus Nijhoff Publishers, 1991).

BIBLIOGRAPHY

- Rothwell, Donald R. and Stuart Kaye, 'Law of the Sea and the Polar Regions: Reconsidering the Traditional Norms', 18 *Marine Policy* (1994), pp. 41-58.
- Sand, Peter H., "'Green" Enclosure of Ocean Space – Déjà Vu?' 54 *Marine Pollution Bulletin* (2007), pp. 374-376.
- Sands, Philippe, *Principles of International Environmental Law* (Cambridge: Cambridge University Press, 2nd edition, 2003).
- Schiffman, Howard, *Marine Conservation Agreements: The Law and Policy of Reservations and Vetoes* (Leiden: Martinus Nijhoff Publishers, 2008).
- Schram, Gunnar J. and André Tahindro, 'Developments in Principles for the Adoption of Fisheries Conservation and Management Measures', in Ellen Hey (ed.), *Developments in International Fisheries Law* (The Hague: Kluwer Law International, 1999), pp. 251-286.
- Scott, Shirley, 'The LOS Convention as a Constitutional Regime for the Oceans', in Alex G. Oude Elferink (ed.), *Stability and Change in the Law of the Sea: The Role of the LOS Convention* (Leiden: Martinus Nijhoff Publishers, 2005), pp. 9-38.
- Scovazzi, Tullio, 'The Evolution of International Law of the Sea: New Issues, New Challenges', 286 *Recueil des Cours* (2000), pp. 39-243.
- Scovazzi, Tullio, 'Marine Protected Areas on the High Seas: Some Legal and Policy Considerations', 19 *International Journal of Marine and Coastal Law* (2004), pp. 1-17.
- Scovazzi, Tullio, 'Mining, Protection of the Environment, Scientific Research and Bioprospecting: Some Considerations on the Role of the International Sea-Bed Authority', 19 *International Journal of Marine and Coastal Law* (2004), pp. 383-409.
- Scovazzi, Tullio, 'New International Instruments for Marine Protected Areas in the Mediterranean Sea', in Anastasia Strati, Maria Gavouneli and Nikos Skourtos (eds.), *Unresolved Issues and New Challenges to the Law of the Sea: Time Before and Time After* (Leiden: Martinus Nijhoff Publishers, 2006), pp. 109-120.
- Secretariat of the Convention on Biological Diversity, *Handbook of the Convention on Biological Diversity Including its Cartagena Protocol on Biosafety* (Montreal, Canada, 3rd edition, 2005).
- Serdy, A., 'Schrödinger's TAC: Superposition of Alternative Catch Limits from 2003 to 2006 under the South Tasman Rise Orange Roughy Arrangement between Australia and New Zealand', in R. Shotton (ed.), *Deep Sea 2003: Conference on the Governance and Management of Deep-sea Fisheries: Part 1: Conference Reports. Queenstown, New Zealand, 1-5 December 2003* (Rome: FAO, 2005), pp. 494-510.
- Sohn, Louis B., 'The Stockholm Declaration on the Human Environment', 14 *Harvard International Law Journal* (1973), pp. 423-515.
- Soons, Alfred H. A., 'Comments on the Genuine Link Concept', in Ige Dekker and Harry Post (eds.), *On the Foundations and Sources of International Law* (The Hague: T.M.C. Asser Press, 2003), pp. 65-71.
- Soons, Alfred H.A., *Marine Scientific Research and the Law of the Sea* (Deventer: Kluwer Law and Taxation Publishers, 1982).
- Soons, Alfred H.A., 'Regulation of Marine Scientific Research by the European Community and its Member States', 23 *Ocean Development and International Law* (1992), pp. 259-277.
- Standing Senate Committee on Fisheries and Oceans of the Senate of Canada, *The Management of Atlantic Fish Stocks: Beyond the 200-Mile Limit*, February 2007.

- Staples, Dereck, 'Management of Shared Fish Stocks: Australian Case Studies', Papers Presented at the Norway-FAO Expert Consultation on the Management of Shared Fish Stocks - Bergen, Norway, 7-10 October 2002, reproduced in FAO Fisheries Report No. 695 Supplement, pp. 159-179.
- Stokke, Olav Schram, 'The Loophole of the Barents Sea Fisheries Regime', in Olav Schram Stokke (ed.), *Governing High Seas Fisheries: The Interplay of Global and Regional Regimes* (New York: Oxford University Press, 2001), pp. 273-301.
- Stokke, Olav Schram, 'A Legal Regime for the Arctic?: Interplay with the Law of the Sea Convention', 31 *Marine Policy* (2007), pp. 402-408.
- Stoll, Peter-Tobias and Silja Vöneky, 'The Swordfish Case: Law of the Sea v. Trade', 62 *Zeitschrift für ausländisches öffentliches Recht und Völkerrecht* (2002), pp. 21-35.
- Stone, Gregory S., Laurence P. Madin, Karen Stocks, Glenn Hovermale, Porter Hoagland, Mary Schumacher, Peter Etnoyer, Carolyn Sotka and Heather Tausig, 'Seamount Biodiversity, Exploitation and Conservation', in Linda K. Glover and Sylvia A. Earle (eds.), *Defying Ocean's end: An Agenda for Action* (Washington: Island Press, 2004), pp. 43-70.
- Sydnes, Are K., 'New Regional Fisheries Management Regimes: Establishing the South East Atlantic Fisheries Organisation', 25 *Marine Policy* (2001), pp. 353-364.
- Tache, Simon W., 'The Nationality of Ships: The Definitional Controversy and Enforcement of Genuine Link', 16 *International Lawyer* (1982), pp. 301-312.
- Tahindro, André, 'Conservation and Management of Transboundary Fish Stocks: Comments in Light of the Adoption of the 1995 Agreement for the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks', 28 *Ocean Development and International Law* (1997), pp. 1-58.
- Tanaka, Yoshifumi, 'Obligation to Co-operate in Marine Scientific Research and the Conservation of Marine Living Resources', 65 *Zeitschrift für ausländisches öffentliches Recht und Völkerrecht* (2005), pp. 937-965.
- Treves, Tullio, 'The General Assembly and the Meeting of States Parties in the Implementation of the LOS Convention', in Alex G. Oude Elferink (ed.), *Stability and Change in the Law of the Sea: The Role of the LOS Convention* (Leiden: Martinus Nijhoff Publishers, 2005), pp. 55-74.
- Treves, Tullio, 'Some International Law Aspects of the Use of Vessel Monitoring Systems for Preventing Illegal Unreported Unregulated Fishing', in Tafsir Malick Ndiaye and Rüdiger Wolfrum (eds.), *Law of the Sea, Environmental Law and Settlement of Disputes: Liber Amicorum Judge Thomas A. Mensah* (Leiden: Martinus Nijhoff Publishers, 2007), pp. 811-820.
- Trouwborst, Arie, *Evolution and Status of the Precautionary Principle in International Law* (The Hague: Kluwer Law International, 2002).
- Trouwborst, Arie, *Precautionary Rights and Duties of States* (Leiden: Martinus Nijhoff Publishers, 2006).
- Trouwborst, Arie, 'The Precautionary Principle in General International Law: Combating the Babylonian Confusion', 16 *Review of European Community & International Environmental Law* (2007), pp. 185-195.
- Tudela, Sergi, 'Ecosystem Effects of Fishing in the Mediterranean: An Analysis of the Major Threats of Fishing Gear and Practices to Biodiversity and Marine Habitats', GFCM Studies and Reviews No. 74 (2004).

BIBLIOGRAPHY

- Tudela, Sergi, Proposal for a representative network of protected deep-sea sensitive habitats in the Mediterranean (2005).
- UN Millennium Project, Environment and Human Well-being: A Practical Strategy, Report of the Task Force on Environmental Sustainability (2005).
- Van Dyke, Jon M., 'The United States and Japan in Relation to the Resources, the Environment, and the People of the Pacific Island Region', 16 *Ecology Law Quarterly* (1989), pp. 217-226.
- Van Dyke, Jon M., 'Modifying the 1982 Law of the Sea Convention: New Initiatives on Governance of High Seas Fisheries Resources: The Straddling Stocks Negotiations', 10 *International Journal of Marine and Coastal Law* (1995), pp. 219-227.
- VanderZwaag, David, Rob Huebert and Stacey Ferrara, 'The Arctic Environmental Protection Strategy, Arctic Council and Multilateral Environmental Initiatives: Tinkering while the Arctic Marine Environment Totters', in Alex G. Oude Elferink and Donald R. Rothwell (eds.), *The Law of the Sea and Polar Maritime Delimitation and Jurisdiction* (The Hague: Martinus Nijhoff Publishers, 2001), pp. 225-248.
- Verzijl, J. H. W., 'The United Nations Conference on the Law of the Sea, Geneva, 1958 II', 6 *Nederlands Tijdschrift voor Internationaal Recht* (1959), pp. 115-139.
- Watanabe, Hiromoto and Seiichiro Ono, 'Analytical Review of the Elaboration Process of FAO Code of Conduct for Responsible Fisheries [in Japanese]', 35 *The Report of Tokyo University of Fisheries* (2000), pp. 153-176.
- Westberg, Ann-Kristin, 'Governance and Management of Living Marine Resources and Fisheries on the Continental Slope and in the Deep-sea: A Legal Framework and Some Points of Departure', in R. Shotton (ed.), *Deep Sea 2003: Conference on the Governance and Management of Deep-sea Fisheries: Part 1: Conference Reports. Queenstown, New Zealand, 1-5 December 2003* (Rome: FAO, 2005), pp. 711-718.
- Willing, Jane, 'Arrangement between the Government of Australia and the Government of New Zealand for the Conservation and Management of Orange Roughy on the South Tasman Rise', Papers Presented at the Norway-FAO Expert Consultation on the Management of Shared Fish Stocks - Bergen, Norway, 7-10 October 2002, reproduced in FAO Fisheries Report No. 695 Supplement, pp. 200-205.
- Wolfrum, Rüdiger and Nele Matz, 'The Interplay of the United Nations Convention on the Law of the Sea and the Convention on Biological Diversity', 4 *Max Planck Yearbook of United Nations Law* (2000), pp. 445-480.
- Worm, B., E. B. Barbier, N. Beaumont, J. E. Duffy, C. Folke, B. S. Halpern, J. B. Jackson, H. K. Lotze, F. Micheli, S. R. Palumbi, E. Sala, K. A. Selkoe, J. J. Stachowicz and R. Watson, 'Impacts of Biodiversity Loss on Ocean Ecosystem Services', 314 *Science* (2006), pp. 787-790.
- Yonezawa, Kunio, 'Some Thoughts on the Straddling Stock Problem in the Pacific Ocean', in Tadao Kuribayashi and Edward L. Miles (eds.), *The Law of the Sea in the 1990s: A Framework for Further International Cooperation* (Honolulu: The Law of the Sea Institute, 1992), pp. 127-135.
- Young, Tomme Rosanne, The Legal Framework for MPAs and Successes and Failures in Their Incorporation into National Legislation, in Report and documentation of the Workshop on Marine Protected Areas and Fisheries Management: Review of Issues and Considerations, Rome, 12-14 June 2006, FAO Fisheries Report No. 825 (2007), pp. 221-300.

Table of International Instruments

- Convention Between Belgium, Denmark, France, Germany, Great Britain and the Netherlands, for Regulating the Police of the North Sea Fisheries, The Hague, 6 May 1882, *BFSP*, vol. 73, p. 39.
- Convention between Great Britain, the United States, Japan, and Russia, respecting Measures for the Preservation and Protection of the Fur Seals in the North Pacific Ocean, Washington, 7 July 1911, *BFSP*, vol. 104, p. 175.
- Convention for the Regulation of Whaling, Geneva, 24 September 1931, *LNTS*, vol. 155, p. 349.
- International Agreement for the Regulation of Whaling, London, 8 June 1937, *LNTS*, vol. 190, p. 79.
- Convention for the Regulation of the Meshes of Fishing Nets and the Size Limits of Fish, London, 5 April 1946, entered into force on 5 April 1953, *UNTS*, vol. 231, p. 199.
- International Convention for the Regulation of Whaling, Washington, 2 December 1946, *UNTS*, vol. 161, p. 72.
- Agreement for the Establishment of the General Fisheries Commission for the Mediterranean, Rome, 24 September 1949, amended lastly in November 1997, *UNTS*, vol. 126, p. 238.
- International Convention for the Northwest Atlantic Fisheries, Washington, 8 February 1949, *UNTS*, vol. 157, p. 157.
- Interim Convention on Conservation of North Pacific Fur Seals, Washington, 9 February 1957, *UNTS*, vol. 314, p. 105.
- Convention on Fishing and Conservation of the Living Resources of the High Seas, Geneva, 29 April 1958, *UNTS*, vol. 559, p. 285.
- Convention on the Continental Shelf, Geneva, 29 April 1958, *UNTS*, vol. 499, p. 311.
- Convention on the High Seas, Geneva, 29 April 1958, *UNTS*, vol. 450, p. 82.
- Convention on the Territorial Sea and Contiguous Zone, Geneva, 29 April 1958, *UNTS*, vol. 516, p. 205.
- Antarctic Treaty, Washington, 1 December 1959, entered into force 23 June 1961, *UNTS*, vol. 402, p. 71.
- Fisheries Convention, London, 9 March 1964, *UNTS*, vol. 581, p. 57.
- Convention on the Conservation of the Living Resources of the Southeast Atlantic, Rome, 3 October 1969, entered into force 24 October 1971, *UNTS*, vol. 801, p. 101.
- Vienna Convention on the Law of Treaties, Vienna, 23 May 1969, entered into force on 27 January 1980, *UNTS*, vol. 1155, p. 331.
- Agreement concerning shrimp between Brazil and the United States, Brasilia, 9 May 1972, *UNTS*, vol. 894, p. 34.
- Agreement on the Conservation of Polar Bears, Oslo, 15 November 1973, *ILM*, vol. 13 (1974), p. 13.
- Convention on Future Multilateral Cooperation in the Northwest Atlantic Fisheries, Ottawa, 24 October 1978, *UNTS*, vol. 1135, p. 371.
- Convention on Future Multilateral Co-operation in North-East Atlantic Fisheries, London, 18 November 1980, *UNTS*, vol. 1285, p. 129.
- Convention on the Conservation of Antarctic Marine Living Resources, Canberra, 20 May 1980, *UNTS*, vol. 1329, p. 47.

- United Nations Convention on the Law of the Sea, Montego Bay, 10 December 1982, *UNTS*, vol. 1833, p. 3.
- Convention for the Protection of the Natural Resources and Environment of the South Pacific Region, Noumea, 24 November 1986, *ILM*, vol. 26 (1987), p. 38.
- United Nations Convention on Conditions for Registration of Ships, Geneva, 7 February 1986, *ILM*, vol. 26 (1987), p. 1229.
- Joint Statement on the Conservation of Fisheries between the Government of the Argentine Republic and the Government of the United Kingdom of Great Britain and Northern Ireland, London and Buenos Aires, 28 November 1990, *International Journal of Estuarine and Coastal Law*, vol. 6, p. 146.
- Arctic Environmental Protection Strategy, 14 June 1991, *ILM*, vol. 30 (1991), p. 1627.
- Protocol on Environmental Protection to the Antarctic Treaty, Madrid, 4 October 1991, *ILM*, vol. 30 (1991), p. 1455.
- Agenda 21, Rio de Janeiro, 13 August 1992
- Convention for the Protection of the Marine Environment of the North-East Atlantic, Paris, 22 September 1992, *ILM*, vol. 32 (1993), p. 1069.
- Convention on Biological Diversity, Rio de Janeiro, 5 June 1992, *UNTS*, vol. 1760, p. 142.
- Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, Rome, approved by FAO Conference on 24 November 1993, *UNTS*, vol. 2221, p. 120.
- Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea, Washington, 16 June 1994, *ILM*, Vol. 34, p. 67.
- Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, New York, 4 August 1995, *UNTS*, vol. 2167, p. 3.
- Code of Conduct for Responsible Fisheries adopted by the FAO Conference on 31 October 1995, available at <<http://www.fao.org/DOCREP/005/v9878e/v9878e00.htm>>.
- Kyoto Declaration, adopted at the International Conference on the Sustainable Contribution of Fisheries to Food Security, Kyoto, Japan, 4-9 December 1995, available at <<http://www.fao.org/DOCREP/006/AC442E/AC442E00.HTM>>.
- Agreement on the Conservation of Straddling Fish Stocks in the Central Part of the Sea of Okhotsk, Moscow, 13 June 1996, available at <<http://iea.uoregon.edu/texts/1996-ConservationPollockResourcesSeaOkhotsk.EN.htm>>.
- Declaration on the Establishment of the Arctic Council, 19 September 1996, *ILM*, vol. 35, p. 1387.
- Annex V on the Protection and Conservation of the Ecosystems and Biological Diversity of the Maritime Area to the Convention for the Protection of the Marine Environment of the North-East Atlantic, Sintra, 22-23 July 1998, available at <http://www.fco.gov.uk/resources/en/pdf/pdf14/fco_ts34-01protectionmarine>.
- Arrangement between the Government of Australia and the Government of New Zealand for the Conservation and Management of Orange Roughy on the South Tasman Rise, Signed on 12 January 1998 and 18 February 1998, respectively, reproduced in D. Staples, 'Management of Shared Fish Stocks: Australian Case Studies', Papers Presented at the Norway-FAO Expert Consultation on the Management of Shared Fish Stocks - Bergen, Norway, 7-10 October 2002.

TABLE OF INTERNATIONAL INSTRUMENTS

- Agreement between the Government of Iceland, the Government of Norway and the Government of the Russian Federation concerning Certain Aspects of Cooperation in the Area of Fisheries, St. Petersburg, 15 May 1999, *LOS*, vol. 41, p. 53.
- Protocol between the Government of Iceland and the Government of the Russian Federation under the Agreement between the Government of Iceland, the Government of Norway and the Government of the Russian Federation concerning Certain Aspects of Cooperation in the Area of Fisheries, St. Petersburg, 15 May 1999, available at <<http://faolex.fao.org/docs/texts/mul44149.doc>>.
- Protocol between the Government of Norway and the Government of Iceland under the Agreement between the Government of Norway, the Government of Iceland and the Government of the Russian Federation concerning Certain Aspects of Cooperation in the Area of Fisheries, St. Petersburg, 15 May 1999, *LOS*, vol. 41, p. 56.
- Arrangement between the Government of Australia and the Government of New Zealand for the Conservation and Management of Orange Roughy on the South Tasman Rise, Signed for New Zealand on 17 February 2000 and for Australia on 25 February 2000, reproduced in D. Staples, 'Management of Shared Fish Stocks: Australian Case Studies', Papers Presented at the Norway-FAO Expert Consultation on the Management of Shared Fish Stocks - Bergen, Norway, 7-10 October 2002.
- Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean, Honolulu, 5 September 2000, available at <<http://www.wcpfc.int/pdf/text.pdf>>.
- Framework Agreement for the Conservation of Living Marine Resources on the High Seas of the South Pacific, Santiago, Chile, 14 August 2000, not yet in force, available at <<http://www.cpps-int.org/spanish/tratadosyconvenios/tratadosregionales/acuerdo degalapagos.htm>>.
- Convention on the Conservation and Management of Fishery Resources in the South East Atlantic Ocean, Windhoek, 20 April 2001, available at <<http://www.seafo.org/Basic%20Documents/convention%20text.htm>>.
- International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, approved by the FAO Committee on Fisheries on 2 March 2001, available at <<http://www.fao.org/DOCREP/003/y1224e/y1224e00.HTM>>.
- Reykjavik Declaration on Responsible Fisheries in the Marine Ecosystem, 4 October 2001, available at <ftp://ftp.fao.org/fi/DOCUMENT/reykjavik/y2198t00_dec.pdf>.
- South African Development Community Protocol on Fisheries, Maputo, 14 August 2001, available at <<http://www.intfish.net/treaties/sadc.htm>>.
- Agreement establishing the Caribbean Regional Fisheries Mechanism, Belize City, Belize, 4 February 2002, available at <http://www.caricom-fisheries.com/website_content/main/agreement_establishing_the_crfm.pdf>.
- Johannesburg Plan of Implementation, Johannesburg, 4 September 2002, available at <http://www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/WSSD_PlanI mpl.pdf>.
- Modification Protocol for the Framework Agreement for the Conservation of the Marine Living Resources in the High Seas of the South-East Pacific, Lima, Peru, 27 November 2003, available at <<http://www.cpps-int.org/spanish/tratadosyconvenios/tratadosregionales/protocolomodificadorio.htm>>.

- Ministerial Declaration at the Conference on the Governance of High Seas Fisheries and the UN Fish Agreement: Moving from Words to Action, 2 May 2005, available at <http://www.dfo-mpo.gc.ca/fgc-cgp/declaration_e.htm>.
- Convention on Future Multilateral Co-operation in North-East Atlantic Fisheries, London, 18 November 1980, revised in 2006, available at <http://www.neafc.org/about/docs/london-declaration_and_new_convention.pdf>.
- Declaration of the Latin American and Caribbean countries ahead of the Review Conference on the 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, 9 March 2006, Note verbale dated 22 May 2006 from the Permanent Missions of Argentina, Chile, Colombia, Cuba, Ecuador, El Salvador, Guatemala, Mexico and Peru to the United Nations addressed to the Secretariat, A/CONF.210/2006/12, Annex.
- Outcome of the Review Conference, 26 May 2006, Report of the Review Conference on the 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, A/CONF.210/2006/15, Annex.
- Revised Statutes of the Western Central Atlantic Fishery Commission, Rome, 20-25 November 2006, Adopted at the Hundred and Thirty-first Session of the Council of the FAO, available at <<http://www.fao.org/docrep/meeting/011/j8533e.htm>>.
- Southern Indian Ocean Fisheries Agreement, Rome, 7 July 2006, available at <<http://www.fao.org/Legal/Treaties/035t-e.htm>>.
- Declaration on Deep-sea Bottom Trawling to Protect Biodiversity in the High Seas, 24-25 October 2006, available at <http://www.forumsec.org.fj/_resources/article/files/2006%20Communique.pdf>.
- Establishment of New Mechanisms for Protection of Vulnerable Marine Ecosystems and Sustainable Management of High Seas Bottom Fisheries in the North Western Pacific Ocean, Busan, Republic of Korea, 31 January-2 February 2007, available at <http://www.fpir.noaa.gov/Library/IFD/NWPBT_InterimMeasure-1-1.pdf>.
- Interim Measures adopted by Participants in Negotiations to Establish South Pacific Regional Fisheries Management Organisation, 30 April-4 May 2007, available at <http://www.southpacificfmo.org/assets/Third%20International%20Meeting/SPRFMO%20Interim%20Measures_Final.doc>.
- Convention on Cooperation in the Northwest Atlantic Fisheries, Lisbon, 28 September 2007, available at <<http://www.nafo.int/publications/meetproc/2008/gc/gcsep07/annex17.html>>.
- Vava'u Declaration on Pacific Fisheries Resources, 16-17 October 2007, available at <http://pidp.eastwestcenter.org/pireport/special/2007_PIF_Comunique.pdf>.
- Third Arrangement Implementing the Nauru Agreement Setting Forth Additional Terms and Conditions of Access to the Fisheries Zones of the Parties, Koror, Palau, 16 May 2008, on file with the author.

Table of Cases

Permanent Court of International Justice

The Case of the S.S. 'Lotus', Judgment of 7 September 1927, *PCIJ, Recueil des Arrêts, Série A, No.10*, p. 3.

Interpretation of the Convention of 1919 concerning Employment of Women during the Night, Advisory Opinion of 15 November 1932, *PCIJ, Série A/B No. 50*, p. 365.

International Court of Justice

North Sea Continental Shelf (Federal Republic of Germany/Denmark; Federal Republic of Germany/Netherlands), Judgment of 20 February 1969, *I.C.J. Reports 1969*, p. 3.

Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) Notwithstanding Security Council Resolution 276 (1970), Advisory Opinion of 21 June 1971, *I.C.J. Reports 1971*, p. 16.

Fisheries Jurisdiction Case (Federal Republic of Germany v. Iceland), Judgment (Merits) of 25 July 1974, *I.C.J. Reports 1974*, p. 175.

Fisheries Jurisdiction Case (United Kingdom of Great Britain and Northern Ireland v. Iceland), Judgment (Merits) of 25 July 1974, *I.C.J. Reports 1974*, p. 3.

Nuclear Tests Case (Australia v. France), Judgment of 20 December 1974, *I.C.J. Reports 1974*, p. 253.

Nuclear Tests Case (New Zealand v. France), Judgment of 20 December 1974, *I.C.J. Reports 1974*, p. 457.

Military and Paramilitary Activities in and against Nicaragua (Nicaragua v. United States of America), Judgment (Jurisdiction of the Court and Admissibility of the Application) of 26 November 1984, *I.C.J. Reports 1984*, p. 392.

Case concerning the Continental Shelf (Libyan Arab Jamahiriya/Malta), Judgment of 3 June 1985, *I.C.J. Reports 1985*, p. 13.

Case concerning the Frontier Dispute (Burkina Faso/Republic of Mali), Judgment of 22 December 1986, *I.C.J. Reports 1986*, p. 554.

Case concerning the Gabcikovo-Nagymaros Project (Hungary/Slovakia), Judgment of 25 September 1997, *I.C.J. Reports 1997*, p. 7.

Fisheries Jurisdiction Case (Spain v. Canada), Judgment (Jurisdiction) of 4 December 1998, *I.C.J. Reports 1998*, p. 432.

Case concerning the Land and Maritime Boundary between Cameroon and Nigeria (Cameroon v. Nigeria: Equatorial Guinea Intervening), Judgment of 10 October 2002, *I.C.J. Reports 2002*, p. 303.

Sovereignty over Pedra Branca/Pulau Batu Puteh, Middle Rocks and South Ledge (Malaysia/Singapore), Judgment of 23 May 2008, available at <<http://www.icj-cij.org/docket/files/130/14492.pdf>>.

International Tribunal for the Law of the Sea

(All the judgments and orders listed below are available on the website of the International Tribunal for the Law of the Sea at <<http://www.itlos.org/>>.)

- The M/V 'Saiga' (No. 2) Case (Saint Vincent and the Grenadines v. Guinea)*, Judgment of 1 July 1999.
- Southern Bluefin Tuna Cases (New Zealand v. Japan; Australia v. Japan)* of 27 August 1999, *Order (Request for provisional measures)*.
- Case concerning the Conservation and Sustainable Exploitation of Swordfish Stocks in the South-Eastern Pacific Ocean (Chile/European Community)*, Order 2000/3 of 20 December 2000.
- Case concerning the Conservation and Sustainable Exploitation of Swordfish Stocks in the South-Eastern Pacific Ocean (Chile/European Community)*, Order 2001/1 of 15 March 2001.
- The 'Hoshinmaru' Case (Japan v. Russian Federation)*, Judgment of 6 August 2007.

Arbitration

- Bering Sea Fur-Seals Case*, Award of the Tribunal of Arbitration Constituted under the Treaty Concluded at Washington, the 29th of February 1892, Between the United States of American and Her Majesty the Queen of the United Kingdom of Great Britain and Ireland of 15 August 1893, *International Environmental Law Reports (IELR)*, vol. 1 (Cairo A.R. Robb ed.), p. 67.
- The North Atlantic Coast Fisheries Case between Great Britain and the United States*, Award of the Tribunal of 7 September 1910, *The Hague Court Reports*, vol. I, p. 141.
- Case concerning filleting within the Gulf of St. Lawrence between Canada and France*, Decision of 17 July 1986, *International Law Reports*, vol. 82, p. 590.
- Southern Bluefin Tuna Case*, Award on Jurisdiction and Admissibility of 4 August 2000, *RIAA*, vol. XXIII, p. 1.
- Arbitration Regarding the Iron Rhine ('Ijzeren Rijn') Railway between the Kingdom of Belgium and the Kingdom of the Netherlands*, Award of the Arbitral Tribunal of 24 May 2005, *RIAA*, vol. XXVII, p. 35.
- Arbitration Between Barbados and the Republic of Trinidad and Tobago*, Award of the Arbitral Tribunal of 11 April 2006, *RIAA*, vol. XXVII, p. 147.

Samenvatting

De opvulling van tekortkomingen in het regime van de visserij op de volle zee: alleen op volle zee voorkomende bestanden, visserijen in de diepzee en kwetsbare mariene ecosystemen

Dit proefschrift gaat in op de volgende onderzoeksvragen: (1) welke algemene principes gelden er voor visserij op volle zee?; (2) wat betekenen deze algemene principes voor nieuwe problemen op het gebied van visserij op volle zee, waaronder diepzeevisserij?; (3) op welke manier hebben staten, zowel collectief als individueel, de leemtes in de regelgeving opgevuld op mondiaal, regionaal en nationaal niveau? In dit proefschrift wordt getracht een antwoord te geven op deze onderzoeksvragen vanuit het perspectief van het internationaal recht, door een analyse te maken van verdragen en andere internationale instrumenten, nationale wetgeving, de praktijk van staten en internationale organisaties en de literatuur op het gebied van het internationale recht. In Deel I (Hoofdstuk 1-2) wordt ingegaan op de algemene principes van visserij op volle zee en de mogelijke gevolgen daarvan voor het omgaan met de nieuwe uitdagingen binnen de visserij op volle zee. Hoofdstuk 1 beschrijft de ontwikkeling van de algemene principes tot aan het aannemen van het Verdrag van de Verenigde Naties inzake het recht van de zee (Zeerechtverdrag) in 1982. Hoofdstuk 2 beschrijft eerst de bepalingen van het Zeerechtverdrag in het licht van de praktijk van staten en internationale organisaties na het aannemen van het Zeerechtverdrag. Vervolgens worden de mogelijke gevolgen van de algemene principes beschreven om zo de invloed van deze algemene principes op het beheer van visserij op volle zee te analyseren. Deel II (Hoofdstuk 3-5) gaat in op de praktijk van staten en internationale organisaties op het gebied van nieuwe uitdagingen in de visserij op volle zee: visbestanden die uitsluitend op volle zee voorkomen (DHSFS), diepzeevisserij en gebiedsgerichte beheerinstrumenten. Hoofdstuk 3 beschrijft de betreffende praktijk in internationale instellingen op mondiaal niveau. Hoofdstuk 4 beschrijft de praktijk van de regionale visserijbeheerorganisaties (RFMOs). Dit zijn: de Commissie voor de instandhouding van de levende rijkdommen in de Antarctische wateren (CCAMLR), de Algemene Visserijcommissie voor de Middellandse Zee (GFCM), de Visserijorganisatie voor het zuidoostelijke deel van de Atlantische Oceaan (SEAFO), de Visserijcommissie voor het noordoostelijk deel van de Atlantische Oceaan (NEAFC) en de Visserijorganisatie voor het noordwestelijke deel van de Atlantische Oceaan (NAFO). Hoofdstuk 5 behandelt de statenpraktijk ten aanzien van gebieden waarvoor geen bevoegde RFMO bestaat, met specifieke aandacht voor de Visserijovereenkomst voor de Zuidelijke Indische Oceaan (SIOFA), de lopende ontwikkeling van regionale visserijbeheerorganisaties of -afspraken (RFMO/As) in het zuidelijke en noordoostelijke deel van de Grote Oceaan, de stand van zaken in andere gebieden en nationale wetgeving die zich specifiek op visserij op volle zee richt in gebieden waar geen bevoegde RFMO/As bestaan.

Algemene principes die gelden voor visserij op volle zee en hun gevolgen

Op basis van Hoofdstuk 1 en 2 komt dit onderzoek tot de conclusie dat er drie algemene principes gelden voor visserij op volle zee: (1) vrijheid van visserij op volle zee; (2) samenwerking tussen staten; en (3) behoud van levende mariene rijkdommen, ecosystemen en biologische diversiteit.

Voor het eerste principe geldt dat staten een beperkte vrijheid hebben wat betreft visserij op volle zee. Hoewel de meeste gedetailleerde regels van het regime voor visserij op volle zee, die in de Commissie voor Internationaal Recht en op de Geneefse Conferentie in de jaren vijftig werden besproken, gingen over visserij in gebieden die grensden aan de territoriale zee, waren deze ontwikkelingen van grote invloed op de regelgeving voor visserij op volle zee in het algemeen. Met name het Verdrag inzake de volle zee maakt duidelijk dat de vrijheid van de volle zee onderworpen is aan behoorlijke inachtneming van de belangen van andere staten in hun uitoefening van de vrijheid van de volle zee. Het Verdrag inzake de visserij en de instandhouding van de levende rijkdommen van de volle zee (HSFC) omschreef de vrijheid van visserij op volle zee als een 'recht'. In zijn uitspraken in de *Fisheries Jurisdiction* zaken, wees het Internationaal Gerechtshof het concept van absolute vrijheid uitdrukkelijk af. Het Hof beschouwde het vereiste van behoorlijke inachtneming als regel van algemeen internationaal recht. Onder het Zeerechtverdrag is de vrijheid van visserij, die van toepassing blijft op gebieden buiten de 200-mijlsgrens van de exclusieve economische zone (EEZ), geformuleerd als een recht en begrensd door de volgende vier overwegingen.

Vrijheden van de volle zee zijn onderworpen aan beperkingen van algemene aard, zoals het verbod op misbruik van de vrijheid van visserij op volle zee. Bovendien dient de vrijheid van visserij op volle zee, net als andere vrijheden van de volle zee, uitgeoefend te worden met behoorlijke inachtneming van de uitoefening van de vrijheden van de volle zee door andere staten en rechten met betrekking tot activiteiten in het Gebied. Onder Artikel 87(2) en 147 van het Zeerechtverdrag dient de vrijheid van visserij op volle zee te worden afgestemd met mijnbouwactiviteiten in het Gebied. Dit vereiste zou kunnen worden geïmplementeerd door mijnbouwactiviteiten aan banden te leggen, om zo belangrijke bestaande visserijactiviteiten, die zich richten op soorten die leven in en op de zeebodem in hetzelfde gebied te beschermen, indien mijnbouwactiviteiten het voortzetten van bodemvisserij in een groot gebied vrijwel onmogelijk maken.

De reikwijdte van de vrijheid van visserij wordt bepaald door de reikwijdte van de term 'visserij'. Zo worden daaraan gerelateerde activiteiten zoals overladen, verwerken en tanken in de jurisprudentie van internationale tribunalen en recente internationale visserij-gerelateerde instrumenten beschouwd als onderdeel van visserij, ofwel aan de visserij gerelateerde activiteiten. Visserij voor wetenschappelijke doeleinden wordt echter niet noodzakelijkerwijs beschouwd als visserij. Explorerende of wetenschappelijke visserij is vaak onderworpen aan een ander regime dan de commerciële visserij, hoewel dit niet betekent dat explorerende visserij valt onder het regime voor wetenschappelijk zeeonderzoek (MSR). In de praktijk is het onderscheid tussen explorerende visserij en MSR moeilijk te maken.

Onder artikel 116(a)-© van het Zeerechtverdrag is de vrijheid van visserij onder andere onderworpen aan rechten, belangen en plichten van kuststaten en aan de regels voor het behoud en beheer in Deel VII Afdeling 2 van het Zeerechtverdrag. Het zou kunnen worden gesteld dat de formulering ‘onderworpen aan’ betekent dat vlaggenstaten in hun recht om te vissen op volle zee verliezen indien hun vaartuigen ernstige en herhaalde overtredingen begaan van de regels voor het behoud en beheer van levende mariene rijkdommen. Het soevereine recht van de kuststaat op het exploreren van het continentale plat en het exploiteren van de daar aanwezige rijkdommen geven deze staat de mogelijkheid de visserij te reguleren in de wateren gelegen boven het continentale plat, overeenkomstig artikel 78(2) Zeerechtverdrag.

Het recht om te mogen vissen op de volle zee is geformuleerd als het recht van staten met betrekking tot hun onderdanen. Hoewel de opstellers van het Zeerechtverdrag lijken te hebben bedoeld dat de term ‘onderdanen’ verwijst naar ‘vaartuigen’ die varen onder de vlag van de betreffende staat, wordt de term in een aantal recente aan de visserij gerelateerde instrumenten gebruikt in de betekenis van natuurlijke personen en rechtspersonen, in plaats van vaartuigen. Hier zou echter niet uit mogen worden geconcludeerd dat het wezenlijk aspect van vrijheid van visserij voor staten in de praktijk is aangepast.

Het tweede principe houdt in dat ook samenwerking tussen staten een pijler is van het regime voor visserij op volle zee. Staten die zich bezighouden met visserij op volle zee zijn verplicht met elkaar samen te werken om maatregelen tot behoud te kunnen nemen. In bepaalde omstandigheden zijn specifieke vormen van samenwerking verplicht: onderhandelingen te goeder trouw; oprichting van RFMO/As voor zover geschikt; uitwisseling van gegevens over vangsten, inspanningen en andere informatie. Met name de plicht om deel te nemen aan de bestaande RFMO/As is ontstaan in de jaren na het aannemen van het Zeerechtverdrag. De staten die vissen op volle zee en de RFMO/As hebben nu wederzijdse plichten: de staten dienen deel te nemen aan het beheersregime van de bevoegde RFMO/A, hetzij als leden/deelnemers hetzij als meewerkende niet-leden; de betreffende RFMO/A dient op zijn beurt de staten die vissen op volle zee te accepteren als lid of als deelnemer. Nieuw toetredende staten zijn ook verplicht om via de RFMO/As samen te werken, zodat hun onderdanen kunnen vissen op volle zee in het kader van de betreffende RFMO/As, ook al hebben zij niet het ‘recht’ om als lid of deelnemer deel te nemen aan het werk van de RFMO/As; de bestaande leden en deelnemers van de RFMO/A zijn vrij te besluiten of ze nieuwe leden of deelnemers accepteren of niet.

Recentelijk hebben bepaalde verdragen en andere internationale aan de visserij gerelateerde instrumenten bepalingen opgenomen over activiteiten die havenstaten en/of marktstaten zouden dienen te ondernemen. Een voorloper van deze aanpak was al verwoord in artikel 8 HSFC.

In tegenstelling tot staten zonder zeekust, hebben kuststaten altijd het recht deel te nemen aan de RFMO/As, onafhankelijk van de vraag of en hoe hun vaartuigen betrokken zijn bij de betreffende visserij op volle zee. Kuststaten zullen naar alle waarschijnlijkheid deelnemen aan het regelgevende regime voor DHSFS, om de simpele reden dat, in de praktijk van de RFMOs, zowel grensoverschrijdende visbestanden als DHSFS binnen één organisatie worden beheerd en alle leden deelnemen

in de besluitvorming over het beheer van de visserij-activiteiten in de regio. Het ontwerpverdrag voor de RFMO voor het zuidelijke deel van de Grote Oceaan (South Pacific RFMO) gaat in deze mogelijk nog verder, door kuststaten een speciale rol te geven in de besluitvorming binnen subregionale beheercommissies.

Het derde principe houdt in dat staten verplicht zijn voor hun onderdanen zodanige maatregelen te nemen als nodig zijn voor het behoud van de levende mariene rijkdommen aanwezig op volle zee. Na de goedkeuring van het Zeerechtverdrag is de plicht om maatregelen tot behoud te nemen op twee manieren verder ontwikkeld: door het versterken van de verantwoordelijkheden van vlaggenstaten; en door het begrip behoud verder uit te werken in het licht van de huidige ontwikkelingen binnen het internationaal milieurecht.

Het Zeerechtverdrag geeft niet aan op welke wijze de plicht tot het nemen van maatregelen voor behoud dient te worden uitgevoerd. In recente internationale aan de visserij gerelateerde instrumenten wordt de vlaggenstaat verplicht vergunningen uit te geven voordat zijn vaartuigen zich gaan bezighouden met visserij op volle zee. De vlaggenstaat mag dit pas doen wanneer deze kan garanderen dat het betreffende vaartuig geen inbreuk zal maken op de maatregelen voor beheer en behoud die zijn genomen door de RFMO/As.

In het codificatieproces in de jaren vijftig werd het begrip behoud geformuleerd met betrekking tot het beheer van visvoorraden op volle zee in gebieden die grensden aan de territoriale zee. Het maximaliseren van duurzame opbrengsten werd de belangrijkste doelstelling, die diende te worden nagestreefd op basis van wetenschappelijke informatie. Het Zeerechtverdrag levert een kader voor het vaststellen van maatregelen voor behoud en geeft daarbij de in acht te nemen factoren: het instandhouden of weer op peil brengen van geogste vispopulaties op of tot een niveau dat een maximale gedurige opbrengst kan opleveren, gekwalificeerd door milieutechnische en economische factoren en, onder andere, met inachtneming van algemeen aanbevolen internationale minimumnormen.

Deze minimumnormen en criteria voor behoud- en beheermaatregelen zijn ontwikkeld met inachtneming van de ontwikkelingen in het internationale milieurecht. Hierin zijn vier aspecten te onderscheiden, die onderling met elkaar verband houden. Ten eerste wordt nu, met betrekking tot de doelstelling van visserijbeheer, nadruk gelegd op het duurzaamheidsaspect, zoals wordt verwoord in uitdrukkingen als 'duurzame visserij' en 'langetermijn behoud en duurzaam gebruik'. Het lijkt zelfs mogelijk dat waar het gaat om visserij op volle zee het gebruikaspect minder belangrijk zal worden dan milieuoverwegingen, zoals nu al het geval is in het regime voor de exploitatie van zeezoogdieren. Ten tweede wordt er meer rekening gehouden met de invloed op ecosystemen en dient visserijbeheer nu een ecosysteemgerichte benadering te volgen. De belangrijkste elementen daarin zijn: rekening houden met interactie tussen soorten, zoals behoud van verwante of afhankelijke soorten en reductie van bijvangst; bescherming van habitats; en compatibiliteit van behoudsmaatregelen in ruimtelijke zin. Ten derde is het nu, naast deze ecosysteem-aspecten, verplicht om de biologische diversiteit als zodanig in stand te houden. Dit houdt in dat naast de verschillende componenten van ecosystemen ook de diversiteit tussen de ecosystemen, tussen de soorten en binnen de soorten dient te worden behouden. Ten vierde

dient de voorzorgsbenadering te worden gevolgd. Toepassing van de voorzorgsbenadering in de visserij houdt in dat staten verplicht zijn ernstige of onomkeerbare schade aan de doelsoort en aan het mariene ecosysteem waarin deze leeft te voorkómen. Onzekerheid rondom visserijbeheer mag geen excuus zijn voor het uitstellen van maatregelen. Aangezien de te nemen maatregelen afhangen van de concrete situatie, variëren mogelijke voorzorgsmaatregelen van verder wetenschappelijk onderzoek tot het vaststellen van preventieve referentiepunten, of het instellen van een moratorium op de visvangst.

Zoals wordt beschreven in Hoofdstuk 2 bestaan er, hoewel de algemene principes een nuttig kader leveren voor de aanpak van problemen met visserij op volle zee, onduidelijkheden over de reikwijdte en gevolgen van deze algemene principes voor visserij op volle zee, met name met betrekking tot het vissen op DHSFS en op organismen die behoren tot de sedentaire soorten voorbij de buitengrens van het continentale plat.

De praktijk op mondiaal, regionaal en nationaal niveau

Zoals blijkt uit Hoofdstuk 4 en 5 volgt uit de oprichtingsinstrumenten en/of de praktijk van de vijf RFMOs, de SIOFA en het ontwerp van de South Pacific RFMO dat deze allemaal een moderne benadering volgen van de visserij op volle zee, waaronder de voorzorgsbenadering en een ecosysteembenadering. Hoewel de CCAMLR Conventie de term 'voorzorgsbenadering' niet expliciet gebruikt, is de praktijk van de CCAMLR voor andere RFMO/As daarvoor wel het voorbeeld geweest. De andere drie bestaande RFMOs van vóór de Overeenkomst over de toepassing van de bepalingen van het Verdrag van de Verenigde Naties inzake het recht van de zee van 10 december 1982 die betrekking hebben op de instandhouding en het beheer van de grensoverschrijdende en de over grote afstanden trekkende visbestanden (FSA) hebben hun oprichtingsinstrumenten sinds 1995 aangepast, hoewel de herziening van de Overeenkomst van Algemene Visserijcommissie voor de Middellandse Zee (GFCM-overeenkomst) nogal beperkt was en met name bestond uit een organisatorische herstructurering.

In het zuidwestelijke deel van de Atlantische Oceaan, het centrale deel van de Atlantische Oceaan, een deel van de Noordelijke IJszee en enkele delen van de Grote Oceaan, lopen er op multilateraal niveau geen formele onderhandelingen voor oprichting van een RFMO/A. Voor de Noordelijke IJszee is het waarschijnlijk dat multilaterale onderhandelingen zullen worden gestart voor de oprichting van een RFMO/A in overeenstemming met de FSA. Daar staat tegenover dat andere gebieden van de volle zee, zoals de Zee van Ochotsk en de gebieden gelegen tussen de eilandstaten in de Grote Oceaan misschien niet zullen vallen onder de voorgestelde RFMO/As. De Zee van Ochotsk blijft waarschijnlijk buiten de voorgestelde RFMO/A voor het noordwestelijk deel van de Grote Oceaan. Een aantal deelnemers aan de onderhandelingen voor de RFMO voor het zuidwestelijk deel van de Grote Oceaan heeft aangegeven gekant te zijn tegen het opnemen van gebieden van volle zee omgeven zijn door de EEZ van eilandstaten in de Grote Oceaan. Als dergelijke gebieden niet vallen onder een multilaterale RFMO/As, is het waarschijnlijk dat

kuststaten visserij op volle zee door vaartuigen van visserijstaten zullen controleren door vergunningen uit te geven voor toegang tot de visbestanden in hun EEZ. Rusland doet dit sinds de negentiger jaren voor zijn voorraden koolvis in de Zee van Ochotsk, en de eilandstaten in de Grote Oceaan zijn kort geleden gestart met deze aanpak. Ervaringen uit de Zee van Ochotsk en de Barentssee doen vermoeden dat deze effectief kunnen zijn.

DHSFS

Enkele internationale fora op het mondiaal niveau hebben aanbevolen de principes van de FSA van toepassing te verklaren op DHSFS. De Algemene Vergadering van de Verenigde Naties (UNGA) heeft staten er verder toe opgeroepen om de DHSFS-visserij te beheren door de nodige maatregelen te nemen die zijn gericht op langetermijn behoud en duurzaam gebruik, door de voorzorgsbenadering en een ecosysteembenadering te volgen, en het verzamelen en rapporteren van gegevens en andere informatie. Men is het er momenteel over eens dat enkele principes van de FSA zouden dienen te worden toegepast op het behoud en beheer van DHSFS. De praktijk die staten volgen op mondiaal niveau is onvoldoende om te kunnen concluderen welke principes onder algemeen internationaal recht toegepast dienen te worden, en, belangrijker, hoe deze toegepast dienen te worden bij het beheer van DHSFS.

De al bestaande en voorgestelde RFMO/As die zich bezig houden met grensoverschrijdende visbestanden hebben de bevoegdheid om DHSFS te beheren, wat ook bevestigd is tijdens de FSA Herzieningsconferentie. Het is onduidelijk welke staten het recht hebben of verplicht zijn om deel te nemen aan het regelgevende mechanisme.

Op regionaal niveau hebben de vijf onderzochte RFMOs de bevoegdheid om DHSFS te beheren. In het oprichtingsinstrument van deze RFMOs wordt geen onderscheid gemaakt tussen grensoverschrijdende visbestanden en DHSFS. Dit geldt ook voor de SIOFA en het ontwerpverdrag ter oprichting van de South Pacific RFMO, ondanks het feit dat de deelnemers aan de onderhandelingen voor de SEAFO, SIOFA en de South Pacific RFMO volledig op de hoogte waren van het bestaan van DHSFS in het voorgestelde toepassingsgebied van deze RFMO/As en dat, voor de SEAFO en de SIOFA, het belangrijkste doel mogelijk het beheer en behoud van DHSFS was. Hoewel een paper in het kader van de onderhandelingen over de voorgestelde South Pacific RFMO zich uitsprak voor een afzonderlijk regime voor DHSFS, is een dergelijk regime nog niet tot stand gekomen in de verschillende ontwerpverdragen die besproken zijn. Dit suggereert dat er pas verschil zal ontstaan wanneer het eigenlijke beheer zal beginnen. Ook de wijzigingen in de oprichtingsverdragen van NEAFC en NAFO C maken geen onderscheid tussen DHSFS en grensoverschrijdende visbestanden, ondanks het feit dat in de betreffende gebieden waarschijnlijk wel DHSFS voorkomen.

In de NAFO, CCAMLR en NEAFC worden mogelijkheden tot visserij toegewezen aan leden met betrekking tot (mogelijke) DHSFS. Het is onmogelijk om uit de toewijzingspraktijk van deze RFMOs een conclusie te trekken over de erkenning van de belangen van kuststaten met betrekking van DHSFS. De toewijzingsleutels verschillen per visbestand en soms krijgen kuststaten voor DHSFS ruimere mogelijk-

heden toegewezen dan voor grensoverschrijdende visbestanden. Het kan derhalve niet gesteld worden dat de belangen van kuststaten irrelevant zijn voor DHSFS.

Kortom, DHSFS vallen onder de bevoegdheid van de betreffende RFMOs en zijn tot nu toe op ongeveer dezelfde wijze beheerd als grensoverschrijdende visbestanden. Het enige mogelijke onderscheid is dat de belangen van kuststaten niet relevant zijn, maar in sommige gevallen lijkt het erop dat met belangen van kuststaten rekening is gehouden in de formulering van de oprichtingsinstrumenten van de betreffende RFMOs en/of het eigenlijke beheer van DHSFS.

Diepzeevisserij

Onder andere de UNGA en de Voedsel- en Landbouworganisatie van de VN (FAO) hebben het beheer van diepzeevisserij op mondiaal niveau aan de orde gesteld. De UNGA wordt over het algemeen beschouwd als het belangrijkste forum om het beheer van diepzeevisserij op mondiaal niveau te bespreken en de FAO biedt ondersteuning voor dit onderwerp op technisch vlak.

In de verschillende UNGA Resoluties is een belangrijke rol in de regulering van diepzeevisserij op volle zee toegewezen aan de 'regionale coöperatieve mechanismen' en uitsluitend in gebieden waar er geen RFMO/A bestaan of geen tijdelijke maatregelen van toepassing zijn, heeft de vlaggenstaat zelf de taak om ook behoud- en beheermaatregelen vast te stellen. In de Resoluties is opgeroepen tot (1) het vaststellen van toepasselijke behoud- en beheermaatregelen overeenkomstig met onder andere de richtlijnen in UNGA Resolutie 61/105; (2) uitbreiding van de bevoegdheid van de bestaande RFMO/As; en (3) het oprichten van een bevoegde RFMO/A in gebieden waar geen RFMO/A bestaat. Welke staten worden opgeroepen om deel te nemen aan regionale samenwerkingsmechanismen blijft in de betreffende UNGA Resoluties onduidelijk voorzover het gaat om diepzeevisserij.

De normen en criteria die worden gebruikt voor het vaststellen van behoud- en beheermaatregelen voor diepzeevisserij zijn anders dan die welke worden gebruikt voor de pelagische visserij. Op mondiaal niveau is er een grote mate van overeenstemming dat er striktere maatregelen nodig zijn voor diepzeevisserij op volle zee, middels toepassing van de voorzorgsbenadering en ecosysteembenadering. Dit wordt ook duidelijk uit de UNGA Resoluties en de Internationale Richtlijnen van de FAO inzake het beheer van diepzeevisserij op de volle zee (FAO Richtlijnen). Zowel de UNGA Resoluties als de FAO Richtlijnen vereisen dat er van tevoren milieueffectrapportages worden opgesteld; visserij is verboden tenzij het wordt aangetoond dat deze geen significant negatief effect heeft (SAI) op kwetsbare mariene ecosystemen (VMEs) of tot het moment dat adequate behoud- en beheermaatregelen zijn genomen. In de FAO Richtlijnen is dit vereiste nog verder uitgebreid door voorzorgsmaatregelen verplicht te stellen wanneer niet is vastgesteld of de voorgestelde activiteit een SAI heeft op VMEs.

Op regionaal niveau zijn er vijf RFMOs die de bevoegdheid hebben over visserij op vissoorten in de diepzee. De SIOFA, de voorgestelde South Pacific RFMO en de voorgestelde RFMO/A voor het noordwestelijk deel van de Grote Oceaan zullen ook bevoegdheid krijgen voor beheer van diepzeevisserij.

De bestaande vijf RFMOs hebben maatregelen genomen voor de bodemvisserij op volle zee. De NEAFC en CCAMLR hebben een schema opgesteld voor het verzamelen van data, dat specifiek gericht is op diepzeevisserij. De CCAMLR, NEAFC en NAFO hebben regels ingesteld voor visserij-inspanningen voor alle visserij of voor bepaalde visbestanden. De NEAFC, NAFO, SEAFO en CCAMLR hebben vangstbeperkingen ingesteld voor bepaalde visbestanden of vissoorten. De CCAMLR, en tot op zekere hoogte de NEAFC, oefenen beheer uit over nieuwe visserijen. Alle vijf de RFMOs hebben bepaalde gebieden gesloten om bentische ecosystemen te beschermen tegen bodemvisserij. Deze RFMOs hebben bovendien beperkingen vastgesteld voor bepaalde soorten vistuig, waaronder een verbod op visserij met zeegnetten en schakelnetten in alle gebieden die vallen onder de bevoegdheid van deze organisaties.

Binnen enkele van de bestaande RFMOs en in lopende onderhandelingen over de oprichting van RFMO/As in het zuidelijke en noordelijke deel van de Grote Oceaan is ook aandacht voor de implementatie van UNGA Resolutie 61/105. In de hierbij aangenomen maatregelen zijn belangrijke delen van de UNGA-aanbevelingen verwerkt. De GFCM en SEAFO moeten de implementatie van UNGA Resolutie 61/105 nog ter hand nemen, onder andere door extra sluitingen van onderzeese bergen en koudwaterkoraalriffen, zoals voorgesteld door hun wetenschappelijke adviesorganen. Een aantal van deze maatregelen heeft aanvullende vereisten gesteld, zoals de bevestiging of vermindering van visserijinspanningen in de CCAMLR, NEAFC, NAFO en de procedures voor het noordelijke en zuidelijke deel van de Grote Oceaan.

Het is opvallend dat veel van de bestaande maatregelen vermelden dat ze de normen en criteria in acht zullen nemen die op vergelijkbaar terrein op mondiaal niveau worden ontwikkeld, waaronder de FAO Richtlijnen. Dit zal de coördinatie van maatregelen tussen verschillende RFMO/As vergemakkelijken. Het valt echter nog te bezien of dit ook daadwerkelijk zal gebeuren.

Naast nationale wetgeving die zich richt op visserij op volle zee in het algemeen, zijn er twee soorten nationale wetgeving die zich specifiek richten op bodemvisserij in gebieden waar geen RFMO/A of multilaterale tijdelijke maatregelen van toepassing zijn. Ten eerste is er een nieuwe EU-verordening die tot doel heeft de diepzeevisserij door EU-vaartuigen te beheersen in gebieden van de volle zee waar noch een RFMO/A, noch tijdelijke maatregelen van toepassing zijn, door het verplicht stellen van visvergunningen en milieueffectrapportages. Bovendien legt deze nieuwe verordening lidstaten de plicht op om strengere maatregelen te nemen dan die zijn bepaald in de betreffende UNGA Resoluties, waaronder het veronderstellen van SAIs indien er daarover onzekerheid bestaat en een verbod op bodemvisserij in gebieden waar geen afdoende wetenschappelijke beoordeling is gedaan of beschikbaar is. De nieuwe verordening kan worden beschouwd als modelwetgeving voor staten wier vaartuigen zich bezighouden met diepzeevisserij in gebieden van de volle zee die niet vallen onder een bestaande RFMO/A of waarvoor geen tijdelijke maatregelen zijn vastgesteld. Ten tweede wordt er in de Amerikaanse *Magnuson-Stevens Reauthorization Act* uit 2006, samen met het presidentiële memorandum uit 2006 aangaande het stimuleren van duurzame visserij en het beëindigen van destructieve vangstpraktijken, aangedrongen op diplomatieke stappen en overleg met buitenlandse regeringen wier vaartuigen zich bezighouden met visserij die een negatief effect heeft op bentische

ecosystemen zoals onderzeese bergen, koudwaterkoraalriffen en hydrothermale bronnen in gebieden van de volle zee waarvoor geen RFMO bestaat. Hierin wordt bepaald dat indien diplomatieke stappen niet de gewenste resultaten bereiken, er tegen deze vaartuigen maatregelen mogen worden genomen met betrekking tot havens en handel.

Beschermde zeegebieden (MPAs) op volle zee

In het kader van de visserij hebben staten het instellen van afgesloten gebieden in het belang van duurzaamheid van visbestanden en voor de bescherming van het mariene ecosysteem ondersteund. Er is pas onenigheid ontstaan toen staten overleg gingen plegen over het instellen van geïntegreerde MPAs voor verschillende doeleinden. Er bestaan meningsverschillen over de compatibiliteit van dergelijke MPAs met het internationaal recht, waaronder het Zeerechtverdrag. Men is het er bovendien niet over eens welke entiteit de leidende rol zou moeten hebben bij het aanwijzen en het beheer van dergelijke MPAs. Op mondiaal niveau lijkt er algemene overeenstemming te bestaan over de leidinggevende rol van de UNGA in de beleidsvorming. Dit betekent echter niet dat staten ermee instemmen dat de UNGA ook een leidende rol heeft bij het aanwijzen en het beheer van MPAs.

Andere vragen waar nog een antwoord op moet komen zijn: (1) of er op een gecoördineerde wijze mondiale MPA-netwerken zouden moeten worden ingesteld, of dat de MPAs door de regionale mechanismen zouden moeten worden gecoördineerd binnen hun eigen gebieden; (2) welke entiteit (of entiteiten) de MPAs zou moeten aanwijzen en beheren (met andere woorden, of er enkelvoudige criteria of sectorwijde criteria moeten worden toegepast).

Op regionaal niveau hebben besprekingen tussen RFMOs en regionale milieubeschermingsmechanismen geresulteerd in samenwerking met betrekking tot MPAs in het noordoostelijke deel van de Atlantische Oceaan, de Middellandse Zee en de Zuidelijke IJzee. In deze regio's hebben de betreffende RFMOs onafhankelijke bevoegdheid om gebieden af te sluiten voor de visserij. Het is echter waarschijnlijk dat de door de regionale milieubeschermingsmechanismen gebruikte normen en criteria invloed zullen hebben op het gebruik van gebiedsgebaseerde beheermiddelen door de betreffende RFMOs.

Suggesties om nieuwe uitdagingen in de visserij op volle zee aan te pakken

DHSFS – Het is mogelijk dat staten voor DHSFS uiteindelijk een mondiaal en juridisch bindend instrument willen opstellen. Het levert voorlopig nog geen problemen op om zonder een dergelijk juridisch instrument te opereren, maar op lange termijn zal het wel essentieel zijn. De beste optie hiervoor is een bijlage bij de FSA, maar door de mogelijke onenigheid over de inhoud van een dergelijk mondiaal juridisch bindend instrument houdt een bijlage dan het karakter van een algemene verklaring aangaande de verplichting om de FSA-bepalingen *mutatis mutandis* op DHSFS toe te passen, en de keuze over de toe te passen principes zal aan de RFMO/As worden overgelaten.

Diepzeevervisserij – Welke stappen staten in de toekomst dienen te nemen is afhankelijk van de implementatie van de FAO Richtlijnen aangaande diepzeevervisserij. Het is misschien niet zo nuttig nog een instrument toe te voegen dat niet juridisch bindend is. Het is uitsluitend wenselijk onderhandelingen te starten over een juridisch bindend instrument indien de Internationale Richtlijnen door de RFMO/As of de afzonderlijke vlaggenstaten niet adequaat zijn geïmplementeerd. Anders, gegeven de uiteenlopende diepwatersoorten waarop wordt gevist en het verschil in vispatronen in iedere regio, is het wenselijk het beheer van diepzeevervisserij aan de RFMO/As over te laten op basis van de UNGA Resoluties en de FAO Richtlijnen.

MPAs op volle zee – Indien staten geïntegreerde MPAs op volle zee op een mondiaal of regionaal niveau willen instellen, bestaat er een dringende noodzaak voor opheldering van onduidelijkheden op juridisch gebied en beleidsgebied, gegeven de onzekerheid rondom de juridische vragen en beleidskwesties met betrekking tot de dergelijke MPAs. Onder het Verdrag inzake biologische diversiteit zijn richtlijnen voor de criteria en normen voor MPAs in voorbereiding. Over beleidsaspecten, in tegenstelling tot wetenschappelijke en technische aspecten, zou ook expliciete overeenkomst moeten worden bereikt. Een haalbare en wenselijke stap voorwaarts zou zijn om middels onderhandeling te komen tot een overeenkomst ter implementatie van het Zeerechtverdrag, met daarin een verklaring over de compatibiliteit van geïntegreerde MPAs op volle zee met het zeerecht, waaronder het Zeerechtverdrag, en waarin wordt aangegeven welke entiteit/entiteiten de bevoegdheid heeft/hebben om dergelijke MPAs in te stellen en te beheren.

Curriculum Vitae

Yoshinobu Takei graduated from the Keio High School (Yokohama, Japan) in 1997. He studied law at Keio University (Tokyo, Japan) from 1997 to 2003 (LL.B. in 2001; LL.M. in 2003). Afterwards, he studied international law at Utrecht University (LL.M. in International Law (*cum laude*) in 2004). In 2004, he participated in the LL.M. Exchange Programme at the University of Helsinki. He has conducted Ph.D. research at the Netherlands Institute for the Law of the Sea (NILOS) since 2005. From 2006 to 2008, he worked as research associate at NILOS. In 2008, he did an internship at the Division for Ocean Affairs and the Law of the Sea of the Office of Legal Affairs of the United Nations Secretariat in New York.

