The Regime of the Area: Delineating the Scope of Application of the Common Heritage Principle and Freedom of the High Seas

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ABSTRACT

Part XI of the United Nations Convention on the Law of the Sea establishes a regime for the Area. The regime of the high seas set out in Part VII of the Convention is also applicable to the Area. Neither Part VII nor Part XI of the Convention exhaustively defines which ocean uses fall within their scope of application. This article analyzes the relevant provisions of the Convention and comments on recent developments that shed further light on the regime of Part XI in relation to the regime of Part VII. It concludes that Part XI's common heritage principle is relevant for all uses of the Area that concern the exploration and exploitation of the Area, including its living resources. Recent developments reveal continued differences of views on the scope of application and implications of the regime set out in Part XI. The provisions of the Convention on marine scientific research and environmental protection would seem to offer sufficient flexibility to frame more detailed rules that do not require the prior resolution of those differences.

Introduction

Part XI of the United Nations Convention on the Law of the Sea[1] (LOS Convention) establishes a regime for the seabed and ocean floor and subsoil thereof beyond the limits of national jurisdiction—referred to as 'the Area' in the Convention.[2]

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1 Adopted on 10 December 1982 (1833 UNTS 396). The Convention has been supplemented by the Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982 of 28 July 1994; hereinafter the 1994 Agreement ((1994) 33 *International Legal Materials* 1309). The 1994 Agreement is mainly concerned with the detailed regime for mining contained in Part XI and does not directly address sections 1 and 2 of Part XI, which are the focus of the present article.

2 Article 1(1)(1). This term will also be employed in the present article.

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Traditionally, what is now 'the Area' was part of the high seas, in which all States have the right to exercise the freedoms of the high seas. Part XI of the Convention did not replace this traditional regime in its entirety. The regime of the high seas, which is defined in Part VII of the Convention, is also applicable to the Area (and the continental shelf, where it does not overlap with the exclusive economic zone). Neither Part VII nor Part XI of the Convention exhaustively define which ocean uses fall within their scope of application. Part VII of the Convention sets out a non-exhaustive list of high seas freedoms. Part XI sets out a number of principles governing the Area and establishes a detailed regulatory regime for mineral resources only.

Since the adoption of the Convention in 1982, a number of new issues, such as the use of genetic resources and the establishment of marine protected areas, have highlighted the potential conflict between Parts VII and XI of the Convention. Dealing with these issues under either Part VII or Part XI may have consequences for the distribution of benefits or the applicable decision-making procedures.

Much of the literature on new issues in relation to the Area focuses on developments with respect to specific uses of the Area and pays relatively little attention to the questions raised by the co-existence of the regimes of Part VII and Part XI of the Convention. The aim of the present article is to bring those questions out more clearly in light of recent developments and to formulate some tentative answers. The article first provides an analysis of the relevant provisions of the Convention. After a discussion of Part VII, the regime set out in Part XI is analyzed in three sections. Two questions are addressed separately: the spatial extent of the Area and the status of the living resources of the Area. An overview of the relevant provisions of Part XI is provided. Next, the article comments on developments with respect to some uses of the Area to establish the implications for the regime applicable to the Area set out in the Convention. The section on recent developments focuses on those developments that shed further light on the regime of Part XI in relation to the regime of Part VII. This section does not address developments in relation to those uses of the Area whose status as high seas freedoms is not disputed or which are fully regulated under Part XI. The concluding section of the article brings together the discussion on the provisions of the LOS Convention and the discussion on recent developments.

The Scope of Application of Part VII of the LOS Convention

The term 'high seas' is not defined in the Convention. Instead, the scope of application of Part VII of the LOS Convention is defined negatively in Article 86 of the LOS Convention:

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

The provisions of Part VII thus apply to the airspace and water column beyond the outer limit of the exclusive economic zone (or the outer limit of the territorial sea where a coastal State has not established an exclusive economic zone) and the seabed and subsoil of that same area. In other words, the scope of application of the provisions of Part VII extends to two areas for which the LOS Convention contains a specific legal regime: the Area and the part of the continental shelf that does not overlap with the exclusive economic zone. Two questions are relevant in considering the consequences of the existence of these parallel legal regimes:[3] does Part VII contain any rules that place limitations on the existence or exercise of high seas freedoms in the Area, and does the regime set out in Part XI of the Convention place any limitations on the exercise of high seas freedoms?[4]

Article 87 of the Convention sets out the basic rules for the regime of the high seas and provides a list of high seas freedoms. A general restriction on the exercise of high seas freedoms is found in Article 87(1): "[f]reedom of the high seas is exercised under the conditions laid down by this Convention and by other rules of international law." As is apparent from the wording of Article 87(1), this restriction is applicable to any high seas freedom, whether it is specifically listed in Article 87(1) or not. Part VII itself places a number of restrictions on the exercise of high seas freedoms. For instance, Article 87(1)(c) provides that the freedom to lay submarine cables and pipelines shall be exercised subject to Part VI defining the regime of the continental shelf. Although the conditions specified in Article 87 significantly qualify the exercise of specific high seas freedoms, the reference in the Article to the Convention and other rules of international law may have even more far-reaching implications for specific freedoms. High seas freedoms in this sense are residual. To establish the implications of the regime of freedom of the high seas for a specific use of the oceans, it has to be established to what extent such a use is regulated by the Convention and other rules of international law.

With respect to the Area, Article 87 implies that Part XI is part of the framework that defines the freedom of the high seas. One consequence of Part XI is that activities in the Area—meaning all activities related to exploration for and exploitation of the mineral resources of the Area—[5] are governed by the regime of Part XI of the Convention and are not included in the high seas freedoms.[6] In other instances, a use of the sea may be a high seas freedom but

[3] As the focus of this article is the regime of the Area, the continental shelf regime is not further considered here.

[4] This second question will be addressed in the following section.

[5] LOS Convention, Article 1(1)(3). This Article refers to 'resources', not 'mineral resources'. From Article 133(a) of the Convention, which defines the term 'resources' for the purposes of Part XI, it is apparent that the term covers all mineral resources. For a discussion of implications of this use of the term 'resources' for the scope of application of Part XI, see further below.

[6] On the other hand, the exploration for and exploitation of all resources of the water column beyond the outer limit of the exclusive economic zone is a freedom of the high seas.

the modalities of its exercise may depend on provisions of the Convention or other rules of international law. For example, dumping is comprised in the high seas freedoms, but it has to be conducted pursuant to the conditions set out, *inter alia*, in Article 210 of the Convention. The example of dumping demonstrates that the conditions under which a high seas freedom may be exercised can result in significant limitations on its actual exercise in practice.[7]

The term 'conditions' contained in Article 87 is not further defined in the Convention. The term is sufficiently broad to include any provision of the Convention that has implications for specific uses of the oceans. As will become apparent from the subsequent discussion, the principles governing the Area set out in section 2 of Part XI of the Convention have such implications.

Part VII of the Convention contains a number of provisions that are directly relevant to establishing the relationship between its regime and that of Part XI. There is one explicit reference to the Area in Part VII of the Convention. The freedoms of the high seas shall be exercised with due regard for the rights with respect to activities in the Area.[8] This requirement does not qualify the exercise of the freedoms of the high seas as such, but rather recognizes that the exercise of those freedoms may interfere with the exploration for and exploitation of the mineral resources of the Area. Such a 'due regard' provision is also applicable where the exercise of different high seas freedoms is concerned.[9]

The high seas freedoms enumerated in Article 87 clearly raise questions concerning the relationship between the regimes included in Part VII and Part XI of the Convention. A number of those freedoms, *i.e.*, the freedom to lay submarine cables and pipelines, the freedom to construct artificial islands and other installations, the freedom of fishing and the freedom of scientific research, (may) have the seabed or its subsoil as their primary focus. To establish whether those freedoms can be exercised under the same conditions in the Area and in the superjacent waters requires an analysis of the provisions that are relevant for each specific use. For instance, Article 112 of the Convention explicitly establishes that all States have the right to lay submarine cables and pipelines on the bed of the high seas beyond the continental shelf. The regime for marine scientific research in the Area differs from the regime for marine scientific research in the superjacent water column. Article 87(1)(f) provides that the freedom of scientific research is subject to Part XIII on marine scientific research. Part XIII makes a distinction between marine scientific research in the Area (Article 256) and marine scientific research in the water column beyond the exclusive economic zone (Article 257). Under Article 257,

[7] Lucchini and Vœlckel even conclude that, in the case of dumping, the rules in other treaty instruments do not seem to leave room for the existence of a freedom of the high seas (L. Lucchini and M. Vœlckel, *Droit de la Mer; Tome 1* (Editions A. Pedone, Paris, 1990), p. 278).

[8] LOS Convention, Article 87(2).

[9] *Ibid.*

all States (and competent international organizations) have the right to conduct marine scientific research in the water column seaward of the exclusive economic zone. In the Area that same right exists, but research has to be conducted in conformity with the provisions of Part XI.[10]

The freedom of fishing mentioned in Article 87(1)(e) has to be exercised subject to section 2 of Part VII on the conservation and management of the living resources of the high seas. That section does not make a distinction between the Area and superjacent waters. The absence of this distinction does not imply that section 2 is equally applicable to both areas. An answer to the question of its applicability requires an analysis of Part XI of the Convention. At this point, it can be noted that the reference in Article 87 is to the freedom of fishing. The Convention does not define the term 'fishing'. The language of section 2 of Part VII—addressing the conservation and management of the living resources of the high seas—in certain instances suggests a focus on marine capture fisheries. Some provisions, such as, for instance, Article 117, have a broader application.[11] It has been argued that section 2 of Part VII also provides a framework for regulating the taking of samples of organisms to gather their genetic material.[12] Other authors conclude that section 2 does not provide an appropriate regulatory framework for the use of the genetic resources of the Area, because of, *inter alia*, the differences with marine capture fisheries.[13]

The freedom to construct artificial islands and other installations in the Area is subject to the requirements set out in Article 147(2) of Part XI of the Convention. That provision imposes conditions on installations used for carrying out activities in the Area. Whether any other conditions apply to this freedom of the high seas in relation to the Area depends on an assessment of the provisions of Part XI.

The Definition of the Area

Article 1 of the LOS Convention states that the 'Area' means the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction.[14] The terms 'seabed', 'ocean floor' and 'subsoil' are not defined in the

[10] The principal provision on marine scientific research in Part XI is Article 143. For a discussion of this Article see further below.

[11] For a discussion of this issue see also C.H. Allen, "Protecting the Oceanic Gardens of Eden: International Law Issues in Deep-Sea Vent Resource Conservation and Management," (2001) 13 *Georgetown International Environmental Law Review* pp. 563–660, pp. 629–630.

[12] *Ibid.*; M.F. Hayes, *Charismatic Microfauna: Marine Genetic Resources and the Law of the Sea* (paper presented at the 30th Annual Conference of the Center for Oceans Law and Policy, Ireland, July 12–14, 2006).

[13] L. Glowka, "The Deepest of Ironies: Genetic Resources, Marine Scientific Research, and the Area," in 12 (1996) *Ocean Yearbook*, pp. 154–178 at pp. 168–169; E. Salamanca Aguado, *La Zona Internacional de los Fondos Marinos; Patrimonio Común de la Humanidad* (Editorial Dykinson, Madrid, 2003), p. 275.

[14] The limits of national jurisdiction are to be established by the coastal State in accordance with the relevant provisions of the Convention (see LOS Convention, Articles 76 and 134). This matter is beyond the scope of the present article.

Convention. The meaning of the term 'seabed' is particularly relevant to define the spatial extent of the Area in relation to the superjacent waters. Does the seabed only refer to solid materials that make up the bottom of the sea, or does it also include solids, water or other liquids or gasses in contact with those materials? For instance, is the water flowing from a hydrothermal vent, and the materials it contains, part of the Area or the superjacent waters?[15] Another example is presented by so-called 'brine pools', which are small lakes on the seafloor with a distinct surface and shoreline. They exist in the ocean because their very salty water is denser than the surrounding water.[16]

A number of Articles of the Convention might seem to suggest that a distinction is made between the seabed on the one hand, and all the waters and materials contained in them located above the seabed on the other. Article 135 of the Convention provides that Part XI shall not affect the legal status of the waters superjacent to the Area. Articles 256 and 257 distinguish between marine scientific research in the Area and in the water column seaward of the exclusive economic zone. However, these Articles do not define the Area and the superjacent waters, but only indicate that different rules apply to each of the two. These Articles also do not establish any precedence of the water column over the seabed (or *vice-versa*) in connection with regard to defining the exact limit between the two.

Two criteria would seem to be relevant to determining whether certain features are part of the seabed or the superjacent waters.[17] One is their location in relation to the seabed, and the other is that they can be clearly distinguished from the surrounding waters. For instance, water flowing from a hydrothermal vent that is an integral part of that hydrothermal vent system and that can be clearly distinguished from the surrounding waters because of its chemical and physical characteristics would seem to be located in the Area and as such would not form part of the waters superjacent to the Area.[18] A brine pool at the seabed should also be considered to be part of the Area. The waters of the

[15] For further information on hydrothermal vents and other deep seabed ecosystems see, *e.g.*, S. Arico and C. Salpin, *Bioprospecting of* (sic) *Genetic Resources in the Deep Seabed: Scientific, Legal and Policy Aspects* (United Nations University and Institute of Advanced Studies, 2005), pp. 9–13.

[16] See B. Carney, *Lakes within Oceans* (available at <oceanexplorer.noaa.gov/explorations/02mexico/background/brinepool/brinepool.html> last accessed on 21 September 2006).

[17] The following conclusions may also be relevant to determining the extent of the continental shelf in relation to the superjacent waters.

[18] See also W. Burke, "State Practice, New Ocean Uses, and Ocean Governance under UNCLOS," in T.A. Mensah (ed.) *Oceans Governance: Strategies and Approaches for the 21st Century* (Law of the Sea Institute, Honolulu, 1996), pp. 219–234 at p. 231, where it is noted that the minerals that are in the hot water that is responsible for the term "smoker" (hydrothermal vent) are subject to Part XI of the Convention. Burke then points out that the living matter which also emerges from the hydrothermal vent does not fall within the definition of resources in Part XI and concludes: "[t]hus, the *deep seabed resource* of present value is not subject to the treaty" (*ibid.*; emphasis provided). As will be argued below, this conclusion with regard to the regime for those resources is debatable. What is of inter-

pool are different in composition from the overlying waters and the pool's shape is the result of the morphology of the surrounding seabed.[19]

Article 133 of the Convention supports the view that the definition of the upper limit of the Area should not be based on a restrictive interpretation of the term 'seabed'. Article 133 of the Convention refers to *all* solid, liquid or gaseous mineral resources "*in* the Area *at* or beneath the seabed."[20] This definition indicates that the Area is not limited to the seabed *strictu sensu*, but that it even includes certain areas above the actual seabed. Article 133 indicates that such areas at least include those in which the mineral resources "at the seabed" are located. Article 133 thus also leads to the conclusion that such features as hydrothermal vents and brine pools are part of the Area. They contain resources that are located at the seabed.[21]

The Status of the Living Resources of the Area

Part XI is focused to a large extent on the mineral resources of the Area. Part XI is replete with references to those resources.[22] It has been suggested that the

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est for the present discussion is that the water (and the resources contained in it) of a hydrothermal vent is considered to be part of the seabed.

[19] Certain negotiating texts at the Third United Nations Conference on the Law of the Sea contained a more detailed definition of the term 'mineral resources' than the one found in Article 133 of the Convention. The ISNT (Doc. A/CONF.62/WP.8 of 7 May 1975 (reproduced in *Third United Nations Conference on the Law of the Sea; Official Records*, Vol. IV, p. 137, at p. 138)), the RSNT (Doc. A/CONF.62/WP.8/Rev.1 of 6 May 1976 (reproduced in *ibid.*, Vol. V, p. 125 at p. 128)) and the ICNT (Doc. A/CONF.62/WP.10 (reproduced in *ibid.*, Vol. VIII, p. 1 at pp. 22–23)) listed liquid or gaseous substances, including water, steam and hot water, ore-bearing silt, and brine as mineral resources. The ICNT/Rev.2 (Doc. A/Conf.62/WP.10/Rev.2 of 11 April 1980 (reproduced in R. Platzöder, *Third United Nations Conference on the Law of the Sea: Documents*, Vol. II (Oceana Publications, Dobbs Ferry, 1982) p. 3 at p. 64) did not include water, steam and hot water in the list of liquid or gaseous substances at or beneath the sea level found in Article 133(b)(i). However, this list is not exhaustive. A report by the co-ordinators of the working group of 21 to the First Committee of the Third Conference observes that the description of the resources of the Area contained in subparagraph b of Article 133 contained in the ICNT/Rev.1 had been changed following the advice of experts on this matter. (Doc. A/CONF.62./C.1/L.27 of 27 March 1980 (reproduced in *Third United Nations Conference on the Law of the Sea; Official Records*, Vol. XIII, p. 113, at p. 114)). The report does not offer any other explanation for the change in wording.

[20] Emphasis provided. The French and Russian language texts of Article 133 also refer to resources at the seabed as being located in the Area. The Spanish language text differs in this respect as it uses a term ('en los fondos') that has the meaning of 'at' and 'in'. Several of the negotiating texts at the Third Conference contained a more detailed definition of the term "mineral resources" than the one found in Article 133 of the Convention. The last of those more detailed definitions, set out in the ICNT/Rev.2, note 19 at p. 64, refers to "[l]iquid or gaseous substances at or beneath the surface [. . .]"; "[s]olid substances occurring on the surface [. . .]"; and "[m]etal-bearing brine at or beneath the surface."

[21] The water of a hydrothermal vent would also seem to fall under the term 'mineral resource' as employed in Article 133 of the Convention. Under certain scientific definitions water is not considered to be a mineral because it is not a solid, but naturally occurring ice is classified as a mineral. Article 133 of the Convention refers to "solid, liquid or gaseous mineral resources".

[22] The majority of the provisions in section 2 of Part XI on principles governing the Area is concerned with the mineral resources of the Area or activities in the Area (see, *e.g.*, Articles 136,

use of other resources in the Area falls under the regime of the freedom of the high seas and is excluded from the scope of application of Part XI.[23] Especially in view of the current interest in the genetic resources of the deep seabed, it is necessary to have a closer look at this suggestion.

The absence of a regime in Part XI specifically addressing the use of other resources of the Area does not dispose of the question of whether or not those resources are part of the Area. Article 136 of the Convention provides that the "Area and its resources are the common heritage of mankind." Article 136 makes the common heritage principle not only applicable to the mineral resources of the Area, but also to the Area as such. To establish the consequences of Article 136 and the other principles governing the Area found in section 2 of Part XI, it has to be established what the "Area" comprises.

As was noted above, Article 1 of the Convention provides that the "Area" means the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction. The terms 'seabed', 'ocean floor' and 'subsoil' are not defined in the Convention. The principal rule of treaty interpretation is that a 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.[24] In principle, the ordinary meaning of the terms 'seabed', 'ocean floor' and 'subsoil' comprises the living and non-living resources that are found in those areas.[25] These are general terms that have a specific spatial application that does not exclude certain natural components from that spatial scope of application because they differ from surrounding areas. The same applies to all other maritime zones. All resources located in a zone form part of that zone.[26] For the Area this is explicitly confirmed by the reference to "the natural resources of the Area" in Article 145(b) of the Convention.

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137(2) and (3), 139, 140, 142, 144–148) and section 3 sets out the specific regime for the development of those resources of the Area.

[23] See note 32 below for an overview of literature reflecting that position.

[24] Vienna Convention on the Law of Treaties of 23 May 1969 (1155 UNTS 331), Article 31(1).

[25] See also F.M. Armas Pfirter, *The Management of Seabed Living Resources in "The Area" under UNCLOS* (Report presented at the Tenth Session of the ISA, 27 May 2004), p. 26; N. Navarro Batista, *Fondos Marinos y Patrimonio Común de la Humanidad* (Ediciones Universidad de Salamanca, 2000), p. 73; T. Scovazzi "Mining, Protection of the Environment, Scientific Research and Bioprospecting: Some Considerations on the Role of the International Sea-Bed Authority," 19 (2004) IJMCL, pp. 383–409 at p. 391. Salamanca Aguado observes:

> En tanto en cuanto el artículo 136 considera que la Zona internacional de los fondos marinos, y no sólo los recursos minerales, constituyen el patrimonio común de la humanidad, deben incluirse en esta especial naturaleza jurídica, todos los recursos naturales susceptibles de explotación comercial, incluidos los microorganismos que se encuentran en ella (Salamanca Aguado, note 13 at pp. 274–275).

[26] The actual regime applicable to those resources may of course vary. However, even if a specific rule excludes specific resources from the general regime of a maritime zone, that rule is part of the regime applicable to the resources that are located in that zone.

The rights of the coastal State over the continental shelf include rights with regard to sedentary species found there.[27] It has been suggested that this definition could be applied by analogy to the living resources of the deep seabed beyond the continental shelf.[28] The implication of this analogy is that sedentary species of the Area would fall under the regime of Part XI of the Convention and not under its Part VII. The relevance of this analogy has been questioned.[29] The legal concept of sedentary species was developed in the context of the continental shelf regime to address specific issues as they were perceived at the time the Convention on the Continental Shelf was being negotiated.[30] The legal status of the living resources of the Area has to be considered in the context of Part XI of the LOS Convention. As will be further argued below, reference to the concept of sedentary species is not required to establish that status. However, even if one concludes that the sedentary species analogy has no relevance for the living resources of the Area, it is of interest as an expression of the impossibility of making any simple and clear-cut division between the seabed and the superjacent waters and the living resources contained therein; therefore this is a problem that requires careful consideration.

The classification of living resources as living resources of the Area or of the superjacent waters depends on the spatial extent of both areas. As was set out in the previous section, the Area includes such features as brine pools and hydrothermal vents. Some of the organisms that do not fall under the definition of sedentary species exist inside those features and as such are living resources of the Area.[31] On the other hand, species that are sedentary species may not be living resources of the Area. This conclusion indicates that the concept of sedentary species in certain instances leads to a different classification of specific resources than under the application of the relevant rules of Part XI.

The principal argument for excluding living resources from the regime of Part XI seems to be derived from Article 133 of Part XI on the use of terms. This Article provides that "[f]or the purposes of this Part "resources" means all solid, liquid or gaseous mineral resources *in situ* in the Area at or beneath

[27] Article 77(4) of the LOS Convention defines sedentary species 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.

[28] See Armas Pfirter, note 25 at pp. 20–22; Salamanca Aguado, note 13 at p. 275. See also below the discussion on the scope of application of certain agreements on regional fisheries management organizations and arrangements.

[29] See Hayes, note 12, who discusses the arguments in the report by Armas Pfirter. See also Scovazzi, note 25 at pp. 400–401.

[30] Adopted on 29 April 1958 (499 UNTS 311).

[31] See also the detailed discussion of the hydrothermal vent resources of the continental shelf by Allen, note 11 at pp. 618–628. Allen concludes that certain species living in hydrothermal vents can be classified as sedentary species, but others cannot be so classified. For example, certain microbes are suspended in the water column in or near a vent (*ibid.*, p. 627). Allen does not consider whether the provision on sedentary species can be applied by analogy to the Area.

the seabed, including polymetallic nodules." According to one view, this definition implies that living resources of the Area are excluded from the common heritage regime. For instance, Allen submits that the canon of construction '*expressio unius est exclusio alterius*' supports the conclusion that Article 133 excludes resources other than mineral resources. Allen concludes that no living marine resources thus fall within the common heritage regime established by Part XI.[32] However, Article 133 does not provide an exhaustive definition of the term 'resources' for the purposes of Part XI, but stipulates that one specific category of resources for the purposes of Part XI will be referred to as 'resources'.[33] Article 133 does not state that Part XI is only applicable to mineral resources. In that case the '*expressio unius est exclusio alterius*' principle clearly would have been applicable. Article 133, as it is worded, does not exclude living resources or other non-mineral resources from the scope of application of Part XI. As the terms, 'natural resources', 'living resources' or 'non-mineral resources' are not defined for the purposes of Part XI, it should be presumed that the meaning that is normally given to those terms is also applicable for the purposes of Part XI.

The drafting history of Part XI includes references to both living and mineral resources.[34] The drafting history does not suggest that an agreement existed whereby the living resources of the Area would be excluded from the scope of application of Part XI of the Convention. In addition, as far as can be ascertained, there does not seem to have been any discussion of the living resources of the Area in the Second Committee of the Third UN Conference on the Law of the Sea, which dealt with the regime of the high seas.[35]

The focus on mineral resources in the negotiations concerning Part XI is explained by the fact that at the time of the Third Conference, only the min-

[32] Allen, note 11 at p. 630. For other authors expressing similar views see, *e.g.*, J. Beurier and C. Noiville, "La Convention sur le droit de la mer et la diversité biologique," in *International Colloquy in Tribute to the Memory of Cyrille de Klemm* (Council of Europe, 2001), pp. 97–114 at p. 112; Burke, note 18 at p. 231; R.R. Churchill and A.V. Lowe, *The Law of the Sea 3rd ed.* (Manchester University Press, Manchester, 1999), p. 239 and fn. 49; Glowka, note 13 at p. 155; M.H. Nordquist (general ed.), *United Nations Convention on the Law of the Sea 1982; A Commentary* (6 Volumes) (Martinus Nijhoff Publishers, Dordrecht: 1985, 1989, 1991, 1993; The Hague: 2002) (hereafter *Virginia Commentary*), Vol. III, p. 29. Most of these publications conclude that the living resources of the Area are subsumed under the regime for the living resources of the high seas set out in Part VII of the LOS Convention.

Treves observes that the 'common heritage' concept may have some relevance for the living resources of the Area, notwithstanding the definition of resources in Article 133 (T. Treves, "Protection of the Environment on the High Sea and in Antarctica," in K. Koufa (ed.), *Protection of the Environment for the New Millennium* (Sakkoulas Publications, Athens, 2002), pp. 74–125 at p. 91; see also Salamanca Aguado, note 13 at p. 275.

[33] It can also be noted that Article 145(b) refers to the "natural resources of the Area," thereby expressly affirming that the resources of the Area are not limited to mineral resources.

[34] See also Armas Pfirter, note 25 at pp. 7–9.

[35] See also *ibid.*, pp. 26–27.

eral resources of the Area were considered to be of economic interest and required the elaboration of a detailed regulatory regime. Even with regard to mineral resources, the regime contained in Part XI is geared to one specific mineral resource (polymetallic nodules). It is difficult to apply this regime to other mineral resources.[36]

By contrast, when the 1994 Agreement was negotiated, the value of genetic resources of organisms of the deep seabed had been recognized. It has been observed that it is particularly interesting that during the negotiations of the 1994 Agreement, no one proposed to broaden the definition of resources in Article 133 to include living resources.[37] That observation warrants some comment. The negotiations leading up to the 1994 Agreement were intended to address the aspects of the mining regime contained in Part XI of the Convention that prevented universal participation in the Convention. That purpose would not have been served by including other controversial issues in the agenda. An effective regime for marine living resources of the Area would in any case require more than a clarification of the implications of Article 133.

Another argument for excluding the living resources of the Area from the scope of application of Part XI could arguably be found in the subsequent practice of the States Parties to the Convention. Article 31(3)(b) of the Vienna Convention on the Law of Treaties provides that any subsequent practice in the application of the treaty which establishes the agreement of the parties regarding its interpretation, shall be taken into account in its interpretation. There is state practice with regard to the living resources of the Area that suggests that they can be exploited in accordance with Part VII of the Convention.[38] The fact that this practice is limited in extent suggests that it does not establish the agreement of the parties regarding the interpretation of the Convention.[39] From recent debates on the law of the sea within, *inter alia*, the framework of the General Assembly, it is clear that States Parties to the LOS Convention disagree on the interpretation of the Convention on this point.[40] This disagreement results in the limited practice before that time carrying less weight than it would otherwise have done in the face of continued silence.

The exclusion of living resources from the regime contained in Part XI of the Convention would lead to a curious result as far as marine scientific research is concerned. Part XIII of the Convention distinguishes between the

[36] See, *e.g.*, J. Lévy, "La première décennie de l'Autorité Internationale des Fonds Marins," 109 (2005) *Revue Générale de Droit International Public*, pp. 101–146 at p. 112.

[37] Hayes, note 12.

[38] See also below for the discussion of fisheries organizations and arrangements.

[39] For the view that subsequent practice has to involve all the parties to a treaty see, *e.g.*, A. Aust, *Modern Treaty Law and Practice* (Cambridge University Press, Cambridge, 2000), p. 195; I. Brownlie, *Principles of Public International Law* 5th ed. (Oxford University Press, Oxford, 1998), p. 635; A. McNair, *The Law of Treaties* (Clarendon Press, Oxford, 1961), p. 424.

[40] See further below.

water column superjacent to the Area and the Area.[41] If Articles 87, 256 and 257 are read together, it is clear that the freedom of scientific research that is guaranteed by Article 87 is only applicable to the water column. The regime for marine scientific research in the water column does not include the Area. Marine scientific research in the Area has to be conducted in conformity with Part XI. If the regime for marine scientific research set out in Part XI does not apply to the living resources of the Area, those resources would be wholly excluded from the regime for marine scientific research established by the Convention.

The Scope of Application of Part XI of the LOS Convention

Part XI sets up a detailed regime for the exploration for and exploitation of the mineral resources of the Area. There can be no doubt that the common heritage regime as elaborated in Part XI of the Convention implies that this use of the Area is completely outside the scope of application of Part VII of the Convention.

The consequences of Part XI for other ocean uses are not always that clear. Certain uses, such as marine scientific research, the laying of cables and pipelines, and uses related to archaeological and historical objects, are specifically regulated in Part XI or other Parts of the Convention. However, the Convention does not establish specific rules for all potential uses of the Area. With regard to these latter uses, the consequences of the principles governing the Area for these uses must be established. Those principles may result in excluding a specific use of the Area altogether from the regime of freedom of the high seas or they may result in attaching certain conditions to the exercise of a freedom of the high seas.

Article 136 of the Convention establishes that the Area and its resources are the common heritage of mankind. The consequences of that status of the Area are elaborated in the subsequent Articles of section 2 of Part XI. One of the most important implications of the applicability of the common heritage principle to the Area as such is elaborated in Article 137(1), which provides that:

> "No State shall claim or exercise sovereignty or sovereign rights over any part of the Area or its resources, nor shall any State or natural or juridical person appropriate any part thereof. No such claim or exercise of sovereignty or sovereign rights nor such appropriation shall be recognized."

Like Article 136, this provision is applicable to the Area. The prohibition on claiming or exercising sovereign rights over any part of the Area prevents any part of the Area being brought under the exclusive control of any State.[42] That

[41] Respectively, Articles 256 and 257.

[42] The parallel provision in Part VII, Article 89, only refers to the invalidity of claims of sovereignty. The absence of a reference to sovereign rights is explained by the fact that States

prohibition does not exclude extractive uses of the Area. However, the prohibition on appropriating any part of the Area,[43] which is applicable to States and to natural and legal persons, also places a limitation on uses of the Area that do not amount to a claim or exercise of sovereignty or sovereign rights. The prohibition on appropriating any part of the Area in principle excludes any use of the Area that brings part of it under the exclusive control or ownership of a State or a natural or legal person.[44] This prohibition would, for instance, seem to imply that production of energy from the Area, which has been argued to be a high seas freedom,[45] has to be considered to be an appropriation of a part of the Area, as energy is being appropriated.

The prohibition on appropriation is not absolute, and does not exclude activities that are explicitly permitted under the Convention. States have the right to conduct marine scientific research in the Area. That research may involve taking samples at a site for further analysis. The taking of such samples does raise a question about the scope of application of the non-appropriation principle. Samples of organisms that have been gathered in connection with marine scientific research may be of commercial interest because of their genetic material. Does the principle of non-appropriation place any limitation on acquiring exclusive rights to that genetic material? It has been suggested that this may be the case.[46]

Article 138 of Part XI provides a guideline for the general conduct of States in relation to the Area. The *Virginia Commentary* observes that Article 138 confirms the self-evident proposition that States are to conduct themselves in the Area in accordance with Part XI and other rules of international law.[47] Another general obligation is contained in Article 141, which provides that the Area shall be open to use exclusively for peaceful purposes by all States without discrimination and without prejudice to the other provisions of Part XI. The *Virginia Commentary* suggests that the language of Article 141 on peaceful

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have sovereign rights over the continental shelf. Certain high seas freedoms, such as fishing, involve appropriation.

[43] Article 137 refers to the appropriation of "any part thereof." The word 'thereof' refers back to "the Area or its resources" in the preceding part of the sentence. This meaning of Article 137(1) (*i.e.*, that 'thereof' also refers back to the Area itself) is expressed more clearly in the French and Spanish texts of Article 137(1), which refer to, respectively, "une partie quelconque de la Zone ou de ses ressources" and "parte alguna de la Zona o sus recursos."

[44] For a discussion of the principle of non-appropriation see, *e.g.*, Salamanca Aguado, note 13 at pp. 302–304.

[45] See, *e.g.*, Churchill and Lowe, note 32 at p. 239, fn. 49.

[46] See Study of the relationship between the Convention on Biological Diversity and the United Nations Convention on the Law of the Sea with regard to the conservation and sustainable use of genetic resources on the deep seabed (Decision II/10 of the Conference of the Parties to the Convention on Biological Diversity); Note by the Executive Secretariat (reproduced in UNEP/CBD/SBSTTA/8/INF/3/Rev.1 of February 2003), para. 117. States differ over whether the regime for marine scientific research in the Area limits the rights to exploit the findings of such research commercially (see further below).

[47] *Virginia Commentary*, note 32, Vol. VI at p. 113.

purposes has different implications than the language of Article 88 of the Convention reserving the high seas for peaceful purposes.[48] One difference between Article 141 and Article 88 is the statement "without prejudice to the other provisions of this Part" in Article 141, which is absent in Article 88. This statement may imply that uses that are peaceful and permitted in the water column overlying the Area still may be subject to limitations in the Area, because they lead to a derogation from other provisions of Part XI.[49] The parallel existence of Articles 88 and 141 would seem to indicate that for all uses of the Area, Article 141 provides the frame of reference, even if it concerns uses that are freedoms of the high seas falling under Part VII of Convention. Article 141 is part of the conditions applicable to the exercise of freedom of the high seas under Article 87 of the Convention.

Section 2 of Part XI makes a number of references to the "benefit of mankind as a whole." This principle is one of the means to give effect to the principle that the Area is the common heritage of mankind. The 'benefit of mankind' principle is not applicable to the Area as such, but is related to specific uses of the Area. A detailed elaboration of the implications of this principle in relation to activities in the Area is provided in Article 140 of the Convention. This principle is also contained in Article 143 on marine scientific research and in Article 149 on archaeological and historical objects.[50] All these uses would seem to have in common that they actually generate certain benefits, material or immaterial, that can be shared.[51] That the 'benefit of mankind' principle may have a more general application with regard to uses that are not mentioned specifically in the Convention and that could result in such benefits, is suggested by the Preamble to the Convention, which indicates that the States Parties to the Convention desire to develop the principles embodied in General Assembly Resolution 2749 (XXV)[52] and then states that the Resolution provides that:

> "the area of the seabed 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 geographical location of States."[53]

[48] *Ibid.*, p. 149. It is not clear from the *Virginia Commentary* what implications that difference actually has.

[49] The *Virginia Commentary* observes that the "purpose of the phrase 'and without prejudice to the other provisions of this Part' is unclear since activities authorized under Part XI are for peaceful purposes" (*ibid.*, p. 150).

[50] For a discussion of the principle in those two contexts see also below.

[51] *Cf.* Scovazzi, note 25 at p. 392.

[52] Resolution 2749 (XXV) contains the Declaration of Principles governing the Sea-Bed and the Ocean Floor, and the Subsoil thereof, beyond the Limits of National Jurisdiction. The Resolution was adopted in 1970 with 108 votes to zero, with 14 abstentions. The principles contained in the Resolution formed the basis for the negotiations on the principles that were later included in Part XI of the LOS Convention.

[53] LOS Convention, 6th preambular paragraph (emphasis provided). That "of which" also refers back to the Area itself is expressed more clearly in the French text of the paragraph,

The preamble to a treaty is part of the text of the treaty that provides the context for the purpose of its interpretation.[54] In the present case, the fact that the Preamble to the Convention observes that the Convention is intended to develop the principle that the Area is to explored and exploited for the benefit of mankind as a whole, is particularly significant for the consideration of new uses of the Area that involve its exploration or exploitation. It would seem that the development of a regime for such uses should give expression to the 'benefit of mankind' principle. This principle can be given specific content in various ways, as is also illustrated by Articles 140 and 143 of the Convention; these implement this principle in relation to activities in the Area and marine scientific research in the Area.[55] In general, it would seem that a specific regime should not lead to burdens that would practically exclude the use of the Area it seeks to regulate.[56]

The remaining Articles of section 2 on principles governing the Area are mostly concerned with specific uses of the Area. The majority of those Articles are concerned with activities of exploration for and exploitation of the mineral resources of the Area. Those Articles also set out the powers and functions of the International Seabed Authority (the Authority). Generally speaking, those powers and functions are limited to activities in the Area and other activities directly related to activities in the Area (for instance, the protection of human life with respect to activities in the Area (Article 146), and installations used for carrying out activities in the Area (Article 147(2)). These Articles provide a full catalogue of the powers and functions of the Authority.[57]

To the extent that the Convention does not confer powers and functions on the Authority, States remain competent to act individually or jointly with regard to the Area in accordance with their rights and obligations under the Convention, including its Part XI. For instance, Part XI only accords the Authority the power to take the necessary measures to protect the marine environment with respect to activities in the Area.[58] With regard to other uses of the Area, States have to act in accordance with their obligations under Part XII of the Convention to protect the marine environment. The general principles of Part XII are applicable to all of the marine environment, including the Area. The same observation applies to the other provisions of Part XII of the Convention to the extent that those provisions are not expressly limited in their application to specific maritime zones.[59]

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which reads in relevant part "que l'exploration et l'exploitation de la zone se feront dans l'intérêt de l'humanité toute entière".

[54] Vienna Convention on the Law of Treaties, Article 31(2).

[55] See also Scovazzi, note 25 at p. 407.

[56] See also Salamanca Aguado, note 13 at p. 217.

[57] LOS Convention, Article 157(2).

[58] *Ibid.*, Article 145.

[59] Article 209 of Part XII reconfirms that pollution from activities in the Area is subject to a specific regime in accordance with Part XI.

Uses of the Area that are explicitly addressed under the Convention have been regulated with varying degrees of specificity. For instance, the regime for cables and pipelines is elaborated in considerable detail in Articles 112 to 115 of Part VII of the Convention. On the other hand, only one Article in Part XI (Article 149) is devoted to archaeological and historical objects found in the Area.[60] That Article only sets out general principles, which leave considerable room for developing the details of a specific regime.[61]

Article 143 of the Convention sets out rules for marine scientific research in the Area. This provision is of interest to the current debate on the use and conservation of genetic resources of the Area. Samples of genetic material that may later prove to be of commercial interest are also collected in the framework of marine scientific research. States differ over the implications of Article 143 and whether taking samples of genetic material in this context should be regarded as marine scientific research.[62]

Article 143(1) provides that marine scientific research in the Area shall be carried out for the benefit of mankind as a whole, in accordance with Part XIII of the Convention. Part XIII refers to marine scientific research in the Area in Article 256 and accords the right to conduct marine scientific research in the Area to all States and competent international organizations, in accordance with the provisions of Part XI. On the other hand, Article 257 is applicable to the water column beyond the exclusive economic zone, which includes the waters superjacent to the Area. Articles 256 and 257 thus confirm that all marine scientific research in the Area has to be carried out in accordance with Part XI.

Part XIII of the Convention sets out the general regime of marine scientific research, which is also relevant to such research in the Area. Some additional conditions apply to marine scientific research in the Area under Article 143. As was noted above, Article 143(1) provides that such research has to be carried out for the benefit of mankind as a whole.[63] Paragraphs 2 and 3 of Article 143 give effect to that principle. Paragraphs 2 and 3 impose certain rights and obligations with regard to marine scientific research on the Authority and on States Parties, respectively. These provisions go beyond the obligations on cooperation with regard to marine scientific research contained in section 2 of Part XIII.[64]

[60] In addition, Article 303 of the Convention, with the exception of paragraph 2, is also applicable to archaeological and historical objects found in the Area. For a discussion of Article 149 see A. Strati, *The Protection of the Underwater Cultural Heritage: An Emerging Objective of the Contemporary Law of the Sea* (Martinus Nijhoff Publishers, The Hague, 1995), pp. 296–314.

[61] See further below for a short discussion of the regime for the Area under the UNESCO Convention on the Protection of the Underwater Cultural Heritage (adopted on 2 November 2001 (41 (2002) *International Legal Materials* p. 40) (hereinafter the UCH Convention)).

[62] For a discussion see further below.

[63] See also Scovazzi, note 25 at p. 398.

[64] Salamanca Aguado observes that Article 143(3) is a specific application to the Area of the obligations to cooperate set out in Articles 243 and 244 of the Convention (Salamanca Aguado, note 13 at p. 216).

The implementation of Article 143(3) in the context of specific areas of research could provide a significant contribution to the effective implementation of the 'benefit of mankind' principle in Article 143(1). The growing interest in the genetic resources of organisms from the Area seems to have reinforced the interest of States in the 'benefit of mankind' principle in Article 143(1). It has been suggested that this principle should inform the use of genetic resources of the Area.[65] At the same time, the risk of too burdensome a regulatory regime is a real danger, in the light of the complex issues that might have to be addressed.[66]

The rules concerning specific uses of the Area indicate that their regime can vary widely, depending on the use involved. In certain cases, such as, for instance, the laying of submarine cables and pipelines, individual States have the right to use the Area and there is no specific requirement to establish further international rules. In other cases, such as, for instance, dumping, an obligation to establish international rules exists. Article 210(4) of the Convention provides that States shall endeavour to establish global and regional rules, standards and recommended practices and procedures to prevent, reduce and control pollution by dumping. For dumping the relevant global framework is the London Convention.[67] This example shows that cooperation with regard to the Area need not necessarily be effected through the Authority or another body specifically established for that purpose. As will be discussed further below, this point is confirmed by other developments in relation to uses of the Area.

The regulation of uses of the Area may require the development of an agreement implementing the provisions of section 2 of Part XI of the LOS Convention. In that context, Article 311 of the Convention is relevant.[68] Under Article 311(6), States Parties to the Convention agree that "there shall be no amendments to the basic principle relating to the common heritage of mankind set forth in Article 136 and that they shall not be party to any agreement in derogation thereof." In considering the effect of Article 311(6), it would seem to be relevant that the 'common heritage' principle is further elaborated in other provisions of section 2 of Part XI. It would seem that those other

[65] See Glowka, note 13 at pp. 173–175; Scovazzi, note 25 at pp. 401–403.

[66] See Glowka, note 13 at p. 173; Hayes, note 12; see also Report of the Secretary-General of the International Seabed Authority under Article 166, paragraph 4, of the United Nations Convention on the Law of the Sea (Doc. ISBA/8/A/5 of 7 June 2002), para. 39.

[67] Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter of 29 December 1972 (1046 UNTS 120). The London Convention refers to the high seas (Article VII(3)). The 1996 Protocol to the London Convention (Protocol to the 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter of 7 November 1996 (36 (1997) *International Legal Materials* p. 7) refers to areas beyond the jurisdiction of any State (Article 10(3)).

[68] For a more detailed discussion of Article 311(3), (4) and (6) see, *e.g.*, D. Freestone and A.G. Oude Elferink, "Flexibility and Innovation in the Law of the Sea—Will the LOS Convention Amendment Procedures Ever Be Used?" in A.G. Oude Elferink (ed.) *Stability and Change in the Law of the Sea: The Role of the LOS Convention* (Martinus Nijhoff Publishers, Leiden, 2005), pp. 169–221 at pp. 175 and 182–183.

provisions should also inform the application of Article 311(6). Other provisions of section 2 of Part XI in any case have to be considered under Article 311(3). That Article allows States Parties to conclude agreements modifying or suspending the operation of provisions of the Convention as applicable solely to relations between themselves. Article 311(3) subjects such agreements to a number of conditions, namely: a) such agreements shall not relate to a provision from which a derogation is incompatible with the effective execution of the object and purpose of the Convention; b) such agreements shall not affect the application of the basic principles embodied in the Convention; and c) the provisions of such agreements do not affect the enjoyment by other States Parties of their rights or the performance of their obligations under the Convention.[69] Article 311(3) entails, *inter alia*, that any agreement concerning uses of the Area that includes States Parties to the Convention will have to be in accordance with the principles formulated in section 2 of Part XI that are basic principles under Article 311(3). This would, for instance, seem to be the case for the 'benefit of mankind' principle.

Recent Developments related to Uses of the Area

The present section looks at some recent developments in relation to the Area. This section is not intended to be exhaustive, but rather to point out the existence of diverging views on certain provisions of Part XI of the Convention and the legal regime for specific uses of the Area.

Archaeological and historical objects

Article 149 of the Convention sets out some basic rules with regard to objects of an archaeological and historical nature found in the Area. The regime applicable to archaeological and historical objects found in the Area has also been addressed in the UCH Convention.[70] Articles 11 and 12 of the UCH Convention deal with, respectively, reporting and notification in relation to the

[69] Article 311(4) requires States Parties intending to conclude an agreement referred to in Article 311(3) to notify the other States Parties of their intention to conclude the agreement and of the modification or suspension of the provision(s) of the Convention for which it provides. Such a notification shall be made through the Secretary-General of the United Nations.

[70] The focus of the UCH Convention is on activities directed at the underwater cultural heritage (defined as "activities having underwater cultural heritage as their primary object and which may, directly or indirectly, physically disturb or otherwise damage underwater cultural heritage" (UCH Convention, Article 1(6)). Activities in the Area, which are regulated by Part XI of the LOS Convention, may also have an impact on the underwater cultural heritage (for a discussion of the relationship between these two regimes, see G. Le Gurun, "France," in S. Dromgoole (ed.), *The Protection of Underwater Cultural Heritage* (Martinus Nijhoff Publishers, Leiden 2006), pp. 59–96 at pp. 86–89; S. Dromgoole, "2001 UNESCO Convention on the Protection of the Underwater Cultural Heritage" (2003) 18 IJMCL pp. 59–108 at pp. 85–87). The Authority has addressed potential impacts of activities in the Area on objects of an archaeological and historical nature in Regulations 8 and 34 of the

Area and protection of the underwater cultural heritage in the Area. Those provisions are intended to elaborate on Article 149 of the LOS Convention.[71]

During the negotiations of the UCH Convention, its relation to the LOS Convention was one of the most contentious issues.[72] However, there does not seem to have been any significant debate over whether Article 149 of the Convention could be further elaborated in the framework of the UNESCO.

The UCH Convention assigns a major role to the so-called 'Coordinating State'.[73] The Coordinating State, in discharging its rights and obligations under the UCH Convention, is called on to "act for the benefit of humanity as a whole, on behalf of all States Parties."[74] In this connection, particular regard is to be paid to the preferential rights of States of cultural, historical or archaeological origin of the underwater cultural heritage concerned.[75] Article 149 of the LOS Convention contains a similar reference to the benefit of mankind as a whole and also similarly identified States having preferential rights. The UCH Convention does not contain any provisions that further elaborate on the 'benefit of mankind' principle contained in its Article 12.[76]

Article 149 of the LOS Convention differs in a number of respects from the UCH Convention. First, unlike the UCH Convention, Article 149 does not identify the actor that is to represent mankind as a whole. Second, Article 149 refers to the State or country of origin, but the UCH Convention only refers to the State of origin. Third, Article 149 deals with archaeological and historical objects. The term 'underwater cultural heritage' in the UCH Convention is defined more broadly.[77] Finally, Article 149 refers to preservation or disposal of objects without indicating a preference for either option. Preservation *in situ* is a core feature of the UCH Convention.[78]

cont.

Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area (reproduced in the Doc. ISBA/6/A/18 of 4 October 2000). The Draft Regulations on Prospecting and Exploration for Polymetallic Sulphides and Cobalt-rich Ferromanganese Crusts in the Area (Doc. ISBA/10/C/WP.1/Rev.1 of 24 May 2004) also incorporate these provisions (see Regulations 8 and 37; for a discussion of the relationship between the (draft) Regulations and the UCH Convention see Le Gurun, note 70 at pp. 86–89).

71 Article 11(1) of the UCH Convention states that "States Parties have a responsibility to protect cultural heritage in the Area in conformity with this Convention and Article 149 of the United Nations Convention on the Law of the Sea;" see also UCH Convention, Article 3.

72 See, *e.g.*, Dromgoole, "2001 UNESCO Convention," note 70 at pp. 75–76.

73 The UCH Convention also entrusts certain functions to the Director-General of UNESCO under Articles 11 and 12, including the appointment of the Coordinating State (Article 12(2)).

74 *Ibid.*, Article 12(1).

75 *Ibid.*

76 See further Dromgoole, "2001 UNESCO Convention," note 70 at pp. 67–68.

77 See UCH Convention, Article 1(1). The Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area established by the Authority in 2000 (note 70, Regulations 8 and 34) and the 2004 Draft Regulations on Prospecting and Exploration for Polymetallic Sulphides and Cobalt-rich Ferromanganese Crusts in the Area (note 70, Regulations 8 and 37) use the language of Article 149 of the LOS Convention.

78 See Dromgoole, "2001 UNESCO Convention," note 70 at p. 84.

Conservation and Management of Marine Living Resources in Areas beyond the Limits of National Jurisdiction

The conservation and management of the marine living resources in areas beyond national jurisdiction until recently first of all concerned fisheries on the high seas.[79] The discovery of marine life on the deep seabed and increased capabilities to gain access to those marine living resources has required the international community to focus attention on the management of these other resources.[80] The conditions on the deep seabed differ from conditions in most other environments on Earth. Organisms living on the deep seabed have developed unique adaptations to survive in these conditions. As a result, those organisms also differ from most other forms of life as far as their genetic makeup is concerned. These genetic resources are relevant to pharmaceutical or industrial applications.[81] Deep seabed communities are vulnerable and exposed to various threats, such as the (potential) exploration for and exploitation of mineral resources, and bottom-trawling. One option to address these threats is the establishment of marine protected areas. Consideration of these issues in international fora has revealed the existence of different views on the regime of the Area set out in the Convention and different preferences with regard to its further elaboration.

The legal regime for the conservation and management of the genetic resources of areas beyond the limits of national jurisdiction has been on the agenda of several global bodies for a number of years, including the General Assembly of the United Nations and the institutions established by the Convention on Biological Diversity.[82] The legal regime applicable to the genetic resources in areas beyond the limits of national jurisdiction was already considered in a 1995 report by the Secretariat of the Convention on Biological Diversity.[83] That report concluded that it is unclear whether or how the 'common heritage' principle applies to the living resources of the deep seabed.[84] The report rec-

[79] The term "areas beyond national jurisdiction," which is not defined in the LOS Convention, is commonly used to refer to the Area and the waters of the high seas.

[80] The deep seabed communities concerned are also found on the deep seabed in areas under national jurisdiction. Within 200 nautical miles they are governed by the provisions on living resources contained in Parts V and VI of the Convention. For the continental shelf beyond 200 nautical miles, species that fall under the definition of sedentary species in Article 77(4) are included in the regime for the continental shelf contained in Part VI of the Convention.

[81] For further background information see, *e.g.*, Arico and Salpin, note 15 at pp. 15–24; Glowka, note 13 at pp. 156–164.

[82] Adopted on 5 June 1992 (31 (1992) *International Legal Materials* p. 818). For a more detailed discussion of those developments see, *e.g.*, L. Glowka, "Beyond the Deepest of Ironies: Genetic Resources, Marine Scientific Research and International Seabed Area," in J. Beurier, A. Kiss and S. Mahmoudi (eds), *New Technologies and Law of the Marine Environment* (Kluwer Law International, The Hague, 2000), pp. 75–93, at pp. 83–92.

[83] Access to Genetic Resources and Benefit-Sharing: Legislation, Administrative and Policy Information; Report by the Secretariat (UNEP/CBD/COP/2/13 of 6 October 1995).

[84] *Ibid.*, p. 30, para. 111.

ommended to the Conference of the Parties to the Convention on Biological Diversity that it might wish to request an in-depth analysis of the relationship between the Convention on Biological Diversity and the LOS Convention. One issue to consider in particular in this context would be how to address the use of genetic resources in areas outside national jurisdiction.[85] Acting on the report, the second meeting of the Conference of the Parties to the Convention on Biological Diversity requested the Executive Secretary to undertake a study, in consultation with the United Nations Office for Oceans Affairs and the Law of the Sea, on the relationship between the two Conventions.[86] Following this request, the Secretariat of the Convention on Biological Diversity prepared a Note on bioprospecting for the genetic resources of the deep seabed.[87] The discussion in the Note of the relevant principles of international law was not reviewed by either the Office for Ocean Affairs and the Law of the Sea or the Office for Legal Affairs of the United Nations.[88]

The Note submitted that:

> "The regime for the Area makes no reference to genetic resources. As a result, it is not clear how [the LOS Convention] may apply to the Area's genetic resources. The most plausible interpretation is that, as with all resources of the high seas other than mineral resources, they are freely accessible, open-access resources, appropriable *(sic)* by anyone who collects them. These types of resources are governed by a number of broad principles included under the rubric of the freedom to fish."[89]

The Note indicated that an alternative interpretation would be to consider genetic resources as coming within the rubric of "living resources." As such, they would be outside the special conditions which apply to mineral resources and would be freely accessible.[90]

The work by the Secretariat of the Convention on Biological Diversity on deep seabed genetic resources was discussed in the 1996 Report of the Secretary-General of the United Nations on the law of the sea. This Report suggests that the issue of access to genetic resources derived from the deep seabed area beyond the limits of national jurisdiction is one that justifies separate consideration. The Report reads in relevant part:

> "The general subject of marine and coastal biodiversity, as well as the specific issue of access to the genetic resources of the deep seabed, raises important questions.

[85] *Ibid.*

[86] Conference of the Parties to the Convention on Biological Diversity, Decision II/10, Conservation and Sustainable Use of Marine and Coastal Biological Diversity, para. 12.

[87] Bioprospecting of (*sic*) the genetic resources of the deep sea-bed, Note by the Secretariat (UNEP/CBD/SBSTTA/2/15 of 24 July 1996).

[88] *Ibid.*, p. 2, para. 4. According to Glowka, it never has been fully clear why the coordination with the Office for Ocean Affairs and Law of the Sea did not take place. Explanations ranged from institutional conflicts to political pressure (Glowka, note 82 at p. 90).

[89] Bioprospecting (*sic*) of the genetic resources of the deep sea-bed, note 87 at p. 3, para. 11 (footnotes not included).

[90] *Ibid.*, p. 20, footnote 16.

> The topic touches not only on the protection and preservation of the marine environment, including that of the international seabed area, but also on such other matters as the application of the consent regime for marine scientific research, the regime for protected areas in the exclusive economic zone, the duties of conservation and management of the living resources of the high seas, and the sustainable development of living marine resources generally. The specific issue of access points to the need for the rational and orderly development of activities relating to the utilization of genetic resources derived from the deep seabed area beyond the limits of national jurisdiction."[91]

The Report further observes that the issue of access might raise questions concerning applicable or relevant international law and the possible development of generally accepted international rules and regulations.[92] The Report stresses that the study to be prepared for the Parties to the Convention on Biological Diversity would be of equal or possibly greater importance to States Parties to the LOS Convention, as well as to Member States in the General Assembly reviewing the overall implementation of that Convention and the implications of current trends and developments for the law of the sea.[93] This statement clearly signaled that this issue should not be considered solely under the Convention on Biological Diversity.[94]

The study of the relationship between the Convention on Biological Diversity and the LOS Convention requested by the second meeting of the Conference of the Parties of the Convention on Biological Diversity was finally completed in 2003.[95] The study reveals a certain ambiguity regarding the legal regime applicable to the genetic resources of the Area. Although the study seems to recognize that the principles governing the Area are applicable to the genetic resources of the Area,[96] it also seems to suggest that there are no practical consequences that follow from the existence of those principles.[97] The study further notes that there are no specific provisions in place for the use and conservation of the biodiversity of the Area, besides those regulating marine scientific research in the Area and the protection and preservation of the flora and fauna from activities relating to mineral resources in the Area.[98] The study suggests that a specific regime could be based on the regime for the Area and its mineral resources and points to four concepts embodied in the 'common heritage' principle: non-appropriation, international management, peace-

[91] *Law of the Sea; Report of the Secretary-General*; Doc A/51/645 of 1 November 1996, para. 231.
[92] *Ibid.*, para. 232.
[93] *Ibid.*
[94] See Glowka, note 82 at p. 90.
[95] Study of the relationship between the Convention on Biological Diversity and the United Nations Convention on the Law of the Sea with regard to the conservation and sustainable use of genetic resources on the deep seabed, note 46.
[96] *Ibid.*, p. 10. paras. 32–34.
[97] See *ibid.*, pp. 29–30, paras. 114–116.
[98] *Ibid.*, p. 11, para. 37.

ful use and benefit-sharing.[99] The study concludes that deep seabed genetic resources could also be brought within the framework of the Convention on Biological Diversity.[100] Both options might also be integrated.[101]

The conservation and sustainable use of deep seabed genetic resources has been addressed in Decisions by the seventh and eighth meetings of the Conference of the Parties of the Convention on Biological Diversity and the 2003, 2004 and 2005 General Assembly Resolutions on the law of the sea.[102] The Decisions and Resolutions are focused on advancing the analysis of the issues involved in the conservation and sustainable use of those resources and do not pronounce on the applicable legal framework. General Assembly Resolution 59/24 set up an ad hoc open-ended informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity in areas beyond the limits of national jurisdiction. That Working Group met from 13 to 17 February 2006.

The Report of the Working Group provides an interesting overview of the diverging views on the relevant legal regime. A number of delegations stated that marine genetic resources in areas beyond the limits of national jurisdiction constituted the common heritage of mankind.[103] Access to genetic resources in the deep seabed in areas beyond the limits of national jurisdiction should, in principle, be subject to the sharing of benefits based on considerations of equity.[104] Some delegations referred to Article 143 of the Convention to argue that activities carried out in the Area should be conducted for peaceful purposes and for the benefit of mankind as a whole, and noted that the Authority had a central role in collecting and disseminating information on marine scientific research on the seabed.[105] The mandate of the Authority could

[99] *Ibid.*, p. 30, para. 116.

[100] *Ibid.*, p. 32, para. 124–126. For an analysis of the possible role of the Convention on Biological Diversity in relation to genetic resources see, *e.g.*, Glowka, note 13 at pp. 176 *et seq.*

[101] Study of the relationship between the Convention on Biological Diversity and the United Nations Convention on the Law of the Sea with regard to the conservation and sustainable use of genetic resources on the deep seabed, note 46 at p. 32, para. 128.

[102] Conference of the Parties to the Convention on Biological Diversity, Decision VII/5, Marine and coastal biological diversity, paras. 54–62; Conference of the Parties to the Convention on Biological Diversity, Decision VIII/21, Marine and coastal biological diversity: conservation and sustainable use of deep seabed genetic resources beyond the limits of national jurisdiction; Resolution 58/240 of 23 December 2003 (Doc. A/RES/58/240 of 4 March 2004), paras. 52 and 68; Resolution 59/24 of 17 November 2004 (Doc. A/RES/59/24 of 4 February 2005), paras. 67–76; Resolution 60/30 of 29 November 2005 (Doc. A/RES/60/30 of 8 March 2006), paras. 77–80.

[103] 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 (Doc. A/61/65 of 20 March 2006), p. 18, para. 71.

[104] *Ibid.*, p. 9, para. 29; see also Report of the sixteenth Meeting of States Parties to the LOS Convention (Doc. SPLOS/148 of 28 July 2006), p. 17, para. 87.

[105] Report of the Ad Hoc Open-ended Informal Working Group, note 103 at pp. 8–9, para. 28; see also *ibid.* p. 17, para. 65.

potentially be expanded to deal with all issues relating to deep-sea biodiversity, including genetic resources.[106]

Other delegations argued that the freedoms of the high seas were applicable to activities relating to marine genetic resources.[107] Those delegations did not see the need for a new regime to address the exploitation of marine genetic resources in areas beyond the limits of national jurisdiction or to expand the mandate of the Authority.[108] Finally, the view also existed that the legal status of genetic resources in the seabed and subsoil in areas beyond the limits of national jurisdiction needed to be clarified.[109] In this connection, it was suggested that the issue could be addressed, taking into account the legitimate interests of all States, through the development of guidelines, codes of conduct, including internationally agreed codes of conduct, and impact assessments.[110]

Annex I to the Report of the Working Group contains a Summary of Trends prepared by the Co-Chairpersons.[111] The conclusions contained in the summary are in general broadly formulated without choosing between different views on the applicable legal regime. They reaffirm the central role of the General Assembly in addressing issues relating to the conservation and sustainable use of marine biological diversity in areas beyond the limits of national jurisdiction.[112] The LOS Convention is recognized as the legal framework within which all activities in the oceans and seas must be carried out.[113] The Summary of Trends recognizes that marine scientific research in the Area must be carried out for the benefit of mankind as a whole.[114] It might seem remarkable that this last reference is included, but this inclusion might be taken to imply that States probably have very different views on the implications of the 'benefit of mankind' principle in this context.

The conservation and sustainable use of marine living resources, as well as the Report of the Working Group, will be further considered during the 61st session of the UN General Assembly at the end of 2006.

[106] *Ibid.* A similar view was expressed at the sixteenth meeting of States Parties to the LOS Convention (Report of the sixteenth Meeting of States Parties, note 104 at pp. 11–12, para. 63).

[107] Report of the Ad Hoc Open-ended Informal Working Group, note 103 at p. 9, para. 30 and p. 19, para. 72.

[108] *Ibid.*, p. 9, para. 30; see also Report of the sixteenth Meeting of States Parties, note 104 at p. 17, para. 87.

[109] Report of the Ad Hoc Open-ended Informal Working Group, note 103 at p. 10, para. 31 and p. 19, para. 73.

[110] *Ibid.*, p. 19, para. 73.

[111] The summary notes that the trends are not exhaustive, are not intended to prejudice national positions and future discussion of the issues and may not necessarily reflect the positions of each and every delegation (Report of the Ad Hoc Open-ended Informal Working Group, note 103 at Annex I, para. 1).

[112] Decision VIII/24 on protected areas by the Conference of the Parties of the Convention on Biological Diversity (March 2006) also recognizes the role of the General Assembly in this respect (para. 34).

[113] Report of the Ad Hoc Open-ended Informal Working Group, note 103 at Annex I, para. 3.

[114] *Ibid.*, p. 23, para. 18.

Marine Protected Areas

The establishment of marine protected areas has been on the political agenda since the beginning of the 1990s. The international community has committed itself to establishing a representative network of marine protected areas by 2012.[115] In working towards the implementation of this commitment, States and international organizations are also looking at the establishment of marine protected areas in areas beyond the limits of national jurisdiction, including the Area.[116] As far as areas beyond the limits of national jurisdiction are concerned, most of the debate at the global level has taken place within the framework of the Convention on Biological Diversity and the General Assembly of the United Nations.

In areas under national jurisdiction, the coastal State is competent to regulate most ocean uses; this competence includes establishing marine protected areas.[117] In areas beyond the limits of national jurisdiction, it is not as clear in which actors the competence to establish marine protected areas is vested. For instance, the impact of fisheries on the marine environment might be addressed in regional fisheries management organizations, but the protection of the marine environment is also addressed by various global and regional bodies, and the Authority is the only organization that is competent to regulate activities in the Area.

A number of recent Decisions by the Parties to the Convention on Biological Diversity address marine protected areas in areas beyond the limits of national jurisdiction. These Decisions recognize the LOS Convention as the relevant legal framework for this issue and the central role of the General Assembly of the United Nations in addressing options for the establishment of marine

[115] Chapter 17 of Agenda 21 (UN doc. A/CONF. 151/26 Vols I–IV), adopted at the 1992 United Nations Conference on Environment and Development, held in Rio de Janeiro (the Rio Summit), called upon States to identify marine ecosystems exhibiting high levels of biodiversity and productivity and other critical habitat areas and to provide necessary limitations on use in these areas, through, *inter alia*, designation of protected areas (para. 17.85). The focus in this respect was, however, not on the deep seabed (see *ibid.*). As far as the impact of activities in areas beyond the limits of national jurisdiction is concerned, the focus of Agenda 21 is, to a major extent, on fisheries. The Plan of Implementation of the World Summit on Sustainable Development, adopted in Johannesburg in 2002, made the commitment found in paragraph 17.85 of Agenda 21 much more explicit, calling for the establishment of marine protected areas consistent with international law and based on scientific information, including representative networks, by 2012 (para. 32(c)).

[116] For a further discussion of the legal issues with regard to marine protected areas in areas beyond the limits of national jurisdiction see, *e.g.*, T. Scovazzi, "Marine Protected Areas on the High Seas: Some Legal and Policy Considerations," 19 (2004) IJMCL pp. 1–17; H. Thiel, "Approaches to the Establishment of Protected Areas on the High Seas," in A. Kirchner (ed.), *International Marine Environmental Law* (Kluwer Law International, The Hague, 2003), pp. 169–192.

[117] The major exception is shipping, but with regard to shipping it is generally recognized that the International Maritime Organization (IMO) is the competent organization and mechanisms exist that enable the coastal State and the organization to establish areas in which more stringent rules can be imposed on shipping.

protected areas in areas beyond the limits of national jurisdiction.[118] The work of the Convention on Biological Diversity, which earlier also addressed legal questions, at present mostly focuses on non-legal issues concerning the establishment of these marine protected areas.[119]

The General Assembly has addressed the issue of marine protected areas in areas beyond the limits of national jurisdiction in its recent Resolutions on the law of the sea. The Resolutions recognize that the protection of the marine environment requires the involvement of all relevant global and regional bodies.[120] It is also noted that existing treaties and other relevant instruments can be used, consistent with international law, and in particular with the LOS Convention.[121]

The Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity in areas beyond the limits of national jurisdiction, which was set up by General Assembly Resolution 59/24 and which met in February 2006, also considered the establishment of marine protected areas in areas beyond the limits of national jurisdiction. The Report of the Meeting of the Working Group observes that marine protected areas and temporal and spatial closures for fisheries management, consistent with international law and based on scientific information, were identified by most delegations as a key tool to improve integrated conservation and sustainable use of marine biological diversity in areas beyond the limits of national jurisdiction.[122] The meeting also considered the need for coordination between various bodies. The existing role of such bodies as the Food and Agriculture Organization (FAO), the IMO, the Convention on Biological Diversity and regional seas conventions was recognized.[123] It was also proposed that the General Assembly could assume a leading role in the identification of criteria for the establishment of marine protected areas, or that the Meeting of States Parties of the LOS Convention could be considered for this purpose.[124] During the 16th Meeting of States Parties, one delegation suggested a central role for the Authority in the protection and preservation of the marine environment.[125]

[118] See Decision VII/5, paras. 29–31 and Decision VIII/24, paras. 34–47.
[119] See also para. 42 of Decision VIII/42 of the Conference of the Parties to the Convention on Biological Diversity.
[120] See, *e.g.*, Resolution 58/240, note 102 at para. 52; Resolution 59/24, note 102 at para. 67.
[121] See, *e.g.*, Resolution 58/240, note 102 at para. 52; Resolution 59/24, note 102 at para. 67.
[122] Report of the Ad Hoc Open-ended Informal Working Group, note 103 at para. 59.
[123] *Ibid.*, para. 60. On the IMO, FAO and Regional Seas Conventions, see further below.
[124] *Ibid.* In view of the controversy over the mandate of the Meeting of States Parties (see, *e.g.*, 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), *Ocean Management in the 21st Century: Institutional Frameworks and Responses* (Leiden, Martinus Nijhoff Publishers: 2004), pp. 295–312 at pp. 302–312), this latter option does not seem to be viable.
[125] Report of the sixteenth Meeting of States Parties, note 104 at para. 63.

At the meeting of the Working Group, two approaches to managing marine protected areas were advanced. A number of delegations proposed a focus on multi-purpose marine protected areas as a key tool to manage biodiversity in areas beyond the limits of national jurisdiction. Such an approach could be realized by an implementing agreement under the LOS Convention that would create a new regulatory regime for the establishment and management of marine protected areas in areas beyond the limits of national jurisdiction.[126] Other delegations considered that the establishment of such protected areas should take place within the framework of existing regulatory regimes.[127] It was also observed that there should be a focus on the type of marine resources and the type of activity threatening them, and that there should be a strong causal link between the threats being addressed and the management measures being proposed.[128] The Summary of Trends prepared by the Co-Chairpersons of the Working Group observes that area-based management tools, such as marine protected areas, are widely accepted and that further elaboration of criteria for identification, establishment and management is required.[129] The Summary of Trends also refers to the requirement to assess the need for the development of an implementing agreement under the LOS Convention to address, *inter alia*, the establishment and regulation of multi-purpose marine protected areas on a scientific basis, as well as other related issues.[130]

The conservation and sustainable use of marine living resources, including the issue of marine protected areas, will be further considered during the 61st session of the United Nations General Assembly at the end of 2006.

The Work of the Authority[131]

The Authority has been assessing its role in relation to the management of biological diversity for a number of years. The main focus of the work of the Authority seems to have been on enhancing the understanding of deep-sea environments and the impact of activities in the Area, but the 2002 Report of the Secretary-General of the Authority demonstrates that uses of the Area raise questions concerning the mandate of the Authority. That Report notes the delicate relationship between Articles 143 and 256 of the Convention on marine scientific research in the Area and on the high seas, the relationship between Article 143 and commercial biotechnological development, and the regulatory

[126] Report of the Ad Hoc Open-ended Informal Working Group, note 103 at para. 61.
[127] *Ibid.*
[128] *Ibid.*, para. 62.
[129] *Ibid.*, Annex I, para. 10.
[130] *Ibid.*, Annex I, para. 11. See also above for an overview of relevant points from the Summary of Trends of a more general nature.
[131] Most of the work of the Authority is concerned with activities in the Area which are clearly covered by the regime contained in Part XI of the Convention. For the purposes of the present article there is no need to review this part of the work of the Authority (for further information in that respect see, *e.g.*, Lévy, note 36; M.W. Lodge, "Environmental Regulation of Deep Seabed Mining," in Kirchner, note 116 at pp. 49–59).

role of the Authority with regard to the protection and preservation of the marine environment.[132] Legal issues associated with biodiversity in the Area and environmental issues have been considered at the meetings of the Authority's Legal and Technical Commission since the Ninth Session in 2003. The reports of the meetings suggest that the Commission is careful not to go beyond its mandate.[133] That work has thus far not resulted in any specific follow-up.

The mandate of the Authority implies that it will have to be involved in the establishment of marine protected areas if the adverse impacts of activities in the Area have to be addressed. Article 145(b) of the LOS Convention requires the Authority to adopt, with respect to activities in the Area, appropriate rules, regulations and procedures for, *inter alia*, the prevention of damage to the flora and fauna of the marine environment. This wording would seem to be broad enough to allow the designation of areas to be closed to mining activities.[134] It has been suggested that the competence of the Authority in relation to activities in the Area places it in a position to take a leading role in the establishment of marine protected areas in areas beyond the limits of national jurisdiction.[135] A central role for the Authority would also facilitate an integrated approach with regard to the management of the Area.[136] Finally, the Authority, following the adoption of the 1994 Agreement, is organized in a way that might make an extension of its mandate acceptable also to developed States.[137] At the same time, the Authority certainly can still be perceived as representing the international community's interest in the Area.

[132] Report of the Secretary-General of the International Seabed Authority, note 66 at paras 39 and 52–53.

[133] See Report of the Chairman of the Legal and Technical Commission on the work of the Commission during the ninth session (Doc. ISBA/9/C/4 of 1 August 2003), paras. 15–17; Report of the Chairman of the Legal and Technical Commission on the work of the Commission during the tenth session (Doc. ISBA/10/C/4 of 28 May 2004), paras. 20–21; Report of the Chairman of the Legal and Technical Commission on the work of the Commission during the eleventh session (Doc. ISBA/11/C/8 of 19 August 2005), para. 31; Report of the Chairman of the Legal and Technical Commission (Doc. ISBA/12/C/8 of 11 August 2006), paras. 18–19. The functions of the Legal and Technical Committee are set out in Article 165 of the LOS Convention and sections 1(4) and 6(7) of the Annex to the 1994 Agreement. See also above on the powers and functions of the Authority.

[134] See also LOS Convention, Article 162(2)(x).

[135] See S. Kaye, "Implementing high seas biodiversity conservation: global political considerations," 28 (2004) *Marine Policy*, pp. 221–226 at p. 225; Scovazzi, note 25 at p. 396.

[136] Study of the relationship between the Convention on Biological Diversity and the United Nations Convention on the Law of the Sea with regard to the conservation and sustainable use of genetic resources on the deep seabed, note 46 at para. 122. The fact that the Authority primarily is intended to develop the resources of the Area may make it less well placed to address environmental concerns than, for instance, the Convention on Biological Diversity. This issue would require consideration in any future regime to protect the marine environment in areas beyond the limits of national jurisdiction.

[137] As Lévy observes:

> Un examen du processus de prise de décision au sein de l'Autorité le révèle particulièrement favorable aux grands pays industrialisés. Ces Etats, s'ils se trouvent obligés d'ac-

The IMO, the FAO and the Regional Seas Conventions

The IMO, FAO and regional seas conventions on the protection of the marine environment all have a (potential) role in the designation of marine protected areas in areas beyond the limits of national jurisdiction. The competence of each of these institutions in large part determines whether their present or future work raises questions concerning the relationship between the regimes of Parts VII and XI of the Convention.

Within the framework of the IMO, a number of instruments provide for the designation of areas in which restrictions apply to navigation. Those instruments in general can also be applied to the high seas. Navigation clearly is a freedom of the high seas and the competence of the IMO to regulate this matter is uncontroversial.[138] Not surprisingly, there has not been any discussion in the IMO touching upon the regime of the Area under the LOS Convention.

The issue of marine protected areas has received limited attention within the framework of FAO thus far. During its 2005 session, the Committee on Fisheries recommended that the FAO develop technical guidelines on the design and testing of marine protected areas. Some members requested guidelines specifically on the use of marine protected areas on the high seas.[139] It is to be expected that the role of the FAO in any case will remain mostly facilitative. The designation of areas that have to be protected from the adverse impact of (specific) fishing practices would in principle seem to fall within the competence of the regional fisheries management organization or arrangement concerned. The regulation by those organizations and arrangements of fishing activities that have an adverse impact on the marine environment of the Area in general would not seem to be controversial from a legal point of view. In light of the debates within the framework of the General Assembly, regulatory actions that would imply that the living resources of the Area fall under the regulatory competence of those organizations or arrangements might be controversial.[140]

Most regional seas conventions on the protection of the marine environment also provide for the establishment of marine protected areas. However, at present most of those Conventions are only applicable to seabed areas within the limits of national jurisdiction of the contracting parties and do not have the competence to address the establishment of marine protected areas in the

cont.

cepter un certain contrôle d'une institution internationale, auront peut-être intérêt à utiliser une institution existante dont le mode de fonctionnement leur est avantageux (Lévy, note 36 at p. 122).

[138] For a discussion see V. Frank, *The European Community and Marine Environmental Protection in the International Law of the Sea: Implementing Global Obligations at the Regional Level* (Martinus Nijhoff Publishers, Leiden, forthcoming), chapter 8.6.

[139] Report of the twenty-sixth session of the Committee on Fisheries, Rome, 7–11 March 2005 (FAO Fisheries Report No. 780), p. 17, para. 103.

[140] See also the discussion of regional fisheries management organizations and arrangements below.

Area. A notable exception is the OSPAR Convention.[141] The OSPAR Convention is also applicable to large parts of the Northeast Atlantic Ocean that are beyond the limits of national jurisdiction of the Contracting Parties. The Contracting Parties have agreed to establish a network of protected areas, including in areas beyond the limits of national jurisdiction. The work on this issue within the framework of the OSPAR Convention suggests that the institutions set up under the Convention will limit themselves, as far as areas beyond the limits of national jurisdiction are concerned, at least at present, to identifying the threats to marine biodiversity, and will work through the global and regional organizations with regulatory competence for specific threats to take actions to protect such areas.[142]

Regional Fisheries Management Organizations and Arrangements[143]

The scope of application of the constitutive instruments of regional fisheries management organizations and arrangements is relevant to the question of the relation between the regimes contained in Parts VII and XI of the Convention as far as marine living resources are concerned.[144] Some of those instruments refer to sedentary species or to all living resources. The language that is employed in the former case varies, but in a number of instances it is clear that the scope of application of the treaty includes sedentary species in areas beyond the limits of national jurisdiction.[145] Under the LOS Convention,

[141] Convention for the Protection of the Marine Environment of the North-East Atlantic of 22 September 1992 (1993) 32 *International Legal Materials* p. 1068.

[142] See especially *Briefing on OSPAR's Work on the Protection of the Marine Environment of the High Seas* (Summary Record OSPAR 2006, PSPAR 06/23/1-E, Annex 6).

[143] I would like to thank Erik Molenaar for drawing my attention to the issue discussed in this section.

[144] Some organizations or arrangements have adopted measures to protect the marine environment of the Area from adverse impacts of fishing activities (see, *e.g.*, Conservation Measures 06/06: On the Management of Vulnerable Deep Water Habitats and Ecosystems in the SEAFO Convention Area (available at <www.seafo.org/Cons%20&%20Mngt%20Measures/2006%20conservation%20measures/conservation%20measure%2006_06.pdf> (last accessed 26 October 2006)). Such actions are in accordance with the obligations of States to protect the marine environment in the exercise of high seas freedoms and in principle do not raise a question of the relationship between Parts VII and XI of the LOS Convention. The same observation applies to the 2004 and 2005 Resolutions on fisheries adopted by the UN General Assembly. The 2004 Resolution calls upon States to take action to deal with practices that have adverse impacts on vulnerable marine ecosystems located beyond the limits of national jurisdiction (Resolution 59/25, note 102 at paras. 66 and 67; see also Resolution 60/31 of 29 November 2005 (Doc. A/RES/60/31 of 10 March 2006), paras. 73–74) and the Report of the Secretary-General. Information on state practice to address the adverse impacts of fishing on vulnerable marine ecosystems is found in: "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" (Doc. A/61/154 of 14 July 2006).

[145] This concerns, *e.g.*, the Convention establishing the South East Atlantic Fisheries Organisation, the new constitutive instrument of the Northwest Atlantic Fisheries Organization (NAFO) currently being negotiated, the recently adopted South Indian Ocean Fisheries Agreement, and the draft agreement to set up the South Pacific Regional Fisheries

sedentary species are only defined in relation to the continental shelf. A similar provision is not included in Part XI of the Convention concerning the Area. However, some living resources of the Area would certainly seem to fall under the definition of sedentary species as employed by the constitutive instruments of the organizations involved.[146] The Convention on the Conservation of Antarctic Marine Living Resources[147] is an example of a Convention that is applicable to the seabed beyond areas of national jurisdiction and is applicable to all marine living resources.

These instruments thus provide support for the view that the living resources of the Area can be managed under the same general regime as other living resources of the high seas. At the same time, it should be noted that the references to sedentary species in areas beyond the limits of national jurisdiction are mainly included in recently adopted instruments or instruments that are still being negotiated. Moreover, fishing activities related to those resources seem to be quite limited. In the light of the debates within the framework of the UN General Assembly touching upon the status of the living resources of the Area, the approach under these instruments may still give rise to controversy. At the same time, it can be noted that regional fisheries management organizations and arrangements in many instances recognize the special requirements of developing States. There arguably is common ground between that concept and the principles contained in Part XI of the LOS Convention.

Conclusions

The interaction between the regime of the high seas and the regime of the Area is complex and controversial with regard to certain ocean uses. For other uses, such as navigation, the laying of submarine cables and pipelines, or activities in the Area, this is not the case. Much of the controversy results from the fact that the certain provisions of Part VII and XI of the LOS Convention formulate principles of general application, and the implications for specific uses of the ocean are not always apparent. Nevertheless, the Convention provides a framework to assess the relationship between the two regimes. The key provision in this respect is Article 87. This Article provides that freedom of the high seas must be exercised under the conditions laid down by the Convention and other rules of international law. This Article implies that Part XI is part of the framework for assessing the scope of high seas freedoms in the Area.[148]

cont.

Management Organisation. The NAFO Convention as presently in force excludes sedentary species from its scope of application (Convention on Future Multilateral Cooperation in the Northwest Atlantic Fisheries of 24 October 1978 (1135 UNTS 369), Article I(4)).

[146] See the discussion of living resources of the Area above.

[147] Adopted on 20 May 1980 (1329 UNTS 47).

[148] This view is further confirmed by Article 141 of the LOS Convention (see further above).

The LOS Convention seems to make a clear-cut distinction between the Area—defined as the seabed and ocean floor and subsoil thereof beyond the limits of national jurisdiction—and the superjacent waters. Applying the distinction in practice will not always be easy. An analysis of the Convention suggests that certain features that might not be considered to be part of the seabed, if a restrictive view were to be taken, are part of the seabed as understood in the Convention, and as such are also part of the Area. This makes the regime of Part XI applicable to such features.[149]

Another controversial issue is whether the living resources of the Area are the common heritage of mankind. An analysis of the relevant provisions of Part XI points to an affirmative conclusion. At the same time, it should be acknowledged that States have taken divergent positions on this issue in international fora, and there is a certain amount of State practice that indicates that those resources are considered to fall under the regime of Part VII of the Convention. Although this state practice does not seem to amount to the type of subsequent practice which establishes an agreement between the Parties to the Convention, its existence is an argument that is bound to carry some weight if this matter were to be subject to further negotiations.

The conclusion that the living resources of the Area fall under the regime of Part XI has important consequences for the regime applicable to those resources. Although Part XI does not set out a regulatory regime for those resources, the principles governing the Area contained in section 2 of Part XI are applicable to their management and use.[150] These principles (e.g., non-appropriation and the requirement that marine scientific research in the Area has to be carried out for the benefit of mankind as a whole) do not prescribe a specific regulatory regime, and the regime of Part XI for mineral resources is not an appropriate model for other uses of the Area. Nonetheless, a regulatory regime will have to be based on the principles of section 2 of Part XI.[151] At the same time, those principles should not be implemented in such a way that they have the effect of excluding a specific use of the Area. In the absence of a regulatory regime, States are obliged to act in accordance with the principles applicable to the Area.

The analysis of the Convention suggests that the 'common heritage' principle is relevant to all uses of the Area that concern the exploration and exploitation of the Area. On the other hand, uses that do not involve the exploration and exploitation of the Area, such as the laying of submarine

[149] A similar definitional issue does not exist with regard to the high seas. High seas freedoms can be exercised in the Area and the superjacent waters. If a different regime for these two marine areas is developed, they will have to be distinguished, which is a different exercise than defining the high seas.

[150] See also L.D.M. Nelson, "Reflections on the 1982 Convention on the Law of the Sea," in D. Freestone, R. Barnes and D. Ong (eds), *The Law of the Sea; Progress and Prospects* (Oxford University Press, Oxford, 2006), pp. 28–39 at p. 34.

[151] See also above the discussion of Article 311 of the LOS Convention.

cables and pipelines, or navigation, can be exercised as high seas freedoms under the conditions set out by the Convention and international law.[152]

The powers and functions of the Authority are limited to regulating activities in the Area and other directly related activities. To the extent that the Convention does not confer powers and functions on the Authority, States remain competent to act, individually or jointly, with regard to the Area in accordance with their rights and obligations under the Convention, including its Part XI. Generally, specific uses related to the Area are discussed in the international body that has a general mandate to deal with the issue concerned. An example is the negotiation of the UCH Convention within the framework of UNESCO. This example also indicates that the elaboration of specific provisions of Part XI—in this case, Article 149—in such a framework may lead to at least a different balancing of the factors that play a role in regulating an issue than that apparently existing under the LOS Convention.

The discussions on the sustainable use and conservation of living resources beyond the limits of national jurisdiction indicate that cross-sectoral issues in general will be discussed within the framework of the General Assembly of the United Nations, with the involvement of other bodies as appropriate.[153] This is in line with the role the General Assembly has generally played with regard to the law of the sea and oceans. Specialized agencies, such as the IMO and the FAO and other global and regional bodies dealing with specific issues, in general have refrained from action that would prejudice this role.

The establishment of protected areas in the Area requires consideration of what mechanisms should be put in place to identify, designate and manage them. As is also evident from the current international debate, various approaches are possible. An approach that would allow the integrated management of protected areas would probably be the most effective from an environmental perspective. That approach probably would require assigning a coordinating role to an international institution.[154] Another approach would be to focus on existing regulatory regimes without adding a new regulatory layer to provide for coordination. Most of those regimes address a specific issue and are well placed to address activities within their scope of competence requiring regulation in the form of issue-based measures.

The legitimacy of a process for identifying, designating and managing marine protected areas will be an important issue under any approach to this topic. The effective protection of an area may require significant restrictions to be placed on activities there. Those restrictions may affect the rights of all States to use the Area and the superjacent water column. The legitimacy of

[152] *Cf. Virginia Commentary*, note 32, Vol. III at p. 34.

[153] As discussed above, the debate on legal issues initially was taken up within the framework of the Convention on Biological Diversity, but that is no longer the case.

[154] As was discussed above, although the Authority would not seem to be a likely candidate to assume this role, there are a number of arguments that suggest that assigning some role to the Authority in this respect might be a feasible solution.

restrictions is particularly problematical where there is no regulatory regime allowing the effective participation by the interested States in a specific activity.

The discussions on the sustainable use and conservation of living resources beyond the limits of national jurisdiction reveal continued differences over the scope of application and implications of the regime in Part XI. Thus far no choices have been made one way or the other. The development of a regulatory regime could bring the controversies over the legal regime to the fore. However, previous negotiations on the law of the sea suggest that it might well be possible to accommodate the various interests involved by using, for instance, ambiguous language, or by not addressing certain questions on the principles involved. The provisions of the LOS Convention on marine scientific research and environmental protection would seem to offer sufficient flexibility to frame more detailed rules in such a way that they do not support a specific view on the status of the living resources of the Area. Cooperation is an important aspect of marine scientific research under the general regime of Part XIII and the specific provisions of Part XI, and the regime for the protection and preservation of the marine environment is applicable to the whole marine environment. The outcome of the present round of deliberations on the LOS Convention may yet provide another example of the flexibility the Convention offers and the strong commitment of most of the international community to preserve this overarching legal framework. At the same time, the discussion on the scope of application of certain regional fisheries management organizations and arrangements suggests that the need to address specific issues carries the risk of overtaking the debate at the global level.