

# Zonal and Integrated Management Approaches to Ocean Governance: Reflections on a Dual Approach in International Law of the Sea

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## ABSTRACT

Traditionally, international law of the sea has been based on the zonal approach. The traditional approach purports in essence to divide the ocean into several jurisdictional spaces on the basis of two opposing principles, namely, the principle of sovereignty and the principle of freedom. It is now apparent, however, that the traditional zonal approach is insufficient to resolve the problems encountered in the management of ocean space. Hence, the need for a new integrated management approach is increasingly emphasised in international instruments as well as in the opinions of writers. Nevertheless, it appears that the concept of the integrated management approach remains obscure in international law. Thus, this study purports to examine this concept at three levels: the ecological, normative and implementation levels. Finally, on the basis of these considerations, this study will present a perspective that the international law of the sea should be considered as a dialectic legal system between the zonal approach and the integrated management approach.

## Introduction

The ocean is one unity in a physical sense. From a legal viewpoint, however, the ocean has been divided by states. It may be said that the history of the law of the sea is that of the division of the ocean. Indeed, contemporary international law of the sea divides the ocean into multiple jurisdictional spaces, such as internal waters, territorial seas, contiguous zone, EEZ, archipelagic waters, continental shelf, high seas and the deep sea-bed which is the common heritage of mankind. In principle, the law of the sea regulates human activities in

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the ocean according to the legal category of ocean spaces. This is sometimes referred to as the sector or zonal approach.

At present, however, it is becoming apparent that the traditional zonal approach is insufficient to resolve the problems relating to ocean management. Consequently, the need for a holistic approach is increasingly stressed in a variety of international instruments as well as in the opinions of writers. In fact, recent international documents and legal instruments frequently refer to the notion of “integrated ocean management” or “integrated management approach”. Furthermore, the emergence of the “integrated management approach” may lead to a new perspective relating to the law, that is to say, *the law of the sea as a dialectic legal system between the zonal and the integrated management approaches*. Considering that the law of the sea has been essentially based on the zonal approach, the dialectic viewpoints may concern the structural change of the law. Thus, it is necessary to examine the concept of the integrated management approach in international law of the sea.

This paper is divided into five parts. Following the introduction, the traditional approach in law of the sea and its problems are examined in part two. Part three will examine opinions of writers as well as international documents concerning an integrated management approach. In part four, the concept of the integrated management approach will be analysed at three levels, that is to say, ecological, normative and implementation levels. On the basis of the above considerations, finally, part five will present a perspective that the law of the sea should be considered from viewpoints of the zonal and integrated management approaches at the same time. As the integrated management approach is a new concept in international law, it may be too early to present a sophisticated legal framework at this stage. Thus, the objective of this study is more modest and its aim is to make a first step toward clarifying the concept of the integrated management approach to ocean governance in international law.

## **Traditional Approach of Law of the Sea and Its Problems**

### **The Zonal Approach**

Traditionally, law of the sea has been based on the zonal approach. This approach is deeply rooted in the history of the law. That history has been dominated by two principles, that is, the principle of sovereignty and the principle of freedom.<sup>1</sup> The principle of sovereignty promoted the extension of coastal states’ jurisdiction, while the principle of freedom ensured the non-appropriation of the ocean as well as the freedom of use. On the basis of two opposing principles, the ocean has been largely divided into two categories.<sup>2</sup>

<sup>1</sup> D.P. O’Connell, *The International Law of the Sea* (Oxford, Clarendon Press, 1982), vol. I, p. 1; T. Scovazzi, “The Evolution of International Law of the Sea: New Issues, New Challenges”, (2000) 286 RCADI p. 54.

<sup>2</sup> An analysis on the history of law of the sea in detail is beyond the scope of this paper. On

The first category is marine space adjacent to coasts, which is subject to territorial sovereignty. The second type concerns marine space beyond a state's sovereignty, where the principle of freedom is applied. The former crystallised into territorial seas and the latter was embodied in the high seas. It is safe to assert that the dichotomy of the ocean was clearly confirmed at the 1930 Hague Conference for the Codification of International Law.<sup>3</sup>

The division of the ocean was further promoted, in particular, after the Second World War.<sup>4</sup> In this regard, the Truman Proclamations regarding the continental shelf as well as regarding fisheries zones of 1945 were landmarks promoting the division of the ocean by coastal states. In fact, since the Truman Proclamations, coastal states have extended their jurisdiction over the sea-bed beyond their territorial seas as well as over superjacent waters of the sea-bed.<sup>5</sup> The state practice thus produced new jurisdictional zones in the ocean. In this regard, Article 86 of the 1982 UN Convention on the Law of the Sea (hereafter the LOSC) states that:

The provisions of this Part [VII] 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. This article does not entail any abridgement of the freedoms enjoyed by all States in the exclusive economic zone in accordance with article 58.

The above provision shows that the LOSC distinguishes five basic categories of marine spaces: internal waters, territorial seas, archipelagic waters, the exclusive economic zone and the high seas. Moreover, the LOSC establishes other regimes concerning marine spaces such as the contiguous zone (Article 33),<sup>6</sup> the continental shelf (Part VI)<sup>7</sup> and the Area (Part XI). Thus, the ocean was divided into multiple maritime spaces under the LOSC.

*cont.*

this issue, see in particular, Scovazzi, *ibid.*, pp. 55–87; O'Connell, *ibid.*, pp. 1–28; L. Juda, *International Law and Ocean Use Management: The Evolution of Ocean Governance* (London and New York, Routledge, 1996), pp. 8–92; R.P. Anand, *Origin and Development of the Law of the Sea: History of International Law Revisited* (The Hague, Nijhoff, 1983).

<sup>3</sup> In fact, Bases of Discussion No. 1 confirmed sovereignty over the territorial seas, by stating that: "A State possesses sovereignty over a belt of sea round its coasts; this belt constitutes its territorial waters." Reproduced in S. Rosenne (ed.), *League of Nations Conference for the Codification of International Law, 1930* (New York, Oceana, 1975), vol. II, p. 235. See also G. Gidel, *Le Droit International Public de la Mer* (Paris, Librairie Edouard Douchemin, 1981), vol. III, p. 169; O'Connell, note 1 above, pp. 75–80.

<sup>4</sup> Cf. W. Friedmann, "Selden Redivivus—Toward a Partition of the Seas?", (1971) 65 AJIL 757–770.

<sup>5</sup> Juda, note 2 above, pp. 113–116.

<sup>6</sup> A contiguous zone is a part of the high seas if a coastal state does not claim EEZ. When a coastal state establishes an EEZ, a contiguous zone constitutes a part of the EEZ.

<sup>7</sup> Should a coastal state not establish an EEZ, the adjacent waters of the continental shelf are the high seas. When a coastal state establishes an EEZ, the continental shelf constitutes the sea-bed part of the EEZ since the concept of EEZ includes sea-bed as well as superjacent waters and airspace (LOSC, Arts. 56(1) and 58(1)).

## Problems With the Traditional Law of the Sea

It is now apparent, however, that the traditional zonal approach is insufficient to resolve the problems encountered in the management of ocean space. The first problem concerns the divergence of the law and nature. Under the zonal approach, marine spaces in the law of the sea are in principle defined *spatially*, based on distance from the coast, irrespective of the nature of the ocean and the natural resources within it.<sup>8</sup> By using the distance criterion, the ecological interactions between marine species as well as the ecological conditions of the physical surroundings are ignored. Science shows that, frequently, maritime delimitation lines do not respect the uniqueness of marine ecosystems.<sup>9</sup> Indeed, due to their nature, several species, such as straddling and highly migratory species, do not respect artificial boundaries. Hence, a clear-cut distinction between marine spaces under the coastal state's jurisdiction and marine spaces beyond such a jurisdiction is not always suitable to the management of those species.<sup>10</sup> As the ocean is a dynamic natural system, it is logical that the law of the sea must take the dynamics of nature into account. Nevertheless, the law of the sea based on the zonal approach has not yet sufficiently considered the fluid and dynamic nature of the ocean as well as the intricate relationship of marine ecosystems and the environments that support them.

Secondly, law of the sea has traditionally adopted species-specific and sectoral approaches, thereby ignoring interrelationships between marine issues. It is important to recognise, however, that as reflected in the Preamble of the 1982 LOSC, the problems pertaining to ocean space are closely interrelated. For instance, protection of the marine environment is essential for the effective management of marine resources. Furthermore, safety of navigation and protection of the marine environment are linked since measures for maritime traffic security usually prevent environmental hazards as well. Thus, it is becoming apparent that there is the need to focus on the interplay between marine issues from holistic viewpoints.

Thirdly, it should be noted that the two traditional principles supporting the zonal approach are currently in need of reconsideration. With respect to living

<sup>8</sup> See LOSC, Arts. 3, 33, 57 and 76(1). Yet, internal waters and archipelagic waters constitute exceptions. The former are located on the landward side of the baseline of the territorial sea (LOSC, Art. 8), and the latter consist of the waters enclosed in the archipelagic baselines drawn in accordance with Art. 47 (LOSC, Art. 49). Thus, the two institutions do not rely on the spatial distance from the baseline. Furthermore, the high seas are defined residually in LOSC, Art. 86.

<sup>9</sup> L. Juda, "Considerations in Developing a Functional Approach to the Governance of Large Marine Ecosystems", (1999) 30 ODIL 93-94.

<sup>10</sup> Scovazzi, note 1 above, p. 131; D. Freestone, "The Conservation of Marine Ecosystems under International Law" in C. Redgwell and M. Bowman (eds.), *International Law and the Conservation of Biological Diversity* (The Hague, Kluwer, 1996), pp. 94 and 102; E.A. Kirk, "Maritime Zones and the Ecosystem Approach: A Mismatch?", (1999) 8 *Review of European Community and International Environmental Law* pp. 68-69.

resources in particular, the freedom of the seas is likely to lose its validity. Indeed, as many writers have suggested, the overexploitation and the exhaustion of fisheries are critical problems. Accordingly, it is arguable that the *laissez-faire* system of freedom is no longer valid for the management of living resources in the high seas.<sup>11</sup> In this regard, it should be recalled that, as early as 1974, the ICJ in the *Fisheries Jurisdiction* case has already stated that:

It is one of the advances in maritime international law, resulting from the intensification of fishing, that the former *laissez-faire* treatment of the living resources of the sea in the high seas has been replaced by a recognition of a duty to have due regard to the rights of other States and *the need of conservation for the benefit of all* (emphasis added).<sup>12</sup>

Regarding the principle of sovereignty, an attempt to extend a national jurisdiction toward the high seas has not completely ceased.<sup>13</sup> Nevertheless, it appears doubtful that the extension of coastal state jurisdiction could resolve problems relating to marine pollution and the conservation of living resources. Such an extension could produce international disputes threatening the integrity of the LOSC. The disputes relating to the *Estai* between Canada and Spain illustrate this problem.<sup>14</sup> Furthermore, in reality, it would be difficult for coastal states to enforce their regulations even thousands of miles from their

<sup>11</sup> Catherine Floit, "Reconsidering Freedom of the High Seas: Protection of Living Marine Resources on the High Seas" in Jon M. Van Dyke, Durwood Zaelke and Grand Hewison (eds.), *Freedom for the Seas in the 21st Century: Ocean Governance and Environmental Harmony* (Washington, DC, Island Press, 1993), p. 310 ff. See also R.P. Anand, "Changing Concepts of Freedom of the Seas: A Historical Perspective" in *ibid.*, pp. 72–86.

<sup>12</sup> [1974] ICJ Rep 31, para. 72 of the judgment between the United Kingdom and Iceland and at 200, para. 64 of the judgment between the Federal Republic of Germany and Iceland.

<sup>13</sup> Some states, such as Chile, Argentina and Canada, have attempted to extend their jurisdiction beyond their EEZ. Francisco Orrego Vicuña argued that future extensions of coastal state authority cannot be ruled out if international arrangements fail. F.O. Vicuña, "The International Law of High Seas Fisheries: From Freedom of Fishing to Sustainable Use" in Olav Schram Stokke (ed.), *Governing High Seas Fisheries: The Interplay of Global and Regional Regimes* (Oxford, Oxford University Press, 2001), p. 45. See also by the same author, *The Changing International Law of High Seas Fisheries* (Cambridge, Cambridge University Press, 1999), pp. 107–118. Nevertheless, the policy of those states invited many criticisms by academics. See, for instance, Scovazzi, note 1 above, pp. 133–137; Jane Gilliland Dalton, "The Chilean Mar Presencial: A Harmless Concept or a Dangerous Precedent?", (1993) 8 *IJMCL* 397–418; C.C. Joyner and P.N. de Cola, "Chile's Presential Sea Proposal: Implications for Straddling Stocks and the International Law of Fisheries", (1993) 24 *ODIL* 99–121; Bernard Labat, "Le Concept Chilien de 'Mer Presencielle' et ses Conséquences sur le Régime de la Pêche dans la Partie de la Haute Mer Adjacente à la Limite des 200 Milles Marins", (1997) 2 *Annuaire du Droit de la Mer* 29–52.

<sup>14</sup> With respect to the analysis on this dispute, see Louise de la Fayette, "The *Fisheries Jurisdiction* Case (*Spain v Canada*), Judgment on Jurisdiction of 4 December 1998", (1999) 48 *ICLQ* 664–672; P.A. Curran and R.J. Long, "Fishery Law, Unilateral Enforcement in International Waters: the Case of the 'Estai'", (1996) 5 *Irish Journal of European Law* 123–163.

coasts.<sup>15</sup> In summary, it is necessary to review the validity of traditional principles in the law of the sea. It is against this background that a new approach of ocean governance is required.

### **Quest for an Integrated Management Approach in the Opinions of Writers as well as in International Instruments**

Argument by José León Suárez

The problems with the zonal approach are not unknown. Some writers have already stressed the need for a holistic approach in ocean management. On this issue, José León Suárez submitted a report on the exploitation of the products of the sea before the Experts Committee for the Progressive Codification of International Law in 1927. In this report, Suárez observed that the treaties dealing with the subject applied to certain species had not always taken the point of greatest importance to humanity and the biológico-economic aspect into account.<sup>16</sup> Thus, Suárez stressed the need for a new treaty on the basis of the biological characteristics. In his view:

And as, if we consider the life of all the species in the animal kingdom, biological solidarity is even closer among the denizens of the ocean than among land animals, the disappearance of certain species would destroy the balance in the struggle for existence and would also bring about the extinction of other species . . . The majority of aquatic animals are essentially migratory, and it is this characteristic which creates the biológico-geographical solidarity of species, which should find its counterpart in a legal solidarity in the sphere of international law in which we are working.<sup>17</sup>

It is important to note that José León Suárez pointed to the parallelism between “biológico-geographical solidarity” and “legal solidarity”. Suárez then suggested that marine living resources, and whales in particular, should be considered as part of the heritage of mankind. In his words: “The riches of the sea, and especially the immense wealth of the Antarctic region, are the patrimony of the whole human race.”<sup>18</sup>

Thus Suárez proposed the establishment of a reserved zone in the high seas on the basis of what was known already or may be discovered with regard to the habitat and migration of whales. It is interesting to note that, in 1927, he had already presented a similar concept to the common heritage of mankind.<sup>19</sup>

<sup>15</sup> R. Churchill, “Legal Uncertainties in International High Seas Fisheries Management”, (1998) 37 *Fisheries Research* p. 236.

<sup>16</sup> S. Rosenne (ed.), *League of Nations, Committee of Experts for the Progressive Codification of International Law [1925–1928]* (Dobbs Ferry, New York, Oceana Publications, 1972), vol. 2, p. 151.

<sup>17</sup> *Ibid.*, p. 147.

<sup>18</sup> *Ibid.*, p. 149.

<sup>19</sup> Scovazzi stated that Suárez could be considered as an antecedent for the concept of the common heritage of mankind. Scovazzi, note 1 above, p. 93 and p. 118.

## Concept of “*domaine public international*”

### *Argument by George Scelle*

Even after the establishment of the zonal approach, some writers did not renounce the quest for a holistic approach. In this regard, one may note with interest that George Scelle presented another perspective on the law of the sea, which was totally different from the zonal approach. Scelle regarded the ocean as a whole as part of the “*domaine public international*”.<sup>20</sup> According to Scelle, all organised societies need “*domaine public*”. With respect to such a “*domain public*”,<sup>21</sup> private appropriation shall be limited for common usage or for public services. Thus, certain goods and spaces are to be classified into the rubric of “*domaine public*” because of the necessity of the usage for all (i.e. *nécessité sociale*). States have such a “*domaine public*”. Similarly, international law could also classify certain goods or spaces into the category of “*domaine public international*”. The ocean, including both territorial and high seas, is an example of the “*domaine public international*”.<sup>22</sup> In this regard, Scelle stressed the unity of the ocean by saying that:

It is impossible to find a natural limit between territorial waters and the high seas as both territorial waters and the high seas necessarily form part of the ‘*domaine public international*’, since if access to territorial seas were not free, no navigation would be possible in the sea. There is no navigation without stops, refuges and supplies, and, consequently, there is no international commerce without the unity of the sea. It remains or should remain obvious that the concept of the territorial sea is a legal *fiction* at best: complementary proceeding to the use of the high seas.<sup>23</sup>

<sup>20</sup> *Dictionnaire de la Terminologie du Droit International* gave two definitions on the “*domaine public international*”. According to the first definition, which was based on Scelle’s view, “*domaine public international*” is the “*expression employée par certains auteurs pour désigner un espace qui ne relève de la souveraineté territoriale d’aucun Etat et est ouvert à l’utilisation par les divers membres de la Communauté internationale, selon des règles de droit international*”. Yet, as will be seen in the text, Scelle considered that spaces under territorial sovereignty could be also classified into the “*domaine public international*”. In accordance with the second and broad definition, “*Le domaine public international comprend les biens dont l’usage ou la jouissance appartient à tous les peuples ou qui sont affectés à un service public international tels les océans, les mers libres, les palais de la Société des nations, de la Commission européenne du Danube, etc.*” Paul Négulesco took this view. *Dictionnaire de la Terminologie du Droit International, publié sous la direction de J. Basdevant* (Sirey, 1960), p. 220.

<sup>21</sup> In France, the term “*domaine public*” is defined, for instance, as “*ceux des biens appartenant à l’Etat ou à une autre collectivité territoriale, qui ne sont pas susceptibles d’appropriation privée en raison de leur nature ou de la destination qui leur est donnée, c’est à dire pratiquement tous les biens affectés à l’usage du public ou à un service public*”. Mme S. Cornit (ed.), *Dictionnaire de Droit* (Paris, Dalloz, 2nd ed., 1966), vol. I, pp. 600–601. Yet, the concept of “*domaine public international*” in international law relates, in essence, solely to spaces. Although Scelle referred to “*biens*”, his examples concerned only spaces. On this point, “*domaine public*” in French law and “*domaine public international*” in international law should be distinguished.

<sup>22</sup> G. Scelle, *Manuel Élémentaire de Droit International Public (avec les textes essentiels)* (Paris, Les Editions Domat-Montchrestien, 1943), p. 276.

<sup>23</sup> Our translation. The original phrase is: “*Il est impossible de trouver une limite naturelle*

Thus, in Scelle's view, territorial seas are also part of the "*domaine public international*". Similarly, Scelle criticised the concept of the continental shelf on the ground that it would be unrealistic to deal separately with the continental shelf and the superjacent waters.<sup>24</sup> In short, it may be said that the focus of Scelle's theory is the unity of the ocean as well as its common usage for all. Needless to say, Scelle knew that the territorial sea was part of the territory of the coastal state in positive international law. Nevertheless, Scelle criticised this rule since it was contrary to the unity of the ocean. Hence Scelle was, as *lex ferenda*, supportive of the theory of servitude presented by de La Pradelle.<sup>25</sup> In Scelle's view, the coastal state exercises its jurisdiction as an organ of the international community in accordance with the "*dédoulement fonctionnel*".<sup>26</sup>

Experience has shown, however, that Scelle's view has not been supported by state practice. One explanation may be that the exclusive rights to marine natural resources were highly important to the coastal state, and were to become increasingly important. In reality, the "*obsession du territoire*" of the coastal state was so strong that his theory could not be supported by many states extending their jurisdiction toward the high seas.

*Arguments by Ruzié, Bastid and Nguyen Quoc Dinh*

Later, however, the theory of "*domaine public international*" was to be advanced by other French writers.<sup>27</sup> In this respect, Ruzié defined the "*domain public international*" as:

*entre les eaux territoriales et la Haute Mer et les unes et les autres font nécessairement partie du domaine public international, car si l'accès de la mer territoriale n'était pas libre, il n'y aurait aucune navigation possible sur la mer elle-même. Il n'y a pas de navigation sans escales, refuges et ravitaillement, ni par conséquent de commerce international, sans unicité de la mer. Mais il reste, ou devrait rester, évident que la notion de mer territoriale est une fiction juridique, mieux: un procédé complémentaire de l'utilisation de la Haute Mer.*" G. Scelle, "Plateau Continental et Droit International", (1955) 63 RGDIP p. 52. See also, Scelle, note 22 above, p. 279.

<sup>24</sup> Scelle, RGDIP, note 23 above, p. 18.

<sup>25</sup> Scelle, note 22 above, pp. 319–320. For the servitude theory in the territorial sea, see A. Geouffre de La Pradelle, "Le Droit de l'État sur la Mer Territoriale", (1898) 5 RGDIP 264–284 and 309–347.

<sup>26</sup> In the context of law of the sea, Scelle often referred to this theory. See, note 22 above, pp. 283, 318, 334, 336. With respect to *dédoulement fonctionnel*, see G. Scelle, "Le Phénomène Juridique du Dédoulement Fonctionnel" in W. Schätzel and H.-J. Schlochauer (eds.), *Rechtsfragen der Internationalen Organisation, Festschrift für Hans Wehberg zu seinem Geburtstag* (Frankfurt am Main, Vittorio Klostermann, 1956), pp. 324–342; A. Cassese, "Remarks on Scelle's Theory of 'Role Splitting' (*dédoulement fonctionnel*) in International Law", (1990) 1 EJIL 210–231; M. Nishiumi, "Dédoulement Fonctionnel de l'État et Droit International Contemporain: D'Après la Pensée de George Scelle" (in Japanese), (2001) 20 *Yearbook of World Law* 77–106.

<sup>27</sup> With respect to the analysis of the concept, see T. Kuwahara, "La Notion de Domaine Public International" (in Japanese), (1987) 97 *The Hitotsubashi Review* 867–877.

a unity of spaces whose utilization concerns the international community as a whole, or at least the population of several States. Whether or not they are subject to territorial sovereignty, their legal regime is governed by *particular rules because of the common interest*.<sup>28</sup>

As examples of the “*domaine public international*”, Ruzié enumerated ocean, river, air space and extra-atmospheric space.<sup>29</sup> On this point, it is important to note that Ruzié focused on the common interest in spaces, which characterises the law of “*domaine public international*”. According to this theory, all spaces that are used by the international community as a whole are regarded as “*domaine public international*”, independent of territorial sovereignty.<sup>30</sup> It follows that the ocean as a whole, including internal waters as well as territorial seas, could be regarded as “*domaine public international*”. In this sense, this theory is totally different from the traditional zonal approach. Similarly, in the first edition of his textbook published in 1975, Nguyen Quoc Dinh considered the ocean, international canals, international rivers and air and outer spaces as part of “*domaine public international*”.<sup>31</sup> Furthermore, in her lecture of 1976–1977, Mme Bastid presented the notion of “*espaces d’intérêt international*”, which was essentially the same concept as “*domaine public international*”. Thus, Mme Bastid categorised the ocean, international river, air space and outer space into “*espaces d’intérêt international*”.<sup>32</sup>

At the same time, it should be stressed that that theory did *not* purport to completely deny the zonal approach. Differently to George Scelle, three writers, Ruzié, Nguyen Quoc Dinh and Bastid, clearly recognised that internal waters and territorial seas were subject to the territorial sovereignty of the coastal state.<sup>33</sup> In this respect, Nguyen Quoc Dinh stressed that there were fundamental differences between the regime regarding “*domaine public*” in municipal law and that of “*domaine public international*” in international law.

<sup>28</sup> Our translation. The original phrase is: “*un ensemble d’espaces dont l’utilisation intéresse la communauté internationale, dans son entier, ou du moins la population de plusieurs Etats. Qu’ils soient soumis, ou non, à une souveraineté territoriale, leur régime juridique est régi par des règles particulières en raison de cet intérêt commun*” (original emphasis). D. Ruzié, *Droit International Public* (Paris, Dalloz, 7th ed., 1987), p. 82.

<sup>29</sup> *Ibid.*

<sup>30</sup> For instance, territorial seas are also a part of the “*domaine public international*” since innocent passage is permitted there.

<sup>31</sup> N.Q. Dinh, *Droit International Public* (Paris, LGDJ, 1st ed., 1975), p. 525. His textbook continues to be revised by P. Daillier and A. Pellet. Although the term “*domaine public internationale*” was not used in the revised editions, it appears that the basic idea of that concept was not totally abandoned. Kuwaraha, note 27 above, p. 872.

<sup>32</sup> Mme P. Bastid, “Cours de Droit International Public (Les Cours de Droit, 1976–1977)”, pp. 1221–1228. As with Mme Bastid, writers tend to avoid the term “*domaine public international*” probably because that concept is different from the municipal law concept of “*domaine public*”. Kuwahara, note 27 above, pp. 873–874.

<sup>33</sup> Nguyen Quoc Dinh, note 31 above, p. 526. See also, Ruzié, note 28 above, pp. 96 and 100; Bastid, note 32 above, p. 1262.

Specifically, the regime in international law protected not only general interests but also exclusive national interests; while, in international order, certain “*domaines*”, such as the territorial seas, are used by all states (for innocent passage), they are connected to state territory and are subject to the territorial sovereignty of the state; hence, the regime regarding their common use must take the principle of exclusivity of the sovereignty into account. For this reason, Nguyen Quoc Dinh stated that the law of “*domaine public international*” reflected two principal and contradictory considerations.<sup>34</sup> It may be said that the theory of the “*domaine public international*” is characterised by holistic viewpoints reflecting the general interests of common use as well as the protection of national interests, which is the concern of the zonal approach. In this sense, it appears that this theory provides in essence a dual viewpoint in the law of the sea.

### Concept of the Common Heritage of Mankind

Another attempt for presenting a holistic approach may be the concept of the common heritage of mankind (CHM).<sup>35</sup> In the law of the sea, the concept of the CHM was embodied under Part XI of the 1982 LOSC. In this respect, Article 136 of the LOSC clearly stated that “the Area and its resources are the common heritage of mankind”.<sup>36</sup>

Article 137 then provides for the non-appropriation of the Area and its resources. Furthermore, Article 140(1) stipulates that activities in the Area shall be carried out for the benefit of mankind as a whole. Moreover, Article 141 states that the Area shall be open to use exclusively for peaceful purposes by all states. In summary, it could be said that the principle of the CHM in the 1982 LOSC is composed of three sub-principles, that is, the non-appropriation of the Area and its resources, the benefit of mankind and the use of the Area exclusively for peaceful purposes. It should be noted that those elements remain intact in the 1994 Agreement Relating to the Implementation of Part XI of the 1982 LOSC.<sup>37</sup> It is true that, under the 1982 LOSC, the application of the CHM is limited to the Area.<sup>38</sup> Nevertheless, the introduction of that concept in the law of the sea was particularly important for three reasons.

<sup>34</sup> Nguyen Quoc Dinh, note 31 above, pp. 525–526.

<sup>35</sup> With respect to the concept of the CHM there are a number of articles, and it is impossible to enumerate those studies here. For a recent comprehensive study, including bibliography in detail, see Kemal Baslar, *The Concept of the Common Heritage of Mankind in International Law* (The Hague, Nijhoff, 1998).

<sup>36</sup> “Area” means the sea-bed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction (LOSC, Art. 1(1)).

<sup>37</sup> In this regard, Art. 311(6) of the LOSC stipulates that: “States Parties 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.”

<sup>38</sup> Yet it should not be forgotten that, originally, the 1971 draft Ocean Space Treaty elaborated by Malta prepared for a more holistic system than the existing Part XI of the LOSC. Art. 2 of the 1971 draft treaty stressed the unity of the ocean by saying that “the seas and the

First, it is conceivable that the term “mankind” is a transspatial as well as transtemporal concept. It is transspatial because “mankind” includes all people of the planet. At the same time it is transtemporal because “mankind” includes both present and future generations.<sup>39</sup> Thus, it may be said that the concept of “mankind” in itself contains an element for integration.<sup>40</sup>

Secondly, one should note that “mankind” is not merely an abstract concept. So far as the 1982 LOSC is concerned, “mankind” has an operational organ, that is, the International Seabed Authority. In this respect, Article 137 (2) provides that: “All rights in the resources of the Area are vested in mankind as a whole, on whose behalf the Authority shall act.” Furthermore, according to Article 153(1), activities in the Area shall be organised, carried out and controlled by the Authority on behalf of mankind as a whole. Hence, in accordance with the 1982 LOSC, exploration and exploitation of natural resources in the Area are under the control of the International Seabed Authority on behalf of “mankind”. To this extent, it appears that “mankind” is appearing as an actor in international law.<sup>41</sup> Indeed, the deep sea-bed regime purports to promote the benefit of mankind as a whole. On this point, it is argued that the regime based on the principle of CHM is a major departure from the traditional law of the sea, balancing the everlasting conflict between the principle of sovereignty and the principle of freedom.<sup>42</sup>

Thirdly, some writers argue that, as *lex ferenda*, the concept of the CHM might possibly be applicable to living resources or even the ocean as a whole.

*cont.*

oceans constitute a single ecological system vital to life and that all States have a common interest in the maintenance of the quality of the marine environment”. The draft treaty then suggested that all natural resources, whether living or non-living, located in the area beyond the 200-mile limit were to be managed by the International Ocean Space Institutions (Arts. 66 and 75 of the draft treaty). This draft was reproduced in S. Oda (ed.), *The International Law of the Ocean Development: Basic Documents* (Leiden, Sijthoff, 1972), pp. 149–193. Regarding the analysis of the idea of Ambassador Pardo, see L.B. Sohn, “Managing the Law of the Sea: Ambassador Pardo’s Forgotten Second Idea” in I.J. Charney, D.K. Anton and M.E. O’Connell (eds.), *Politics, Values and Functions: International Law in the 21st Century, Essays in Honor of Professor Louis Henkin* (The Hague, Kluwer, 1997), pp. 275–293.

<sup>39</sup> R.-J. Dupuy, “La Notion de Patrimoine Commun de l’Humanité Appliquée aux Fonds Marins” in R.-J. Dupuy, *Dialectiques du Droit International: Souveraineté des Etats, Communauté Internationale et Droits de l’Humanité* (Paris, Pedone, 1999), pp. 189–194.

<sup>40</sup> R.-J. Dupuy stated that “mankind” was a concept of integration. *Ibid.*, p. 191. With respect to the significance of the emerging concept of “mankind”, see Pierre-Marie Dupuy, “Humanité, Communauté et Efficacité du Droit” in *Humanité et Droit International, Mélanges René-Jean Dupuy* (Paris, Pedone, 1991), pp. 133–148.

<sup>41</sup> T. Kuwahara, *Introduction to International Law of the Sea* (in Japanese) (Tokyo, Sinzansya, 2002), pp. 214–217. See also J. Combacau, *Le Droit International de la Mer, Que sais-je?* (Paris, PUF, 1985), p. 88.

<sup>42</sup> Scovazzi, note 1 above, p. 121. In Japan, Kuwahara was also supportive of that view. T. Kuwahara, *International Law of the Sea* (in Japanese) (Tokyo, Kokusaishoin, 1992), pp. 164–166.

For instance, Judge Oda stated that: “[I]n the future, almost without doubt, this concept [of the CHM] will also apply to fishery resources or even to protection of the marine environment.”<sup>43</sup> Furthermore, Van Dyke indicated the concept of CHM as a principle for a comprehensive regime of ocean governance, by stating that: “It should be noted that the resources of the high seas are the common heritage of humanity, to be shared equitably.”<sup>44</sup> Moreover, Baslar also maintained that the status of fish stocks and marine pollution should be considered from the viewpoints of the CHM concept.<sup>45</sup> Considering that the concept of “mankind” contains an element for integration, it appears to be arguable that these opinions of writers are also in line with a holistic approach.

The above brief review reveals that several writers have considered the possibility of a holistic approach. Although those arguments were not fully supported in positive international law, it is important to note that the need for a holistic approach has been considered by several writers focusing on the common interests of the international community.

#### “Integrated Management Approach” in International Instruments

Recently, international documents also tend to stress the importance of a holistic approach by referring to the concept of “integrated management approach” or “integrated ocean management”. For instance, paragraph 17.1 of Agenda 21, adopted in the United Nations Conference on Environment and Development (UNCED/the Earth Summit), stated that:

The marine environment—including the oceans and all seas and adjacent coastal areas—forms *an integrated whole* that is an essential component of the global life-support system and a positive asset that presents opportunities for sustainable development. . . . This requires new approaches to marine and coastal area manage-

<sup>43</sup> S. Oda, “Sharing of Ocean Resources: Unresolved Issues in the Law of the Sea”, (1981) 3 *Journal of International and Comparative Law* p. 13. See also by the same author, *International Control of Sea Resources: Reprint with a New Introduction* (Dordrecht, Nijhoff, 1989), p. xxvi. Borgese is also supportive of this view. E.M. Borgese, “The Common Heritage of Mankind: From Non-Living To Living Resources and Beyond” in N. Ando *et al.* (eds.), *Liber Amicorum Judge Shigeru Oda* (The Hague, Kluwer, 2002), pp. 1313 *ff.* (in particular, p. 1319). However, Hayashi is prudent on this point. He considered that it would not be for some time that the common heritage concept would replace the principle of freedom of fishing on the high seas, however limited the scope of its application might become. M. Hayashi, “New Developments in International Fisheries Law and the Freedom of High Seas Fishing” (in Japanese), (2003) 102 *The Journal of International Law and Diplomacy* p. 176 and p. 205.

<sup>44</sup> Furthermore, Van Dyke continued that: “Recognizing that the ocean is a common heritage can also help in determining how to allocate its limited resources.” Jon M. Van Dyke, “International Governance and Stewardship of the High Seas and Its Resources” in J.M. Van Dyke, D. Zaelke and G. Hewison (eds.), *Freedom for the Seas in the 21st Century: Ocean Governance and Environmental Harmony* (Washington, DC, Island Press, 1993), p. 19.

<sup>45</sup> Baslar, note 35 above, pp. 228–242.

ment and development, at the national, subregional, regional and global levels, *approaches that are integrated in content and are precautionary and anticipatory in ambit*, as reflected in the following programme areas (emphasis added).<sup>46</sup>

Moreover, the UN General Assembly Resolution of 28 November 2001 used the words “integrated ocean management”. In that Resolution, the General Assembly recommended that, in view of the forthcoming World Summit on Sustainable Development, the Consultative Process should discuss the issues of:

Capacity-building, regional cooperation and coordination, and *integrated ocean management*, as important cross-cutting issues to address ocean affairs, such as marine science and the transfer of technology, sustainable fisheries, the degradation of the marine environment and the safety of navigation (emphasis added).<sup>47</sup>

Similarly, in 2002, the Report of the Meeting of the UN Informal Consultative Process on Oceans stated that: “An integrated, interdisciplinary, interzonal and ecosystem-based approach to oceans management, consistent with the legal framework provided by [the LOSC] and the goals of chapter 17 of Agenda 21, is not just desirable, it is essential.”<sup>48</sup>

The need for an integrated management approach is also stressed at the regional level. On 20 December 2002, the UN General Assembly adopted Resolution 57/261, entitled “Promoting an Integrated Management Approach to the Caribbean Sea Area in the Context of Sustainable Development”.<sup>49</sup> Owing to the unique biodiversity and highly fragile ecosystem of the Caribbean Sea, this Resolution recognised “the importance of adopting an integrated management approach to the Caribbean Sea area in the context of sustainable development” and encouraged the further promotion of that approach.

It is worth noting that the above documents repeatedly emphasised the need for “integrated ocean management” or “an integrated management approach” to ocean governance. The problem is, however, that the concept of the “integrated management approach” remains obscure in international law. Indeed, it appears that international instruments tend to use the term loosely. In order to clarify the concept, at least two questions should be considered: what elements should be “integrated” under this approach, and to what degree does the basis

<sup>46</sup> With respect to the impact of UNCED upon ocean management, see B. Cicin-Sain and R.W. Knecht, “Implications of the Earth Summit for Ocean and Coastal Governance”, (1993) 24 ODIL 323–353; B. Cicin-Sain, R.W. Knecht and G.W. Fish, “Growth in Capacity for Integrated Coastal Management Since UNCED: An International Perspective”, (1995) 29 *Ocean and Coastal Management* 93–123.

<sup>47</sup> General Assembly Resolution 56/12, para. 48.

<sup>48</sup> Report on the work of the United Nations Open-ended Informal Consultative Process established by the General Assembly in its Resolution 54/33 in order to facilitate the annual review by the Assembly of developments in ocean affairs at its third meeting, A/57/80, 2 July 2002, p. 4, para. 4.

<sup>49</sup> A/RES/57/261, 27 February 2003.

for that approach exist in contemporary international law of the sea. The next part addresses these issues.

### **Analysis: the Integrated Management Approach at Three Levels**

Although there is no clear definition of the integrated management approach in international law, it is obvious at least that the principal purpose of this approach is to resolve problems which cannot be easily solved under the traditional law of the sea.<sup>50</sup> In so doing, it is conceivable that a certain degree of integration should be required in at least three levels: ecological, normative and implementation levels. These three levels of integration are interlinked.

#### **Integrated Management Approach at the Ecological Level**

##### *Development of the ecosystem approach*

First, the integrated management approach is at issue in the management of living resources, including marine biological diversity. As indicated earlier, the ecological interactions between marine species has not been sufficiently considered under the zonal approach. Yet it is becoming apparent that the intricate relationship of marine ecosystems and the environments that support them are important elements in establishing an effective ocean management regarding marine living resources as well as marine biological diversity. On this point, an integrated management approach focusing on ecological unity is required. In this respect, it is worth noting that the ecosystem approach is currently being developed.<sup>51</sup>

<sup>50</sup> In this connection, it is interesting to note that there is a similar notion of “integrated coastal zone management (ICZM)”. This concept concerns the coastal area, including the interface of the land and sea, under national jurisdiction, although its spatial scope is obscure. On the other hand, the integrated management approach discussed in this study relates to the use of *the ocean as a whole* in international law. Hence, the exercise of the integrated management approach concerns all members of the international community, including both coastal and non-coastal states as well as international organisations. In this sense, the integrated management approach addressed in this study should be distinguished from the concept of ICZM. With respect to the concept of ICZM, see in particular, B. Cicin-Sain and R.W. Knecht, *Integrated Coastal and Ocean Management: Concepts and Practices* (Washington, DC, Island Press, 1998); R. Beckman and B. Coleman, “Integrated Coastal Management: The Role of Law and Lawyers”, (1999) 14 IJMCL 491–522.

<sup>51</sup> In this regard, Freestone stated that: “[i]f the goal is to preserve marine biodiversity, it requires an holistic/comprehensive approach which can address the whole range of threats to marine species or ecosystems, including ecological processes and functions: in other words, an ecosystem approach”. D. Freestone, “The Conservation of Marine Ecosystems under International Law” in Redgwell and Bowman (eds.), note 10 above, pp. 105–106. The need for an ecosystem approach is often stressed by writers in the context of the management of marine living resources. See for instance, Erik Jaap Molenaar, “Ecosystem-Based Fisheries Management, Commercial Fisheries, Marine Mammals and the 2001 Reykjavik Declaration in the Context of International Law”, (2002) 17 IJMCL 561–595; L. Juda, “Rio Plus Ten: The Evolution of International Marine Fisheries Governance”, (2002) 33 ODIL 109–144 (in particular, pp. 131–132).

While the term “ecosystem approach” has been variously defined in different settings, the Biodiversity Committee of the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention) of 1992 defined this approach as:

the comprehensive integrated management of human activities based on the best available scientific knowledge about the ecosystem and its dynamics, in order to identify and take action on influences which are critical to the health of marine ecosystems, thereby achieving sustainable use of ecosystem goods and services and maintenance of ecosystem integrity.<sup>52</sup>

In accordance with this definition, the ecosystem approach focuses on biological interactions between all marine species in the same as well as in neighbouring zones, and the ecological conditions of the physical surroundings.<sup>53</sup>

At present, the ecosystem approach is becoming a key element in international legal instruments relating to marine affairs.<sup>54</sup> In fact, one may observe the clear trend that the ecosystem approach is increasingly being adopted in agreements concerning marine living resources as well as the protection of marine environment. For instance, as early as 1980, the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) clearly adopted this approach.<sup>55</sup> In this respect, Article 1 of the CAMLR Convention provides that the Antarctic marine ecosystem means the complex of relationships of Antarctic marine living resources with each other and with their physical environment. Article 2(3)(b) then requires the maintenance of the ecological relationships between harvested, dependent and related populations of Antarctic marine living resources. Furthermore, Article 2(3)(c) places a

<sup>52</sup> Meeting of the Biodiversity Committee (BDC), Dublin, 20–24 January 2003, Summary Record BDC 2003, BDC 03/10/1-E, Annex 13, “Ecosystem Approach to Management of Human Activities”, p. 1. Furthermore, the *Report of the Secretary-General of the United Nations* defines a marine ecosystem as follows: “A marine ecosystem may be defined as the sum total of marine organisms living in a particular sea area, the interactions between those organisms and the physical environment in which they interact. A vulnerable marine ecosystem could be defined as one that is particularly susceptible to disruption, to damage or even to destruction due to its physical characteristics, the activities and interactions of the organisms therein and the impacts they suffer from human activities and the surrounding environment.” “Oceans and the Law of the Sea”, *Report of the Secretary-General*, A/58/65, p. 53, para. 172.

<sup>53</sup> N. Matz, “The Interaction between the Convention on Biological Diversity and the UN Convention on the Law of the Sea” in P. Ehlers, E. Mann-Borgese and R. Wolfrum (eds.), *Marine Issues* (The Hague, Kluwer, 2002), p. 208.

<sup>54</sup> With respect to the analysis on state and treaty practices concerning the ecosystem approach, see H. Wang, “Ecosystem Management and Its Application to Large Marine Ecosystems: Science, Law, and Politics”, (2004) 35 ODIL 41–74; S.M. Garcia and M. Hayashi, “Division of the Oceans and Ecosystem Management: A Contrastive Spatial Evolution of Marine Fisheries Governance”, (2000) 43 *Ocean and Coastal Management* pp. 461–463.

<sup>55</sup> The text is reproduced in H. Hohmann (ed.), *Basic Documents of International Environmental Law* (London, Graham and Trotman/Nijhoff, 1992), vol. 3, pp. 1416–1428.

clear obligation relating to the prevention of changes or minimisation of the risk of changes in the marine ecosystem which are not potentially reversible over two or three decades.

The ecosystem approach is also clearly reflected in the 1995 Straddling and Highly Migratory Fish Stocks Agreement (hereafter the 1995 Fish Stocks Agreement).<sup>56</sup> Article 5(e) provides that coastal states and states fishing on the high seas shall:

adopt, where necessary, conservation and management measures for species belonging to the same ecosystem or dependent on or associated with the target stocks, with a view to maintaining or restoring populations of such species above levels at which their reproduction may become seriously threatened.

Furthermore, Article 5(g) requires coastal states and states fishing on the high seas to protect biodiversity in the marine environment. Moreover, Article 7(2) of that Agreement stipulates that, in determining compatible conservation and management measures established for the high seas and those adopted for areas under national jurisdiction, a state shall:

(d) take into account the biological unity and other biological characteristics of the stocks and the relationships between the distribution of the stocks, the fisheries and the geographical particularities of the region concerned, including the extent to which the stocks occur and are fished in areas under national jurisdiction.

Furthermore, the 1992 Convention on Biological Diversity (the Rio Convention)—which is applicable to terrestrial territory as well as marine spaces under national jurisdiction—clearly adopted the ecosystem approach under Article 8.<sup>57</sup>

With respect to regional agreements, the OSPAR Convention explicitly focuses on the conservation of marine biological diversity and marine ecosystem. In this regard, Article 2(1)(a) of the OSPAR Convention provides that the contracting parties shall take all possible steps to prevent and eliminate pollution and shall take the necessary measures to protect the maritime area against the adverse effects of human activities so as to safeguard human health and to conserve marine ecosystems and, when practicable, restore marine areas which

<sup>56</sup> Orrego Vicuña indicated that the biological unity of the stocks concerned was the starting point of the approach that sought to manage fisheries in an integrated manner in respect to both the high seas and the EEZ. Orrego Vicuña, note 13 above, *The Changing International Law of High Seas Fisheries*, p. 177.

<sup>57</sup> The Rio Convention is the first global treaty relating to the protection and preservation of biological diversity including marine biological diversity. The words “biological diversity” in the Rio Convention include diversity within species, between species and of ecosystems. Furthermore, “ecosystem” means a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit. Yet the term “conservation” was purposefully not defined in the Rio Convention. Françoise Burhenne-Guilmin and Susan Casey-Lefkowitz, “The Convention on Biological Diversity: A Hard Won Global Achievement”, (1993) 3 *Yearbook of International Environmental Law* p. 50.

have been adversely affected. Furthermore, Annex V on the Protection and Conservation of the Ecosystems and Biological Diversity of the Maritime Area requires promotion of the conservation of marine ecosystems.<sup>58</sup> Thus, Article 2 of Annex V stipulates that contracting parties shall take the necessary measures to protect and conserve the ecosystems and the biological diversity of the maritime area, and to restore, where applicable, marine areas which have been adversely affected. International conventions which more or less take the ecosystem approach into consideration are summarised in Table 1.<sup>59</sup>

#### *Limits with the ecosystem approach*

While there is a treaty basis for asserting the ecosystem approach when entering into force, the latter may, however, be difficult to implement in practice.<sup>60</sup> First, the adoption of the ecosystem approach does not mean the rejection of the zonal approach. It is undeniable that the distinction between marine spaces under and beyond national jurisdiction is still the basis of the law of the sea. Thus, a difficult question arises as to how it is possible to maintain the *compatibility* of the measures taken in the area under national jurisdiction and the area beyond national jurisdiction. This problem was typically raised in the Fish Stocks Agreement. This Agreement maintains the traditional dichotomy in the ocean by specifying that the Agreement applies to the conservation and management of straddling fish stocks and highly migratory fish stocks beyond areas under national jurisdiction.<sup>61</sup> On this issue, Article 7(2) of the 1995 Agreement states that it is the duty of coastal states and states fishing on the high seas to co-operate in achieving the compatibility of conservation and management measures established for the high seas and those adopted for areas under national jurisdiction.<sup>62</sup> This provision suggests that conservation and management measures established for the high seas and those adopted areas under national jurisdiction shall be compatible *inter se*.<sup>63</sup> Criteria for determining compatibility are set out in Article 7(2). Nevertheless, the 1995 Fish Stocks Agreement

<sup>58</sup> In accordance with Art. 15.5 of the Convention, Annex V has entered into force: on 30 August 2000 for Finland, Spain, Switzerland, Luxembourg, the European Community, the United Kingdom and Denmark; and on 5 October 2000 for Sweden.

<sup>59</sup> This list merely shows examples and is not exhaustive. Furthermore, other non-binding international instruments also endorse the ecosystem approach in fisheries management. For instance, the 2001 Reykjavik Declaration on Responsible Fisheries in the Marine Ecosystem explicitly stressed the importance of the ecosystem-based fisheries management. On this issue, see Molenaar, note 51 above.

<sup>60</sup> Wang, note 54 above, pp. 56–59.

<sup>61</sup> Art. 3(1).

<sup>62</sup> The provision maintaining the compatibility of conservation and management measures is also contained in other conventions, such as: the Convention on the Conservation and Management of Fishery Resources in the South-East Atlantic Ocean (Art. 19); the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (Art. 10); the Convention on Future Multilateral Cooperation in the Northwest Atlantic Fisheries (Art. 11(3)).

<sup>63</sup> Alex G. Oude Elferink, “The Impact of Article 7(2) of the Fish Stocks Agreement on the

remains silent on the criterion for balancing relevant factors enumerated in Article 7(2).<sup>64</sup> Thus, further considerations would be necessary to answer the question on how it is possible to maintain the compatibility of measures taking relevant factors into account.<sup>65</sup>

Secondly, one should note that delineation of ecosystem boundaries and determination of the appropriate scale is often difficult to determine.<sup>66</sup> Ecosystem processes and functions are complex and variable. The whole mechanism of an ecosystem is often difficult to understand, and thus the application of the ecosystem approach will face difficulties.<sup>67</sup> In order to promote the ecosystem approach, however, conservation measures will be required even when some cause-and-effect relationships are not yet fully established scientifically.<sup>68</sup> On this point, the precautionary approach or principle may come into play.<sup>69</sup>

*Interrelation between the ecosystem approach and the precautionary approach*

The essence of the precautionary approach is that once a risk has been identified, the lack of scientific proof of cause and effect shall not be used as a reason for not taking action to protect the environment.<sup>70</sup> Although the

*cont.*

Formulation of Conservation and Management Measures for Straddling and Highly Migratory Fish Stocks”, FAO Legal Papers Online No. 4, August 1999, p. 4. Thus, the first sentence of Art. 7(2) does not suggest that one measure will predominate over another. *Ibid.*, p. 7.

<sup>64</sup> *Ibid.*, pp. 13–18. On this issue, see also by the same author, “The Determination of Compatible Conservation and Management Measures for Straddling and Highly Migratory Fish Stocks”, (2001) 5 *Max Planck Yearbook of United Nations Law* pp. 551–607.

<sup>65</sup> On this point, some writers pointed out that consideration of the factors enumerated in Art. 7(2) might lead to a result in favour of coastal states. O. Vicuña, note 13 above, *Changing International Law of High Seas Fisheries*, p. 190; P.G.G. Davies and C. Redgwell, “The International Legal Regulation of Straddling Fish Stocks”, (1996) 67 *BYIL* pp. 263–264.

<sup>66</sup> Juda, note 9 above, p. 92.

<sup>67</sup> Wang, note 54 above, p. 56; W.T. Burke, “UNCED and the Oceans”, (1993) 17 *Marine Policy* p. 532.

<sup>68</sup> Juda, note 9 above, p. 104.

<sup>69</sup> There are many articles addressing the precautionary approach or principle. For a recent study on the precautionary approach and bibliography on this issue, see A. Trouwborst, *Evolution and Status of the Precautionary Principle in International Law* (The Hague *et al.*, Kluwer, 2002).

<sup>70</sup> D. Freestone and E. Hey, “Origin and Development of the Precautionary Principle” in D. Freestone and E. Hey (eds.), *The Precautionary Principle and International Law: The Challenge of Implementation* (The Hague *et al.*, Kluwer, 1996), p. 13. According to James Cameron and Juli Abouchar, the precautionary approach is composed of three elements: (i) regulatory inaction threatens non-negligible harm; (ii) there exists a lack of scientific certainty on the cause and effect relationship; and (iii) under these circumstances, regulatory inaction is unjustified. J. Cameron and J. Abouchar, “The Status of the Precautionary Principle in International Law” in *ibid.*, p. 45.

definition of the precautionary approach or principle varies depending on the instruments, Principle 15 of the Rio Declaration, for instance, defined the precautionary approach as follows:

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

In the context of law of the sea, the precautionary approach has been invoked in conventions and instruments concerning the protection of marine environment as well as of marine living resources.<sup>71</sup> In this respect, it is important to note that many treaties adopting the ecosystem approach tend to refer to the precautionary approach at the same time. This trend is illustrated at Table 1.<sup>72</sup> For example, Article 6(1) and (2) of the 1995 Fish Stocks Agreement clearly states that:

1. States shall apply the precautionary approach widely to conservation, management and exploitation of straddling fish stocks and highly migratory fish stocks in order to protect the living marine resources and preserve the marine environment.
2. States shall be more cautious when information is uncertain, unreliable or inadequate. The absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures.<sup>73</sup>

<sup>71</sup> As a recent study on the precautionary approach in law of the sea, see Simon Marr, *The Precautionary Principles in the Law of the Sea: Modern Decision Making in International Law* (The Hague, Nijhoff, 2003); D. Vanderzwaag, "The Precautionary Principle and Marine Environmental Protection: Slippery Shores, Rough Seas, and Rising Normative Tide", (2002) 33 ODIL 165–188. With respect to a thorough examination on state practice relating to the precautionary approach, see Trouwborst, note 69 above. Annexes A and B attached to the Trouwborst's study are useful in order to overview relevant international documents to this matter. See also, Pascale Martin-Bidou, "Le Principe de Précaution en Droit International de l'Environnement", (1999) 103 RGDIP 631–666 (in particular, pp. 634–645.); O. McIntyre and T. Mosedale, "The Precautionary Principle as a Norm of Customary International Law", (1997) 9 *Journal of Environmental Law* 223–235. For analysis of municipal laws concerning the precautionary approach, see P.H. Sand, "The Precautionary Principle: Coping with Risk", (2000) 40 *Indian Journal of International Law* 1–13.

<sup>72</sup> This list is not exhaustive.

<sup>73</sup> On this point, Hayashi indicated that the ecosystem approach was taken fully into account in the precautionary approach. M. Hayashi, "The 1995 UN Fish Stocks Agreement and the Law of the Sea" in D. Vidas and W. Østreng (eds.), *Order for the Oceans at the Turn of the Century* (The Hague, Kluwer, 1999), p. 49. See also Wang, note 54 above, p. 53.

**Table 1** Treaties That Adopted Both the Ecosystem and Precautionary Approaches

<i>Year</i>	<i>Title</i>	<i>Ecosystem Approach</i>	<i>Precautionary Approach</i>	<i>Entry in force</i>
1980	Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR)	Art. 2(3)	Art. 2 <sup>74</sup>	1982
1992	Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR)	Art. 2(1)(a) Annex V	Art. 2(2)(a)	1998
1992	Convention on Biological Diversity	Art. 8	Preamble	1993
1992	Convention on the Protection of the Marine Environment of the Baltic Sea Area	Preamble and Arts. 3(1), 15	Art. 3(2)	2000
1995	Straddling and Highly Migratory Fish Stocks Agreement	Arts. 5, 7(2)	Arts. 5(c), 6	2001
1995	Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean	Parts I, II, III and IV	Preamble	1999
1995	†Code of Conduct for Responsible Fisheries	Arts. 2(i), 6, 7, 9, 10 and 12	Arts. 7.5, 6.5	
1995	Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean	Art. 10	Art. 4(3)(a)	*
1996	Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter	Preamble and Art. 1(10)	Art. 3(1)	*
1998	Agreement on the International Dolphin Conservation Program	Preamble and Arts. 2(3), 4, 6	Art. 4(1)	1999
1999	Agreement Concerning the Creation of a Marine Mammal Sanctuary in the Mediterranean	Art. 2(1)	Declaration to the Agreement	2002
2000	Framework Agreement for the Conservation of Living Marine Resources on the High Seas of the South Pacific	Preamble Art. 5(1)(c)(d)	Art. 5(1)(b)	*
2000	Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean	Preamble and Arts. 5(f), 8	Preamble Arts. 5(c), 6	*
2001	Convention on the Conservation and Management of Fishery Resources in the South-East Atlantic Ocean	Art. 3(f)	Arts. 3(b), 6(g) 7 and Preamble	*

\* not yet in force

† the Code is a voluntary instrument

<sup>74</sup> There is no explicit reference to the precautionary approach in Art. 2. Nevertheless, the Understanding of CCAMLR's Approach to Management elaborated by the Scientific Committee in 2000 is of the view that Art. 2 embodies the precautionary approach. The text of the Understanding is available at: <<http://www.ccamlr.org/pu/E/pubs/am/text.pdf>> Wang is also supportive of this view, note 54 above, p. 47.

The linkage between the ecosystem and precautionary approach may also be found in the FAO Code of Conduct for Responsible Fisheries.<sup>75</sup> The Code of Conduct stresses the ecosystem approach as one general principle, by stating that: “States and users of living aquatic resources should conserve aquatic ecosystems.”<sup>76</sup> Furthermore, “management measures should not only ensure the conservation of target species but also of species belonging to the same ecosystem or associated with or dependent upon the target species”.<sup>77</sup> At the same time, the Code of Conduct clearly provides that:

States should apply the precautionary approach widely to conservation, management and exploitation of living aquatic resources in order to protect them and preserve the aquatic environment. The absence of adequate scientific information should not be used as a reason for postponing or failing to take conservation and management measures.<sup>78</sup>

Similarly, one may find the same linkage between the two approaches in the context of the protection of the marine environment. For instance, Article 15 of the 1992 Convention on the Protection of the Marine Environment of the Baltic Sea Area (hereafter the Helsinki Convention) places an explicit obligation upon the contracting parties to conserve natural habitats and biological diversity and to protect ecological processes.<sup>79</sup> At the same time, Article 3 clearly provides that the contracting parties shall apply:

the precautionary principle, *i.e.*, to take preventive measures when there is reason to assume that substances or energy introduced, directly or indirectly, into the marine environment may create hazards to human health, harm living resources and marine ecosystems, damage amenities or interfere with other legitimate uses of the sea even when there is no conclusive evidence of a causal relationship between inputs and their alleged effects.

It appears that this phenomenon is not merely a coincidence. Considering the scientific uncertainty relating to the mechanisms of marine ecosystems, it appears to be logical that the ecosystem approach should be connected to the precautionary approach.<sup>80</sup> In this sense, it is conceivable that the ecosystem

<sup>75</sup> While the Code is a voluntary instrument relating to fisheries, certain parts of it are based on relevant rules of international law, including those reflected in the LOSC on the Law of the Sea.

<sup>76</sup> Article 6.1.

<sup>77</sup> Article 6.2. In addition, the Code of Conduct refers to marine ecosystems in many provisions.

<sup>78</sup> Article 7.5.1. See also Articles 7.5.2 and 6.5.

<sup>79</sup> The text is available at: <http://www.helcom.fi/helcom.html>.

<sup>80</sup> On this point, Kaye clearly indicated the linkage between the precautionary principle and the ecosystem approach. S.B. Kaye, *International Fisheries Management* (The Hague, Kluwer, 2001), pp. 273–274. Juda also echoed this view by saying that: “Consideration of marine ecosystems may well lend strength to the emergence of the proactive concept of precautions.” Juda, note 2 above, p. 289. Furthermore, Statement on the Ecosystem Approach

and precautionary approaches could be principal elements in implementing the integrated management approach at the ecological level on a treaty basis.<sup>81</sup>

### Integrated Management Approach at the Normative Level

The integrated management approach is also becoming important at the normative level. In this connection, one should note that the problems of ocean space are closely interrelated to each other and need to be considered as a whole.<sup>82</sup> Thus, an integrated management approach focusing on the interrelationship between marine issues is required. Indeed, the words in Chapter 17 of the Agenda 21, “approaches that are integrated in content”, appear to suggest that the integrated management approach is cross-sectoral in its nature.<sup>83</sup> In this regard, it is welcome that a dynamic treaty network is currently coming into existence with respect to a variety of marine affairs. On the other hand, it is undeniable that the growing numbers of treaties may run the risk of producing overlaps or conflicts of relevant rules owing to the close interrelationship between marine issues.<sup>84</sup> It follows that the cross-sectoral consider-

*cont.*

to the Management of Human Activities, which was adopted in the First Joint Meeting of the Helsinki and OSPAR Commission, also states that the application of the precautionary principle is equally a central part of the ecosystem approach. Joint Meeting of the Helsinki and OSPAR Commissions, 25–26 June 2003, Record of the Meeting, Annex 5, p. 2, para. 5.

<sup>81</sup> It appears that the customary law character of the ecosystem approach has not yet been clearly established. Equally, opinion remains divided with respect to the status in customary law of the precautionary approach. Some argue that the precautionary approach is now a customary law. See Cameron and Abouchar, note 70 above, pp. 29–52; P. Sands, *Principles of International Environmental Law* (Manchester and New York, Manchester University Press, 1995), vol. I, pp. 212–213; McIntyre and Mosedale, note 71 above, p. 235. By contrast, other writers more prudently accept the customary law character of the precautionary approach. See Pascale Martin-Bidou, note 71 above, pp. 658–665. On this issue, the International Tribunal for the Law of the Sea (ITLOS) in the *Southern Bluefin Tuna* case did not explicitly refer to the precautionary approach. Thus, the interpretation of the judgment regarding this approach varies even among the members of the ITLOS. See Separate Opinion of Judge Treves, (1999) 38 ILM p. 1645, para. 9; Separate Opinion by *Ad Hoc* Judge Shearer, p. 1650; Separate Opinion of Judge Wolfrum, p. 4; Separate Opinion of *Ad Hoc* Judge Székely, p. 9, para. 24 (The decision and separate opinions are available on ITLOS homepage).

<sup>82</sup> Preamble of the 1982 LOSC.

<sup>83</sup> In fact, Juda clearly stated that: “The identification of existing and projected uses and contemplation of their interactions and compatibility are key components of ‘integrated’ management.” Note 2 above, p. 286.

<sup>84</sup> With respect to the examination of possible conflicts between relevant rules, see in particular, R. Wolfrum and N. Matz, *Conflicts in International Environmental Law* (Berlin, Springer, 2003). In particular, the normative relationship between the Rio Convention and the 1982 LOSC has been discussed by some writers. See for instance, M. Chandler, “The Biodiversity Convention: Selected Issues of Interest to the International Lawyer”, (1993) 4 *Colorado Journal of International Environmental Law and Policy* 141–175 (in particular, pp. 152–153); R. Wolfrum and N. Matz, “The Interplay of the United Nations Convention on the Law of the Sea and the Convention on Biological Diversity”, (2000) 4 *Max Planck Yearbook of United Nations Law* 445–480; Matz, note 53 above, pp. 203–220.

ation inevitably produces the question as to how it is possible to avoid duplication or conflicts between relevant rules. Hence, harmonisation between relevant rules concerning ocean management becomes an important issue in the integrated management approach.

A means of avoiding normative duplication or conflict may be to co-ordinate relevant rules of treaties through the Conference of the Parties (COP). Hence the establishment of inter-treaty linkage through COP is of central importance. Today, such an inter-treaty linkage is remarkable particularly in the conservation of biological diversity. For instance, the COP of the Rio Convention underlies the potential inter-treaty linkage between the Rio Convention and the other biodiversity-related global conventions in the decisions of the COP. In fact, Decision II/13 of the COP stressed the need to avoid unnecessary duplication of activities and costs on the part of parties and the organs of the Convention. Thus, the Decision requested that the Executive Secretary co-ordinate with the secretariats of relevant biodiversity-related conventions.<sup>85</sup> Indeed, the COP of the Rio Convention concluded a number of memoranda of co-operation with relevant conventions and organisations.<sup>86</sup> Endorsing these memoranda of co-operation, Decision III/21 of the COP encouraged the development of further such arrangements with relevant international biological diversity-related bodies, including regional conventions.<sup>87</sup>

Such a treaty linkage is also developing through the OSPAR Convention. Article 1 of Annex V of this Convention clarifies the link to the Rio Convention by referring to the definitions in that Convention of “biological diversity”, “ecosystem” and “habitat”.<sup>88</sup> Furthermore, Article 2 of Annex V explicitly refers to the obligation of parties to the Rio Convention to develop strategies, plans or programmes for the conservation and sustainable use of biological diversity. Moreover, Article 4 of Annex V clearly specifies co-operation with IMO. Considering that the navigation of vessels may affect marine ecosystems, co-operation between the parties to the OSPAR Convention and

<sup>85</sup> Decision II/13: “Co-operation with Other Biodiversity-Related Conventions”, reproduced in Secretariat of the Convention on Biological Diversity, *Handbook of the Convention on Biological Diversity* (London, Earthscan, 2001), pp. 339–340. See also Decision III/21, Decision IV/15.

<sup>86</sup> The Secretariat of the Rio Convention has entered into a Memoranda of Co-operation with the following conventions as well as institutions: Center for International Forestry Research For Scientific and Technical Co-operation; Convention on International Trade in Endangered Species of Wild Fauna and Flora; Convention on the Conservation of Migratory Species of Wild Animals; Convention on Wetlands of International Importance, especially as Waterfowl Habitat; Intergovernmental Oceanographic Commission; Pan-European Biological and Landscape Diversity Strategy; UNCTAD; UNESCO; IUCN; and FAO. See at: <http://www.biodiv.org/convention/partners-background.asp>. On this issue, see also G. Henne and S. Fakir, “The Regime Building of the Convention on Biological Diversity on the Road to Nairobi”, (1999) 3 *Max Planck United Nations Yearbook* 315–361 (in particular, pp. 356–357).

<sup>87</sup> Para. 2. Secretariat of the Convention on Biological Diversity, note 86 above, p. 421.

<sup>88</sup> Louise de la Fayette, “The OSPAR Convention Comes into Force: Continuity as Progress”, (1999) 14 *IJMC* p. 267.

IMO will be important for co-ordinating relevant activities. In addition, co-operation between the OSPAR and Helsinki Commission (HELCOM) is also enhancing in relation to the protection of marine biological diversity.<sup>89</sup> While the Rio and OSPAR Conventions are merely examples, the experience of these conventions shows that multilateral conventions are continuing to evolve through the COP to create a dynamic inter-treaty linkage. Such an inter-treaty linkage will be useful in order to co-ordinate relevant rules and activities of state parties from holistic viewpoints.

### Integrated Management Approach at the Implementation Level

#### *Importance of international control through international institutions*

It is necessary to consider the question as to how it is possible to implement relevant rules in an integrated manner.<sup>90</sup> This question relates to the role of the integrated management approach at the implementation level. It is true that, as with other domains of international law, there is no central organisation for implementing relevant rules regarding ocean affairs. In this sense, it may be inevitable to conclude that the law of the sea remains in essence a decentralised system. Even so, it is worth noting that some mechanisms concerning the implementation of the law are developing. In this regard, there is little doubt that the role of international organisations is particularly important. At present, the functions of international organisations are expanding in a variety of domains in international law and the law of the sea is no exception. This point is illustrated by the fact that specialised UN agencies, such as IMO,<sup>91</sup> FAO,<sup>92</sup> UNESCO/IOC and UNEP, are playing an important role in ocean man-

<sup>89</sup> In fact, the first joint Ministerial Meeting of the Helsinki and OSPAR Commissions was held in 2003. The two commissions confirmed the application of the ecosystem approach in the HELCOM and OSPAR frameworks in "Statement on the Ecosystem Approach to the Management of Human Activities: 'Towards an Ecosystem Approach to the Management of Human Activities'" (Joint Meeting of the Helsinki and OSPAR Commissions, 25–26 June 2003, Record of the Meeting, Annex 5). Co-operation between the Helsinki and OSPAR Commissions is also confirmed in Statement on the European Marine Strategy, "What HELCOM and OSPAR Can Bring to the Development of the European Marine Strategy" (Joint Meeting of the Helsinki and OSPAR Commissions, 25–26 June 2003, Record of the Meeting, Annex 6, paras. 6–7.

<sup>90</sup> "Implementation" is a word with more than one meaning. Churchill indicated four meanings of this word. R. Churchill, "Levels of Implementation of the Law of the Sea Convention: An Overview" in Vidar and Østreng, note 73 above, p. 317. In the narrow sense, the word means the putting into effect by states of their rights and obligations under a treaty. *Ibid.* In this study, however, the word is used in a broad sense, i.e. the adoption of relevant rules, standards and guidelines as well as furthering the aims and rules of a treaty by means of subsequent action.

<sup>91</sup> With respect to IMO, see Myron H. Nordquist and J.N. Moore (eds.), *Current Maritime Issues and the International Maritime Organization* (The Hague, Nijhoff, 1999).

<sup>92</sup> Regarding the activities of FAO on the law of the sea, see M.H. Nordquist and J.N. Moore (eds.), *Current Fisheries Issues and the Food and Agriculture Organization of the United Nations* (The Hague, Nijhoff, 2000).

agement. Furthermore, there are a number of regional organisations relating, in particular, to fisheries.<sup>93</sup>

In this connection, it is important to note that international control through international institutions is increasingly important in order to secure the compliance of treaties.<sup>94</sup> While international control is a concept with more than one meaning,<sup>95</sup> this concept may be broadly defined as procedures for supervising the implementation of a treaty. International control aims at enhancing the compliance of treaties by a variety of procedures, such as reporting from states parties, verification, and decisions as well as recommendations. Such an international control mechanism is developed particularly in international human rights law. Furthermore, many agreements concerning the environmental protection are adopting a similar mechanism.<sup>96</sup>

Currently, international control is also becoming important in the law of the sea. In this respect, there is little doubt that a reporting system is one of the appropriate means of supervising the implementation of a convention by the parties.<sup>97</sup> In fact, a number of treaties relating to the protection of the marine environment place an obligation upon the contracting parties to regularly report the measures taken to implement the convention to a commission established by the treaty or other appropriate organs.<sup>98</sup> As an example, Article 16(1) of the Helsinki Convention stipulates that:

<sup>93</sup> The analysis on these regional organisations in detail is beyond the scope of this study. Regarding the role of regional organisations in general, see B. Kwiatkowska, "The Role of Regional Organizations in Development Cooperation in Marine Affairs" in A.H.A. Soons, *Implementation of the Law of the Sea Convention Through International Institutions, Proceedings of the 23rd Annual Conference of the Law of the Sea Institute, June 12–15, 1989* (Honolulu, University of Hawaii, 1990), pp. 38–138. With respect to regional fishery organisations, see R. Barston, "The Law of the Sea and Regional Fisheries Organisations", (1999) 14 *IJMLC* 333–352; R. Wolfrum, "Fishery Commissions", in R. Bernhardt (ed.), *Encyclopedia of Public International Law* (Amsterdam *et al.*, Elsevier, 1989), vol. 11, pp. 117–121; L. Juda, note 51 above, pp. 123–128.

<sup>94</sup> In fact, Birnie and Boyle stressed the importance of the supervision by international institutions. P. Birnie and A. Boyle, *International Law and the Environment* (Oxford, Oxford University Press, 2002), pp. 201–202. In addition, the present study uses the term "international institutions" in a broad sense, including inter-governmental organisations as well as a committee established by a COP of a convention.

<sup>95</sup> As P.-M. Dupuy pointed out, further consideration will be required in order to clarify this concept. P.-M. Dupuy, *Droit International Public* (Paris, Dalloz, 6th ed., 2002), p. 514. With respect to comprehensive analysis on the concept of international control, see A. Morita, *Le Contrôle International: Théorie et Pratique* (in Japanese) (Tokyo, Tokyo Daigaku Shuppankai, 2000).

<sup>96</sup> Birnie and Boyle, note 94 above, pp. 200–220; T. Sato, "International Supervision by International Organizations with Regard to States" (in Japanese), (1995) 114 *The Hitotsubashi Review* 99–115.

<sup>97</sup> On this issue, see D.M. Dzidzornu, "Marine Environment Protection under Regional Conventions: Limits to the Contribution of Procedural Norms", (2002) 33 *ODIL* pp. 291–298; Birnie and Boyle, note 94 above, pp. 205–206.

<sup>98</sup> See Table 2. This list merely shows examples and is not exhaustive.

The Contracting Parties shall report to the Commission at regular intervals on:

- (a) the legal, regulatory, or other measures taken for the implementation of the provisions of this Convention, of its Annexes and of recommendations adopted thereunder;
- (b) the effectiveness of the measures taken to implement the provisions referred to in subparagraph (a) of this paragraph; and
- (c) problems encountered in the implementation of the provisions referred to in subparagraph (a) of this paragraph.

**Table 2** Reporting System Embodied in Treaties Concerning Marine Affairs

<i>Year</i>	<i>Title</i>	<i>Relevant Provisions</i>
1954	International Convention for the Prevention of Pollution of the Sea by Oil	Article 12
1972	International Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter	Article 6(4)
1973	International Convention for the Prevention of Pollution from Ships (MARPOL)	Article 11
1976	Convention for the Protection of the Mediterranean Sea Against Pollution	Article 20
1978	Kuwait Regional Convention for Co-operation on the Protection of the Marine Environment from Pollution	Article 23
1980	Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR)	Articles 20, 21
1981	Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region	Article 22
1981	Convention for the Protection of Marine Environment and Coastal Area of the South-East Pacific	Article 14
1982	Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment	Article 22
1992	Convention on the Protection of the Marine Environment of the Baltic Sea Area	Article 16
1992	Convention on Biological Diversity	Article 26
1992	Convention for the Protection of the Marine Environment of the North East Atlantic (OSPAR)	Article 22
1995	Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean	Article 26
1996	Agreement on the Conservation of Cetaceans of the Black Sea Mediterranean Sea and Contiguous Atlantic Area	Article 8
1996	Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter	Article 9(4)
1996	Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities	Article 13
2000	Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean	Article 23(2)(3)(4)(5)
2001	Convention on the Conservation and Management of Fishery Resources in the South-East Atlantic Ocean	Article 13(1)(2)(5)(7)
2001	Stockholm Convention on Persistent Organic Pollutants	Article 15

On the basis of the report from the contracting parties, the Baltic Marine Environment Protection Commission is to keep the implementation of the Convention under continuous observation.<sup>99</sup> In so doing, the implementation of treaties is to be supervised by the Commission.

On the other hand, a weakness of the reporting system is that its effectiveness will depend on the diligence and accuracy of the reporting authorities.<sup>100</sup> In reality, it is suggested that many states fail to fulfil the reporting obligation or report superficially to the relevant international institutions.<sup>101</sup> In particular, it is indicated that reporting in the developing state regime is likely to be a formalistic supervisory tool owing to insufficient technical expertise.<sup>102</sup> Thus, some conventions seek to reinforce the reporting obligation by specifying the content of the reports in detail or providing commitments of contracting parties or commissions to information. For instance, Article 16(1) of the Helsinki Convention requires that the contracting parties report not only the measures taken for the implementation of the provisions of this Convention but also assessments of the effectiveness of such measures and problems encountered in implementing them. Furthermore, Article 16(2) of the Helsinki Convention stipulates that on the request of a contracting party or of the Commission, contracting parties shall provide information on discharge permits, emission data or data on environmental quality as far as available. The OSPAR Convention also provides a similar obligation under Articles 9 and 22. In particular, one may note with interest that the OSPAR Convention further obliges the contracting parties to report measures taken to prevent and punish conduct in contravention of provisions of the Convention pursuant to Article 22(a). In addition, the OSPAR Commission itself is empowered to undertake research in some respects.<sup>103</sup> Hence the Commission could verify the reliability of specific information reported by national authorities.<sup>104</sup> These mechanisms will be useful in enhancing the accuracy of the reports.

Moreover, it is worth noting that, in addition to the reporting system, the OSPAR Convention contains an advanced compliance procedure. In this

<sup>99</sup> Art. 20(1)(a). In this respect, a HELCOM Ministerial Declaration stressed the important role of the Helsinki Commission in supervising the implementation of the Convention and the Recommendations with the aim of ensuring that the same environmental measures were implemented in the whole Baltic Sea and its catchment area. HELCOM Ministerial Declaration (HELCOM Bremen Declaration), 25 June 2003, p. 7. The text is available at the home page of HELCOM: <http://www.helcom.fi/helcom24/MinDec.pdf>.

<sup>100</sup> Birnie and Boyle, note 94 above, p. 206.

<sup>101</sup> With respect to this problem, see for instance, P. Sand, *Principles of International Environmental Law* (Cambridge, Cambridge University Press, 2nd ed., 2003), pp. 181–182.

<sup>102</sup> Dzidzornu, note 97 above, p. 297. Thus international co-operation and assistance between industrialised and developing states will be particularly important in the field of marine scientific research. *Ibid.*

<sup>103</sup> Annex III, Art. 10(a)(b) and Annex IV, Art. 3(b)–(d) of the OSPAR Convention. See also Art. 20(f) of the Helsinki Convention.

<sup>104</sup> Dzidzornu, note 97 above, p. 296.

respect, Article 10 provides that the OSPAR Commission, made up of representatives of each of the contracting parties,<sup>105</sup> has duties (a) to *supervise* the implementation of the Convention and (b) generally to review the condition of the maritime area, the effectiveness of the measures being adopted, the priorities and the need for any additional or different measures. Article 22 then places an obligation upon the contracting parties to submit periodical reports to the Commission. Moreover, Article 23 specifies the compliance procedure, by stating that:

The Commission shall:

- (a) on the basis of the periodical reports referred to in Article 22 and any other report submitted by the Contracting Parties, *assess* their compliance with the Convention and the decisions and recommendations adopted thereunder;
- (b) when appropriate, *decide upon and call for steps to bring about full compliance with the Convention*, and decisions adopted thereunder, and promote the implementation of recommendations, including measures to assist a Contracting Party to carry out its obligations (emphasis added).

In this provision, attention should be drawn to the fact that Article 23 refers to “recommendations”. Thus, the assessment of compliance is applicable not only to the Convention and the legally binding decisions, but also to recommendations. It follows that the contracting parties have to take recommendations seriously, even though they are not binding.<sup>106</sup> Furthermore, one may note with interest that Article 23 refers to “measures to assist a Contracting Party”. Although the meaning of the “measures” remains obscure, it is conceivable that they could include administrative, technical or scientific help.<sup>107</sup> Thus, through the reporting and compliance mechanisms, the implementation of the OSPAR Convention is supervised by the OSPAR Commission.<sup>108</sup> It is

<sup>105</sup> With respect to the function of the OSPAR Commission, see in particular, R. Lagoni, “Monitoring Compliance and Enforcement of Compliance Through the OSPAR Commission” in Ehlers *et al.* (eds.), note 53 above, pp. 155–163; Louise de la Fayette, note 88 above, pp. 257–259.

<sup>106</sup> E. Hey, T. IJstra and A. Nollkaemper, “The 1992 Paris Convention for the Protection of the Marine Environment of the North-East Atlantic: A Critical Analysis”, (1993) 8 IJMCL p. 45.

<sup>107</sup> Lagoni, note 105 above, p. 161. Hilf indicated that in line with recent developments, economic incentives to promote environmental objectives may be a possible means to promote compliance. J. Hilf, “The Convention for the Protection of the Marine Environment of the North-East Atlantic—New Approaches to an Old Problem?”, (1995) 55 ZaöRV p. 593.

<sup>108</sup> This does not mean, however, that the OSPAR Commission has enforcement jurisdiction against a contracting party. Indeed, Art. 13 provides that decisions and recommendations shall be adopted by unanimous vote of the contracting parties. It is inconceivable that a contracting party whose action was contrary to the Convention would vote in favour of the decision. Furthermore, while the Commission may adopt decisions or recommendations by a three-quarter majority vote, the decisions become binding 200 days after their adoption for the contracting parties that have voted for it and not withdrawn their vote, provided that these are three-quarters of the contracting parties. It is suggested thus that a contracting party which is against these decisions is not bound by them. Lagoni, note 105 above, pp. 161–162; Hilf, note 107 above, p. 593.

conceivable that international control through international institutions is particularly important for implementing relevant rules in an integrated manner.

*Need for co-ordination between international institutions*

In this connection, a question arising is how it is possible to co-ordinate activities among relevant international institutions. In fact, the proliferation of international institutions may produce problems regarding overlaps of jurisdiction.<sup>109</sup> Thus, co-ordination between relevant international bodies is essential.<sup>110</sup> At the global level, however, there are few consolidations of programme activities or effective policy co-ordination, apart from some inter-agency mechanisms, such as the Global Investigations of Pollution in the Marine Environment (GIPME), the Inter-Secretariat Committee on Scientific Programmes Relating to Oceanography (ICSPRO) and the Joint Group of Experts on Scientific Aspects of Marine Environmental Protection (GESAMP).<sup>111</sup> In this regard, it should be noted that the Sub-committee on Oceans and Coastal Areas (SOCA), which had been a mechanism for inter-agency co-operation on sustainable development for the oceans established following UNCED, was abolished in 2001 because it was not effective.<sup>112</sup> In 2002, member states of the LOSC called for the creation of a new general mechanism for inter-agency co-operation. Yet, the 2003 Report of the Secretary-General indicated that recreating a similar entity would probably not be helpful. Instead, the Report suggested that it would be preferable to use an existing structure within the United Nations, such as the United Nations System Chief Executives Board for Coordination and the High Level Committee on Programmes for the general oversight of inter-agency co-ordination and co-operation.<sup>113</sup> This example illustrates the difficulty of creating an effective scheme for global inter-agency co-operation.

On the other hand, an open-ended informal consultative process was established with a view to facilitating the annual review by the General Assembly of developments in ocean affairs.<sup>114</sup> This informal consultative process aims at

<sup>109</sup> Churchill, note 90 above, p. 319.

<sup>110</sup> Annick de Marffy, "La Place des Organisations Internationales Competentes Dans la Mise en Application du Régime de la ZEE" in E. Franckx and P. Gauthier (eds.), *The Exclusive Economic Zone and the United Nations Convention on the Law of the Sea, 1982–2000: A Preliminary Assessment of State Practice* (Brussels, Bruylant, 2003), p. 52. See also Chapter 17 of the Agenda 21, para. 17.116.

<sup>111</sup> L. Hinds, "Ocean Governance and the Implementation Gap", (2003) 27 *Marine Policy* p. 351; G. Kullenberg, "Global International Organisations and the Implementation of the Law of the Sea Convention" in Vidas and Østreg, note 73 above, p. 351.

<sup>112</sup> *Report of the Secretary-General, "Oceans and the Law of the Sea"*, 3 March 2003, A/58/65, p. 71, para. 241.

<sup>113</sup> *Ibid.*, para. 242.

<sup>114</sup> UN General Assembly Resolution A/RES/54/33, "Results of the Review by the Commission on Sustainable Development of the Sectoral Theme of 'Oceans and Seas': International Coordination and Cooperation", 24 November 1999.

identifying areas where co-ordination and co-operation at intergovernmental and inter-agency levels should be enhanced.<sup>115</sup> Thus, it is expected that this process may provide a forum for promoting co-ordination and co-operation between relevant international organisations from the global viewpoint.<sup>116</sup> Furthermore, the UN General Assembly Resolution 58/240 adopted in 2004 stressed the need “to improve coordination at the national level and cooperation and coordination at both intergovernmental and inter-agency levels, in order to address all aspects of oceans and seas in *an integrated manner*”, and recalled “the essential role of international cooperation and coordination in promoting *the integrated management* and sustainable development of the oceans and seas” (emphasis added).<sup>117</sup> Thus, the Resolution reiterated its request to the Secretary-General to establish an effective, transparent and regular inter-agency co-ordinating mechanism for issues relating to oceans and seas within the United Nations system.<sup>118</sup>

### **Prospects and Concluding Remarks: Law of the Sea as a Dialectic Legal System**

The above considerations appear to show that the need for an integrated management approach is becoming apparent at the ecological, normative and implementation levels with a view to improving the existing weaknesses arising from the zonal approach. It is arguable that even though the integrated management approach is still embryonic, to some extent, mechanisms supporting this approach are developing in treaties relating to ocean management. In this sense, it may be said at least that the basics for the integrated management approach are emerging at treaty level. In light of this consideration, it will be possible to point to two different approaches in the contemporary law of the sea: the zonal and the integrated management approaches. These two approaches show clear contrasts in at least four respects.

First, with respect to the basic presumption, the zonal approach reflected the confirmation of the sovereign state system derived from the peace of Westphalia. On the other hand, due to its nature, the integrated management approach presupposes the “international community” based on common inter-

<sup>115</sup> *Ibid.*, para. 2.

<sup>116</sup> Annick de Marffy, note 110 above, pp. 61–63. In this connection, it is conceivable that the role of the UN Division for Ocean Affairs and the Law of the Sea (UNDOALOS) will be particularly important in providing support to the General Assembly as well as the organisations of the United Nations system.

<sup>117</sup> A/RES/58/240 “Oceans and the Law of the Sea”, 5 March 2004. Preamble.

<sup>118</sup> *Ibid.*, para. 69. It is suggested that on 31 October 2003, the United Nations System Chief Executives Board for Coordination endorsed the conclusion of the High Level Committee on Programmes to establish an Ocean and Coastal Areas Network (OCAN), building on the former Subcommittee on Oceans and Coastal Areas. Oceans and the Law of the Sea, *Report of the Secretary-General*, 4 March 2004, A/59/62, p. 75, para. 296.

ests.<sup>119</sup> Indeed, without the awareness of common interests and international co-operation to defend such interests, the integrated management approach will not function.

Secondly, regarding the task assigned to each approach, the zonal approach purports in essence to divide the ocean into several jurisdictional spaces balancing the principle of sovereignty and the principle of freedom. In the Westphalia society, one of the principal functions of international law has concerned the spatial distribution of states' jurisdiction.<sup>120</sup> Hence, it was not surprising that traditional law of the sea on the basis of the zonal approach has also focused mainly on the spatial distribution of states' jurisdiction by dividing the ocean into several sectors. It may be said that traditional law of the sea based on the zonal approach was a typical example of the international law of co-existence.<sup>121</sup> By contrast, the integrated management approach purports to create a scheme for the common usage of the ocean, focusing on common interests of international community. In so doing, the integrated management approach is to bring members of the international community together with a view to actively enhancing international co-operation. In this sense, it may be said that the integrated management approach reflects the international law of co-operation.

Thirdly, the zonal approach is essentially spatial in nature, in the sense that the ocean is divided on the basis of distance from the coast. By relying on the objective criterion of distance, the law of the sea based on the zonal approach succeeded in spreading a state's jurisdiction into the ocean. On the other hand, the integrated management approach focuses on the unity of the marine ecosystems. In this sense, it may be said that this approach is an ecology-oriented approach.

<sup>119</sup> In fact, the reference to the "international community" has been increasingly seen in a number of international instruments, although the concept is not yet well established. Regarding this concept, see R.-J. Dupuy, "Communauté Internationale" in (by the same author) *Dialectiques du Droit International; Souveraineté des Etats, Communauté Internationale et Droit de l'Humanité* (Paris, Pedone, 1999), pp. 309–314; Bruno Simma and Andreas L. Paulus, "The 'International Community': Facing the Challenge of Globalization", (1998) 9 EJIL 266–277; P.-M. Dupuy, "L'unité de l'ordre juridique international: Cours général de droit international public (2000)", (2002) 297 RCADI pp. 245–268.

<sup>120</sup> Georges Scelle, "Obsession du Territoire" in *Symbolae Verzijl* (The Hague, Nijhoff, 1958), p. 349. See also C. Tomuschat, "International Law: Ensuring the Survival of Mankind on the Eve of A New Century", (1999) 281 RCADI p. 57.

<sup>121</sup> G. Abi-Saab, "Cours Général de Droit International Public", (1987) 207 RCADI p. 320. In this regard, it is well known that Friedmann pointed to the expansion of international law from international law of co-existence and international law of co-operation. The latter is further categorised into the international law of co-operation on a universal level and one on a regional level. Regarding this formula, W. Friedmann, *The Changing Structure of International Law* (London, Stevens & Sons, 1964), pp. 60–71; by the same author, "General Course in Public International Law", (1969) 127 RCADI pp. 91–109. With respect to Friedmann's thoughts, see, in particular, G. Abi-Saab, "Whither the International Community?", (1998) 9 EJIL pp. 250–254; K. Obata, "Stratification of International Law as the Construction of a World Public Sphere: The Legal Project of Wolfgang Friedmann in His Later Period" (in Japanese), (2001) 20 *Yearbook of World Law* pp. 151–176.

Fourthly, with respect to the implementation of rules governing marine issues, the traditional law of the sea was essentially self-regulation. Under the zonal approach, the implementation of relevant rules remains non-institutional. As the main purpose of the zonal approach is to separate state jurisdiction, it is not surprising that the traditional approach did not develop the institutional mechanisms of the law of the sea. However, the integrated management approach is in essence institutional. Considering that international co-operation is essential for the advancement of the integrated management approach, institutionalised mechanisms for ensuring such a co-operation, such as an international control, become particularly important.

It follows from the above considerations that the contemporary law of the sea should be considered as a dialectic legal system between the zonal and integrated management approaches. On the one hand, there is no doubt that the law of the sea is still dominated by the zonal approach. Considering that the world is divided into sovereign states, the main role of the zonal approach—spatial distribution of national jurisdiction—will in no way lose its importance. On the other hand, it is also apparent that the zonal approach is insufficient for ocean management in some respects, and, thus, the new integrated management approach is needed in the law of the sea. Hence, two different approaches must coexist in international law of the sea *at the same time*.<sup>122</sup> Indeed, the purpose of the integrated management approach is *not* to replace the zonal approach, but to resolve the problems that cannot be resolved under the zonal approach.

It is conceivable that the interaction between the two approaches will be at issue with many topics regarding ocean management. In particular, the reconciliation of the two approaches will be an important issue in the management of straddling and highly migratory fish stocks, the conservation of marine biological diversity, the prevention of marine pollution and the safety of navigation. Intensive ocean use will increasingly necessitate reconciliation of the zonal and the integrated management approaches to ocean management. Hence, harmonisation of the two approaches will be a central issue in international law of the sea.

<sup>122</sup> In this respect, it is interesting to note that R.-J. Dupuy considered international law in general as a dialectic legal system between the relational order (“*l’ordre relationnel*”) and the institutional order (“*l’ordre institutionnel*”). In his view, an important point is that institutional order does *not* take the place of relational order and, thus, the two types of order coexist in international law. It appears that the dialectic approach may also be useful in the context of the law of the sea. R.-J. Dupuy, “Communauté Internationale et Disparités de Développement: Cours Général de Droit International Public”, (1979) 165 *RCADI* 9–232 (in particular, pp. 39–44, 46). With respect to the dialectic approach to international law in general, see by the same author, *Le Droit International Public, Que sais-je?* (Paris, PUF, 11th ed., 2001).