
Moira L. McConnell

Edgar Gold

Follow this and additional works at: https://scholarlycommons.law.case.edu/jil

Part of the International Law Commons

Recommended Citation

Available at: https://scholarlycommons.law.case.edu/jil/vol23/iss1/3
The Modern Law Of The Sea: Framework For The Protection And Preservation Of The Marine Environment?

Moira L. McConnell and Edgar Gold*

I. INTRODUCTION

This article reviews and summarizes the existing and emerging international legal regime dealing with the protection and preservation of the marine environment. Special reference is made to the provisions of the U.N. Convention on the Law of the Sea, 1982 (hereinafter referred to as the 1982 Convention), dealing with the protection and preservation of the marine environment, as contained in Part XII of the Convention.1 In addition, this article examines the developing international law regulating and preserving common spaces and subject matter, particularly with reference to the concept of sustainable development. The article begins with the premise that the marine environmental provisions of the 1982 Convention contain the highest-level global directives for the protection and preservation of the marine environment presently available. Furthermore, these principles are not only confined to the protection and preservation of the marine environment, but are intrinsically part of international environmental law.2 After an introduction to the environmental law framework established by the 1982 Convention, this article will analyze the obligations of the signatory States within this framework. This analysis is based upon an examination of some sixty interna-

* Faculty of Law, Dalhousie University, members of the Marine Environmental Law Program and associates of the Oceans Institute of Canada, Halifax, N.S., Canada. The research assistance of Maria Teresa Cirelli, LL.M. (Dal.), and editorial assistance of Karen Campbell, a student of law, is gratefully acknowledged.

1 United Nations Convention on the Law of the Sea, Dec. 10, 1982, U.N. Doc. A/Conf.62/122, U.N. Sales No. E.83.V.5 (1983), reprinted in 21 I.L.M. 1261 [hereinafter Law of the Sea]. It should be noted that this Convention has so far received three-quarters of its required 60 ratifications, and is, therefore, not yet in force. However, much of the Convention, particularly, its environmental content, has been widely accepted as a codification of customary international law on the topic. Even with respect to the rather contentious provision regarding exploitation of the deep sea bed there appears to be a movement towards greater acceptance and support for the regime by states, originally opposed to it in 1982 such as the United States.

tional and regional conventions and other instruments presently concluded which, directly and indirectly, are concerned with environmental protection.

II. THE U.N. CONVENTION ON THE LAW OF THE SEA AND THE MARINE ENVIRONMENT

The 1982 Convention has as one of its primary objectives, the establishment of a "legal order for the seas and oceans which will facilitate international communication, and will promote peaceful uses of the seas and oceans, the equitable and efficient utilization of their resources, the conservation of their living resources, and the study, protection and preservation of the marine environment."\(^3\) One of the objectives of this article is to evaluate the extent to which the 1982 Convention has been successful in achieving this "legal order" in the context of the protection and preservation of the marine environment. This task involves identification of both the trends and "gaps" in global and regional responses to the international legal obligation to protect and preserve the marine environment. The international legal obligation has moved beyond lex ferenda, and now exists as a matter of customary international law, articulated primarily in Part XII of the 1982 Convention. "Gaps" may be either the result of technological changes, omissions in the 1982 Convention itself, or incomplete responses by some States to the obligations established in the 1982 Convention. Background research for this study has determined the exact nature of the obligations imposed by Part XII and associated provisions of the 1982 Convention with respect to State responsibilities toward the marine environment. All relevant global, regional and subregional conventions and arrangements, dealing with both single and multiple-source based pollution, have been examined. It became apparent from this study that there is a trend toward developing conventions which are more comprehensive in their scope. Nevertheless, it also became apparent that the extent to which States have moved beyond mere acknowledgement that an environmental problem exists is still substantially less than the "legal order" envisaged by the Preamble to the 1982 Convention.

However, a fair evaluation of the provisions in Part XII of the 1982 Convention must emphasize that they are not merely a restatement of existing conventional law or practice, but are constitutional in character. Indeed, they are the first comprehensive statement of international law on the issue. The provisions illustrate a movement toward regulation based upon a more holistic conception of the ocean as a resource that is exhaustible and finite, and ocean usage as a resource management ques-

\(^3\) LAW OF THE SEA, supra note 1, preamble (emphasis added).
tion—one State's use or abuse negatively affecting another State's use of the resource.

The marine protection and preservation provisions in the 1982 Convention also illustrate a shift in regulatory practice. Part XII is the first attempt at a global response to the problem of marine pollution. It is also the first codification of the "soft law" principles on marine pollution as articulated in 1972 at the United Nations Conference on the Human Environment (the Stockholm Conference). Although the 1982 Convention imposes extensive obligations, which necessarily entail restriction on State autonomy, consensus was achieved at a comparatively early stage in the 1982 Convention negotiations. In principle, this is indicative of the unanimous concern of the world community about harm to the marine environment and the relatively uncontroversial nature of the required solutions.

Part XII, and associated provisions of the Convention, are important in the general development of international law because they comprise the first such attempt to develop a public international law framework in response to the deterioration of, and threats to, the marine environment. More importantly, however, and reflective of the nature of its subject matter, Part XII is expressly designed to operate as an "umbrella" for regional activity. It has a traditional "norm-setting" function but, unlike earlier treatment of marine pollution which emphasized national authority and allowed for unilateral or discretionary response to loosely stated principles, the practice of regionalism is expressly recognized and, indeed, mandated in Part XII.

For example, Part XII, Section 2 is entitled "Global and Regional Cooperation" and directs States to cooperate on a global and, as appropriate, regional basis, taking into account regional characteristics. This supports the view that the main trend in international regulation is an increasing emphasis on regionalism as a functional compromise between a necessarily generalized global response and unpredictable and uncertain unilateral responses.

An examination of the marine pollution provisions in the 1982 Con-


5 LAW OF THE SEA, supra note 1, art. 197.

6 There are also a number of initiatives in place and under development which approach some of these problems through a variety of regional arrangements such as the various UNEP Regional Seas Programs. Some of these approaches are even taking the form of "informal regionality", such as the agreement among Maine, Massachusetts, New Hampshire, New Brunswick and Nova Scotia regarding cooperation on marine environmental matters in the Gulf of Maine. See B. Kwaitkowska, THE 200-MILE EXCLUSIVE ECONOMIC ZONE IN THE LAW OF THE SEA (1989). See also D. VanderZwaag, THE FISH FEUD (1983).
vention and the legal responses at the global, regional and subregional levels also indicates that the earlier, prevailing State practice, responding to marine pollution concerns, is still source-based, specifically responsive rather than protective and is a combination of private, global level arrangements and ad hoc regional or bilateral agreements. Increasingly, States are focusing more on the broader notion of marine environment and eco-systems, rather than on specific types of marine pollution. As a result, State responses are becoming multi-source based, conservation-oriented and regionally cooperative. This development seems to be in response to the broad obligations imposed generally by the 1982 Convention and specifically by other international conventions.

It is suggested that the most appropriate way to analyze the obligations in the 1982 Convention is from the point of view of the marine environment in general, rather than simply as questions of marine pollution itself. The notion of "marine environment" is more consistent with the developing perception of ocean use as a "resource," and is also a more encompassing notion than that of marine pollution. As indicated by its title, "Protection and Preservation of the Marine Environment," Part XII of the 1982 Convention is concerned solely with defining the nature of States' responsibilities toward their own and the global marine environment. The marine environment is not a spatial entity removed from the territorial jurisdiction of any single state, rather it is a concept comprising all zones of marine jurisdiction governed by the Convention, including internal waters and high seas.

The treatment of marine conservation and protection in the 1982 Convention, as opposed to marine pollution which is a separate issue from conservation of marine resources, suggests that the law of marine pollution has now evolved as an independent body of law. The general parameters of this evolution are set out in the Part XII rules regarding prevention, reduction and control of marine pollution. However, not all the provisions relating to marine pollution are found in Part XII of the Convention, thus reflecting the package or linkage approach which permeates the Convention. This integration also reflects the reality of, and the regulatory problem posed by, marine pollution, and the extent to which it affects or is affected by almost every other ocean use issue addressed in the Convention. For example, jurisdictional zones, the nature of vessel and aircraft passage, and resource exploitation all affect the marine environment. An adequate resolution of these issues requires reconciliation of global and community needs (the marine environment) with national economic, territorial and legislative sovereignty (a right to exploit their own natural resources in accordance with their own environmental policy) concerns.

The reconciliation of national and international interests is further complicated by the historically dominant community interest in interna-
tional communication or navigation as a part of the so-called "freedom of the seas," and the claims of the less developed states for economic and industrial development, possibly even at an environmental cost. While accommodating conflicting interests might apply to the entire 1982 Convention, the process is even more complex in the context of marine pollution. This complexity results from the extent to which marine pollution and responses to marine pollution overlap with all areas of ocean use. International regulation of marine pollution poses particularly difficult problems in the context of its effect on diverse types of land use. Land based activity, rather than vessel or maritime activity, has only recently been more fully recognized as the major source of marine pollution.\(^7\) The regulation of land based sources of marine pollution presents difficulties because it affects activities that are clearly within the territorial jurisdiction of sovereign states and often has widespread implications for national economic development and political autonomy.

Regulation impacts equally, if differently, on developing States who view it as a constraint on their progress, and on industrially developed States who must renovate, dislocate or even dismantle existing developments. In some cases, retroactive activity is more costly than developments which can "build in" environmental protection from the outset. In its Preamble, the 1982 Convention specifically recognizes the broad nature of pollution of the marine environment and the need to reconcile competing interests: ". . . the problems of ocean space are closely interrelated and need to be considered as a whole." This problem has become of even greater significance in the present discussions on overall global environmental issues such as global climate change, ozone depletion, atmospheric pollution and the need to preserve biological diversity.

### III. THE NATURE OF STATES' OBLIGATIONS TO PROTECT THE MARINE ENVIRONMENT

This section specifically focuses on the identification of States' international obligations to legislate or take other action, with respect to the protection and preservation of the marine environment pursuant to Part XII of the 1982 Convention.\(^8\)

Although the majority of provisions dealing with protection and preservation of the marine environment are found in Part XII of the 1982 Convention, they must be read in conjunction with articles, found

---

7 Marine Report, supra, note 2, at 12.
8 To fully evaluate the entire regime relating to the marine environment it would be necessary to consider the numerous provisions scattered throughout the 1982 Convention which delineate both coastal, port and flag state enforcement responsibilities and jurisdiction with respect to particular activities. While it is important that the interrelatedness of the provisions be emphasized, a specific examination of these provisions is both beyond the scope of this article and unnecessary for its purpose.
elsewhere in the 1982 Convention, which affect the Part XII regime. In addition, several articles dealing with the marine environment were already included in the 1958 Geneva Convention dealing with the law of the sea. These remain effective and binding on those States who have not agreed to the 1982 Convention. Similarly, the 1982 Convention provisions regarding State responsibility and liability, co-exist with and do not prejudice, existing and developing international rules. Where rights and obligations exist in other agreements, either expressly permitted, preserved by or compatible with the 1982 Convention, they remain unaltered. Therefore, the provisions in Part XII are best viewed as guiding or interpretive principles, rather than standard setting principles. The provisions assume the existence of agreed standards, rules and practices external to the 1982 Convention. Considered as a whole, Part XII can be regarded as a "blueprint" or "umbrella" for other more locally or situationally responsive legislation and activities.

A. The Structure

Part XII is divided into eleven sections which delineate States' obligations arising from a duty not to pollute the marine environment. These sections cover matters such as:

1. regional and global cooperation, including technical assistance and transfer of technology among States;
2. monitoring and environmental risk assessment;
3. compliance with specific international rules, regarding pollution from particular sources and regarding ice-covered areas;
4. enforcement of the obligations;
5. safeguards for maritime States using the oceans for transport;
6. sovereign immunity; and
7. State responsibility and liability.

B. The Obligations

The primary obligation of States in relation to the global marine environment is stated in the 1982 Convention's crucial Article 192: "States have the obligation to protect and preserve the marine environment." Article 192 is the first of the forty-six articles which constitute

---

10 LAW OF THE SEA, supra note 1, art. 311(1).
11 Id. art. 304.
12 Id. arts. 311(2), 311(5).
13 Id. art. 194.
14 Id. art. 192 (emphasis added).
Part XII of the 1982 Convention. The fact that the marine environment is not, as already indicated, a distinct entity separate from any State's territorial jurisdiction is specifically recognized in Article 193: "States have the sovereign right to exploit their natural resources pursuant to their environmental policies and in accordance with their duty to protect and preserve the marine environment." In addition to their status as conventional obligations binding on States party to the 1982 Convention, Articles 192 and 193 are generally regarded as statements of customary international law on the extent of a State's environmental responsibility toward the oceans. The obligatory language used in the two provisions reflects the importance placed upon the issue by the international community: A State breaching its obligation to protect and preserve the marine environment would also be in breach of international law. In an international legal instrument agreed upon among sovereign States dealing with questions of economic, political and territorial importance, the use of the words "obligation" and "duty" is significant. This is further substantiated by Article 235(1) of the 1982 Convention which provides that: "States are responsible for the fulfillment of their international obligations concerning the protection and the preservation of the marine environment. They shall be liable in accordance with international law."

Despite the attempt to make Part XII comprehensive, it is necessary to look elsewhere within the Convention to discover what constitutes the subject matter of Part XII, "pollution of the marine environment." This is defined in Article 1(4) as

... the introduction by man, directly or indirectly of substances or energy into the marine environment, including estuaries, which results or is likely to result in such deleterious effects as harm to the living resources and marine life, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the ocean, impairment of the quality of use of sea water and reduction of amenities.

Article 1(5) also defines a particular polluting activity, "dumping," to cover only "deliberate disposal" of substances and goods at sea. Like the definition of marine pollution, it envisages disposal or introduction of some materials into the sea without liability. For example, Article 1(5)(b) provides that "dumping" does not include: "(i) the disposal of waste or other matters incidental to or derived from the natural operations of ships; (ii) placement of matter for a purpose other than the mere

---

15 *Id.* art. 193 (emphasis added).
16 *Id.* art. 235(1).
17 *Id.* at pt. XII.
18 *Id.* art. 1(4).
19 *Id.* art. 1(5).
disposal thereof.”

The general obligation to protect and preserve the marine environment, as set out in Article 192, is given force in Article 194, which clarifies the scope of the regulated subject: pollution of the marine environment. The Part XII regime is expressly concerned with “all sources of pollution of the marine environment” and states are directed to take all measures necessary to “prevent, reduce and control pollution of the marine environment from any source.” Although Article 194 imposes mandatory requirements, not all States have the same degree of responsibility. In its text, the article recognizes that economic and infrastructural differences exist between States, particularly between less developed States. States are required to take all necessary measures using “the best practical means at their disposal and in accordance with their capabilities.” Examples of such measures are set out in Article 194 and also in Articles 195 and 196. The list is not exhaustive and the goal of the measures is the minimization, rather than elimination of pollution. The measures in Article 194 are source oriented, and deal with four sources of marine pollution:

1. land based sources of toxic, harmful or noxious substances released by dumping or released through the atmosphere;
2. vessel activity, including intentional and unintentional discharge;
3. activity related to the exploration and exploitation of natural resources of the sea bed and subsoil; and
4. other installations and devices operating in the marine environment.

Article 196 extends these sources to include pollution arising from the use of technologies and, more importantly in terms of the definition of pollution and polluting activities also includes the introduction, intentional or otherwise, of new or alien species into the marine environment which may cause harmful and significant changes. Article 194 also includes effect-oriented measures to protect “rare and fragile ecosystems,” i.e. ice-covered areas, and habitats of depleted, threatened or endangered species or other forms of marine life. In carrying out their obligations, States must refrain from “unjustifiable interference” with other states in exercising their rights established by the 1982 Convention. Furthermore, States must not respond to the problem of marine pollution by transferring damage or hazards from one area to another, or by con-

20 Id. art. 1(5)(b).
21 Id. art. 194(1)(e) (emphasis added).
22 Id.
23 Id. art. 234.
verting pollution from one form to another.²⁴

The obligation to refrain from "unjustifiable interference" incorporates into the Part XII regime the provisions scattered throughout the 1982 Convention regarding jurisdiction and ocean use activities in particular zones. For example, the enforcement of coastal state pollution concerns are subject to the right of innocent passage.²⁵ Similar restrictions exist with respect to the EEZ, Continental Shelf, Transit passage, and archipelagic sealane passage. In addition to restricting State action in relation to vessel source pollution, provisions outside Part XII reinforce obligations and duties found in this Part.

In terms of fundamental obligations, Article 197 is second only to Article 192 in the Part XII regime. Article 197 leads Section 2, "Global and Regional Co-operation," with a direction that "States shall co-operate on a global and, as appropriate, on a regional basis . . . in formulating and elaborating international rules for the . . . protection and preservation of the marine environment, taking into account characteristic regional features."²⁶ The obligation to cooperate includes an obligation to notify affected States of actual or imminent danger to the marine environment, to make contingency plans for dealing with such dangers, to research, to study and to exchange information and data in order to provide scientific criteria for the development of rules, standards, procedures and practices to reduce, prevent or control pollution.²⁷ Although set out in their own sections of the Convention, the following obligations apply:

(1) to provide scientific and technical assistance to developing States;²⁸

(2) to monitor, assess and publish reports on environmental risks of activities under state control which may cause substantial pollution or significant and harmful changes to the marine environment;²⁹ and

(3) to provide recourse under existing, and further develop, international law with respect to assessment, compensation and settlement of disputes arising from marine pollution.³⁰ These provisions can all be seen as an aspect of the obligation to cooperate.

State acceptance and compliance with the obligation to cooperate globally and regionally is contained in the provisions of Section 5: "International Rules and National Legislation to Prevent, Reduce and Control

²⁴ Id. art. 195.
²⁵ Id. art. 19(2)(h).
²⁶ Id. art. 197 (emphasis added).
²⁷ Id. arts. 197-201.
²⁸ Id. arts. 201-203.
²⁹ Id. arts. 204-206.
³⁰ Id. art. 235(3).
Pollution of the Marine Environment.”\textsuperscript{31} Contrary to the suggestion in its title, Section 5 does not set out international rules or standards, rather it assumes their existence and requires that States implement them. The latter is a third fundamental obligation imposed on States by Part XII. Section 5 also establishes a further dimension of the obligation to cooperate: It requires that States, when implementing the established standards, \textit{harmonize} their legislation and practices both regionally and through international organizations and diplomatic conferences, globally.\textsuperscript{32}

Section 5 is similar to Article 194 in that it approaches marine pollution from a source-oriented perspective. Six sources of marine pollution are dealt with specifically:

(1) Land-based marine pollution;
(2) Sea-bed activities under national jurisdiction;
(3) Activities in the “Area”;
(4) Dumping;
(5) Vessel source, and;
(6) Atmospheric pollution.

Although the general format of these provisions is similar, there are differences in the extent to which States have discretion in their implementation responsibilities. It is important, therefore, to consider briefly each of the sources referenced in Section 5. Since the provisions in Section 6, “Enforcement,” refer directly to the Section 5 provisions, and can be seen as integral to the implementation obligation, these will also be considered.

1. Article 207: Land-Based Sources

Even though the major source of marine pollution is from land-based activities, Article 207 allows the greatest room for State discretion. States are required to take legislative action to deal with the problem of land based marine pollution but are only required to “take into account internationally agreed rules,” to “take other measures as may be necessary,” to “endeavour to harmonize their policies,” and to “endeavour to establish global and regional rules.”\textsuperscript{33} The only definite standard is that States must take some legislative action and include legislation “designed to minimize, to the fullest extent possible, the release of toxic, harmful or noxious substances, especially those which are persistent, into the marine environment.”\textsuperscript{34} Article 207 assumes the existence of internationally agreed rules, standards and recommended practices and draws a distinc-

\textsuperscript{31}Id. § 5.
\textsuperscript{32}Id. arts. 207-12, 235(2) (emphasis added).
\textsuperscript{33}Id. art. 207.
\textsuperscript{34}Id.
tion between them and the global and regional rules, which States are obliged to "endeavour to establish." This is further complicated by a reference to international rules regarding enforcement of the obligations. In this connection, the 1982 Convention requires States to enforce their laws adopted under Article 207 and to "implement applicable international rules and standards established through competent international organizations or diplomatic conference." The flexibility of the envisioned standards is illustrated by the requirement that the standards take into account "regional features, the economic capacity of developing States and their need for economic development."

2. Article 208: Sea-bed Activities (National)

Similar to the other provisions in Section 5, Article 208 assumes the existence of "international rules" regarding particular polluting activities, including sea bed activities, artificial islands, installations and structures subject to coastal state jurisdiction. States are obliged to take legislative action and other necessary measures regarding pollution from these activities. Unlike Article 207, a minimum standard for these measures is set in that they "shall be no less effective than international rules." Assuming that international standards exist, this is potentially a formidable obligation. This standard goes beyond compatibility and demands effectiveness, a term also connoting a standard for enforcement. As in Article 207, a distinction is apparently drawn here between these "international rules" and the "global and regional rules" which States are obliged to establish, "acting especially through competent international organizations or diplomatic conference." The enforcement provision uses the same formula as that used for land based sources, and refers to "laws and regulations adopted in accordance with Article 208" as distinct from "applicable international rules and standards." Article 208 also outlines the obligation to "endeavour to harmonize" policies with those of other States at the "appropriate regional level." Unlike Article 207, there is no allowance made for the economic aspirations and capacities of developing States.

3. Article 209: Activities in the Area

Article 209 incorporates the obligation placed upon "the Authority" to establish rules, regulations and procedures and to ensure effective pro-
tection of the marine environment from activities in the Area. Again, it is unclear whether these rules are considered the “international rules” required to be established under Article 209. However, the enforcement provision, Article 215, does refer back to the Part XI “international rules.” The other primary obligation under Article 209 is that flag states adopt laws “no less effective than the international rules” to regulate activities of “vessels, installations, structures and other devices . . .” under their jurisdiction by virtue of nationality (however determined).

4. Article 210: Dumping

Article 210 concerns “dumping” which, as pointed out earlier, is defined in Article 1 of the 1982 Convention. This Article contains the standard obligation to adopt laws and take measures necessary to “prevent, reduce and control pollution” from dumping. It is clear, both from the definition of dumping and from the requirement that permission to dump be sought, that some dumping is envisaged. A minimum standard for national legislation is also established but, unlike Articles 207 and 208, there is more internal consistency. States are required to “endeavour to establish global and regional rules” and their legislation and measures “shall be no less effective . . . than the global rules and standards.” However, a distinction between these “global rules” and “applicable international rules” is made in the enforcement provision. Aside from requiring enforcement of laws and regulations adopted in accordance with the 1982 Convention and international rules “established through competent international organisations [sic] or diplomatic conference[s],” the enforcement obligations are divided among the affected coastal State, the flag State of the vessel or aircraft, and the State from which the waste originated.

5. Article 211: Vessel-source Pollution

Regulation of pollution from vessels has been a matter of international concern for many years. This is evidenced by both the consistency and detail of the provisions. States are obligated first to establish, through a competent international organization or diplomatic confer-

42 Id. arts. 145, 209. Work is presently being done on what may become part of these rules. See, e.g. “Draft Regulations on Prospecting, Exploration and Exploitation of Polymetallic Nodules in the Area”, Addendum, Part VIII, Working Paper by the Secretariat of the Preparatory Commission for the International Seabed Authority and the International Tribunal for the Law of the Sea, 8 February 1990. UN Doc. LOS/PCN/SCN.3/WP.6/Add.5.
43 LAW OF THE SEA, supra note 1, art. 209.
44 Id. art. 210.
45 Id.
46 Id. art. 216.
47 Id.
ence, international rules regulating vessel source pollution. States are also obliged to adopt laws applicable to their national vessels which are "no less effective" than generally accepted international rules. Because of the transitory nature of the polluting source, there is a provision which permits port State and coastal State regulation. This type of regulation is permissible with respect to the design, construction, manning or equipment of vessels only to the extent that it gives effect to international rules and standards.\textsuperscript{48} In the case of coastal States, this legislative restriction may be more flexible if a competent international organization determines it appropriate.

The only standard set in Article 211 is that the international rules must cover notification to coastal States or other interests which may be affected by incidents involving pollution discharge or maritime casualties. The enforcement obligations regarding vessel source pollution,\textsuperscript{49} as with the legislative obligation, place the primary responsibility on the flag State to ensure that vessels under its jurisdiction, by virtue of nationality, comply with "applicable international rules and standards" and with national legislation adopted in accordance with the 1982 Convention.\textsuperscript{50} There is also a "secondary" and, arguably redundant, legislative obligation which expressly requires flag States to "adopt laws, regulations and take other measures necessary" to implement their national laws and the applicable international rules.\textsuperscript{51} However, the scope and level of flag State responsibility to ensure vessel compliance is not left to State discretion. Instead, there are detailed situational requirements and standards regarding enforcement and punishment. For example, States are required to provide for the effective enforcement of these rules even when outside territorial jurisdiction.\textsuperscript{52}

The enforcement provisions also contain further cooperation requirements designed to ensure vessel compliance with international standards. These obligations primarily concern requests from other States to investigate suspected violations, to provide information, or to assist the enforcement of pollution legislation by taking action, such as preventing unseaworthy vessels, or those which threaten the marine environment, from leaving their ports.

The obligations of port and coastal States are confined to cooperative activity regarding information and enforcement. The provisions re-

\textsuperscript{48} Id. art. 211(6)(c). See also, id. art. 25(2).
\textsuperscript{49} Id. arts. 217-21.
\textsuperscript{50} Id.
\textsuperscript{51} Id.
\textsuperscript{52} Id. Indeed, in the context of the flag of convenience registry or where vessels are nationals of less developed states, this obligation poses a problem in terms of institutional resources. Additionally, the multinational corporate character of many of these "nationals" provides further enforcement difficulties.
garding enforcement of international and national pollution legislation to by port and coastal States including special regimes for ice covered areas, remain permissive and subject to procedural "Safeguards," and "Sovereign Immunity."  

6. Article 212: Atmospheric Pollution

Similar to the provisions dealing with sources of land-based pollution, this part of the Convention requires States to adopt legislation regulating pollution of the marine environment from the atmosphere and to take other measures as may be necessary. However, the standards remain discretionary. States are required to "take into account internationally agreed rules . . . and the safety of air navigation" when developing their response. The only other obligation is, again, one of cooperation: States are required to "endeavour to establish global and regional rules." The enforcement provision maintains the distinction between laws adopted by the State in conformity with the 1982 Convention obligations and with applicable and relevant international rules. It also requires the adoption of national laws to implement applicable international rules, whatever they may be.

C. Summary

In order properly to assess the regime to protect and preserve the marine environment, as described in the 1982 Convention, it is necessary to consider all the interrelated provisions of the Convention. It is important that Part XII not be considered in isolation because the extent of State powers to protect and preserve the marine environment, particularly relating to marine pollution, is largely determined by its interface with other matters regulated by the Convention, such as resource exploitation and maritime passage of vessels and aircraft. It is, however, possible to consider the nature of State international obligations to preserve and protect the marine environment exclusive of jurisdictional matters and powers, by examining the regime outlined in Part XII. This Part can be understood as setting out three fundamental and interrelated levels of obligation:

1. The obligation to protect and preserve the marine environment: which, in the context of Part XII, means the duty not to pollute the

---

53 Id. arts. 218-19.
54 Id. arts. 223-33.
55 Id. art. 236.
56 Id.
57 Id.
58 Id. art. 222. A regime governing the pollution of the atmosphere is currently being developed and may be in place by 1992.
marine environment.\textsuperscript{59}

(2) \textit{The obligation to cooperate on a global and regional basis:} which includes the crucial obligation to develop rules and standards at a global and regional level in response to the first obligation. It also includes the related obligation to cooperate with information exchange, technological assistance, and enforcement or implementation assistance.\textsuperscript{60}

(3) \textit{The obligation to adopt, implement and enforce the cooperatively agreed upon standards at a national level:} The extent of this obligation, as illustrated by the complexity of the provisions which deal with it, is the most difficult to address in a global Convention. Essentially, the degree of State discretion correlates with territorial sovereignty, that is, where the activity or pollution source regulated, such as land-based sources, is completely within a State's territorial jurisdiction and there is no possibility of acceptable external enforcement of standards, then there is greater flexibility and room for variation in the State's obligation.\textsuperscript{61}

The three levels of obligation are highly integrated. To a large extent, each assumes and is dependent upon the substantive existence of the other to render it meaningful.

There have been at least sixty international and regional conventions and other instruments dealing with environmental protection concluded since the mid-1950s.\textsuperscript{62} Although most of this activity predates the 1982 Convention, this regime constitutes the existing international legal regime for the protection and preservation of the marine environment. Accordingly, the next section will examine how this existing regime works within the 1982 Convention framework and, at the same time, how it meets the Convention's stated objectives.

\textbf{IV. TOWARDS A GLOBAL ENVIRONMENTAL LAW FRAMEWORK THROUGH THE MODERN LAW OF THE SEA}

One of the main objectives of this article has been to determine the extent to which the "legal order," as envisaged in the Preamble of the 1982 Convention, has come into existence in terms of the global commitment to protect and preserve the marine environment. Primarily this involves ascertaining the nature of States' international obligations set out in Part XII of the 1982 Convention, determining what actions States have taken — globally, regionally and sub-regionally — in response to these obligations, and evaluating State action in terms of such obligations. This section of the article will focus on the evaluation.

\textsuperscript{59} See id. §§ 1, 9. As the term "pollution of the marine environment" is defined in article 1.

\textsuperscript{60} See id. §§ 2, 3, 4, 6, 9.

\textsuperscript{61} See id. §§ 5, 6, 9.

\textsuperscript{62} See, e.g. E. Gold, HANDBOOK ON MARINE POLLUTION 53-57 (1985).
Part XII is most usefully understood as constitutional or “umbrella” legislation providing obligatory guidelines at a global level but assuming that specific or local legislation exists to give it substance. The exact extent of the “coverage” offered by the Part XII “umbrella,” cannot be determined without taking into account the numerous provisions throughout the Convention which affect States’ powers to fulfill their obligations. Although, it is possible to evaluate the extent of States’ obligations to the international community by examining the regime set out in Part XII, such an analysis would not take into account other obligations which may be preserved by, or co-exist with the 1982 Convention requirements as customary international law.

It was suggested earlier that the fundamental international legal obligations of States to protect and the preserve the marine environment, as set out in Part XII of the 1982 Convention, are threefold:

1. The obligation to protect and preserve the marine environment and, specifically, not to pollute;
2. The obligation to cooperate on global and regional levels, primarily to develop acceptable standards, rules and practices in response to the first obligation; and,
3. The obligation effectively to adopt, implement and enforce at a national level, the agreed upon standards, under the second obligation, in response to the first obligation.

The specific obligations or duties set out in the forty-six articles of Part XII address one or more of these three fundamental obligations. The obligations are interdependent and a failure on the part of States to achieve any one of the three will contribute to failure of the whole regime, and the establishment of a legal order to protect and preserve the marine environment. This does not mean that the protection and preservation of the environment is necessarily more important, overriding other concerns. The concept of a “legal order,” as set out in the Preamble, envisages a balance between conflicting interests. This balance is recognized implicitly in Part XII and other provisions which do not preclude introduction of some materials into the marine environment, exploitation of resources and a certain level of ecological change and risk. This is a practical illustration of the increasingly influential concept of “sustainable development.”

The emphasis on the marine environment and the concept of ecosystems in the 1982 Convention may cause some problems in the development of national marine environment protection legislation. The Convention regards actual alterations to the marine environment rather than specific activity as deleterious, making the potential for diverse laws and regulations obvious. It is not necessary to scrutinize all possible national legislation in order to assess trends and gaps in States’ responses to the “legal order” and the customary law obligation to protect the marine
environment. The chief concern is whether there has been any attempt by the international community to fulfill the three fundamental obligations. It must be emphasized that fulfillment of these Part XII obligations may be as onerous as it is crucial. Frequently, substantial fulfillment of the Part XII obligations may demand high economic and political cost. Of course, it is beyond the capacity of this article to examine accurately how far States have gone to fulfill these clear environmental law obligations at the national level. In fact, this type of examination has, so far, never been undertaken. There is, nonetheless, ample evidence of a considerably raised environmental consciousness throughout the world. This has, in turn, been reflected in legislative action. Also, there is no doubt that this raised consciousness and legislative action has been stimulated and encouraged by the law of the sea debate since the late 1960s. Thus, the history of the modern law of the sea also reflects, to a great extent, the development of the environmental law of the sea.63

It can be seen that, at the national level, the implementation of the environmental law of the sea has been far from methodical. Generally, environmental legislation has been developed on an ad hoc basis, often in reaction to some type of specific environmental problem rather than in compliance with the environmental policy evidenced in conventions and agreements. However, it must be remembered that a high level global environmental directive was missing until the conclusion of the 1982 Convention. This means that the development of international environmental law had been subject to a "patchwork" regime without an all embracing legislative umbrella. This is also reflected in the difficulties experienced by such organizations as the International Maritime Organization (IMO) and the United Nations Environment Program (UNEP) in having their agreements widely accepted and implemented. The highest level global "directive" had simply been missing!

Most of the existing conventions illustrate the scope of the general acceptance of the global marine environmental regime, but a number of them are not yet in force due to lack of sufficient acceptance. Furthermore, many of the instruments which are in effect have not been accepted by a majority of States. Some have barely received the minimum acceptance required to enter into effect. This illustrates a real gap in the "numbers game" — the number of States demonstrating their commitment to the environmental law principles espoused by the various instruments. In a world of approximately 160 States, one could argue that acceptance of such principles requires adherence by at least seventy-five to eighty-five percent of all States.

Examination of the agreements indicates that, while there has been

---

63 THE ENVIRONMENTAL LAW OF THE SEA, supra note 4.
acknowledgement of the obligation and various attempts to cooperate on a regional basis, there has been far less activity regarding implementation and development of acceptable international rules and standards. As discussed previously, States' obligations to implement and enforce these rules assume the preexistence of relevant international rules. This problem derives partly from the historically ad hoc approach by which various agencies and groups, such as GESAMP, IMO, UNESCO, UNEP, IAEA, FAO, and other interests, such as the OECD, EEC, and the IUCN, have developed overlapping programs in response to marine pollution or have developed responses which are not necessarily compatible. There is a clear need for better information exchange and greater coordination of efforts among the various bodies and States acting on their obligations. Presently, it is difficult to ascertain the status of existing conventions or arrangements, particularly where various protocols have been developed. It is also important to note, that many of the conventions in existence today groups were conceived and developed before the 1982 Convention became the dominant force.

Again, vessel activity today is not the major source of marine pollution, even though it has been the focus of most international responses. The major source of marine pollution is land based activity. Recent activities such as the EEC Directives, the development of the Montreal Guidelines, the failed Declaration of the Baltic States, the increasingly broad bilateral agreements, the environmental treaties relating to the South Pacific and others illustrate that States are recognizing the impact of land based pollution and are attempting to respond cooperatively. Nonetheless, this is a complicated issue both from a legislative and an enforcement point of view. While land based sources of pollution may be more easily addressed at a regional level, there is clearly a need for global regulation and standards to achieve the required "legal order" under the 1982 Convention. However, aside from a few agreements which predate the 1982 Convention, little has been done in terms of creating international law and implementing those standards nationally. The status of the Montreal Guidelines is uncertain; consequently, determining whether these constitute "international rules" or regional cooperation is problematic.

Pollution stemming from ships has received the bulk of international marine development attention since the mid-1950s. The fact that at least forty of the almost sixty conventions and agreements examined for this study relate to shipping activities illustrates this point. Although it is argued that this preoccupation with a single polluting industry has been at the expense of more international energy being concentrated on land based pollution, there is no doubt that it has resulted in the reduction of
ship-source pollution to nearly the lowest possible level.\textsuperscript{64} This is principally due to the work of the IMO which, through its principle of "safer ships and cleaner seas," has effectively convinced maritime states and their shipping industries that maritime safety and environmental protection can be combined for direct global economic benefit.

Nevertheless, ship-source pollution continues to be a problem. For example, the MARPOL Convention\textsuperscript{65} one of the most innovative and far-reaching marine pollution instruments conceived so far, a precedent for regulating other polluting industries, has not yet been as widely accepted as it should be. Furthermore, the primary concentration in the area of ship-source pollution has been on oil pollution. Liability for damage arising from pollution by substances other than oil has not yet become the subject of a worldwide convention, but the subject is currently being studied by the IMO following a failed attempt in 1984.

The London Dumping Convention of 1972 was one of the more comprehensive pre-1982 Convention responses to marine pollution from a source which involved both vessels and land based activity. Like MARPOL, it contains supplementary amendments and resolutions, some of which are not yet in force or are voluntary such as the Moratorium on Dumping of Radioactive Wastes. Furthermore, the degree to which States have accepted and implemented all of these standards varies considerably and, consequently, poses a problem for determining the international rules on dumping.

Aside from the problem of State implementation of global and regional conventions and agreements, the 1982 Convention poses a specific problem itself. Although its provisions are designed to create an effective regime or legal order for the protection and preservation of the marine environment, some of the language used to describe States' obligations may be understood to undermine the structure. The problem lies with the third fundamental obligation: the duty to adopt, implement and enforce national legislation. As pointed out earlier, the obligation is based upon the assumed existence of international rules. However, even aside from the internal inconsistencies between international rules and global rules, this creates a problem of circularity where the only international or global rules are those found in the 1982 Convention which itself assumes the existence of external rules!

A related problem is the varying degree of discretion accorded States in relation to the standards for national legislation. Definitional problems also exist with respect to the second fundamental obligation: the duty to cooperate globally and regionally. There is no definition of

\textsuperscript{64} See generally, supra, note 2.
"region" in the Convention, despite a duty to cooperate and develop rules and standards on that basis. Although some assistance is found in articles dealing with semi-enclosed seas and the obligation of bordering States to cooperate, it may be that other criteria for "regions" exist.

Although States recognize their international legal obligation to protect and preserve the marine environment and the importance of cooperation, there are still problems in the coordination of responses and in the degree of those responses at the implementation level. The "legal order" rests upon three fundamental and inseparable obligations; failure to fulfill any of the three may mean ultimate failure of the entire regime.

V. CONCLUSION

The foregoing review of the international legal regime concerning the protection and preservation of the marine environment leads to the following conclusions.

Almost sixty international and regional conventions and agreements are concerned directly or indirectly with the protection and preservation of the marine environment. This series of instruments reflects a considerable ability by the institutions which developed them to reach a resolution, although the instruments are far from comprehensive. Many are not yet in force and of those which are, a number have not been accepted by a substantial majority of States. The instruments concentrate heavily on the area of ship-source marine oil pollution which has been reduced to historically low levels. However, liability for ship-source pollution other than oil, such as that from hazardous and noxious substances, is still missing from the overall regime.

In the area of land based sources of marine pollution, the international regime is still far from complete. Despite UNEP's efforts, the various Regional Seas Programs are developing only slowly and, in some regions, are actually languishing. The difficulty of combatting an international problem, originating from sovereign States, manifests itself most clearly in this area. International attempts to deal with this, the most serious of all pollution problems, generally result only in guidelines or voluntary commitments from States.

Although there is now ample evidence of many States' raised environmental consciousness as reflected in new national environmental legislation, much of this development takes places on an ad hoc basis, often only in reaction to a particular environmental problem. This is due to a combination of factors. At present, the 1982 Convention provides the only highest-level global "environmental directive" to States. However, the Convention is not necessarily perceived as an environmental instru-

---

66 LAW OF THE SEA, supra note 1, arts. 122-23.
ment. Some States still consider there to be no truly global environmental directive urging legislative action at the national level. Another problem is, of course, the economic cost of implementing environmental standards. This is particularly problematic for most developing countries and needs to be addressed, possibly at the U.N. General Assembly level. It is simply unacceptable for any State to be unable to implement basic environmental standards of global benefit, due to economic disabilities.

The review of Part XII of the 1982 Convention, in the context of an international regime for protection and preservation of the marine environment, reveals an extraordinarily rich instrument which, most likely far exceeds the expectations of its drafters. Part XII can be perceived as the substantive codification of the modern environmental law of the sea and, as such, the much needed highest-level global directive for the protection and preservation of the marine environment. Indeed, it is the paradigm for all international environmental law.

However, the value of Part XII is presently diluted from two directions. First, as stated the 1982 Convention, it sets out as one of the fundamental environmental obligations: the duty to adopt, implement and enforce national legislation. However, this requirement is based on the assumption that international rules already exist. Since the only truly global international rules are those set out in the 1982 Convention itself, the argument is circular. This could easily be overcome by a Resolution of the U.N. General Assembly stating that the 1982 Convention reflects the highest global level of environmental law and other international rules for protection and preservation of the marine environment, established outside of the convention in the various international and regional conventions and agreements, are simply the operational international rules required by the Convention.

Second, the present lack of the States' perception that the 1982 Convention is also an important global environmental instrument dilutes the effect of Part VII. It could be argued that it should be the single most important global statement in terms of marine environmental protection and preservation. This problem could also be eliminated if the U.N. General Assembly were to address the global environmental problem in terms of the Part XII approach of the 1982 Convention.

The legal framework relating to questions of liability and compensation for environmental damage is likewise not well developed. Only in

---

67 This is, to a great extent, due to the preoccupation of States with the sea bed provisions of the Convention which has prevented most of the "Northern" States from accepting the entire Convention. Hopefully, progress at the Preparatory Commission on the Law of the Sea may result in a new surge of ratifications which would, at the same time, permit States to focus more sharply on the benefits of the treaty.
the area of ship-source marine pollution has any type of widely accepted regime been established. Even in this area, there are questions about the adequacy of the compensation limits, the administration of compensation funds and, most importantly, the difficulties in quantifying environmental damage by traditional legal methods. Thus, recent work begun by the International Oceanographic Commission in this area is most welcome. Still, the overall area of compensation and liability clearly contains a considerable gap since it presently is covered only by existing public and private principles of law which form an indistinct "grey" area needing a much clearer definition. Specific private law remedies arising from environmental damage are beyond the scope of the 1982 Convention. Yet, the best regulatory principles are defined in the 1982 Convention, for environmental protection is ineffective unless an acceptable liability and compensation regime is also developed.68

Apart from UNEP and IMO, few intergovernmental organizations are coordinating their environmental efforts and priorities. Even with such coordination, a better definition is needed. If the global environment is to be protected, then global approaches must prevail. This is clearly expressed throughout the 1982 Convention, but the method of placing these responsibilities in the relevant global and regional organizations remains in question. For example, the recently concluded United Nations Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (Basel Convention),69 envisages a dual system of control and liability. Although this may well be an innovative approach, it is questionable whether there has been sufficient, if any, coordination with the IMO. This is especially true where a dual system approach, relating to liability for transporting hazardous and noxious substances, failed in 1984. Apart from the obvious gaps in international legislation already identified, there may be a lack of coordination among States.70

Finally, the environmental law of the sea, as reflected and codified in the 1982 Convention, must be the responsibility of the U.N. Office for

68 Although a number of widely accepted international oil pollution compensation and liability schemes have been developed under IMO auspices since 1969, recent serious tanker disasters have resulted in overreaction, particularly in the United States. This has caused the United States to engage in unilateral action regarding compensation and liability for oil pollution damage. This action clearly contravenes the spirit of the 1982 Convention while making the complex task of the IMO in this area more difficult. See The Oil Pollution Act of 1990, Pub. L. No. 101-380, 104 Stat. 484 (1990).


70 It is conceded that this conclusion is based on the observation of general trends rather than on sustained research which is beyond the scope of this article.
Ocean Affairs and the Law of the Sea. If the environmental provisions of the 1982 Convention are raised to the highest level global marine environmental directive, possibly through a U.N. General Assembly Resolution, then such provisions must be "championed" and nurtured by an institution commensurate at this level. If such rules are to be the very apex of international marine environmental law, they cannot be interpreted by U.N. specialized agencies and other institutions alone. They should be housed within an organization which is specifically charged with the implementation of all international environmental law, including the law of the sea.