

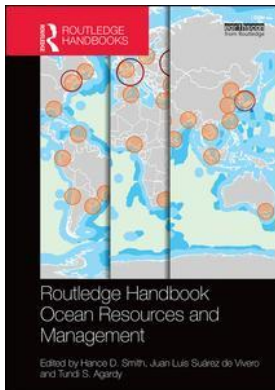
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Hance D. Smith, Juan Luis Suárez de Vivero, Tundi S. Agardy

### **State Ocean Strategies and Policies for the Open Ocean**

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Patricio A. Bernal

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# 3

## STATE OCEAN STRATEGIES AND POLICIES FOR THE OPEN OCEAN

*Patricio A. Bernal*

### **The ocean space and its resources in the twentieth century**

This chapter addresses 'state ocean strategies and policies for the Open Ocean'. Open Ocean and Deep Seas are not legal categories included in the United Nations Convention on the Law of the Sea, UNCLOS, but are technical terms that encompass the large oceanic ecosystems extending thousands of kilometres offshore and the very inaccessible deep environments of the ocean, perhaps the most important part of the ocean in terms of the life support system of the planet.<sup>1</sup> It differs from the term 'High Seas', a clearly defined jurisdiction in Part VII of UNCLOS, since much of what is Open Ocean and Deep Seas lies within exclusive economic zones (EEZ) and Territorial Seas of coastal nations, many of them small islands and developing states. Since the international seabed beyond the continental shelf or EEZs of nations constitutes 'The Area', Part XI of UNCLOS puts it under the authority of the International Seabed Authority; much of the management needed in this oceanic domain can be done and is starting to be done under national law, existing legal international arrangements and regional coordination.

But not all oceans can be dealt with in this way. UNCLOS gives the responsibility for the governance, policy and management of the High Seas to the collective authority and action of nation states, with direct legal, political and economic control of nearly half of the world's ocean, excluding the corresponding seabed. In the final analysis individual nation states are the cornerstones of this system. Given the many shortcomings in implementing current regulations, it is a valid question to ask why this turns out to be so and here some possible answers are exposed.

Throughout the history of humanity, ocean space and its resources have been coveted by nations. As in the occupation and settlement of land, nations have tried to exert control and dominion over coastal seas and critical passages, and have regulated and taxed the free movement of vessels and merchandise along their coasts. Ocean-going capabilities and strong navies were and are the instruments of this dominion. In the first half of the twentieth century an increased interest in the use of the ocean space and its resources was accompanied by concomitant concerns on the security risks associated with an open and aggressive race for control and dominion of

the open sea. The two world wars had demonstrated the importance of modern naval power and the advent of large aircraft carriers, the importance of the ocean to project military force to distant locations. The emergence of the Cold War as the dominant security scenario after the Second World War and the trauma over Hiroshima and Nagasaki put ocean affairs centre stage, at least from a global security stand.<sup>2</sup>

With the establishment of the United Nations in 1945, depository of a strong and universal mandate to avert regional and global security risks, this state of affairs was considered problematic and eventually became untenable. Progress in marine technology and the impact of new scientific discoveries brought forward renewed interest on old and new civilian uses. The discovery of poly-metallic nodules at the bottom of the sea pre-figured a future with large deep-sea mining operations. This fact triggered a series of extensive deep-sea mining claims in the equatorial Pacific, registered by private companies under national law.<sup>3</sup>

The extension and intensification of whaling and fisheries in the High Seas, and the development of large fleets that were accompanied by factory vessels that could operate for many weeks in distant waters, highlighted the need to better define and protect fishery rights. Already facing a 'plethora of conflicting claims by coastal states' (Koh, 1983) and the expansion of world trade, made securing passage through international straits imperative, as well as the need to craft a common universal definition of maritime national jurisdictions. These concerns received varying levels of attention and reactions around the world. Due to the lack of capabilities to master sophisticated seagoing technologies, issues related to the open ocean were seen by many coastal states as issues for 'the rich and powerful countries'. Nations with large navies, commercial fleets and an increasing capability to conduct scientific research in the open ocean were clearly beneficiaries of the status quo based on the 'freedom of the sea' doctrine and might have had some level of reservations with regard to entering into a broad and complex negotiation under the UN. Nevertheless, global and regional security concerns were widely shared among all nations, regardless of their size and power.

This chapter describes first the scope of UNCLOS with a summary of its outcomes, discussing next the context in which UNCLOS was negotiated. Then a brief review of the series of international instruments and institutions available today to manage the open ocean is provided, including a description of the UN system and its key role in ocean governance. Next, the relationship of ocean governance and ocean law to civil society is critically analysed, followed by a brief analysis of the role surveillance and enforcement of regulations play. The challenges posed by the introduction of integrated management and the application of the ecosystem approach as standards of good practice are presented next. Finally, the chapter ends with a reasoned proposal laying down a '*feuille de route*' for organizing and improving action at the national level.

### **UNCLOS: the United Nations Convention on the Law of the Sea**

Without any doubt, UNCLOS is the major legal instrument addressing the governance of the open ocean and High Seas. UNCLOS is often referred to as a constitution of the ocean and at least in one respect this is exact: UNCLOS is far from being a self-contained code. UNCLOS combines its norms and jurisdictions with 'a series of frameworks for developing specific rules in the context of other arrangements and organizations' (Oxman, 2002). For example, for all issues relating to shipping it is the International Maritime Organization (IMO) that acts as the 'international competent organization'; similarly, the United Nations Food and Agriculture Organization (FAO) does the same for fisheries and aquaculture, and the Intergovernmental Oceanographic Commission of UNESCO for ocean sciences and ocean observations.

The new international legal regime that emerged in 1982 was conceived to provide: first a framework to harmonize the rights and duties specified in the pre-existing Conventions into a single text, re-enforced by a common system for settling disputes; second, a common redefinition of ocean areas, the zonal or 'spatial' jurisdictions, i.e. the nature and extension of the new jurisdictions for the ocean space derived from the harmonized texts; and third, new functional principles and norms in domains such as protection of the marine environment, living marine resources and deep-sea mining.

In terms of zonal regimes, the common redefinition of ocean areas contained in UNCLOS provides precise definitions of *Baselines* at the coastal territorial boundary of states, *Internal Waters*, located behind the baselines, *Territorial Sea*, extending 12 miles offshore of the baselines, *Contiguous Zone* up to 20 miles, allowing control by coastal state of unlawful acts, *Exclusive Economic Zone*, a *sui generis* jurisdiction giving exclusive economic rights to coastal states up to 200 miles from baselines, the *Continental Shelf* regime giving exclusive access to the coastal state to its resources, the *High Seas* regime, preserving beyond EEZs the freedoms of the '*freedom of the sea*' doctrine for the water column and surface; and *The Area*, i.e. the international seabed area beyond EEZs or continental shelf boundaries, defined as '*the common heritage of humanity*'. It is interesting to note that due to the conflicting interests that needed to be accommodated, the definitions of these zonal regimes were far from being exclusively a matter of geographic boundaries alone. The jurisdictions attached to them are limited functionally or functional principles are affected by them.

The new functional principles that UNCLOS incorporated include environmental considerations on: Pollution Prevention (generally), Dumping at Sea; Fishing Rights, both in the EEZ and on the High Seas; Protection of Marine Mammals; Biodiversity; Land Based Pollution; Atmospheric Based Pollution; and Pollution from Ships.

UNCLOS also created four new Agencies:

- the Commission on the Limits of the Continental Shelf charged with the mandate of resolving claims for an 'extended continental shelf';
- the International Seabed Authority with its Assembly, Council, and Secretariat managing the Mining Code of part XIV and monitoring activities in The Area;
- the Enterprise, pertaining to the Mining Code established in part XIV; and
- the International Tribunal for the Law of the Sea, charged with the regime for the settlement of disputes.

UNCLOS also completed the preliminary work done in Geneva during the First UN Conference on the Law of the Sea *Concerning the Compulsory Settlement of Disputes* where an Optional Protocol (that entered into force in September of 1962) had been agreed, providing for the compulsory jurisdiction of the International Court of Justice, or for submission of the dispute to arbitration or conciliation. UNCLOS establishes a comprehensive regime for Settlement of Disputes, (Part XV) provides it with its own Tribunal and explicitly regulates three Enforcement regimes by: the Flag Nation, Port Nations, and more generally by Coastal Nations not acting as Port Nations.

It is a singularity in international affairs, that precisely during the bi-polar world of the Cold War, and during the discussion within the UN of a 'new international economic order', a sophisticated and complex negotiation on ocean affairs could succeed. In the 1960s, codifying 'a single body of rights and duties' for the use of the ocean space and its resources and agreeing on 'a precise allocation of jurisdictions applicable to all' (Oxman, 2002), was a pending issue in international law. Once in the first half of the twentieth century<sup>4</sup> and twice in the second

half, in 1958 and 1960 under the UN, efforts to negotiate an integral agreement on the law of the sea had failed. The First UN Conference on the Law of the Sea in 1958 was unable to find a common base for the negotiation and concluded giving rise not to one but to four separated conventions: the Convention on the Territorial Sea and the Contiguous Zone; the Convention on the High Seas; the Convention on Fishing and Conservation of the Living Resources of the High Seas; and the Convention on the Continental Shelf. The Second UN Conference on the Law of the Sea in 1960, convened to address the breadth of the territorial seas and fishery limits, was unable to reach a consensus, adopting instead just two non-binding resolutions.

It was during the third Law of the Sea Conference (1973–1982) that the international community finally agreed on the current text of the United Nations Convention on the Law of the Sea, UNCLOS. The Success of the Third UN Conference on the Law of the Sea depended on the definition of a balanced negotiating package and on adopting a *sui generis* procedural rule. In the words of Bernard Oxman, ‘many treaties, by permitting reservations, sacrifice uniformity of substance in order to promote universality of ratification’ but UNCLOS aimed at ‘uniformity of substance and universality of adherence’ (Oxman, 2002). For achieving this, the Convention had to be negotiated and adopted as a whole, *in toto*, as a package deal, prohibiting reservations. To achieve this ambitious goal, the Third Conference was carefully prepared with a lot of informal preliminary work that outside or within the UN had started as far back as 1967.

The negotiating package did contain elements that would change the balance from the traditional ‘freedom of the seas’ doctrine that exclusively dominated ocean affairs for centuries to a more nuanced and modern system where the powers and rights of coastal states could be significantly extended, especially from an economic point of view, but at the same time preserving the basic rights of movement in the ocean, so essential from a sovereignty, commercial and security point of view.

Developing countries actively contributed to creating the base for a negotiating package between north and south. Triggered by the Truman declaration in September 1945 (i.e. the unilateral declaration by the USA of national jurisdiction over the resources of the continental shelf), Argentina with one of the widest continental shelves in the world did the same in 1946, extending its jurisdiction over the resources in overlying waters. The nations of western South America, neighbouring the subduction zone between the Antarctic and Nazca Plates and the American continent and having a series of deep-sea trenches off their coasts instead of an extensive continental shelf, established sovereign jurisdiction over 200 miles off their coasts regardless of the actual extension of their continental shelf: Chile in 1947, Peru in 1948 and Ecuador 1950. These early developments in South America were followed by Arab countries who asserted sovereign domain over the resources in the continental shelf, and later on by African countries. The archipelagic states of Indonesia and the Philippines also claimed jurisdiction over their ‘interior waters’. This fast evolving legal landscape brought home to all coastal states the fact that regardless of their stage of development they also had a stake in the High Seas and some of these newly proposed jurisdictions became key negotiating points adopted by the new group of 77, that in the rhetoric of the time federated the ‘non-aligned and developing countries of the third world’. Although South American countries were first in claiming sovereign jurisdiction over 200 miles, it was Kenya that in a working paper presented at the Thirteenth Session of the Asian–African Consultative Committee (Lagos, 18–25 January 1972),<sup>5</sup> proposed the term ‘economic exclusive zone’ for the 200 mile zone (Nandan, 1987). The evolution of the 200 mile zone concept from 1947 to 1982 reflects a compromise that legitimizes functional sovereign economic rights over the resources but not over the space, as a territory.

In contrast with the series of treaties and conventions negotiated a decade later in Rio de Janeiro, or the Antarctic Treaty designed primarily to solve territorial claims over the Antarctic territory and that protects what in 1959 was seen as a pristine continent, UNCLOS is far from being a Convention negotiated around the protection of the environment. It is a convention that deals with development and the potential benefits that nations could obtain from the ocean and its resources, and maintains the security equilibrium existing during the Cold War.

In the dynamic of the negotiations of a package with dissimilar contents, during the Third Conference '*quid pro quo*' transactions had to emerge. Parts XIII and XIV of the final text reflect very well this aspect of the negotiations. With the aim of protecting the economic rights vested on the coastal states by the new EEZ jurisdiction, Part XIII regulates the conduct of Marine Scientific Research inside the EEZ; in fact one of the freedoms preserved in Part VII for the High Seas. Since most developing nations do not have the capabilities to conduct scientific research in distant waters, the protections and guarantees in Part XIII affected predominantly research conducted by developed nations inside the EEZ of coastal states that could reveal or prospect for potential resources.

On the other hand, Part XIV tries to build a legal instrument to level the ground of capabilities for access to marine resources by exhorting all nations of the world to cooperate in the transfer of marine technology under '*fair and reasonable terms and conditions*' (Art. 266.1), and to '*foster favourable economic and legal conditions for the transfer*' (Art. 266.3).

At the time, for developing countries that had recently established the Group of 77, the context for Part XIV was provided by the larger discussion on equity in international economic affairs taking place under the UN Conference on Trade and Development (UNCTAD). The UN General Assembly had adopted on 1 May 1974 a strong Declaration containing a series of principles promoting a New International Economic Order (UN A/RES/S-6/3201, 1974). Part XIV was seen as a sort of promise of large country-to-country programmes of transfer of marine technology that would open access to marine resources, specially mining. The transfer of deep-sea mining technology is fully part of the mining code (Part XI Art. 144). This article turned out to be one of the final stumbling blocks to approving the whole treaty. Developed countries interpreted Part XIV as being part of the more general commitment to cooperate; something that they felt they already did under multilateral and bilateral agreements. Forty years on from the UNCLOS negotiations, it is fair to say that in most cases the key actor has been the private sector and not the states that negotiated the transfer of technology for the exploitation of marine resources, usually in compensation for being granted access to the resources of coastal states.

Are nations of the world assuming the challenges that UNCLOS put in their hands? For a great majority of coastal and developing nations the High Seas has been and remains a remote space. Most coastal nations do not have the specialized skills, expensive infrastructure and financial means to access the High Seas and its resources. Therefore, in practice, the effectiveness of the approach adopted relies on the commitment and engagement of those that possess the assets and capabilities to access the High Seas. However, for this very same reason the treatment that UNCLOS gives to the High Seas also raises basic questions of equity.

### **International instruments and institutions**

The fact that UNCLOS combines its norms and jurisdictions with frameworks developed under other arrangements and organizations gives a special role to the UN in the implementation of UNCLOS, especially beyond territorial seas. This role is not exclusive, since in a court of law, all International Law will be called upon in the resolution of disputes, but gives the UN a priority

central role that has been assumed and developed in time. Furthermore, a sort of tacit agreement exists among nations that governance of the sea is to be treated at the level of the General Assembly of the UN. Since 1982 this tacit agreement has been strictly adhered to, with the only exception the negotiation and adoption by UNESCO of the Underwater Cultural Heritage Convention in 2001 that entered into force on 2 January 2009, after its twentieth ratification.

On the other hand, there are 641 bilateral and multilateral agreements, including modifications, regulating the use of the ocean space and its resources (Mitchell, 2002–2014). Not all these agreements and treaties have the same relevance or importance, and many are bilateral arrangements written to solve ad hoc conflicts among neighbours; nevertheless their existence (or persistence) shapes international jurisprudence. This proliferation of international agreements reveals a low level of engagement or confidence on the global ocean governance system from the part of states. Many parts of UNCLOS have never been tested in the court of law, and many governments when given the opportunity by UNCLOS to choose, preferred the International Court of Justice in The Hague rather than the Law of the Sea Tribunal in Hamburg as their arbiter in the settlement of disputes. This means that when litigating a marine case, the legal advice on which tribunal or jurisdiction should take the case still remains a critical first step. The review below follows to a great degree the selection made by Haward and Vince (2008).

### **1 *The 1995 UN Fish Stocks Agreement (UN)***

In 1992, at the UN Conference on Environment and Development in Rio de Janeiro, nations agreed to call for a UN Conference to negotiate a complementary agreement for highly migratory and straddling fish stocks. Before 1992, several crises had developed in situations where a fish stock lying within national jurisdiction had a significant part of the same stock lying outside national jurisdiction, leaving it open to the exploitation by distant waters' fishing fleets. Real incidents in the 1980s resulted in the capturing of foreign fishing boats in the High Seas by coastal states trying to enforce fishing regulations and protect their stocks. These incidents could have been treated as acts of piracy or an unlawful act of aggression among nations, bordering on an act of war. Fortunately, diplomacy prevailed and parties concerned finally recognized that a real problem existed. After six sessions held between 1993 and 1995, the 'UN Agreement for the Implementation of the Provisions of UN Convention of the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks' was adopted. Better known as the UN Fish Stocks Agreement (UNFSA), it entered into force on 11 December 2001. As its long official name indicates, this agreement is understood to be an 'implementing agreement' for UNCLOS,<sup>6</sup> signalling a practical and low-risk way of complementing UNCLOS without opening its basic original text to lengthy negotiations, amendments and modifications.

Articles 19, 20, 21, 22 and 23 of UNFSA provides that states will ensure that vessels flying their flags shall comply with regional and sub-regional management measurements adopted by Regional Fisheries Management Organizations and Agreements (RFMO/A). A crucially important addition to international law contained in these articles was that nations were authorized to enforce those measures, 'regardless of where the violation occurs', including the High Seas. Some of these very same articles still remain today a major obstacle for several fishing nations to subscribe this agreement on the basis that they violate exclusive flag-state jurisdiction over fishing vessels in the High Seas (Balton and Koehler, 2006).

UNFSA contains a significant body of non-flag-state enforcement provisions that contribute significantly to strengthening port-states' authority (Rayfuse 2004, cited in Haward and Vince,

2008): i) member states' members of a RFMO can detain vessels that they suspect have acted to undermine the effectiveness of the conservation measures adopted by the RFMO, until the flag state concerned adopts 'appropriate' actions; ii) port-states have the right and duty to inspect gears, documents and cargo of fishing vessels calling voluntarily on their ports; iii) port-states can prohibit landings and trans-shipments when it can be established that the catch has been obtained undermining the effectiveness of management and conservation measures adopted by a RFMO/A.

Only states that belong to a RFMO or have agreed to apply the conservation measures adopted by a RFMO can fish the resources (species) regulated by those measures. Most RFMO/A were established to regulate single species stocks, such as the 17 tuna commissions. This feature of most RFMOs also makes the application of the ecosystem approach to fisheries difficult, where consideration of the catch of non-targeted species and the impact on other species should also be considered. Since RFMO/As allocate quotas or levels of fishing effort among their members, this in effect should limit fishing in the High Seas only to those countries that are members of a RFMO. This clause has become very contentious. 'Free rider' vessels that fish regardless of complying with regulations remain a real threat in many parts of the world. Some RFMOs manage different types of stocks, such as NAFO in the North West Atlantic. This is also the case of the new South Pacific RFMO that in its western region will manage essentially Deep Sea Fisheries, and in its Central and Eastern region will manage a large pelagic fishery. The bottom line is that each *RFMO is an autonomous international agreement (or treaty) binding a group of fishing nations, the parties to the agreement, that self-regulate their own behaviour*. Many RFMOs have a good record and adhere to acceptable international standards. However, many have resisted or grudgingly accepted efforts to establish a system of external review of their procedures (Balton and Koehler, 2006).

## 2 The Compliance Agreement (FAO)

Reflecting the level of difficulty with the enforcement of fisheries in the High Seas, 'the Agreement to promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas' had to be established to deter the practice of reflagging vessels to avoid compliance with the conservation and management measures adopted for the High Seas. In the words of Balton and Koehler (2006, p. 9) this is a problem because 'many developing States (and some developed States) allow High Seas fishing vessels to fly their flags without any meaningful ability or intention to control the operations of those vessels'. The agreement was intended to be applied to all vessels fishing or intending to fish in the High Seas, although parties can exempt vessels below 24m length. Entering into force in 2003, today it has 39 'acceptances', which in the context of FAO agreements have the same function as ratification or accession. The last three acceptances were given by Senegal, Mozambique and Brazil in 2009.

## 3 Code of Conduct (FAO)

A voluntary 'soft law' instrument, it contains a comprehensive prescription to guide fisheries practices towards a trajectory of sustainability. It deals with: i) fisheries management practices; ii) fishing operations; iii) aquaculture development; iv) integrating of fisheries into coastal area management; v) post-harvest practices and trade; and vi) fishery research. The compliance agreement (above) is an integral part of the Code of Conduct as well as several International Plans of Action (IPOAs) drafted within the FAO system answering a call contained in the Code to provide guidance for 'the formulation of international agreements, and other legal agreements'.



There are several IPOAs: i) 'for the management of fishing capacity'; ii) 'for the conservation and management of sharks'; iii) 'for reducing incidental catch of seabirds in longline fisheries'; and iv) 'to prevent, deter and eliminate illegal, unreported and unregulated fishing' (IPOA-IUU). As part of the 'Code' all these instruments are voluntary.

#### **4 International Whaling Commission (IWC)**

Established in 1946 under the International Convention for the Regulation of Whaling, the IWC was intended to serve as the primary international mechanism for the conservation of whales as a fishing (hunting) stock. Since 1970, *a contrario sensu* however, the Commission has become the primary international mechanism for the protection and conservation of all species of whales (Caron, 1995). In 1986 the IWC adopted a five-year moratorium on commercial whaling that has been extended to the present and has designated an Antarctic sanctuary for whales. "The IWC power to "legislate" a moratorium or quotas is very restricted because any member state may opt out of a quota or moratorium simply by objecting to it' (Caron, 1995). Furthermore, the IWC has no authority or practical means to enforce them and any member might shield itself from the obligation of compliance by leaving the Commission, as Iceland did in 1992 until rejoining in 2002.

#### **5 Marine Pollution and Safety of Life at Sea (IMO)**

Over time the IMO has developed a total of 58 treaties and arrangements, dealing with safety issues related to cargo (shipping of dangerous substances), safety of life at sea, search and rescue procedures, dumping of substances into the ocean, ship construction standards (double hull tankers, safe containers, safe fishing vessels), and pollution from vessels, and more recently with rules dealing with the abatement of terrorism and terrorists acts.

According to the IMO itself, the three most important instruments are:

- 1 the International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended;
- 2 the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto and by the Protocol of 1997 (MARPOL); and
- 3 the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) as amended, including the 1995 and 2010 Manila Amendments.

Everything that happens at sea on board a ship falls under the responsibility of a state through the Flag-State regime of UNCLOS. The state that registers or licenses the vessel, granting it the right to carry its flag to navigate in international waters and to enter into the territorial waters of other states, has first and exclusive responsibility of what the vessels and the people on board do vis-à-vis compliance with international and national laws and regulations.

According to the UN Review of Maritime Transport (UNCTAD, 2011), 90 per cent of foreign controlled tonnage of the world fleet is registered in ten countries that maintain 'open and international registries'. These ten countries are: Antigua and Barbuda, Bahamas, Bermuda, Cyprus, Isle of Man, Liberia, Malta, Marshall Islands, Panama and Saint Vincent and the Grenadines. In fact four countries: Panama, Liberia, the Marshall Islands and Hong Kong (China) register 47.5 per cent of the world fleet (UNCTAD, 2011). A less elegant name for this universal practice is 'flags of convenience'.

In general terms, it can be said that a vessel flies a flag of convenience when it has no real economic connection (or no '*genuine economic link*') with the country whose flag it flies. From a viewpoint of the countries of registration, an '*open registry*' country is one which accept vessels on its shipping register with which it has no genuine economic link . . . real owners live outside the jurisdiction of the Flag State.

*(Benham, 2003, pp. 126, 128)*

UNCTAD identifies the following elements as relevant for determining whether a genuine link exists (Benham, 2003):

- 1 the merchant fleet contributes to the national economy of the country;
- 2 revenues and expenditures of shipping, as well as purchases and sales of vessels, are treated in the national balance of payments accounts;
- 3 the employment of nationals on vessels; and
- 4 the beneficial ownership of the vessel.

The genuine economic link that appears broken by the practice of open registries is what UNCTAD was supposed to guard 'in order to help developing countries make headway in the development of shipping capabilities . . . in a participatory international economic system' (Behnam, 2003, p. 124). Today, developing countries have a dominant economic participation in the provision of seafarers, ship scrapping and in registration, although there is also progress in 'maritime sectors of higher business sophistication and technical complexity' (UNCTAD, 2011).

## **6 Convention on Biological Diversity (CBD)**

The Convention on Biological Diversity was opened for signature on 5 June 1992 at the United Nations Conference on Environment and Development (the Rio 'Earth Summit') and entered into force on 29 December 1993. The objectives of the Convention as stated in Article 1 are:

[T]he conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding.

Early on, CBD adopted in 1995 the Jakarta Mandate on the Conservation and Sustainable Use of Marine and Coastal Biological Diversity, committing to:

a series of specific goals including the development of a global system of marine and coastal protected areas, the establishment of and implementation of a global program of making fisheries and mariculture sustainable, blocking the pathways of invasions of alien species, increasing ecosystem resilience to climate change, and developing, encouraging, and enhancing implementation of wide-ranging integrated marine and coastal area management that includes a broad suite of measures at all levels of society.

*(Secretariat CBD, 2012)*

The 2008 Conference of the Parties of CBD adopted criteria for the identification of Ecological and Biological Significant Areas, EBSAs (decision IX/20 annex 1) as well as guidance concerning the development of representative networks of marine protected areas (decision IX/20 annex 2). An inter-sessional CBD expert workshop reviewed the experience with the application of the CBD EBSA and the FAO's Vulnerable Marine Ecosystems (VME) criteria, concluding that the two sets of criteria were compatible. The inter-sessional workshop results fed into the 2010 COP decision X/29 that, *inter alia*, outlined regional processes to apply the criteria for the identification of EBSAs. These processes have already taken place in several regions of the world (NE Atlantic, SW Pacific, Tropical West Atlantic and Caribbean, South Indian Ocean, Eastern and Tropical Pacific, South East Atlantic and North Pacific), generating a list of 187 EBSAs (Dunn, *et al.* 2014).

Part of the Rio Convention's<sup>7</sup> CBD does encourage and invite a strong presence and participation of civil society in their proceedings. This is in contrast to the strict procedural rules that can govern the UN General Assembly proceedings, closing all discussions to all except state representatives as well as in state parties' meetings of UNCLOS. To correct this lack of participation of civil society in UNCLOS and based on a recommendation of the UN Commission on Sustainable Development, the UN General Assembly (UN A/RES/54/33, 1999) established the Informal Consultative Process on Oceans and the Law of the Sea (Simcock, 2010).

### **7 The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)**

A multilateral treaty to protect endangered plants and animals, the convention was proposed in 1963 at a meeting of the International Union for Conservation of Nature (IUCN). Its text, adopted by 80 countries in Washington, was opened for signature in 1973, entering into force on 1 July 1975. CITES aims to ensure that international trade in specimens of wild animals and plants does not threaten the survival of the species in the wild. Roughly 5,000 species of animals and 29,000 species of plants are protected by CITES. Each protected species or population is included in one of three lists, called Appendices, that are afforded different levels or types of protection from over-exploitation. Appendix I lists species that are threatened with extinction and CITES prohibits international trade in specimens of these species, except when the purpose of the import is not commercial, for instance for scientific research. Appendix II lists species that are not necessarily now threatened with extinction but that may become so unless trade is closely controlled. Appendix III is a list of species included at the request of a Party that already regulates trade in the species and that needs the cooperation of other countries to prevent unsustainable or illegal exploitation. Parties may enter reservations with respect to any species listed in the Appendices in accordance with the provisions in the Convention.

### **The role of the United Nations system in the Law of the Sea**

The United Nations is a complex system composed of a central system and a wider 'family' of UN specialized agencies and related organizations. *Sensu stricto*, the United Nations is the body constituted in 1945, around the UN Charter. This central system is built around the Governance provided by its General Assembly that meets annually in New York and incorporates programmes and other bodies created by the General Assembly.

Parallel to this central system there are 15 specialized agencies, including the World Bank and the International Monetary Fund, each of them constituted under their own independent

international treaty or convention, that answer to the governance of their own supreme bodies. These two groups, given the common and shared principles and aspirations, cooperate and try to integrate and harmonize as much as practical their policies and actions. This combined group of institutions is what is generally called the 'UN family'.<sup>8</sup>

The closest to an executive board for this family is the UN System Chief Executives Board for Coordination (CEB), presided over by the UN Secretary General, that includes the CEOs of 30 entities: the United Nations central system; 15 specialized agencies established by inter-governmental agreement; the World Trade Organization and the International Atomic Energy Agency; and 12 funds and programmes.<sup>9</sup> What is important to retain is that the whole UN family is not a single organization, but many organizations.

Similarly to IMO for shipping (see above), for fisheries and aquaculture FAO is the international competent authority setting the international technical standards. FAO advises and serves as an umbrella organization for the Regional Fisheries Management Organizations and Arrangements (RFMO/A). There are 20 RFMO/As, each of them constituted around an autonomous treaty or agreement whose parties or members are the fishing nations participating and benefiting from a given fishery or group of fisheries.

With 165 state members, the Intergovernmental Oceanographic Commission has responsibility for coordinating international research programmes (WCRP, GEOHAB) and the collection of oceanographic observations and data through its Global Ocean Observing System (GOOS). IOC has several regional sub-commissions: IOCARIBE in the Caribbean Region based in Cartagena de Indias and Kingston, WESTPAC based in Bangkok for the Western Pacific including Australia, and the IOC Sub-commission for Africa based in Nairobi serving both coasts of Africa. IOC also runs the Global Tsunami Warning System, with main operational centres in Hawaii, Alaska, San Juan, Perth, Tokyo, Jakarta and Hyderabad.

UNESCO having eliminated its Marine Sciences Division in 1990 in favour of concentrating ocean sciences under the IOC maintains other science programmes focusing on small island development states (SIDS), the secretariat for the World Heritage Convention with its 46 Marine World Heritage sites, the Underwater Cultural Heritage Convention and the Division on Education on Sustainable Development.

Other UN organizations are also involved with the ocean; the World Meteorological Organization (WMO) dealing with ocean-atmosphere interaction, marine meteorology and climate and its implications; the International Atomic Energy Agency (IAEA), monitoring marine pollution of radioactive substances; the United Nations Industrial Development Organization (UNIDO) with industrial marine technology, and active in the management of Large Marine Ecosystems; the International Labour Organization (ILO) in the protection of maritime workers in the shipping and fisheries industries; the World Health Organization (WHO) for ocean-related health problems and food safety; the United Nations Development program (UNDP) and the World Bank, financing the sustainable development of ocean and coasts.

Several Divisions of the central UN Secretariat also play a role: the Division of Economic and Social Affairs (UN-DESA) acted for 20 years as the secretariat for the Commission on Sustainable Development, coordinating programmes for coastal management, small island development states and oceans. In 2012, at the United Nations Conference on Sustainable Development (Rio+20), member states agreed to establish a High-level Political Forum on Sustainable Development,<sup>10</sup> to replace the Commission on Sustainable Development. The Division of Ocean Affairs and the Law of the Sea (UN-DOALOS), acts as the secretariat for UNCLOS, the Commission on the limits of the Continental Shelf and by default for any other meeting on oceans that is organized under the central UN system in New York, as is the case today for the Informal Consultative Process on Oceans and the Regular Process for the Assessment of

Table 3.1 Roles of agencies, programs and secretariats of the United Nations ‘family’ in relation to the ocean

	<i>Direct roles: management &amp; governance</i>	<i>Indirect roles</i>	<i>Standard setting roles</i>
ILO		Capacity development on labour protection at sea	Shipping and fisheries labour
FAO	Fisheries and aquaculture management	Land nutrient inputs into the ocean	Fisheries and aquaculture. ‘Codex alimentarium’
UNESCO UNESCO/ IOC	World heritage – ocean science, services and observations	Education sustainable development	Open and free exchange of ocean data. Heritage preservation
ICAO		Overflight and innocent passage EEZ	
WHO			Food safety. Public Health ‘Codex alimentarium’
WB	Coastal and ocean development		Financial management
IMF UPU		Public awareness (Ocean Stamps editions)	Financial standards
ITU		Frequency and bandwidth allocation for ocean communications and instruments	
WMO	Ocean observations for weather and climate forecasting	Operational warning of ocean extreme events to the commercial fleet Meteorological and climate services	Meteorological data exchange
IMO	Shipping regulation Marine pollution	Search and rescue operations at sea Emergency communication system	Pollution of ocean or from ocean-going sources
WIPO UNIDO UN-WTO UN-DESA	Coastal industrial development	Property of data and databases Management of LME projects	Coastal tourism
UN-DOALOS UNDP	Sustainable development of oceans, coasts and SIDS Law of the sea. Extension of the continental shelf Coastal and ocean management and governance	Capacity development on the law of the sea Capacity development in ocean management and governance	
UNEP	Regional seas/coastal and ocean environment		Environmental protection standards
IAEA	Radioactive pollution monitoring and control		Radioactive pollution standards
UNISDR	Disaster prevention, disaster mitigation		Disaster preparedness
UNU	Coastal communities research/ awareness	Capacity development on ocean governance Management of LME ocean projects Data for tsunami warning	
UNOPS CTBTO UNCLOS	Framework convention for ocean. Limits of the continental shelf		
UNFCCC	Climate change adaptation – mitigation		
CBD	Biodiversity of oceans and coasts	Biodiversity-inclusive Environmental Impact Assessment (EIA). Strategic Environmental Assessments (SEA)	MPAs. Ecological and biologically significant areas (EBSAs). Access and benefit sharing

the Marine Environment. [Table 3.1](#) contains a listing of the different UN competent organizations and their roles in relation to the Ocean.

### **Oceans, UNCLOS and civil society, a broken link**

Ocean dwellers are a distinct, tiny minority of the human population.<sup>11</sup> There are very few human activities that are truly oceanic in nature: national navies and commercial shipping crews, mariners and long-distance fishermen are probably the human beings that spend most of their lives 'out at sea', roaming in the High Seas.<sup>12</sup> They constitute highly specialized, cohesive and isolated 'guilds' that follow old 'corporative' traditions. Sociologically and politically this fact has huge consequences both for our collective perception of the ocean and for the effectiveness of the institutions and jurisdictions created to provide governance and stewardship to the different ocean spaces.

The rights and responsibilities that modern states give to citizens close the loop of accountability for elected and designated officials, for the High Seas are certainly not embodied in these minority groups. There are no true citizens of the ocean empowered to exert that function. Faced with this reality, and lacking the political will to create a body empowered with the authority to exert at least some of the functions of modern states for the High Seas, the law of the sea entrusted these obligations collectively to nation states. This fundamental decision is in stark contrast to the treatment that UNCLOS gave to the bottom of the sea in Part XI under the principle of 'the common heritage of mankind'.

Although the exhortation contained in UNCLOS is for the collective, cooperative, concerted action of all nations, in practice this responsibility is delegated in different circumstances to coastal states, flag states and port states. This means that it is through individual national-state strategies, policies and actions in marine affairs that the system is supposed to operate. Few nations have evolved the institutions to deal with this challenge properly. Ocean Ministries or Departments with sufficient power to oversee marine affairs across the board do not exist and relatively competent substitutes exist only in a tiny minority of nations. This leaves the weakest link to establish the minimum standard. Nations are to provide the financial muscle and scientific know-how for the management of the marine environment as a whole and of the open oceans and deep seas in particular.

However, the entities that extract benefits from the High Sea, with the exception of defence activities, generally are not public entities but rather private individuals or private corporations. Depending on the effectiveness of national policies, laws, and institutions and of the associated capabilities, this arrangement allows for a wide range of behaviours, many of them at variance with international legal standards.

There is little doubt that nation states assume full responsibility and exert the monopoly in the use of force in terms of security, and that there is a one-to-one correspondence between these concerns and what is said and not said in UNCLOS about security. Negotiated during the Cold War, what is said about security in the text is as important as those security issues on which the Convention is 'silent'. There is no doubt that at least informal high-level consultations had to be conducted between the USA and the USSR, to define the envelope of the negotiations before engaging in the UNCLOS process. Even after both nations concurred to the consensus that adopted the text in December 1982 in Montego Bay, additional negotiations had to be conducted between the USA and the USSR to clarify the interpretation of some security-related language in the Convention, for example the USA-USSR Joint Statement with attached Uniform Interpretation of Rules of International Law Governing Innocent Passage protocol that was negotiated between 1986 and 1989 was adopted in Wyoming in September 1989, only six weeks

before the fall of the Berlin wall. The new multi-polar world emerging in the twenty-first century will certainly witness new challenges to existing arrangements and interpretations. Innocent passage is a keystone of the security arrangements in UNCLOS. What is a military vessel supposed to do with all its non-destructive remote surveying equipment on board when undertaking innocent passage over an EEZ or territorial waters of another nation? Are military surveys subject to the previous consent regime applicable to Marine Scientific Research under Part XIII of UNCLOS, as some nations sustain they are?

### **Surveillance and enforcement**

There is a legitimate argument around whether it is a lack of governance that generates sub-standard types of behaviours in the High Seas, or is it simply that we have the converse situation – there is plenty, or maybe even an excess of governance but we lack effective surveillance and compliance mechanisms.

A wide range of good and bad practices can be catalogued for each of the major conventions and agreements. For example, trans-shipment in the High Seas goes on regularly in distant-fleet fishing operations, a practice that makes enforcement of conservation measures extremely difficult. On the other hand, finding solutions is not easy, as the piracy crisis in the Horn of Africa and the North-Western Indian Ocean has shockingly showed the world. Expanding the role of the defence community for ‘constabulary’ and ‘benign’ roles on the coast always faces cultural and practical obstacles. Even in the case of prosecuting criminal acts, restrictions exist for most naval organizations undertaking ‘police functions’ in terms of law enforcement outside national territorial waters (Bernal, 2010). These can assume bizarre expressions: confronting a flagrant violation in the Indian Ocean, where intervention was clearly legitimated by UNCLOS, officers on board a naval vessel deployed to deter illegal operations in the High Seas found themselves inhibited from taking action because there was no equivalent rule under national law authorizing military personnel to take the type of action required by the circumstances. The bottom line is that naval personnel perform their duties under national jurisdiction, the jurisdiction of their flag. After signing and ratifying UNCLOS each country should conduct a process of harmonizing to the extent possible its precepts with national law to render it fully effective. Unfortunately, it seems that this has been done for all possible cases in very few countries.

When such action is possible, the tangle of legal arrangements necessary to render it effective soon becomes overwhelming. In the Caribbean Region, for example, with intensive illegal trafficking of drugs and people, the US Coast Guard works under more than 22 bilateral agreements, allowing for law enforcement within the territorial waters of other countries (Bernal, 2010).

But there are positive signs. The Malacca Strait is a critical and strategic waterway in the global trading system. It carries more than one fourth of the world’s commerce and half the world’s oil. In 2006, having rejected a previous offer of the USA to patrol the strait, Singapore, Malaysia and Indonesia signed the Straits of Malacca Patrol Joint Coordination Committee Terms of Reference and the Standard Operation Procedures to act jointly in order to tighten security in the Strait. In 2008 Thailand too became part of the joint committee for joint air and surface patrols. This combined effort had a decisive effect in limiting the piracy activity in the strait. In 2004 there were 38 cases of piracy but only two in 2008 (Bernal, 2010).

### **The challenge of integrated management**

Since the early 1970s a more integrated approach to ocean management has been advocated, focusing first on the coastal zone. Integrated Coastal Zone Management (ICZM)<sup>13</sup> came first,

probably because impacts on marine ecosystems from the development of the coastal zone are visible and easier to grasp. However, after the UNCED conference in 1992 in Rio de Janeiro, the concept of integrated management of ocean systems was extended beyond the coast to the formulation of ocean policy and governance in national and international jurisdictions. This trend was accompanied by other changes in emphasis through the emergence of the 'ecosystem approach to management' concept.

From a natural sciences point of view these changes recognize the biological, ecological and biogeochemical interconnectedness of natural ocean systems. From a sociopolitical point of view, this mutation recognizes that management is essentially the management of human behaviour associated with the extraction of human benefits and that in using the resources of the ocean there always will be conflicting interests that need to be resolved, hopefully through rational, consensual and peaceful means.

During the Second London Ocean Workshop, convened in 1998 by the Minister of Environment of Brazil and the Minister of Environment of the UK, Dr Meryl Williams, then Director of the International Centre for Living Aquatic Resources Management, stated the challenge in stark terms: 'Section A, Chapter 17 of Agenda 21 lays down a comprehensive prescription for integrated development of the ocean environment. However, six years after the Rio de Janeiro conference, most nations can demonstrate only limited progress towards filling this prescription' (Williams, 1998). In the same Workshop, Mr Atle Fretheim, then Minister of Environment for Norway, stated the issues around integration with clear precision:

[T]here is a special need for better integrated international action to deal with 'offshore and deep sea environments', related in particular to action on 'marine activities' such as shipping, offshore oil and gas activities and fisheries. However, most marine ecosystems are open ecosystems with complex interactions. Consequently, impacts on the ecosystem in one part of the marine environment will influence on other parts. Clearly activities in the coastal zone may have considerable impact on the offshore environment. So will also land-based activities causing pollution of the marine environment, directly or indirectly. A truly integrated approach to international action to protect the offshore/deep sea environment should therefore look at all activities having negative effects on the marine environment, and not only 'maritime activities'.

*(Fretheim, 1998)*

Coordination of policies across national ministries is not standard, nor a universal practice around the world. On the contrary, as Meryl Williams also pointed out in her paper there is a clear 'institutional inequality among sectors, especially between the sectors dealing with large economic activities such as ports and tourism and those dealing with natural resources and the environment' (Williams, 1998).

During the UN International Year of the Ocean in 1998, high-level national legislation with long-term management implications was initiated or promulgated, most notably in Australia, Canada and the USA (IOC, 2007). The majority of these texts introduce the concept of integrated management, defining standards that should guide policy development in a process leading to integration across sectors and jurisdictions. The experience shows that efforts to design horizontal integrated policies in ocean affairs had faced the challenges of their intrinsic complexity as well as the resistance from the strongly vertical structure of the political system of management currently in place. Nevertheless, and despite the difficulties, the nature of ocean process that calls for a horizontal treatment across sectors has made significant inroads in the institutional arrangements of nations.



A fascinating example comes from Australia's Ocean Policy, initiated in December 1995 and after broad national consultations, promulgated on 23 December 1998 during the International Year of the Ocean. This was an ambitious piece of legislation containing 390 initiatives that laid down a set of standards, created an independent agency, the National Oceans Office, a ministerial-level National Oceans Ministerial Board, and called for the development of integrated Regional Marine Plans (RMPs).

Implementation of the policy started with the development of the RMPs. Despite significant progress, this was a slow process and after five years a performance assessment review concluded that the initial implementation of the regional marine planning was 'very ambitious', adding that there 'was uncertainty about what will be delivered, how it will work and weather it will add value'. The review also criticized the policy for the lack of a legislative base and noted that among the major impediments was the fact that the Oceans Policy having been originated and promulgated at the federal level by the Commonwealth 'did not represent an agreed position with the States and Territories and it has not been subsequently endorsed by them' (TFG International, 2002). In 2005 Australian Oceans institutions were restructured. The National Oceans Office lost its executive agency status and was relocated inside the Marine Division of the Department of Environment and Heritage (Haward and Vince 2008, p. 114), and the Minister of Environment announced that RMPs would be established under section 176 of the Environment Protection and Biodiversity Conservation Act 1999, a pre-existing law providing a legislative basis for their implementation (Haward and Vince 2008, p. 115). These were hard lessons to be learned. Under this new institutional arrangement Australia has progressed significantly its Ocean Policy through the implementation of marine bioregional plans that also provide a platform for the National Representative System of Marine protected areas. Much of what has been used can be traced back to the initial work of the National Ocean Office and the first RMPs.

Canada, New Zealand, the USA and China have also laid down integrated ocean policies and can show interesting trajectories of their implementation, unfortunately beyond the scope of this review. The excellent book by Haward and Vince (2008) has a detailed account of the similarities and differences of the first three cases mentioned and an abundant literature in the social sciences and policy has documented the interesting shifts taking place in marine policy during the last 20 years.

### **The ecosystem approach to management**

In terms of 'ecosystem approach to management' the way most fisheries are managed today offers a paradigmatic counterexample. Traditional management of fisheries deals with individual fish populations strictly in demographic terms, i.e. accounting for the input of individuals as population growth or immigration and the output in terms of natural and fishing mortality. In the ocean this is a highly complex task dealing with huge numbers and where measurements and the precision of population estimates are such that almost always they are close to the limits of empirical sufficiency. Nevertheless, the problem is that fish populations are also affected by changes in other external factors, such as predators and prey abundances and other changes in their bio-physical environments and at the same time what happens with their numbers will affect all the surrounding ecosystem of which fish are part. We can say that in traditional fish population dynamics, all this additional ecological complexity is subsumed in the error term of the demographic numerical estimates. The fact that a given population of fish could be maintained under these circumstances, despite a significant fraction being taken out of the system by fishing, doesn't mean that the situation created provides a stable ecological trajectory for the

system as a whole, i.e. for all the series of accompanying fish in the community and other organisms participating in the same food chain.

A well-documented example is the anchovy (*Engraulis ringens*) and sardine (*Sardinops sagax*) fisheries off Central Peru and Northern Chile, where close to 30 per cent of the total throughput of solar energy in the pelagic ecosystem is taken out in the form of fish catch that is transformed into fishmeal and oil. This has been going on for at least the last 60 years. There is no question that all animal populations in the Humboldt ecosystem have already shifted their demographic equilibrium points from where they were before this fishery was developed in the 1950s. Decreases in the abundance of toothed whales, sea lions, birds, squid and other large predator populations are quite apparent and have been abundantly documented (Pauly and Tsukayama, 1987; Pauly *et al.* 1989). The fossilized excrement of the 'guanay' (*Phalacrocorax bougainvillii*) formed in the past the world-famous guano deposits in central Peru. A decrease of 30 per cent in its population made the 'guanay' a *near threatened* species and guano is no longer accumulating at the same rate. Abundance of other fish and crustacean components of the same food chain, although less visible, have also changed. This still seems to be an acceptable state of affairs in terms of human benefits and economic development in Chile and Peru, where revenues from the fish-meal industry are a significant fraction of their exports, but show clearly that the ecological changes in the system extend well beyond the demographics of the single species of anchovies or sardines. Wherever intense fishing operations have been sustained over stocks during decades, similar impacts must have happened, unfortunately less well documented than in Peru. Anchovies and sardines are closer to the bottom of the food chain than larger predators such as whales, sharks and tuna. The amount of biomass consumed by these large predators is huge and diminution in their numbers must have shifted dramatically the flux of organic matter in the ocean, favouring the demographic explosion or collapse of other organisms. In the real world there is no such thing as an 'ecological vacuum', as the BIOMASS project's robust negative result showed in the 1980s, assessing the expected huge size of 'Antarctic krill' populations due to the disappearance of its main predator, the 'blue whale' (Fraser *et al.* 1992; Kock and Shimadzu, 1994).

### *Une feuille de route*

Ocean governance has been appropriately described as a 'two level game', insofar as the process of formulating its principles and building their institutions, the domestic political apparatus, accustomed to act without external limits, enters into contact with the international relations of nations. In other words, in a world that is increasingly more interdependent, ocean governance concerns do not emerge exclusively out of the domestic political and social dynamics of a nation; rather a nation maintains and projects its presence internationally, thereby emerging from its international engagements or at least being in contact with these international engagements. 'Two level game' is a valid description of these relationships creating a special domestic and international political scenario 'so long as . . . countries remain interdependent, yet sovereign' (Putnam, 1988, p. 434). Keeping in mind this two-level game dynamics, in what follows and as a form of conclusion, the different challenges for a nation to address their interests and responsibilities, challenges or opportunities vis-à-vis ocean governance are presented.

#### **1 Full application of domestic norms and standards**

Every nation has norms and standards, usually defined sector by sector (industrial, agricultural, environmental, health, etc.), whereby regulating activities on land has an impact on coastal and ocean waters and their living resources. Their full application is a prerequisite and their

systematic harmonization with the International Treaties, Conventions and Agreements subscribed by each nation is a must. With regards to the ocean, the UNEP Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA) was adopted by the international community in Washington DC in 1995. The GPA is a tool that provides guidance and capacity development opportunities for coastal states to address this first-order challenge. It 'aims at preventing the degradation of the marine environment from land-based activities by facilitating the realization of the duty of States to preserve and protect the marine environment'. The GPA targets major threats to the health, productivity and biodiversity of the marine and coastal environment resulting from human activities on land and proposes an integrated, multisectoral approach based on commitment to action at local, national, regional and global levels.

## ***2 Coordination and harmonization of sectorial regulations and policies with international standards and obligations signed by the state***

In fact the task of harmonizing national law and lower level regulations containing standards (e.g. levels of pollutants from industrial solid or liquid residues, treatment and disposal of radioactive medical material, levels of organic, inorganic pollutants and pesticide loads on rivers, sewage disposal, etc.) with international treaties is a major challenge that only a few nations have addressed in a comprehensive way. Much progress could be accomplished if such harmonization were to take place. Most nations have a designated authority charged with the administration of its maritime territory, usually in charge of maritime and related activities (shipping, ports, among others). Although all sovereign jurisdictions of the nation extend to its maritime territory, most functional regulations remain with the administration of origin and are not delegated or transferred to the designated maritime authority (e.g. health, environment, agriculture, fisheries, etc.). Although in principle the designated authority could address this harmonization, by its institutional identity, usually closely linked to the security or sovereign aspects of the maritime territory, it is frequently ill-equipped to the task and conflicts between authorities with different but overlapping functional mandates do emerge. With increasing pressures for the use of maritime space these inter-sectorial conflicts tend to become more acute and paralyse action.

Furthermore, it is frequent to find the situation where there is no predefined authority charged with monitoring new duties emanating from international treaties endorsed and ratified by the state and of leading the process of harmonization with national laws and regulations. Furthermore, regulations designed to be applied in the ocean should take into account the dynamic and fluid nature of the marine environment, an aspect absent from all land-based legislation.

## ***3 Coordination across sectors***

The new trends calling for integrated ocean policies on the coast and in the open ocean implicitly call for the definition of policies across productive sectors. This is a huge political challenge since it affects long-established practices. It is an additional challenge in strongly federal systems of government where many functions and jurisdictions cascade down to different levels of the administration: state or provincial, regional, county or departmental and cities. As reviewed above, for the case of Australia, the establishment of a high-level Ocean Policy act or instrument, appears to be a plausible strategy to introduce incremental but clearly directional change.

The establishment of National Institutions with the mandate of coordinating across all productive sectors benefiting from ocean resources or oceanic ecosystem services is another. For example in a spatial sequence:

- Coastal Commissions with the mandate of verifying the integrated character of policies impacting the coastal domain;
- National Administration for the EEZ, as in China; can improve the performance of the state in terms of their ability to provide stewardship to EEZs, beyond shipping and fishing, improving the ability of coastal states to benefit from their EEZ. This is becoming more important in cases where mining (coastal or deep-sea), oil and gas exploitation, extensive aquaculture and the establishment of large wind parks for harvesting energy exist. An administration or authority is needed for the EEZ: the successful application of marine spatial planning techniques, requires a minimum institutional framework to support it;
- a dedicated Agency answering to the highest levels of the Executive Branch with the mandate of verifying the integrated character of policies emanating from ministries and departments as an alternative. The National Accounting Offices reports assessing the progress on the integrated ocean policies in Canada and Australia are sobering examples of the challenges and limits of reports of this nature if other political issues are not well aligned with the mission of this agency.

#### ***4 Beyond the EEZ***

In terms of compliance with international norms what is lacking is an effective mechanism to enforce national and international norms and standards over all individuals and entities operating under the jurisdiction of the 'flag state'. This is perhaps the weakest link of the current system. A nation could empower an administration to monitor the activity of everything that takes place under its 'flag-state' jurisdiction. However, it would be naive to expect flag states to exercise proper control unless some minimum requirements were laid down on an international instrument. Voluntary mechanisms at the hand of corporate interest might not be sufficient (fishing nations and fishing operators within RFMOs, or shipping nations and shipping operators through voluntary quality assurance protocols), and eventually some international agreement would be necessary to improve performance in the High Seas through the 'flag-state' regime.

#### ***5 National coordination for the formulation of national positions in international fora***

In the words of Edgar Gold (1999), referring to the shipping industry: 'As international organizations had no enforcement power (which had traditionally been left to flag states), acceptance or adherence to international codes and conventions did not entail that the accepting State was willing or able to enforce such codes.' This is a strong description of the current state of affairs and not only in shipping.

'The international community' is a difficult concept. On one side the international community is the best instrument for nations to act in a coordinated and harmonious way under at least the spirit of the UN Charter. However, nations do not speak with one voice within the international community. They speak with the voice of their national interest in the more limited context of the forum in which they are participating. For example: The Ministry of Foreign Affairs with close advice from defence and intelligence represents nations in the Security Council of the UN, the Fishing and Agriculture Minister in the FAO, the Transport

Ministry in the IMO, the Education, Science and Culture minister in UNESCO, the Minister of Environment in UNEP and the Minister of Finance in the IMF, the WB and the GEF.

Small nations see in the International Community an opportunity to defend their interests collectively, since they can hardly confront bilaterally, through one-on-one negotiations, all issues of their interest. The UN family uses a sort of regional caucuses to organize its debates, and within those caucuses, usually in front of a smaller and more empathic audience, small nations can more easily find the bases for concerted action. Nevertheless, in smaller groups leadership can play a key decisive role. Some nations have developed sophisticated coordination mechanisms, usually entrusted to their Foreign Affairs ministries, to build a presence and leadership image when operating in the International Community. Surprisingly, these are not the most powerful nations in the world, but mid-size emerging powers.

So the least that a nation must do in order to engage in the Ocean Governance processes at the global level is to have an effective national coordination across sectors and stakeholders in order to represent appropriately their interests in international negotiations. Some of these mechanisms are permanent task groups with different stakeholders from the public and private sector. For example, for climate change, for international fisheries, or for Antarctic affairs, or crafting national positions for regional and sub-regional bodies. Others might respond to special high-level UN Conferences, such as the one for the Conservation and Sustainable Use of Marine Biodiversity in the High Seas. This mechanism requires an honest broker, usually the Minister of Foreign Affairs, and a clear political leadership from the top. Given the increasing importance of ocean affairs, this is and will continue to be the minimum requirement of the future.

### Notes

- 1 The 'life support system' is the network of complex natural dynamic processes that maintain the conditions that make life possible on the planet. Key properties of the system are the heat capacity of the ocean, the oxygen production, the carbon capturing by water and the carbon sequestration by sediments, and the nutrient cycling and conversion of organic matter to inorganic nutrients on a global scale. The point usually missed is that these properties are not fixed and stable forever; they can and do change by being part of a complex set of dynamic equilibrium. The fact that every second breath of oxygen we take comes from the oxygen produced in the ocean by phytoplankton and that the accumulation of CO<sub>2</sub> and other gases in the lower atmosphere, changing the 'permeability' of the upper atmosphere to electromagnetic radiation and causing global warming, are just two examples of those interlinked dynamic processes.
- 2 During the Cold War the freedom to move naval assets across the ocean became a cornerstone of the strategic equilibrium between the USA and the USSR. Both nations developed a nuclear retaliatory capability and deployed it on board their submarine fleets. Because the ocean is essentially opaque to electromagnetic radiation, satellites can only see a few millimetres below the surface; the submarines carrying nuclear weapons were able to hide and avoid detection. A massive nuclear attack with intercontinental ballistic missiles could annihilate the response capabilities of the adversary, but would leave intact their submarine retaliatory power.
- 3 For example, poly-metallic nodules claims by Anaconda Co. under the State of Arizona (USA) law. Anaconda, at the time one of the largest producers of copper in the world, was probably using a strategy of co-opting the access of a new source of concentrated copper laced together with other minerals such as nickel and cobalt. Since the entry into force of UNCLOS, the status of these claims has never been tested in a court of law, a situation that is complicated by the fact that the USA, although signing UNCLOS and benefiting from all its zonal jurisdictions, has not ratified UNCLOS, precisely due to the strong opposition to part XI in some segments of American society. The chemical composition of nodules of economic interest varies but on average has the following constituents: Manganese 29 per cent; Iron 6 per cent; Silicon 5 per cent; Aluminum 3 per cent; Nickel 1.4 per cent; Copper 1.3 per cent; Cobalt 0.25 per cent.
- 4 The League of Nations Codification Conference held in The Hague from 13 March to 12 April 1930, addressed the issue of 'the extent of territorial waters', failing to reach agreement.

- 5 In this paper the rationale for the emergence of the exclusive economic zone concept was clearly stated from the point of view of developing nations: the ‘present regime of the high seas benefits only the developed countries . . .’. The developed countries, because of their advanced technologies, were able to engage in distant-water fishing activities wherever and whenever they chose to do so. At the same time, developing countries were often incapable of exploiting the resources in waters closely adjacent to their own coasts much less in waters great distances away. (Cited from Nandan, 1987, p. 9)
- 6 Strictly speaking the first ‘implementing agreement’ of UNCLOS should be considered to be the one negotiated for Part XI, which significantly modified the original text of its ‘mining code’, opening the road for the signing of the Convention by the USA.
- 7 Around UNCED 1992 in Rio de Janeiro three environmental agreements were negotiated: The United Nations Framework Convention of Climate Change, the Montreal Protocol on Chloro-fluorocarbon Emissions and the Convention on Biodiversity.
- 8 Articles 57 and 63 of the UN Charter refer directly to and define the status of ‘specialized agencies’ and many aspects of the operation of the whole system are common to all. The employees of the central system and the wider family have a single system of remuneration and retirement, are protected while in mission by a single worldwide security system and utilize a single daily allowance scale, adjusted regularly to place and time.
- 9 There are 19 other UN entities and bodies that are not members of CEB, including all the UN regional economic and social commissions.
- 10 The High-level Political Forum on Sustainable Development provides political leadership and guidance in implementing sustainable development commitments and addresses new and emerging sustainable development challenges. It meets every four years at the level of Heads of State and Government under the auspices of the General Assembly and every year under the auspices of the UN Economic and Social Council.
- 11 Coastal dwellers and in particular many islanders could enlarge this number. These populations have an enhanced appreciation of ocean processes and usually know how to extract benefits from the sustainable use of ocean resources.
- 12 Maybe we could add today the crews operating day and night on the most distant offshore oil and gas platforms.
- 13 Perhaps one of the earliest initiatives was the California Coastal Initiative established by voter initiative in 1972 (Proposition 20) creating the California Coastal Commission that later was made permanent by the Legislature through adoption of the California Coastal Act of 1976.

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