The Barcelona System

An Overview

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Abbreviations

ACCOBAMS	Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area, 1996
BAT	Best Available Techniques
BEP	Best Environmental Practices
BP/RAC	Blue Plan Regional Activity Centre
CBD	Convention on Biodiversity, 1992
CCAMLR	Convention on the Conservation of Antarctic Marine Living Resources, 1980
CEMA	Catalan Centre for the Enterprises and the Environment
COP	Conference of the Parties
CP/RAC	Regional Activity Centre for Cleaner Production
CTM	Mediterranean Remote Sensing Centre
CUP	Chemical Use Plan
EEZ	Exclusive Economic Zone
EFZ	Exclusive Fishing Zone
EIA	Environmental Impact Assessment
ERS/RAC	Environmental Remote Sensing Regional Activity Centre
ESM	Environmental Sound Management
EU	European Union
FAO	(United Nations) Food and Agriculture Organisation
GFCM	General Fisheries Council (since ’97: Commission) for the Mediterranean
HELCOM	Helsinki Commission
IAEA	International Atomic Energy Agency
ICAM	Integrated Coastal Areas Management
ICJ	International Court of Justice
IMO	(United Nations) International Maritime Organisation
ITLOS	International Tribunal of the Law of the Sea
IUCN	International Union for the Conservation of Nature
LBS	Land-Based Sources
LBSA	Land-Based Sources and Activities

LDC	London Dumping Convention
LOSC	(United Nations) Convention of the Law of the Sea, 1982
MAP	Mediterranean Action Plan
MAP II	Action Plan for the Protection of the Marine Environment and Sustainable Development of the Coastal Areas of the Mediterranean
MARPOL	International Convention for the Prevention of Pollution from Ships, 1973
MCSD	Mediterranean Commission on Sustainable Development
MEDPOL	Programme for the Assessment and Control of Pollution in the Mediterranean Region
MEDU	MAP Coordinating Unit/Secretariat
MEPC	(IMO) Marine Environment Protection Committee
MOU	Memorandum of Understanding
MSY	Maximum Sustainable Yield
MTF	Mediterranean Trust Fund
NFP	National Focal Point
NGO	Non-Governmental Organisation
OAU	Organisation of African Unity (now: African Union)
OECD	Organisation for Economic Co-operation and Development
OPRC	International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990
OSPAR	Convention for the Protection of the Marine Environment of the North-East Atlantic, 1992
PAP/RAC	Priority Actions Programme Regional Activity Centre
POP	Persistent Organic Pollutant
PSSA	Particularly Sensitive Sea Area
RAC	Regional Activity Centre
REMPEC	Regional Marine Pollution Emergency Response Centre for the Mediterranean
SAC	Special Area of Conservation (under the Habitat Directive)
SOLAS	International Convention for Safety of Life at Sea, 1974
SPA	Specially Protected Area
SPA/RAC	Specially Protected Areas Regional Activity Centre

SPAMI	Specially Protected Area of Mediterranean Importance
SRS	Ship Reporting System
TAC	Total Allowable Catch
UEM	Uniform Emission Standards
UK	United Kingdom of Great-Britain and Northern-Ireland
UN	United Nations
UNCED	United Nations Conference on Environment and Development, 1992
UNEP	United Nations Environmental Programme
USA	United States of America
USSR	Soviet Union
WQO	Water Quality Objectives
ZPE	Zone de Protection Écologique (Ecological Protection Zone)
100 HS	Secretariat for the Protection of Coastal Historic Sites

Foreword

In this paper, the Barcelona Convention and its related protocols, together known as the Barcelona System, will be analysed. The Barcelona System is designed to protect and preserve the marine environment of the Mediterranean Sea. It is astonishing that the Convention, which was adopted as early as 1976, has inspired only few lawyers to write about it. Not even the extensive amendment procedure of 1995 and the subsequent adoption of new protocols lead to the whirl of comments, otherwise common in our field. As a result, the Barcelona System is the domain of only a handful of lawyers, of whom Professor Scovazzi of the University of Milan is probably the most well-known.[1]

Besides the limited amount of articles, there is a huge amount of internet publications in the form of workshop reports, brain-storm sessions, exhortations, considerations, news paper articles and expressions of concern. The latter range is interesting to get an impression of the fields of current interest, but have only limited value for juridical purposes. The overall picture of (juridical) sources is thus rather pale.[2]

For this reason, I put the various protocols in their context and analysed them after briefly mentioning their global and regional counterparts, with which I compared them. However, the comparison is not always very detailed, since the aim is to show the weaknesses and strengths of the protocols and not those of the other instruments. Besides that, it was not my intention to elaborate extensively on comparison because the primary purpose of the paper is to give an - if you wish critical- overview of the Barcelona System, since this, as far as I know, does not exist. The interested lawyer, who wants to know more about the Barcelona System can therefore only do one thing: read the Convention and protocols, of which the present paper is the result.

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[1] T. Scovazzi, *Marine Specially Protected Areas, The General Aspects and the Mediterranean Regional System,* Kluwer Law International, The Hague 1999. The book was kindly sent to me in copy from the original of the Royal Library in The Hague by Ms Anke Schuitemaker.

[2] A rather sad example of the latter is that the latest overview of ratifications and entry into force of the amendments and new protocols on the UNEP and MAP websites is only available as from 1 October 2003. Therefore, I had to rely on less official sources such as articles in journals and press releases to get this information.

To provide the necessary juridical background, I begin with the various maritime zones of Mediterranean interest. The case, as you shall see, is that the Mediterranean States have been reluctant to claim much more than a territorial sea of 12 nautical miles. However, some States have recently begun to establish different types of zones beyond the 12 nautical mile limit. This is a point of huge interest and of major importance regarding the enforcement powers of the coastal States in an area that used to be high seas.

Introduction

The scope of this paper is to discuss the Barcelona Convention and its protocols in all their facets through an analysis of their provisions. The paper will in particular deal with enforcement measures provided for under the Barcelona System in the various maritime zones. To this end, potential Mediterranean maritime zone claims will be discussed and the present state of delimitation in the Mediterranean Sea will be reviewed. Eventually a suggestion for improvement will be presented.

The changes introduced by the ’95 amendment and the subsequent adoption of new protocols will be considered on their merits. Particular attention will be paid to their effectiveness and the extent to which they introduce environmental principles. Similar global and regional instruments will be looked at, in order to enhance the insight in similar issues in other parts of the world. Potential improvements will be proposed.

The paper will not deal with the implementation of provisions in the various States, but will only generally indicate when implementation is or could be problematic. In order to give a complete overview of the various instruments, all provisions will be mentioned, even in the absence of any particular comment.

1 The Mediterranean Sea[3]

1.1 Geology

The Mediterranean Sea connects Europe, Asia and Africa. It covers an area of approximately 2,5 million square kilometres and has an average depth of 1500 metres and a volume of 3,7 million cubic kilometres.

The Mediterranean is comprised of two major basins, western and eastern, which are separated by the relatively shallow strait of Sicily. These two basins are divided into a series of interacting parts and adjacent seas. The Western Mediterranean covers approximately 0,85, and the Eastern Mediterranean 1,65 million square kilometres.

The Mediterranean is almost a closed sea, but is connected with the Atlantic by the Strait of Gibraltar, with the Sea of Marmara by the Dardanelles, and with the Red Sea by the Suez Canal.

Surface winds in the Mediterranean come generally from the north and west. The combination of dry winds and sunshine (250 days a year) produces a strong evaporative influence over the entire surface of the Mediterranean Sea, accounting for its above-average salinity.

The surface current system of the Mediterranean shows a migration of Atlantic water towards the east with numerous spin-off eddies along the way formed. There is no surface return system from the east to the west, but a return of Mediterranean water takes place by way of deep water flowing from east to west and spilling over the sill of Gibraltar into the Atlantic.

There are a number of large alluvial plains associated with the deltas of major rivers (Ebro, Rhone, Po and Nile) and with those of numerous smaller rivers of the basin,

[3] The information in this chapter is based on the IUCN Regional Profile of the Mediterranean of 2003, and is meant to give an impression of the State of the Mediterranean. Available at: http://www.unep.ch/regionalseas/pubs/profiles/map.doc

particularly in Tunisia, Greece and Turkey. These rivers drain soils far removed from the coastline and carry very large volumes of sediment to the sea.

1.2 Ecology

1.2.1 General

A fundamental characteristic of the Mediterranean water is its impoverished nutrient concentration. No deep nutrient-rich Atlantic waters take part in the Mediterranean circulation. Since it is only the upper 150m of Atlantic water that provide replenishment of the Mediterranean Sea, the only increase in concentration of nutrients is due to river input and agricultural runoff or pollution.

The Mediterranean is rich in variety but relatively poor in quantity of organisms produced. However, its surrounding lands are characterised by a relatively high degree of biological diversity value and its fauna is characterised by many endemic species. The continental shelf is very narrow, but the coastal marine area of the Mediterranean, which stretches from the shore to the outer extent of this continental shelf, shelters rich ecosystems and the only areas of high productivity. The central zones of the Mediterranean are low in nutrients but coastal zones benefit from telluric nutrients that support higher levels of productivity. Among the ecosystems that occupy coastal marine areas, the rocky intertidals, estuaries, and, above all, seagrass meadows (mainly Posidonia oceanica) are of significant ecological value.

1.2.2 Habitats

Seagrass meadows are an important habitat for many marine species for breeding, feeding and resting. A narrow fringe of vegetation, in some areas less than 100m wide and 0-40m deep, lays nearly all around the Mediterranean. There is a direct link between the presence of seagrass and fish production. The sustainability of important fisheries, including shrimps, depends on the presence of seagrasses. Together with wetlands, seagrass meadows produce more than 80 % of the annual fish yield in the Mediterranean.

However, seagrass is endangered by the intense development of various activities in the region, including those linked with urbanisation and rapid population increases on the southern and eastern shores. These activities include the discharge of

untreated sewage, discharge of industrial wastes in rivers and at sea, construction of roads, airports and marinas, dredging of sand and gravel, and anchoring of innumerable pleasure boats. Besides that, trawling has led to the destruction of Posidonia (Posidonia oceanica) meadows. Due to their regression over the last ten years, 40 species are now considered as endangered: 38 algae and 2 marine phanerogams.

A large number of Mediterranean wetlands have been reclaimed over time. There are important lagoon systems in Spain (Valencia), France (Languedoc and Giens), Italy (Sardinia, Toscana, Pylia, and Venice), Central Greece, Cyprus, Morocco (Nadar), Algeria, Tunisia, and across the entire Nile delta in Egypt. Mediterranean wetlands and lagoons are of great significance to the conservation of biological diversity productivity. They have numerous other functions such as recreation, tourism, flood reduction, fisheries and agriculture as well as chemical and physical reduction of pollution. They are also breeding and wintering areas for a great variety of birds and are essential stopover points on the migratory routes. Wetlands and lagoons are facing direct threats, such as reclamation for industrial development, infrastructure, agriculture and tourism and indirect threats such as the diversion of rivers and pumping from underground aquifers.

A large proportion of the Mediterranean coastline is rocky and supports communities dominated by algae. There, characteristic biogenic constructions can be found, including Lithophyllum licheonides platforms on steep coasts and vermeted platforms (with gastropod molluscs) on calcareous coasts. Rocky coastlines are vulnerable and suffer from pollution and trampling by tourists. Their protection is therefore particularly required.

Estuaries are another important habitat. There are 69 rivers draining into the Mediterranean. However, the effect of soil erosion on the Mediterranean is not a major problem in itself. The main issue is the amount of pollutants carried by these rivers, particularly the Ebro, Rhone and the Po, that drain regions with heavy industrial and agricultural activity.

1.2.3 Species

The Mediterranean fauna diversity is characterised by many endemic species. Especially for sedentary groups the percentage for endemism is very high. Within the Mediterranean there is a gradient of increasing species diversity from east to west. The number of species among all major groups of plants and animals is much lower in the eastern Mediterranean than in the western and central parts of the sea. The southeast corner, the Levant Basin, is the most impoverished area.

As for quantity, biological productivity of the Mediterranean Sea as a whole is among the lowest in the world, except in coastal lagoons. Low concentration of nutrients limits Phytoplankton growth. Primary productivity however, can be unusually high at the mouths of rivers and along the coast in wintertime. Other invertebrates than zooplankton such as molluscs support some of the more valuable fisheries, with the explosive development of mussel culture acting as an indication of enrichment in the Golfe du Lion and Adriatic.

Three endangered sea turtles are found in the region, the loggerhead (Caretta caretta), the leatherback (Dermochelys coriacea), and the green turtle (Chelonia mydas). The loggerhead is the most abundant, however, it seems to have deserted many parts in the Western region due to fishing activity. The other two species are also becoming increasingly rare.

The Audouin's gull (Larus audouinii) population in the Mediterranean has reached dangerously low levels (approximately 600-800 pairs). Of particular note are the endangered species Pelecanus onocrotalus (white pelican), P. crispus (Dalmatian pelican), Egretta alba (great white heron), Phoenicopterus ruber (greater flamingo), and Larus genei (slender-billed gull). The Mediterranean is of significant importance for migratory birds. Twice a year 150 migratory species cross the narrow natural passages in the region (Gibraltar, Cap Bon (Tunisia), Messina (Italy), Belen Pass (Turkey), Lebanese coast, and Suez Isthimus) taking advantage of the wetlands on their way.

More than 500 species of fish have been recorded in the Mediterranean, 362 of these as shore forms, 62 of which are endemic. Compared to other oceans, the yield of Mediterranean fisheries is comparatively low, probably as a result of the relatively low primary productivity and generally narrow continental shelves. There is some evidence of a gradient in the yield, decreasing from west to east and from north to south.

The presence of upwelling areas along the coast of North Africa and between the Ligurian Sea and the Golfe du Lion support many fish. Surface currents, which cross through the Straits of Gibraltar and circulate in the western part of the Mediterranean are used by different shoals of fish, including tuna (Tunidae) and swordfish (Xiphias gladius), to aid them on their migration to breeding or spawning areas. Predators such as killer whales and sperm whales enter the Mediterranean following them.

Several species of marine mammals have reached dangerously low population levels and their survival has become questionable unless immediate measures are taken for their conservation. The species in which this is most evident is Monachus monachus (Mediterranean monk seal), which depends on rocky islands and archipelagos that are free from disturbance as breeding sites. Species distribution and frequency varies. Cetacean distribution is much greater in the west than in the east due to a strong Atlantic influence. Species and populations from that ocean occasionally enter the Mediterranean Sea through the Straits of Gibraltar, the only natural route of access from the Atlantic Ocean.

1.3 General Environmental Concerns

The resident population of the coastal zone is estimated at 130 million, a source of environmental pressure that is significantly increased by the annual influx of 200 million tourists. Urbanisation, together with agricultural and industrial use, contributes substantially to high levels of pollution throughout the Mediterranean basin. Eighty per cent of all pollution is land-based. Seventy percent of municipal sewage discharged to the Mediterranean was untreated by the early 1990s. There are over 500 coastal cities with populations above 100,000 that discharge sewage to the sea. Fifty-three per cent of the volume of that sewage remains untreated. An

additional 20% of Mediterranean pollution stems from marine activities including shipping, fishing and resource extraction and from the deposition of long-range airborne contaminants. At sea, deliberate discharges of bilge and ballast waters account for three quarters of the annual infusion of hydrocarbons. At 650,000 tons, the total yearly discharge of hydrocarbons constituted more than 15 times the amount spilled by the Exxon Valdez. Two thousand five hundred ships, including about 300 oil tankers, continue to cross the Mediterranean on a daily basis. The sea has a vast amount of solid litter, 75% of which is plastic. Other environmental contaminants include heavy metals, toxic chemicals and organo-chlorines. There is, in addition, a growing concern about the introduction of exotic species discharged from tanker ballasts or entering via the Suez Canal.

The processes of water circulation and exchange are such that almost any substance introduced into the surface environment of the Mediterranean Sea, unless it is volatile and subject to evaporation or is miscible within the deep water that leaves the Mediterranean, will remain within its boundaries. The uneven distribution of runoff and precipitation along the northern coasts of the Mediterranean Sea, combined with the concentration of population and industrial activity in the north, contributes a waste load of pollutants to northern Mediterranean waters that eventually spreads to other areas.

2 Maritime delimitations

Twenty littoral States surround the Mediterranean.[4] Their presence influences the claims they have on the sea according to the Law of the Sea Convention,[5] the 1958 Geneva Conventions[6] and customary international law. Those delimitation aspects relevant to both the Mediterranean and this paper will be dealt with.[7] Some light will be shed on certain delimitation disputes, which is one of the main causes for the reluctance of States to claim the maritime zones to which they would theoretically be entitled.

2.1 Internal Waters

As provided in article 8 of the LOSC, internal waters are defined as those waters on the landward side of the baseline of the territorial sea. The coastal State exercises full sovereignty over its internal waters and has both the right to enact legislation (legislative jurisdiction) affecting foreign vessels and to enforce it (enforcement jurisdiction).[8]

Baselines are drawn either by following the low-water line along the coast as marked on large-scale charts (article 5 LOSC) or by way of straight baselines (article 7 LOSC). Straight baselines join appropriate points in cases in which the coast is deeply indented and cut into, or if there is a fringe of islands along the coast in its immediate vicinity.[9] In the *Anglo-Norwegian Fisheries Case*[10] of 1951, the International Court of

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[4] Albania, Algeria, Bosnia and Herzegovina, Croatia, Cyprus, Egypt, France, Greece, Israel, Italy, Lebanon, Libya, Malta, Monaco, Morocco, Slovenia, Spain, Syria, Tunisia, Turkey, United Kingdom (as regards Gibraltar and the two sovereign Base Areas of Akrotiri and Dhekila on the island of Cyprus) and Yugoslavia/Serbia & Montenegro.

[5] United Nations Convention of the Law of the Sea, Montego Bay, 10 December 1982. In force 16 November 1994. (LOSC). To which Albania, Israel, Libya, Morocco, Syria and Turkey are not party. The LOSC largely codifies customary law and thus the fact of not being a Party to it, does not necessarily alter rights and obligations.

[6] Convention on the Territorial Sea and Contiguous Zone, Geneva, 29 April 1958. In force 10 September 1964. And: Convention on the High Seas, Geneva, 29 April 1958. In force 30 September 1962. And: Convention on the Continental Shelf, Geneva, 29 April 1958. In force 10 June 1964.

[7] Therefore, this chapter does not cover the rules on *e.g* contiguous zones, archipelagic baselines or estuaries since archipelagos in the sense of the LOSC do not exist in the Mediterranean and estuaries and contiguous zones are not relevant to the present paper.

[8] The latter, of course, does not apply to State owned ships that enjoy diplomatic immunity.

[9] Straight baselines must not depart substantially from the general direction of the coast and the sea areas lying within the lines must be sufficiently closely linked to the land to be regarded as internal waters. Straight baselines may not be used in a manner as to cut off the territorial sea of another State from the high seas or an exclusive economic zone.

Justice gave its permission to Norway to use straight baselines, whose employment had been challenged by the United Kingdom.

Islands[11] may be used for measuring the territorial sea, contiguous zone, exclusive economic zone and continental shelf in the same way as the mainland (article 121(2) LOSC) and can thus also have their own internal waters.[12]

Bays may under circumstances be regarded as internal waters. Article 10 LOSC defines a Bay as a well marked indentation whose penetration is in such proportion to the width of its mouth as to contain land-locked waters and constitute more than a mere curvature of the coast.[13] The bay closing line may not exceed 24 nautical miles. Historical Bays are not governed by the LOSC but by customary international law. They may be closed by a straight baseline and no limit of its length seems to exist.[14] Each case is governed by its concrete circumstances and claims must be approached with circumspection.[15]

Several Mediterranean States have drawn straight baselines,[16] yet in some cases it is doubtful whether the particular coastline can be regarded as deeply indented or

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[10] *Anglo-Norwegian Fisheries Case* (1951) 18 International Law Reports 86.

[11] Islands are defined as naturally formed area of land surrounded by water, which is above water at high tide (article 121 LOSC).

[12] Rocks that cannot sustain human habitation or economic life cannot have an EEZ or continental shelf of its own, although they may have a territorial sea and contiguous zone (article 121 LOSC).

[13] Its area must be at least as large as the area of a semi-circle whose diameter is a line between the low-water marks of its natural entrance points. In the United Kingdom Case *Post Office v Estuary Radio Ltd* [1967] 3 All England Law Reports 663, the High Court decided that the natural entrance points of a bay are to be defined on cartographical basis. I.e. according to the shape of the coastline on a chart.

[14] R.R. Churchill and A.V. Lowe, The Law of the Sea, 3rd edition, Manchester University Press, Manchester 1999, p. 44.

[15] As decided by the International Court of Justice in the *Land, Island and Maritime Frontier Case* (1992) 97 International Law Reports 112. Some criteria for the establishment of a historic title were addressed in a 1962 United Nations Secretariat Study: (UN Secretariat, *Historic Bays*, First UN Conference on the law of the Sea, Official Records, Vol. I, pp. 1-38. Cited in: R.R. Churchill and A.V. Lowe, The Law of the Sea, 3rd edition, Manchester University Press, Manchester 1999, p. 43.) "*according to which a State may validly claim title to a bay on historic grounds if it can show that it has for a considerable period of time claimed the bay as internal waters and has effectively, openly and continuously exercised its authority therein, and that during this time the claim gas received the acquiescence of other States.*"

[16] Albania, Algeria, Croatia, Cyprus, Egypt, France, Italy, Malta, Morocco, Spain, Tunisia, Turkey and Yugoslavia/Serbia&Montenegro. See: T. Scovazzi, *Marine Specially Protected Areas, The General Aspects and the Mediterranean Regional System,* Kluwer Law International, The Hague 1999, p. 48.

fringed by islands as article 7 LOSC prescribes. Historical Bays are claimed by Italy (Gulf of Taranto) and Libya (Gulf of Sidra). Both claims have met protest from the United States and other countries. Libya's claim is probably the most controversial. In 1973 it drew a bay closing line on historic title of 296 miles, which evoked protest from several States, including Australia, France, Norway, the UK, the USA and the USSR. The USA even sent a naval squadron to the Gulf to demonstrate its objection to the claim and repeated this action several times more. Because of the international protest and the lack of historical sovereign rights, there is little evidence to sustain Libya's claim. The same applies to the Italian claim to the Gulf of Taranto.

2.2 Territorial Sea

The territorial sea, in which the coastal State exercises full sovereignty (article 2(1) LOSC), starts at the baseline and may extend up to a limit of 12 nautical miles (article 3 LOSC). In the *Anglo-Norwegian Fisheries Case*,[17] the ICJ held that a minimum territorial sea of 3 miles might be considered obligatory. In the territorial sea all ships[18] enjoy the right of innocent passage (article 17 LOSC), which must be continuous and expeditious, but may include temporary stopping and anchoring in the normal course of navigation if necessary (article 18 LOSC). The coastal State has legislative jurisdiction over foreign vessels only in respect of a limited number of issues, including safety of navigation, conservation of the living resources of the sea, prevention of infringements of fisheries laws and preservation of the environment (article 21 LOSC). Criminal enforcement jurisdiction is limited to cases in which the consequences of the crime extend to the coastal State, if the crime disturbs peace and/or good order of the coastal State, if assistance of the local authorities is requested or in certain cases of drug crimes (article 27 LOSC). Likewise, civil enforcement jurisdiction is limited in article 28 LOSC.

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[17] *Anglo-Norwegian Fisheries Case* (1951) 18 International Law Reports 86.

[18] Some States require foreign military vessels to notify their presence and nuclear ships and those ships carrying dangerous substances to carry documents and observe special precautionary measures established by international agreements (article 23 LOSC), although States may require them to use designated sea lanes in the territorial sea (article 22 LOSC).

Most Mediterranean States have a 12-mile territorial sea, but some States adopt narrower limits: The U.K. (3 nautical miles[19]), Greece (6 nautical miles) and Turkey (6 nautical miles in the Aegean Sea, 12 nautical miles elsewhere). Syria claims a territorial sea of 35 nm, which only binds States that recognise or make similar excessive claims.[20] Article 15 LOSC provides that States with opposite or adjacent coasts should seek agreement, or otherwise must not extend their territorial seas beyond the median line.[21] Several bi- or multilateral treaties have been adopted between States with incompatible claims,[22] though some of the disputes are far from being resolved.

One of the disagreements is a delimitation dispute between Greece and Turkey in the Aegean Sea over the breadth of their territorial sea, continental shelf and airspace sovereignty. The most important dispute concerns Greece's territorial sea. Since 1936, Greece has claimed a six nautical mile territorial sea. Turkey's claim in the Aegean is identical, but extends to twelve nautical miles off both its Black Sea and Mediterranean Sea coasts. Based on the current breadths, there are three high sea corridors traversing the Aegean, which permit Turkish vessels leaving their eastern coastal ports such as Izmir and Kusadasi to reach the Mediterranean without having to transit Greek waters.[23]

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[19] In regard of British Territories other than "British Islands", the breath of the territorial Sea is still 3 nautical miles. See: T. Scovazzi, *Marine Specially Protected Areas, The General Aspects and the Mediterranean Regional System,* Kluwer Law International, The Hague 1999, p. 48.

[20] R.R. Churchill and A.V. Lowe, *The Law of the Sea*, 3rd edition, Manchester University, Manchester Press, 1999, p. 80.

[21] This provision is subject to historic titles or special circumstances. On dispute settlement according to the LOSC and maritime boundary disputes see: Charney, J.I., *Progress in International Maritime Boundary Delimitation Law,* [American Journal of International Law], (1994), p. 227-255.

[22] Regarding the sovereign U.K. base areas of Akrotiri and Dhekelia: Annex A of the Treaty Concerning the Establishment of the Republic of Cyprus, signed at Nicosia on 16 August 1960 by Cyprus, Greece, Turkey and the U.K. In regard of the Strait of Bonifacio between Corsica and Sardinia, a Treaty between France and Italy was signed at Paris on 28 November 1986. Concerning the Gulf of Trieste the Agreement between Italy and Yugoslavia signed at Osimo on 10 November 1975 exists. On 31 July 1992 Slovenia declared its succession to Yugoslavia in the treaty of Osimo, and Italy "took note with satisfaction" of this decision. See: T. Scovazzi, *Marine Specially Protected Areas, The General Aspects and the Mediterranean Regional System,* Kluwer Law International, The Hague 1999, p. 49.

[23] When Greece ratified the LOSC in 1995, Turkey, the only NATO nation that has not indicated intent to do likewise, labelled the vote as *casus belli,* because of the implications it could have for the breadth of the territorial sea. The position of Greek islands in the Aegean (and the fact that islands generally have a territorial sea of their own) means that an extension of the territorial sea limit, would effectively turn the Aegean into a "Greek Lake". A more important issue was that extension would lead to a situation in which ships in transit to or from the eastern coast of Turkey as well as those approaching to

2.3 International Straits

Straits are natural channels linking two larger areas of water. Under customary law, vessels used to have an unfettered right to pass through such straits if they were part of the high seas, but only a right of innocent passage if they were within the territorial sea of another State. In the *Corfu Channel Case*[24] the ICJ held that the right of innocent passage by warships (and also merchant ships) could not be suspended by the coastal State in straits used for international navigation between one part of the high seas and another.

The LOSC introduced a special regime for straits and the right of "transit passage" through them. Article 37 LOSC provides alternatively that transit passage applies to straits used for international navigation between one part of the high seas or EEZ to another part of the high seas or EEZ.[25]

In three cases transit passage is replaced by a right of innocent passage: (1) if there exists a high sea or EEZ route of similar convenience through the strait; (2) if the strait is formed by an island and the mainland and seaward of the island a high sea or EEZ route of similar convenience exists; or (3) if the strait links the high sea or EEZ with a territorial sea of a foreign State. In the latter case, the right of innocent passage cannot be suspended.

Transit passage differs from innocent passage through the territorial sea in that it does not have to be "innocent" and it applies to aircraft as well as vessels (article 38 LOSC). Moreover, it cannot be suspended (article 44 LOSC). Ships and aircraft in transit passage must proceed without delay, refrain from any threat or use of force against the bordering State and refrain from any activities other than those incident to

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or departing from the Dardanelles or Bosphorus, would have to pass through Greek territorial sea to reach the Mediterranean. The resulting limited freedom of navigation under the innocent passage regime would be unacceptable for Turkey in its heated relationship with Greece. Turkey's proposal to find an equitable solution based on a median line was rejected by Greece, eager not to give up any formal rights on a 12-mile territorial sea. The situation between the two countries has cooled down over the last years, not in the least because of the prospect of Turkey's membership to the EU and the USA support of Turkey as a more reliable NATO partner than Greece. See: Van Dyke, J.M., *The Role of Islands in Delimiting Maritime Zones: The Case of the Aegean Sea,* [Ocean Yearbook], (1989), p. 65. And: Schmitt, N., *Aegean Angst. A Historical and Legal Analysis of the Greek-Turkish Dispute,* [Roger William University Law Review], 2 (1996), p. 25.

[24] *Corfu Channel Case (United Kingdom v Albania)* (1949) 16 International Law Reports 155.

[25] Subject to long-standing international conventions (article 35c LOSC) dealing with specific straits.

their normal modes of continuous and expeditious transit (article 39 LOSC). Coastal States may designate sea-lanes and traffic separation schemes in straits (article 41) and may adopt laws and regulations to implement international standards for navigational safety and pollution control (article 42 LOSC). Otherwise, national legislation affecting foreign ships and aircraft is limited to fisheries and customs etc. Coastal State's regulatory powers are therefore more limited than in case of innocent passage. Moreover, the LOSC does not deal with enforcement jurisdiction in straits.[26]

Two straits of major importance for international navigation, the strait of Gibraltar and the system of Turkish straits (Dardanelles, Marmara Sea and Bosphorus), connect the Mediterranean to, respectively, the Atlantic Ocean and the Black Sea. There are several other Straits between islands.

2.3.1 Strait of Messina

The Strait of Messina separates the Italian island of Sicily from the Italian mainland and connects two parts of the high seas. At its narrowest point, the strait is less than two nautical miles wide. The regime of non-suspendible innocent passage (instead of transit passage) applies to this strait under Article 38(1) and Article 45 of the LOSC, because a route of similar convenience with respect to navigational and hydrographical characteristics exists seaward of Sicily.

Italian legislation introduced limitations on navigation after the *Patmos* incident of 21 March 1985. Merchant ships are required to respect a traffic separation line and reporting obligations. Pilotage is compulsory for merchant ships over 15,000 tons, or for ships over 6,000 tons if they carry substances harmful to the environment, including oil. Navigation through the strait is prohibited to ships over 50,000 tons carrying these substances according to international treaty law.[27] Italy's domestic legislation is adopted under article 42 LOSC.

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[26] Enforcement is therefore subject to the same principles as apply to innocent passage (article 34 LOSC).

[27] Decree of the Minister of Merchant Marine, 8 May 1985, *Gazzetta Ufficiale della Repubblica Italiana,* No. 110 of 11 May 1985. See: Scovazzi, T., *Management Regimes and Responsibility for International Straits. With Special Reference to the Mediterranean Straits,* [Marine Policy], 19 (1995), p. 150.

2.3.2 Strait of Bonifacio

The Strait of Bonifacio is 3,23 nautical miles wide at its narrowest point and runs between the French island of Corsica and the Italian island of Sardinia. It connects two parts of the high seas. Navigation through the strait is difficult because of the many islets and rocks.

IMO Resolution A.430(XI), adopted in 1979, endorsed the decision of France and Italy to establish a system of surveillance and information for ships passing through the strait. In 1993, the two countries enacted domestic regulations prohibiting transit through the strait to ships flying their respective flag and transporting hydrocarbons or other dangerous substances.[28] At the request of France and Italy, IMO adopted Resolution A.766(18) on navigation in the strait of Bonifacio on 4 November 1993, in which it stresses the ecological value of the bordering coasts, and recommends Governments to prohibit or discourage ships carrying dangerous chemicals in bulk flying their flags to use the Strait.[29] It also sets up a system of surveillance and information for ships using the strait.

The IMO Maritime Safety Committee furthered the system of traffic organisation by something different from a separation scheme in its 69th session. IMO set up a mandatory ship reporting system (SRS) in the strait of Bonifacio applying to ships of 300 gross tonnages and more. Annex 2 deals with the system of reporting, relevant procedures and a radio communication system. Parties are required to report information on any defect, damage, deficiency or limitations "in accordance with provisions of the SOLAS[30] and MARPOL[31] Conventions".[32]

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[28] For France: *Arrêté préfectoral* of the *Préfet maritime de la Meditérranée*, No. 1/93 of 15 February 1993. For Italy: Decree of the Minister of the Merchant Marine, 26 February 1993, *Gazzetta Ufficiale della Repubblica Italiana,* No. 50 of 2 March 1993. On the matter see: Scovazzi, T., *Management Regimes and Responsibility for International Straits. With Special Reference to the Mediterranean Straits,* [Marine Policy], 19 (1995), p. 150.

[29] See: *The International Marine Park of the Mouths of Bonifacio. Relevant Perspectives in International Law*. Case Study by the IUCN Global Marine Programme and the IUCN Environmental Law Centre of 2 February 2004.
Available at: http://www.iucn.org/places/medoffice/CD2003/conten/pdf/Bonifacio_case_2004.pdf

[30] International Convention for the Safety of Life at Sea, London, 1 November 1974. In force 25 May 1980.

[31] International Convention for the Prevention of Pollution from Ships, London, 2 November 1973, as amended by the protocol, London, 1 June 1978. In force 2 October 1983.

The French and Italian domestic regulations are conform article 41 and 42 LOSC. The legislation can therefore be enforced according to the powers given to a coastal State in its territorial sea (article 34(1) LOSC).[33]

2.4 Continental Shelf

The 1958 Geneva Continental Shelf Convention codified the customary principle that States had certain sovereign rights over the continental shelf adjacent to their coasts for the purpose of exploring and exploiting its natural resources. In the *North Sea Continental Shelf Cases*[34] the ICJ held that this right arises inherently from the sovereignty the coastal State has over its land territory and thus need not be claimed. Article 76 LOSC entitles States to automatically have a continental shelf of at least 200 nautical miles and, if the physical character of the seabed allows, extending up to 350 nautical miles or 100 nautical miles from the 2,500 metre isobath. Limits beyond 200 nautical miles must be notified to a special Commission (article 76(8) and Annex II LOSC).

In the Mediterranean, continental shelves extending beyond 200 nautical miles are impossible because of its limited area. Article 83 requires that the delimitation of the continental shelf between States with opposite or adjacent coasts must be affected by agreement on the basis of international law to achieve an equitable solution and, if no agreement can be reached within reasonable time, the parties must resort to the dispute settlement procedures according to Part XV LOSC. However, States can opt out of compulsory settlement of disputes in cases concerning sea boundary delimitation (article 298 LOSC). The outer limits of the continental shelf must be published (article 84 LOSC).

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[32] IMO Circular 198 of 26 May 1998. "Routeing Measures other than Traffic Separation Schemes" And: IMO Circular 201 of 26 May 1998 "Mandatory Ship Reporting Systems". The IMO circulars were introduced in the French legal system by the *Arrêté préfectoral* of the *Préfet maritime de la Meditérranée* No. 84/98 of 3 November 1998 and in Italy with a Decree of the Minister of Merchant Marine of 27 November 1998, *Gazzetta Ufficiale della Repubblica Italiana,* unknown. The IMO Circulars are respectively available at:
http://www.imo.org/includes/blastDataOnly.asp/data_id%3D8752/198.PDF and:
http://www.imo.org/includes/blastDataOnly.asp/data_id%3D8753/201.PDF

[33] See below "SPA and biodiversity protocol".

[34] *North Sea Continental Shelf Cases* (Germany v Denmark, Germany v Netherlands) (1969) 41 International Law Reports 29 at p. 51.

The coastal State has sovereign rights only for the utilisation of mineral and other non-living resources in the seabed and subsoil, as well as sedentary species of living organisms (article 77 LOSC).[35] The rights of the coastal State over the continental shelf cannot affect the legal status of the waters or airspace above it and must not unjustifiably interfere with navigation or other rights of foreign States (article 78 LOSC). Thus, the regulatory powers of the coastal State are limited to those necessary to protect its interest in natural resources, although special powers are given for controlling pollution from dumping affecting the continental shelf (article 210 LOSC).

The LOSC describes the rights of the coastal State and other States regarding submarine cables and pipelines (article 79 LOSC), artificial islands, installations and structures (article 80 LOSC), including safety zones around them (article 60 LOSC), drilling (article 81 LOSC) and exploitation of the continental shelf beyond 200 miles (article 82 LOSC).

At present, Monaco is the only Mediterranean State whose overall maritime borders are clear. Many other States have not yet concluded any delimitation at all. Several bilateral agreements on delimitation of the continental shelf are in force between Mediterranean States.[36]

2.4.1 Greek Turkish Continental Shelf Disputes

An unresolved dispute between Turkey and Greece concerning their continental shelves exist. As a party to the LOSC, Greece would be entitled to a 200-mile continental shelf for the exclusive exploration and exploitation of its natural resources. To the extent this overlaps with the Turkish claim, the dispute would probably be settled according to a median line equidistant to the relevant baselines, leaving virtually the whole Aegean continental shelf under Greek control. On the other hand, Turkey, neither a Party to the LOSC nor to the 1958 Geneva Continental

[35] Non-natural resources such as wrecks are not covered by this regime and therefore depend on bi- or multilateral treaties. Sedentary species include static species such as abalone, but doubts have arisen about the status of mobile crabs and lobsters.

[36] T. Scovazzi, *Marine Specially Protected Areas, The General Aspects and the Mediterranean Regional System,* Kluwer Law International, The Hague 1999, p. 52.

Shelf Convention, regards the same continental shelf as a natural prolongation of the Anatolian land mass and argues that in an equitable solution the Greek islands should not all be entitled to have their own continental shelf (according to article 121 LOSC this would only be so for rocks which can not sustain human habitation or economic life) because of their proximity to the Turkish coast. Although the Greeks proposed to settle the dispute before the ICJ, the Turkish regarded the issue more a political than a juridical one, and therefore declined the Greek proposal. Unilateral Turkish oil exploration in 1976 nearly led to war. The two countries settled in the Berne Agreement,[37] in which they declared to refrain from prejudicial activities and to negotiate in good faith. A Greek unilateral exploration in 1987 renewed the tension, which has, despite negotiations in 1992, still not been resolved.[38]

2.5 Exclusive Economic Zones

2.5.1 General

In 1985, the ICJ stated that the institution of the EEZ was part of customary international law.[39] In article 55 and 57 LOSC, the EEZ is described as an area beyond and adjacent to the territorial sea up to a maximum of 200 nautical miles. An EEZ does not arise *per se* but must be claimed, which has been done by approximately 110 coastal States whereas 30 States have established exclusive fishing

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[37] Agreement on Procedures for Negotiations of Aegean Continental Shelf Issues, Berne, 11 November 1976. Reprinted in 16 International Legal Materials 13 (1977).

[38] Schmitt, N., *Aegean Angst. A Historical and Legal Analysis of the Greek-Turkish Dispute,* [Roger William University Law Review], 2 (1996), p. 33-45. Disagreements between Greece and Turkey over control of the continental shelf could ultimately lead to increased problems of illegal exploitation. Turkey has already conducted oil exploration in the continental shelf region without the consent of Greece, whereas Greece routinely drills for oil without informing Turkey. Additionally, both Greek and Turkish fisherman take advantage the loose regulations in the Aegean Sea, creating concerns over the depletion of available seafood, exports that both countries rely upon to generate revenues for their respective economies. This has occurred despite Greece's claims that most of the fish stocks and other living resources in the Aegean belong to Greece. Another environmental issue is the rise in the pollution levels in the Aegean. The territorial dispute has created avenues for illegal dumping by both countries, where security and military concerns have taken precedent over pollution control. Pollution levels have also been negatively affected by the increased shipping traffic, as Turkey has especially been aggressive in maintaining its presence in the Aegean by directing its commercial transport through the Aegean Sea instead of using alternate routes. Further, both countries have also expanded the use of their navies in the Aegean, creating the potential for military action that would threaten the environment of the Aegean and the habitat that the continental shelf provides.
See: *Case Studies Disputing the Continental Shelf Region in the Aegean Sea: The Environmental Implications of the The Greek -- Turkish Standoff.* (By Chip Arvantides) Available at: http://www.american.edu/ted/ice/aegean.htm

[39] *Case Concerning the Continental Shelf* (Libya/Malta) (1985) 81 International Law Reports 238, p. 265.

zones (EFZ). The outer limits of the EEZ or delimitation lines between States must be published and deposited with the Secretary-General of the United Nations (article 75 LOSC).

In its EEZ, its seabed and subsoil, a coastal State has sovereign rights for the purpose of exploring and exploiting conserving and managing the natural and non-natural resources (article 56 LOSC).[40] Subject to the rights and duties of other States, the coastal State has jurisdiction in its EEZ regarding the establishment and use of artificial islands, installations and structures, marine scientific research and, important for the scope of this paper, the preservation of the marine environment (article 56 LOSC).[41]

Article 65 LOSC gives coastal States and international organisations the right to impose stricter controls over the exploitation of marine mammals within the EEZ than the LOSC itself requires. States are also urged to co-operate in their conservation and to work through international organisations in relation to cetaceans (whales, dolphins and porpoises).[42]

2.5.2 Mediterranean Exclusive Fishing Zones (EFZs)

EFZs are "incomplete" EEZs, since they are established for fishing only. In the Mediterranean, four EFZs exist: Malta has claimed a 25 mile EFZ since 1978, Tunisia has claimed a fishing zone since 1951 that is delimited for about half of its length according to the criterion of the 50-mile isobath. This is unique in international practice and questionable, because, due to the shallow waters, the zone extends to 15 nautical miles from the Italian island of Lampedusa and includes a rich bank ("*Il*

[40] These rights can be restricted by way of Treaty, as happened in the European Community, whose Member States have ceded their fishery resources to the Community itself.

[41] In addition to rights, the coastal State has also obligations in its EEZ: it must determine the total allowable catch (TAC) of living resources, ensure through proper conservation and management measures that they are not endangered by over-exploitation, and maintain or restore populations of harvested species at levels which can produce the maximum sustainable yield (MSY) (article 61 LOSC). See for a more extensive analysis of fishery-related provisions, which does not fall within the scope of this paper: R.R. Churchill and A.V. Lowe, The Law of the Sea, 3rd edition, Manchester University Press, Manchester 1999, p. 289-294.

[42] Articles 66 and 67 LOSC contain provisions on anadromous and catadromous stocks. Sedentary species are expressly excluded by article 68 from the application of the EEZ regime and are treated as part of the natural resources of the continental shelf, whose regime does not impose duties of management and conservation of them on the coastal State.

Mammellone"), which has traditionally been exploited by Italian fishermen and is considered as an area of high seas by Italy. By a decree of 25 September 1979,[43] Italy established a zone of biological protection (*zona di tutela biologica)* on the high seas southwest of the island of Lampedusa in which fishing activities may be prohibited or restricted in regard of Italian nationals and vessels. The zone exactly coincides with the Tunisian EFZ and caused an unresolved dispute.[44]

In 1994, Algeria claimed a fishing zone, extending 32 nautical miles from the western maritime frontier to Ras Ténés and 52 nautical miles to the eastern maritime frontier.[45] The most recent claim to a 49-nautical-mile fishing zone in the Mediterranean was made by Spain in 1997 according to a line equidistant from the opposite coasts of Algeria and Italy and the adjacent coast of France.[46] No fishing zone is established in regard of he Spanish Mediterranean coast facing Morocco. Interestingly, the preamble of the decree by which the zone is established states that the reason for the establishment of the EFZ is the protection of the Mediterranean fish stocks for future generations because the 12-mile territorial sea cannot adequately serve the object of the conservation of living resources.

2.5.3 Mediterranean EEZs

Avoiding difficult delimitation problems, Mediterranean States have been reluctant to claim EEZs in the Mediterranean Sea.[47] No areas of high seas would be left, if coastal States were to claim 200-mile EEZs since no point in the Mediterranean is more than 200 nautical miles distant from the nearest land or island. Legally, the Mediterranean States are entitled to claim an EEZ and some States have taken steps in this direction.

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[43] Decree of the Minister of Merchant Marine of 25 September 1979, *Gazzetta Ufficiale della Repubblica Italiana* No. 275 of 8 October 1979.

[44] T. Scovazzi, *Marine Specially Protected Areas, The General Aspects and the Mediterranean Regional System,* Kluwer Law International, The Hague 1999, p. 124.

[45] Decree of 28 May 1994, *Journal Officiel de la République Algérienne,* No. 40 of 22 June 1994.

[46] Royal Decree 1315/1997 of 1 August 1997, *Boletín Oficial* No. 204 of 26 August 1997.

[47] France, Spain, Turkey and the U.K. have established 200-mile EEZs or EFZs, which are only applicable to their non-Mediterranean coasts.

In 1981 Morocco created a 200-mile EEZ, which theoretically applies to both Atlantic and Mediterranean waters, but it is unclear whether Morocco enforces its EEZ legislation in the Mediterranean waters.[48]

Ratifying the LOSC, Egypt declared that it "will exercise as from this day the rights attributed to it by the provisions of parts V and VI of the […] Convention […] in the exclusive economic zone situated beyond and adjacent to its territorial sea in the Mediterranean Sea and in the Red Sea."[49] However, the declaration has not been followed by implementation of the legislation.

2.5.4 Ecological Protection zones

In March 2003, France enacted a law establishing a *zone de protection écologique* (ecological protection zone) after two major maritime accidents (Erika and Prestige) had taken place. The law claims jurisdictions over pollution incidents, in particular dumping and incineration, in a zone extending up to 200 nautical miles from the baseline, but fails to address other threats to the marine environment such as over-fishing, tourism and extraction of natural resources.[50] Penal sanctions for unauthorized discharge will also be enforceable under the 2003 law.[51] The law is in force since 8 January 2004, and negotiations over its exact delimitation are still in course.[52] The reason for the legislation, the Minister of Ecology explained, is that maritime traffic of oil and other dangerous substances is in continuous increase, with nearly 28 % of the world maritime oil traffic occurring in the Mediterranean. The

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[48] Act No. 1-81 of 18 December 1980, promulgated by *Dahir* No. 1-81-179 of 8 April 1981. In the preamble to Agreement on relations in the sea fisheries sector between the European Economic Community and the Kingdom of Morocco concluded on 15 May 1992, Official Journal of the European Community No. L 407 of 31 December 1992, the European Community and Morocco recall that Morocco has established an EEZ having the maximum width of 200 nautical miles. The Agreement applies to both Mediterranean and Atlantic waters.

[49] United Nations Law of the Sea Bulletin No. 3, March 1984, p. 14. Cited from: T. Scovazzi, *Marine Specially Protected Areas, The General Aspects and the Mediterranean Regional System,* Kluwer Law International, The Hague 1999, p. 54.

[50] The inclusion of fisheries would make the establishment of the zone impossible because of overlapping claims over fishing rights.

[51] *Décret n° 2004-33 du 8 janvier 2004 portant création d'une zone de protection écologique en Méditerranée.* This legislation is not applicable to the other coastal waters of France, in which a similar zone, in addition to the EEZ in those waters, was established in: *Loi n° 2003-346 du 15 avril 2003 relative à la création d'une zone de protection écologique au large des côtes du territoire de la République.*

[52] See *e.g.* the article *Création d'une Zone de Protection Ecologique (ZPE) en Méditerranée.* Published on the website of the university of Marseille. Available at: http://www.cdmt.droit.u-3mrs.fr/actu/zpe.html

absence of an EEZ under French jurisdiction in the Mediterranean prevented application of legislation on vessel source pollution from foreign ships beyond French territorial waters in accordance with MARPOL.

Croatia passed a law establishing a Zone of Ecological Protection and Fishing on October 2003, which became effective as from 3 October 2004.[53] In this extended zone, covering an area of 57,000 square kilometers Croatia will implement its laws and regulations regarding prevention of pollution and protection of fisheries.[54] The declaration of the zone will create the legal basis for negotiations and agreements on its delimitations with relevant countries. Croatia considered that extension of jurisdiction is the best means to achieve the objective of environmental protection.[55]

2.6 High Seas

The high seas regime applies to those waters that are not included in the EEZ/EFZ, territorial sea, in the internal waters or archipelagic waters (article 86 LOSC). Some of the freedoms of the high seas are listed in a non-exhaustive manner in article 87, including freedom of navigation, overflight, laying of submarine cables and pipelines, constructing of artificial islands, fishing and scientific research. The freedoms must be exercised with due regard to the interests of other States in their exercise of the freedom of the high seas.

The high seas are reserved for peaceful purposes (article 88), and claims of sovereignty over part of the high seas are invalid (article 89). Article 90 gives every State the right to sail ships flying its flag there. Potentially conflicting uses of the high seas should presumably be resolved in light of their relative reasonableness, as the

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[53] The declaration formalises and extends the rights Croatia already had in this area. These rights were based on the Maritime Code of Croatia, adopted 27 January 1994. (*Narodne Novine* 1994, No. 17), which includes several provisions similar to those on the EEZ (articles 33 to 42).

[54] This seems to indicate that Croatia claims jurisdiction over all types of pollution.

[55] The zone prohibits fishing by foreigners, but exempts fishermen from EU countries, which drastically diminishes its impact. The exemption status for EU fishermen was created shortly before Croatia would be granted official EU-candidate status. Establishment of the zone had been opposed by Italy and Slovenia. EU members will remain exempted from the prohibition until Croatia and the EU reach agreement over the fishing rights. See: *Croatia opens protected fishing, ecological zone, amid protest.* Available at:
http://science.news.designerz.com/croatia-opens-protected-fishing-ecological-zone-amid-protests.html

International Court of Justice held in the Nuclear Test Cases, although the LOSC is silent on this matter.[56]

Flag States must maintain effective search and rescue services, and must require their masters to render assistance to ships and persons in danger or distress at sea (article 98). The LOSC provides rules on slavery, piracy, drug trafficking and unauthorised broadcasting (articles 99-109).

Under article 111 coastal States that have good reasons to believe that a foreign ship has violated its laws and regulations, can under circumstances undertake hot pursuit at the high seas. Article 112 allows States explicitly to lay submarine cables and pipelines on the bed of the high seas beyond the continental shelf.

The freedom to fish on the high seas under article 116 is subject to the right of coastal States over straddling stocks and migratory species. Moreover, all States have a duty to adopt measures controlling their nationals in order to conserve the living resources of the high seas (article 117), and to cooperate with other States in the management of shared stocks, where appropriate, through the establishment of regional and sub-regional fisheries organisations (article 118). The Mediterranean Fisheries Organisation is such a regional institution envisaged in article 118.[57]

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[56] *Nuclear Test Case* (Australia v France) (1974) 57 International Law Reports 348 and *Nuclear Test Case* (New Zealand v France) (1974) 57 International Law Reports 605.

[57] The EU has decided to establish Regional Advisory Committees to promote fisheries management on a regional basis with stakeholder involvement. Seven have been adopted by the European Council, including one on the Mediterranean Sea. They will be composed of fisheries organisations and other stakeholders (including environmental groups), and will have a critical role to play in promoting the ecosystem approach. The Mediterranean Committee is expected to be established toward the end of 2004, and will present important opportunities for IUCN and the Malaga Office. See Draft Report on the IUCN Members' Meeting, held in Napels, Italy 19-22 June 2004, p. 22. Report available at: http://www.iucn.org/places/medoffice/Documentos/iucn_members_meeting04_summary.pdf
A much older regional fisheries organisation is the former General Fisheries Council (since 1997: Commission) for the Mediterranean (GFCM), created by the Agreement for the Establishment of the GFCM, Rome, 24 September 1949 pursuant to article 14 of the Constitution of the UN Food and Agriculture Organisation (FAO), which entered into force on 20 February 1952. The GFCM has the purpose of promoting the development, conservation, rational management and best utilisation of all marine living resources of the Mediterranean, Black Sea and connecting waters. It has mostly exercised scientific and consultative functions in order to keep the state of the resources under review. Only in 1995 the Council formulated a binding resolutions relating to large pelagic longline vessels and the taking and landing of bluefin tuna (Resolution No. 95/1), which entered into force on 1 June 1995. Two other binding resolutions were adopted in October 1997, one of which relates to driftnet fishing (Resolution 97/1), which prohibits the keeping on board, or use of driftnets with a total length exceeding 2,5 km.

At present, coastal States in the Mediterranean have been reluctant to claim EEZs. As a result, most of the Mediterranean Sea constitutes high seas and jurisdiction is generally limited to flag States. This can be a problem for environmental protection of the Mediterranean Sea in the event the vessels are registered under flags of convenience in States that have little interest in enforcing environmental regulations. To compensate for this jurisdictional and enforcement gap, certain powers in environmental matters on the high seas have been established for port and coastal States in Part XII LOSC.

2.7 Flag, Port and Coastal State Control in Environmental Matters

Part XII of the LOSC contains framework provisions on the protection and preservation of the marine environment[58] and compensates for the weakness of flag State control by extending the enforcement powers of coastal and port States and balances this by limiting their legislative discretion over foreign ships.

Although coastal States are allowed to adopt laws and regulations relating to innocent passage through their territorial sea in order to control pollution, national rules on the design and equipment of ships may only apply to foreign vessels if they reflect international standards (article 21). Foreign ships in transit passage through straits are only required to comply with generally accepted international regulations, procedures and practices for safety at sea and the prevention of pollution (article 39).

Flag States must enforce violations of pollution laws by their registered ships, irrespective of where the offence is committed (article 217), and coastal States may

[58] Most of these obligations will be dealt with in their specific paragraph below, but a short overview follows here: States exploiting their natural resources must take all necessary measures to prevent, reduce and control pollution of the marine environment. Activities carried out under their jurisdiction or control may not cause damage by pollution to other States or any area beyond their sovereignty (articles 193-194). States are required to cooperate on a global or regional basis in formulating international rules, standards and recommended practices and procedures for protecting and preserving the marine environment (article 197). They must notify other States and international organisations about imminent or actual damage of which they become aware (article 198) and must develop contingency plans for responding to marine pollution incidents (article 199). They must also cooperate on research and information exchange on pollution and in the establishment of scientific criteria for regulations (article 201). States are required to undertake and publish environmental assessment of planned activities under their jursidiction and control that may cause substantial pollution or significant and harmful changes in the marine environment. There are also general obligations to adopt laws and regulations to deal with specific sources of marine pollution (article 207-212).

institute proceedings against vessels of any nationality in their ports (218-220). Coastal States also have the right to take and enforce measures beyond the territorial sea to protect their coastline or other interests from pollution following a maritime casualty (article 221). The latter provision would even justify intervention on the high seas.[59]

In issues concerning ship safety and marine pollution, port States are given extended powers for the obvious reason that a vessel in a port is far more accessible for enforcement purposes than at (high) seas. Article 220(1) LOSC codifies customary law by providing that a State may prosecute a vessel in its ports that is believed to have infringed its pollution laws in the adjacent territorial sea and EEZ.

Article 218(1) introduces the same action against a foreign vessel for pollution outside the EEZ that is contrary to international law, extending intervention even to the high seas. Article 219(3) allows a port State to detain an un-seaworthy vessel that poses a threat to the marine environment until it is made safe.[60]

[59] Coastal States are also required to enforce certain dumping regulations if the dumping takes place within their territorial sea, EEZ or on its continental shelf. All other States are required to enforce these regulations if the matter to be dumped is being loaded on their territory or at its offshore terminals (article 216(1)). See below "Dumping Protocol".

[60] Various qualifications to port State control must be respected, including the need to notify the flag State (article 231), and to suspend legal proceedings if that State initiates them within six months in respect of the same incident beyond the territorial sea. The latter does not apply in the event that there is a major damage to the coastal State, or the flag State has repeatedly disregarded its enforcement obligations (article 228).

3 The Mediterranean Action Plan

3.1 History and Development of MAP

Following the Stockholm United Nations Conference on the Human Environment in 1972, which had identified the Mediterranean as among the "particularly threatened bodies of water",[61] Mediterranean states requested the United Nations Environment Programme (UNEP) to set up an activity framework for environmental co-operation in the Mediterranean region. This led to the establishment of the Mediterranean Action Plan (MAP) 1975[62] and, in 1976, to the adoption of its legal component, the Convention for the Protection of the Mediterranean Sea Against Pollution.[63]

A typical offspring of the environmental policy of the 1970s, the initiative's initial concern was to assist governments to control marine pollution by targeting the different pollutants in a limited sectoral approach. In 1993, at their Eighth Ordinary Meeting in Antalya (Turkey), the Parties to the Barcelona Convention recommended a revision process of *inter alia* this sectoral approach.

The 1993 recommendation called on the contracting Parties to examine amendments to the Mediterranean Action Plan and the Barcelona Convention and its related protocols and examine the possibility of adapting the texts to the latest developments in international environmental law in the light of 20 years of experience. Besides that, the amendments had to contain provisions on sustainable development, taking into account the results of the 1992 UN Conference on Environment and Development

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[61] Report of the United Nations Conference on the Human Environment, Stockholm, 5-6 June 1972, [New York: UN, 1973] UN Doc. A/CONF/48/14/REV.1 (Stockholm Declaration). Identification and Control of pollutants of broad international significance, Subject Area III.

[62] The MAP, adopted in 1975, was established in accordance with guidelines which were published in 1976 by UNEP: Guidelines and Principles concerning a Comprehensive Action Plan for the Protection of Regional Seas through Environmental Sound Development. UNEP/IARMS.1.6 Annex II of 18 June 1976. The '75 MAP was replaced in 1995 by the "Action Plan for the Protection of the Marine Environment and the Sustainable Development of the Coastal Areas of the Mediterranean (MAP II)", which took into account the achievements and shortcoming of MAP's first twenty years of existence. Available at: http://eelink.net/~asilwildlife/mapphr2.html

[63] The Convention for the Protection of the Mediterranean Sea against Pollution, Barcelona, 16 February 1976. In force 12 February 1978, which, as amended in Barcelona on 10 June 1995, changed its name into Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean. Amendment not in force. (Hereinafter: "Barcelona Convention" or "Convention")

(UNCED).[64] The reform was also intended to introduce a better reflection of the regional needs of the Mediterranean.[65]

In pursuance of the recommendation, the Secretariat (MEDU)[66] initiated a process of revision of the Barcelona Convention System, which led to the amendment of both the Convention and three protocols and the adoption of new protocols.[67] At the same time, Agenda MED 21 was introduced, reflecting the requirements of the World Summit's Agenda 21 onto the regional Mediterranean level, which led to the adoption of MAP II on 10 June 1995. [68]

With the adoption of MAP II, a second phase in the MAP process was launched, changing its classical pollutant-centred policy approach to an integrative strategy of environmental protection and sustainable development. Parallel commitments to the protection of the environment[69] and the improvement of the quality of life in the Mediterranean region[70] effectively describe the overall new goal of MAP as environmentally sustainable socio-economic development. At the same time, with MAP II it was recognised that lasting environmental protection needs to take into account all socio-economic policies. MAP therefore strives "to ensure sustainable

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[64] Declaration of the United Nations Conference on Environment and Development, Rio de Janeiro, 14 June 1992, UN Doc.A/CONF.151/26/Rev.1. (Rio Declaration).

[65] See: UNEP Report of the Eighth Ordinary Meeting of the Contracting Parties to the Convention for the Protection of the Mediterranean Sea Against Pollution and its Related Protocols, Antalya, Turkey, 12-15 October 1993. UNEP(OCA)/MED IG.3/5, paragraph 139, p. 25. And: Raftopoulos, E., *"Relational Governance" for Marine Pollution Incidents in the Mediterranean: Transformations, Development and Prospects,* [The International Journal of Marine and Coastal Law], 16 (2001), p. 45. Who describes the three fundamental determinants for the revision of the MAP regime as: "[…] the *contextualisation* of the sustainable development objective, *adaptation* to the evolution of international environmental law, and *regionalisation* of environmental concerns due to the peculiarities of the Mediterranean region […]".

[66] See below "MAP Coordinating Unit".

[67] The Barcelona Convention, the Dumping Protocol, the Land Based Sources Protocol and the Specially Protected Areas Protocol were revised, of which an analysis follows below.

[68] Action Plan for the Protection of the Marine Environment and Sustainable Development of the Coastal Areas of the Mediterranean, Annex I to the Barcelona Resolution on the Environment and Sustainable Development in the Mediterranean Basin, 1995. (MAP II) Available at: http://eelink.net/~asilwildlife/mapphr2.html

[69] MAP II, Objectives point 2 and 3.

[70] MAP II, Objectives point 6.

management of natural marine and land resources and to integrate the environment in social and economic development, and land-use policies".[71]

3.2 Structure of MAP

The MAP establishes an environmental regime originally containing scientific, integrated management, legal, institutional, and financial components.[72] New areas have been added including sustainable development and coastal management.

3.2.1 Central Bodies

The MAP is governed by the Contracting Parties, which convene for ordinary meetings every two years to review the implementation of MAP and decide on general policy and strategic issues. The secretariat (MEDU) is advised by the MAP Bureau, composed of six representatives of the Contracting Parties, meeting twice a year.

3.2.2 MAP Coordinating Unit (MEDU)

As the central secretariat to the MAP process, MEDU, established in 1980 and located in Athens since 1982, prepares the meeting of the Contracting Parties and of the Bureau and is responsible for the follow-up of their decisions. MEDU co-ordinates all activities of MAP and reports to the Contracting Parties.[73]

3.2.3 Funding

MAP institutions are primarily funded by the Mediterranean Trust Fund (MTF), to which all Parties of the Barcelona Convention contribute according to an UN assessment scale. MAP Regional Activity Centres are also funded by the respective host countries.

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[71] MAP II, Objectives point 1. However, this paper will not primarily deal with the socio-economic aspects and of the Mediterranean Action Plan, in particular the Euro-Mediterranean Partnership, but primarily with its legal component: the Barcelona System.

[72] In MAP these are described as follows: I. Integrated Planning of the development and management of the resources of the Mediterranean Basin; II. Coordinated program for research, monitoring, and exchange of information and assessment of the state of marine pollution and of protection measures; III. Framework convention and related protocols with their technical annexes for the protection of the Mediterranean Environment; IV. Institutional and financial implications of the Action Plan.

[73] For information on MEDU visit: http://www.planbleu.org/indexa.htm (if available).

3.2.4 Advisory Bodies

The Contracting Parties are assisted by two advisory bodies, one of which is constituted by the National Focal Points (NFPs). They are appointed by a Contracting Party and have biannual meetings to consider the progress of MAP and formulate recommendations to the programme and budget for the coming biennium.

As a second advisory body to MAP, the Mediterranean Commission on Sustainable Development (MCSD) was established in 1995 as part of the new approach of MAP II.[74] The Commission is composed of 21 representatives of the Contracting Parties, usually officials from the national Ministries of Environment, and fifteen temporary representatives of Civil Society. The latter represent local authority networks concerned with environmental and sustainability issues, socio-economic actors, and NGOs working in the fields of environment and sustainable development. These 15 representatives of civil society are selected for two-year terms by the meeting of the Contracting Parties.[75] The MCSD does not dispose of its own permanent expert capacities, and therefore uses the Regional Activity Centres.

The MCSD has concentrated its work around eight priorities, including *e.g.* sustainable management of the coastal region, water management, tourism and development.

3.2.5 The Centres

Co-ordinated and supervised by MEDU, MAP has eight ancillary institutions for implementation and capacity-building with different mandates within the scope of the Programme.[76]

3.2.5.1 Programme for the Assessment and Control of Pollution in the Mediterranean Region (MEDPOL)

MEDPOL[77] was created in 1975 to assess, qualify and quantify the marine environmental problems of the Mediterranean Sea and is at present based at MEDU in

[74] For information concerning the MCSD see: http://www.planbleu.org/indexa.htm
[75] UNEP/MAP 1998: "Rules of Procedure", "Terms of Reference" and "Composition", Constitutive Documents of the Mediterranean Commission on Sustainable Development, p. 11-14.
[76] A ninth Centre for sustainable tourism in Turkey (Regional Activity Centre/Eco-Tourism) is currently under discussion. Available at: www.unepmap.gr (if available).
[77] See: www.unepmap.gr (if available).

Athens. The Programme is expected to move towards assisting Mediterranean States in the formulation and implementation of pollution monitoring and reduction programmes. The Centre is responsible for the follow-up of the implementation of the Land-based Sources, the Dumping and the Hazardous Wastes Protocol.

3.2.5.2 Blue Plan Regional Activity Centre (BP/RAC)

The Blue Plan presents itself as a "think-tank" providing a "package" of data, systemic and prospective studies and, in certain cases, proposals for action.[78] The Centre was established in 1979 in Sophia Antipolis, France, with the mandate to provide the Mediterranean countries with information for the implementation of sustainable development.

3.2.5.3 Priority Actions Programme (PAP/RAC)

PAP/RAC was established in Split, Croatia, in 1980 to assist integrated planning in the Mediterranean in order to alleviate environmental problems in coastal areas relating to socio-economic development. PAP is complementary to the Blue Plan.[79]

3.2.5.4 Regional Marine Pollution Emergency Response Centre for the Mediterranean (REMPEC)

The Regional Oil Combating Centre was established in Malta in 1976 and was renamed in 1989 as REMPEC.[80] The Centre assists the Mediterranean states in cases of marine pollution accidents and in building up national response capabilities. Thus, REMPEC has been instrumental to international agreements such as the OPCR 1990[81] Convention. It is also meant to provide a general framework for the exchange of information on operational, technical, scientific, legal and financial matters and training on these subjects. The amendment of the Emergency Protocol requires REMPEC to extend its activities to the prevention of pollution incidents resulting from the day-to-day operation of ships. REMPEC is managed under the joint auspices of UNEP and IMO.

3.2.5.5 Specially Protected Areas Regional Activity Centre (SPA/RAC)

SPA/RAC, set up in La Charguia, Tunisia, in 1985, assists Contracting Parties in establishing and managing specially protected areas and implementing action plans

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[78] See: Blue Plan 2002 web-site available at: http://www.planbleu.org/indexa.htm

[79] For information on PAP/RAC see: www.pap-thecoastcentre.org

[80] See for information on REMPEC: www.rempec.org

[81] International Convention on Oil Pollution Preparedness, Response and Cooperation, London, 30 November 1990. In force 13 May 1995.

for endangered species. It is also involved in the drawing up of biodiversity conservation strategies.[82]

3.2.5.6 Regional Activity Centre for Cleaner Production (CP/RAC)

The Centre was founded in Barcelona in 1994 as Catalan Centre for the Enterprises and the Environment (CEMA), and is a MAP Regional Activity Centre since 1996. The main goal of CP/RAC is to disseminate concepts of clean production and pollution prevention. Activities are targeted in particular at the industry, being a major source of pollution. The Centre focuses on assisting MAP in its activities for the implementation of the Land-Based Sources protocol and the Specially Protected Areas protocol. CP/RAC co-operates with MEDPOL to encourage businesses to give priority to pollution prevention in contrast to combating pollution.[83]

3.2.5.7 Environment Remote Sensing Regional Activity Centre (ERS/RAC)

The Palermo based Mediterranean Remote Sensing Centre (CTM) is a joint company of the Sicily Region Government and Telespazio. The latter manages a satellite remote sensing and space telecommunication station. The mandate of the Centre is to provide information and assist in the application of data derived from remote sensing concerning environmental states and changes in the Mediterranean region.[84]

3.2.5.8 Secretariat for the Protection of Coastal Historic Sites (100 HS)

The Atelier du Patrimoine was established in 1980 by the City of Marseilles to advise the town planning department on matters relating to archaeology and acts as the Secretariat for MAP's 100 Historic Sites Programme for the protection of 150 threatened historic sites around the Mediterranean.[85]

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[82] UNEP/MAP 2001: Report of the 12th Ordinary Meeting of the Contracting Parties to he Convention for the Protection of the Mediterranean Sea against Pollution and its Protocols, Annex V, p. 6-12 and 26-33. Available at: www.unepmap.org (if available)

[83] See for more information: www.cipn.es

[84] UNEP/MAP 2001: Report of the 12th Ordinary Meeting of the Contracting Parties to the Convention for the Protection of the Mediterranean against Pollution and its Protocols, Annex V, p. 6-12 and 26-33. Available at: www.unepmap.org (if available). For information on ERS/RAC see: www.ctmnet.it

[85] Prats, Michèle and Jellal Abdelkafi: 100 Historic Sites Programme. Evaluation Report, p. 21. Cited from: Conrads, A, Interwies, E, Kraemer, A, *The Mediterranean Action Plan and the Euro-Mediterranean Partnership: Identifying Goals and Capacities – Improving Co-operation and Synergies. Report to the Mediterranean Action Plan,* Report by Ecologic of 28 June 2002. Available at: http://www.ecologic.de/download/projekte/1900-1949/1905/1905-project_report.pdf

3.3 Barcelona System

As the legal component of MAP, the Convention for the Protection of the Mediterranean Sea Against Pollution (hereinafter: "Barcelona Convention" or: "Convention") was adopted under auspices of UNEP at Barcelona on 16 February 1976 and entered into force on 12 February 1978.[86] The Convention and its protocols, also referred to as the Barcelona System, transfer the Action Plan into legally binding commitments. At this moment, Contracting Parties of the Barcelona Convention are the EU and 20 Mediterranean States.[87]

The Barcelona Convention is a so-called umbrella treaty, supplemented by protocols relating to specific aspects of environmental protection. Under Map II, the Barcelona system underwent important changes in several of their components.[88] Three existing protocols have been amended and new protocols have been adopted. The structure of the present Barcelona system includes the Convention and six protocols, which will be dealt with in the next sections.

The Barcelona Convention and its protocols do not stand on their own in promoting the protection and preservation of the marine environment. On the global level, a number of instruments is relevant and complementary to the Barcelona system, such as the United Nations Convention on the Law of the Sea (LOSC), the 1973/1978 Convention for the Prevention of Marine Pollution by Ships (MARPOL), and the London dumping Convention.[89] The Map Coordinating Unit has also been promoting complementary arrangements at the sub-regional level, such as those in the Adriatic

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[86] Other regional sea programmes were adopted in various parts of the world, for which the Mediterranean Regional Seas Programme became the role model. See: Haas, P.M., *Safe the Seas: UNEP's Regional Seas Programme and the Coordination of Regional Pollution,* [Ocean Yearbook], 9 (1991), p. 188-212. And: Akiwumi, P., Melvasalo, T, *UNEP's Regional Seas Programme: approach, experience and future plans,* [Marine Policy], 22 (1998), p. 229-234.

[87] The original members Algeria, Cyprus, Egypt, France, Greece, Israel, Italy, Lebanon, Libya, Malta, Morocco, Spain, Syria, Tunisia plus Turkey, and Albania, Bosnia and Herzegovina, Croatia, Monaco, Serbia/Montenegro (former Yugoslavia) and Slovenia.

[88] The MAP, adopted in 1975, was replaced in 1995 by the "Action Plan for the Protection of the Marine Environment and the Sustainable Development of the Coastal Areas of the Mediterranean (MAP Phase II)". It was designed taking into account the achievements and shortcoming of MAP's first twenty years of existence. Available at: http://eelink.net/~asilwildlife/mapphr2.html

[89] Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, London, Mexico City, Moscow, Washington, 29 December 1972. In force 30 August 1975.

(between Italy and Yugoslavia), the Ionian Sea (between Italy and Greece), and the Ramoge agreement in the Ligurian Sea (between Italy, France and Monaco).[90]

[90] Chircop, A.E., *The Mediterranean Sea and the Quest for Sustainable Development,* [Ocean Development and International Law], 23 (1992), p. 19. However, this paper does not deal with these sub-regional agreements.

3.3.1 Barcelona Convention[91]

The Preamble of the amended Convention introduces a responsibility for sustainable development and refers to the 1992 UNCED Rio Conference and several co-operation agreements concerning sustainable development. It restates the recognition of the vulnerability of the Mediterranean Sea and its particular ecological and cultural value and the need to co-operate on a regional level to preserve the Mediterranean for present and future generations. The geographical scope of the convention, the "Mediterranean Sea Area", covers all maritime waters including gulfs and seas from roughly the Strait of Gibraltar to the Dardanelles. Whereas the 1976 Convention excluded the internal waters from its scope, internal waters are now automatically included in the broad definition of article 1(1). The geographical scope of the Convention is broad enough to cover EEZs, EFZs, Ecological Protection Zones, territorial seas, contiguous zones, straits, etc. and even high seas. According to the present Convention, the Parties may extend its scope to their coastal areas. The establishment of an area needed for proper management thus depends on the willingness of States to participate and not on scientific evidence, which would be preferable. However, protocols may apply to an extended area as defined in the particular protocol.

The definition of "pollution" is adapted according to the precautionary approach by including the likeliness of pollution,[92] and also applies to pollution of estuaries (article 2 Convention), which gives effect to the holistic approach, envisaged by sustainable development, referred to under article 3(2). A new provision has been introduced to encourage non-Parties to implement the provisions of both the Convention and protocols (article 3(4) Convention). Obviously, this provision cannot bind non-member States, but clearly shows the holistic approach of the revision process.

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[91] The Convention for the Protection of the Mediterranean Sea against Pollution, Barcelona, 16 February 1976. In force 12 February 1978, which, as amended in Barcelona on 10 June 1995, changed its name into Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean. Amendment not in force.

[92] ""Pollution" means the introduction by man, directly or indirectly, of substances or energy into the marine environment, *including estuaries,* which results, *or is likely to result,* in such deleterious effects as […]"(italic by pd).

The general obligation to take individually or jointly all appropriate measures in accordance with the Convention and protocols to abate, combat and -introduced by the '95 amendment- eliminate to the fullest extent possible[93] pollution of the Mediterranean Sea Area has been extended with the phrase "so as to contribute towards its sustainable development" (article 4(1)). The protection of the Mediterranean Sea Area must now be an integral part of the development process, according to the principle of intergenerational equity, which has left its vague Preamble-status, and in accordance with the recommendations of the Mediterranean Commission on Sustainable Development (MCSD). Although weakened by its formulation "in accordance with their capabilities" and only applying to cost-effective measures, the precautionary principle has been introduced. New provisions, although without specification, can be found on the polluter pays principle and environmental impact assessment, including co-operation with other States when the activity is likely to result in transboundary significant adverse effects. A promising new provision has been created for integrated coastal management, to which a future protocol may be dedicated (article 4(3)).[94] When appropriate, Parties are now obliged to adopt time limits in all their plans and use best available techniques and promote the transfer of environmentally sound technology (article 4(4)). The principles are promising, but need specification, which the Convention itself does not provide. This leaves the interpretation and implementation of the principles to the protocols, which will clearly lead to diffuseness. More guidance is probably needed.

As in the 1976 version, Parties are urged to take appropriate measures to prevent, abate and *to the fullest extent possible eliminate*[95] pollution caused by dumping (now including incineration), pollution from ships, pollution resulting from exploration and exploitation of the continental shelf and the seabed and its subsoil and pollution from land-based sources (articles 5, 6, 7 and 8). The latter now contains a special reference to substances that are toxic, persistent and liable to bio-accumulate, and includes indirect sources like canals and other watercourses and pollution from land-based

[93] This formulation does not add much to the existing provision, since the elimination of pollution is obviously something States have at heart. The real challenge is to force States to take binding steps to reach this ultimate goal and this is exactly what the new provision does not do.

[94] See below "Integrated Coastal Area Management".

[95] The influence of this new phrase remains to be considered and is, because of its formulation, not very convincing. See above.

sources transported by the atmosphere. The provision on pollution emergencies has been left unchanged, but a new article on the conservation of biodiversity and the transboundary movements of hazardous wastes and their disposal has been introduced (articles 9, 10 and 11).

The Parties must jointly monitor pollution and create relevant authorities in their territories (article 12). They must cooperate in the fields of science and technology and, introduced by the '95 amendment, promote research on, access to and transfer of environmentally sound technology, including clean production technologies, and cooperate in the formulation, establishment and implementation of clean production processes (article 13). Again, the Convention does not provide the Parties with guidance on the interpretation and application of these provisions.

A promising new provision requires the Parties to adopt legislation implementing the Convention and protocols (article 14). The Parties must inform the public and give it the opportunity to participate in decision-making processes concerning the Mediterranean Sea (article 15). The intervention of the public could ultimately be a positive development, but there is no specification on how this can be reached and which public in particular is envisaged. The article on liability and compensation has unfortunately been left unchanged (article 16).

UNEP is responsible for carrying out several secretariat functions, now extended to receive, consider and reply to enquires and information from non-governmental organisations and the public (article 17(iv)) and to regularly report to Parties on the implementation of the Convention and of the protocols (article 17(vi)). This body is defined as the "Organization" for purposes of the Barcelona Convention (article 2(b)). The appointment of UNEP carrying out the Secretariat functions and the lack of an independent supervisory Commission for the Mediterranean may be problematic because of UNEP's generality and considerable workload.

Ordinary meetings of the Parties are still held once every two years and extraordinary meetings at any other time deemed necessary (article 18). The former keeps under review the implementation of the Convention and its protocols. Their added function is to approve the Programme Budget (article 18(2)vii). A Bureau of the contracting

Parties has been established, composed of the representatives of the contracting Parties and elected by their meetings. Its functions shall be set out in the Rules of Procedure adopted by the meetings of the contracting Parties (article 19). Observers are allowed to be admitted at the meetings and conferences of the contracting Parties. Observers do not have the right to vote, but may present any relevant information (article 20).

Additional protocols may be adopted at diplomatic conferences, convened at the request of two thirds of the contracting Parties (article 21). At these conferences amendments to the Convention or protocols may be adopted by a three-fourths majority (article 22). At meetings of the Parties, amendments to annexes may be made (article 23). Parties must adopt rules of procedure and financial rules (article 24).

The contracting Parties are required to transmit to the Organisation reports on implementation measures and, introduced in ’95, on the effectiveness of these measures and on problems encountered in the implementation of them (article 26). The implementation of the provisions of the Convention and protocols has always been the major problem in the Convention, and the additional requirement may improve the current reporting system. It is regrettable though, that the reporting system has not been accompanied by binding recommendations, and that the Convention does not specify what has to be done with the reports.

An important new provision on compliance has been introduced in article 27, requiring the meeting of the Parties to assess the compliance with the Convention, protocols, measures and recommendations. There is no provision on how this has to be done. The meeting of the Parties must recommend the necessary steps to bring about full compliance and implementation. Unfortunately, the conference of the Parties still does not have any binding powers in this regard.

In order to enhance the effectiveness of (the enforcement of) the Convention and in particular of the protocols, a reporting procedure could be introduced for flag States on the enforcement measures they take in respect of the international conventions relevant to the scope of the respective protocol, for which article 217 LOSC offers the basis. This would enhance the transparency of all enforcement measures taken and the

relevant regional centre would have to transform the information in a report on the state of maritime security in the Mediterranean marine environment.

Similarly, the influence of Port States could be enhanced according to the powers assigned to them by the LOSC[96] complementary to flag State control and exercised in a non-discriminatory way. It is further suggested to facilitate a coordinated approach to the established regional and subregional port State control regimes related to the Mediterranean Sea.[97] This would support the internal operation of them by making the participation of their Mediterranean members more active and by assisting those contracting parties that do not participate in regional port State control agreements to find their own way of participation. It would also support the process of appropriate interregional cooperation on port State control in the Mediterranean, by contributing to the communication between the various instruments.[98]

Dispute settlement for interpretation and application issues must be submitted upon common agreement to the arbitration tribunal in accordance with Annex A, if peaceful settlement through negotiation is not possible (article 28). Dispute settlement is thus not possible if the Parties do not agree on the appointment of the tribunal,

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[96] Articles 219 and 226-232.

[97] These include in particular the 1982 Paris Memorandum of Understanding on Port State Control, Paris, 1 January 1982, in operation 1 July 1982. See: www.medmou.org/paris1.html (Paris MOU) and the 1997 Memorandum of Understanding on Port State Control in the Mediterranean Region, Valletta, 11 July 1997. (Mediterranean MOU). This Memorandum will enter into force for each Authority on the date duly notified to the Secretariat (article 10.6). The Paris MOU extends to the Mediterranean since five of its members are contracting Parties to the Barcelona Convention and border the Mediterranean (Croatia, France, Greece, Italy and Spain). It constitutes a voluntary agreement that aims at the strict enforcement of the relevant port State control system established under IMO and ILO conventions and resolutions. It harmonises control of foreign ships in ports, ensures compliance with relevant international conventions without discrimination and prevent deviation of traffic and distortion of competition. The Mediterranean MOU consists of Mediterranean States and sets up a similar regional cooperation system. Nine out of its 20 members are contracting Parties to the Barcelona Convention (Algeria, Cyprus, Egypt, Israel, Lebanon, Malta Monaco, Tunisia and Turkey) and it is fully operational since 2000. The operation of the Paris MOU is being improved by making uniform and mandatory the provisions of the latter within the EU. See Directive 95/21 of 19 July 1995. "Concerning the enforcement, in respect of the Member States, of international standards for ship safety, pollution prevention and shipboard living and working conditions." Official Journal No. L157, 7 July 1995, p. 1. As amended by EU Directives 98/42 of 19 June 1998, Official Journal No. L184, 27 June 1998, p. 4. And EU Directive 98/25 of 27 April 1998, Official Journal No. L133, 7 May 1998, p. 19.

[98] See: Raftopoulos, E., "Relational Governance" for Marine Pollution Incidents in the Mediterranean: Transformations, Development and Prospects, [The International Journal of Marine and Coastal Law], 16 (2001), p. 69.

which leaves the most difficult interpretation issues almost certainly outside its reach.[99]

Parties to the Convention must at least be Parties to one of the Protocols and membership to the Convention is obligatory for signing a Protocol (article 29). The Convention enters into force on the date on which the first Protocol enters into force (article 33). Three years after the date of entry, any Party may give its written notification of withdrawal from the Convention. The same applies to withdrawal from protocols. Protocols enter into force on the thirtieth day following the date of deposits of at least six instruments of ratification, acceptance or approval of, or accession to that protocol (article 33).

The Convention is a promising instrument, but fails to provide necessary specification and does not provide binding powers. Its impact thus depends on the commitment of the individual Parties, which will probably be determined by the pace of the slowest.

[99] See: Raftopoulos, E., *"Relational Governance" for Marine Pollution Incidents in the Mediterranean: Transformations, Development and Prospects,* [The International Journal of Marine and Coastal Law], 16 (2001), p. 70. Mr. Raftopoulos touches on the settlement of disputes. On this matter, he proposes to create a separate clause providing for the submission of disputes concerning the interpretation of the protocol to the International Tribunal of the Law of the Sea (ITLOS). This would reinforce the possibility of enforcement of the protocol regime. It would create a truly international jurisdiction for the Mediterranean environment that would be directly accessible to any contracting party accepting compulsory ITLOS jurisdiction. It would also throw a light on the prospect for the consensual jurisdiction of ITLOS that can be accessible not only to the contracting Parties, but also to all other entities involved. Such a provision would be allowed under article 28 of the amended Barcelona Convention, article 288(2) LOSC and article 20(2) and 21 of the ITLOS Statute.

3.3.2 Dumping

Dumping at sea is a cheap and easy way of disposing of wastes that cannot be disposed of at land. Dumping became increasingly popular in the ’50s and ’60s when waste regulations on land became stricter. Dumping is treated separately from pollution from ships, because dumping is deliberate and the reason of the voyage.[100]

3.3.2.1 Global and Regional Measures

A fairly general requirement is provided for in article 210 LOSC, calling upon its Parties to agree on global and regional rules to prevent, reduce and control pollution through dumping by means of a permit system, giving the coastal State the ultimate power to allow, regulate and control dumping in its territorial sea, EEZ and on its continental shelf. Within these maritime zones, the coastal State has the duty to enforce these rules and regulations (article 216). A similar enforcement duty rests on flag States in respect of vessels flying their flag or vessels or aircraft registered in their territory. Any other State must enforce its regulations with regard to vessels or aircraft loading matters to be dumped in their territory.

The 1972 London Dumping Convention[101] (’72 LDC) is the most important global treaty dealing with dumping as intended in article 210 LOSC and covers practically all significant dumping taking place. The Convention regulates dumping of substances listed in Annex II that require a special permit to be issued in accordance with the criteria listed in Annex III. Annex I lists substances that may not be dumped. National authorities responsible for issuing permits are to be established by the Parties. The Convention provides for legislative and enforcement jurisdiction conform the LOSC. A 1996 protocol[102] to the LDC, which is not yet in force, introduces a new precautionary system under which any dumping is prohibited unless the substance is listed in Annex 1, and a permit in accordance with the more detailed criteria listed in Annex 2 has been issued. Both the ’72 LDC (article VII) and its ’96 Protocol (article

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[100] R.R. Churchill and A.V. Lowe, The Law of the Sea, 3rd edition, Manchester University Press, Manchester 1999, p. 329.

[101] Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, London, Mexico City, Moscow, Washington, 29 December 1972. In force 30 August 1975.

[102] Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter. London, 8 November 1996. Not in force.

12) urge parties to cooperate on a regional basis and the dumping protocol to the Barcelona Convention can be regarded as an example of such cooperation.

Another example of regional cooperation is the '74 Helsinki Convention,[103] which prohibited all dumping in the Baltic.[104] This strict approach, based on the vulnerability of the semi-enclosed Baltic, is still reflected in its '92 successor.[105] Article 10 prohibits incineration and article 11 bans dumping of anything other than dredged materials. Dredged materials that contain harmful substances listed in Annex I, may only be dumped in accordance with guidelines adopted by the Helsinki Commission, which administers the Convention (Annex V). The Helsinki Convention only covers dumping in the territorial and internal waters of its Parties. However, permits for dumping by its own vessels or aircraft beyond the territorial sea may only be granted after consultation with the Helsinki Commission.[106]

3.3.2.2 Dumping Protocol[107]

The Barcelona Convention requires its Parties to adopt measures on dumping in article 5, to which the Parties gave effect by adopting the 1976 protocol. The '76 protocol underwent an extensive amendment procedure in 1996. The preamble of the '96 dumping protocol recognises not only the danger posed to the environment by dumping, but also by incineration and refers to Chapter 17 of Agenda 21 of UNCED. Article 7 reflects the extended scope by prohibiting, like the Helsinki Convention, incineration at sea.

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[103] Convention on the Protection of the Marine Environment of the Baltic Sea Area, Helsinki, 22 March 1974. In force 3 May 1980.

[104] Dredged spoils were excepted, but could only be dumped with a special permit issued in accordance with provisions in an Annex.

[105] Convention on the Protection of the Marine Environment of the Baltic Sea Area, Helsinki, 9 April 1992. In force 17 January 2000.

[106] Another regional instrument is the OSPAR Convention: Convention for the Protection of the Marine Environment of the North-East Atlantic, Paris, 22 September 1992. In force 25 march 1998, which replaced its '72 Oslo and '74 Paris Predecessor. OSPAR is similar to the '96 LDC, but even stricter in some respects.

[107] The Protocol for the Prevention of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft, Barcelona, 16 February 1976. In force 12 February 1978, which, as amended in Barcelona on 10 June 1995, changed its name into Protocol for the Prevention and Elimination of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft or Incineration at Sea. Amendment not in force.

The definition of dumping covers the deliberate disposal at sea of waste or other matter from ships or aircrafts and the disposal of ships and aircraft. It also applies to the storage or burial of waste on the seabed or its subsoil.[108] The protocol does not deal with dumping from offshore installations,[109] which leaves offshore installations in e.g. the Adriatic uncovered under the protocol.

Parties are required to take all appropriate measures to prevent, abate and, according to the '95 amendment, eliminate to the fullest extent possible dumping or incineration in the Mediterranean Sea Area (article 1). The Dumping Protocol to the Barcelona Convention does not explicitly urge its Parties to develop procedures for the effective application of its provisions on the high seas, although this area would automatically be included in the geographical scope.[110]

In line with the changes the London Dumping Convention underwent by its 1996 amendment, the '95 amendment changed the approach to dumping of the dumping protocol in accordance with the precautionary principle.

The '76 protocol permitted dumping with the exception of the prohibited matter listed in Annex I. The list included radioactive wastes,[111] but did not include substances that might be carcinogenic. Substances listed in Annex II could only be dumped with a prior special permit issued in accordance with the criteria of Annex III. Other wastes could be dumped with a prior general permit (articles 4, 5, 6 and 7 of the '76 protocol). The '76 protocol did not encourage recycling or land-based alternatives, or call for a gradual reduction of ocean dumping.[112]

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[108] Which was introduced by the '95 amendment.

[109] The omission of dumping from platforms or other man-made structures is not in line with the LDC that does not exclude these types of dumping. Although the LDC is a global convention and dumping by States that remain outside the latter convention barely takes place, it is hard to understand why the dumping protocol was not extended in accordance with the LDC. The Helsinki covers this type of dumping as well.

[110] The '72 LDC does require its Parties to develop procedures for the effective application of the Convention on the high seas (article VII), although this requirement has not been fulfilled.

[111] Whereas the original LDC requires Parties to review the moratorium on the dumping of radioactive wastes every 25 years (Annex I, paragraph 12 LDC).

[112] Suman, D., *Regulation of Ocean Dumping by the European Economic Community,* [Ecology Law Quarterly], (1991), p. 571.

The ’95 amendment introduces a general prohibition on dumping except for five categories of substances known not to be hazardous listed in article 4(2); dredged material, fish waste, vessels until 31 December 2000, platforms or other man-made structures and inert uncontaminated geological material.[113] Dumping of other organic materials is only allowed if they derive from the processing of fish. The London Dumping Convention also allows dumping of sewage sludge and certain bulky items if such wastes are generated at locations having no practicable access to disposal options other than dumping. The enclosed nature of the Mediterranean needs the stricter approach of the ’95 Barcelona dumping protocol, but still is not as strict as the Helsinki Convention, which prohibits all dumping with exception of dredged material. The relatively shallow and enclosed Mediterranean would probably benefit from the prohibition of the allowed substances.

Dumping of the excepted materials is only allowed with a prior special permit issued in accordance with the criteria listed in the Annex to the protocol or adopted in guidelines by the Contracting Parties (articles 5 and 6). The Annex to the protocol is similar to the one of the original London Dumping Convention but does not incorporate the more detailed criteria of the ’96 protocol to the LDC. An obvious omission is the environmental impact assessment on an adequate scientific basis (Annex III A 9 LDC). Another omission is the explicit mentioning of the influence on specially protected areas (of Mediterranean Importance), the fragile ecosystem of which needs special attention.[114]

The prohibition on dumping does not apply in cases of *force majeur* due to stress of weather or any other case in which human life or the safety of a ship or aircraft is threatened. Parties likely to become affected and the organisation must be notified (article 8).[115]

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[113] The fact that dumping *of* man-made structures and platforms is in principle allowed makes the omission of prohibiting dumping *from* these installation even more obvious.

[114] See below “SPA and Biodiversity protocol”.

[115] Article 9 extends the scope of the protocol to substances, other than those listed in article 4(2), to be disposed of at *land* with unacceptable danger for or damage to the safety of human life. In these cases, the organisation must be notified and find a solution together with the other parties to the protocol. This article, which was already part of the ’76 protocol, reflects the holistic approach of the protocol, and is probably intended to prevent Parties from illegally dumping hazardous substances that are too harmful to dispose of at land.

Parties are required to designate competent authorities for issuing permits and keeping records of the matters to be dumped (article 10). Parties must also enforce implementation measures to all vessels and aircraft registered in its territory or flying its flag, ships and aircraft loading matter to be dumped in its territory and vessels and aircraft believed to be engaged in dumping in areas under its jurisdiction in this matter (article 11). It is regrettable, that the competences of port States are limited to the act of loading. It would be beneficial to extend their competences *e.g.* by requiring them to deny vessels engaged in dumping activities entry to their ports.

In conjunction with ordinary meetings of the Contracting Parties to the Convention, meetings of the Parties to the protocol must be held. It is their function to keep the implementation of the protocol under review, to study the dumping-records and to consider and review amendments (article 14). The protocol does not further specify what has to be done with the results of the study and consideration of the records of permits issued, for which reason the requirement is of little practical importance.[116] Unfortunately, the protocol does not provide for means to enforce implementation by way of *e.g.* binding recommendations.

Article 15 declares the provisions of the Convention relating to any protocol applicable to the dumping protocol. Particularly interesting is the relation to the general sustainable management duties under article 4 of the amended Convention, which requires Parties to prescribe measures optimising the effective protection of the Mediterranean and by contributing to its sustainable development (article 4(1) and 4(2) Convention). Article 4(3) of the Barcelona Convention specifies various methods and principles influencing the way in which Parties are expected to act.

Furthermore, the contracting Parties are required to adopt effective legislation to implement the protocols and Convention and they must also report to the meeting of the Parties on the implementation measures taken and on their effectiveness (article 26 Convention). These reports are to be assessed by the meeting of the Parties (article

[116] The '96 amendment to the London Dumping Convention requires its Parties to include information in the reports on the effectiveness of the implemented measures and a similar provision applies to the Parties to the dumping protocol because article 26 of the Barcelona Convention requires so.

27), which may recommend necessary steps and even the public is allowed to participate in the decision making process relevant to the field of application of the Convention and the protocols (article 15(2)).[117]

As in its '76 predecessor, the '95 protocol does not encourage recycling or land-based alternatives, or call for a gradual reduction of ocean dumping. It neither introduces environmental impact assessment nor deals with liability and responsibility for damage resulting from dumping or incineration. Besides that, the amendment does not introduce stricter provisions for enforcement. As in the '76 version, the '95 amendment requires Parties to undertake to issue instructions to its maritime inspection ships and aircraft to report to its authorities any incidents or suspicious situations (article 12).[118]

[117] See: Raftopoulos, E., *"Relational Governance" for Marine Pollution Incidents in the Mediterranean: Transformations, Development and Prospects,* [The International Journal of Marine and Coastal Law], 16 (2001), p. 67. Who describes the enlargement of the accountability system as a major step forward. The other protocols contain similar provisions, and at the appropriate point, reference will be made to the present analysis.

[118] A similar provision in the original LDC will be replaced by one with a two-year deadline from the moment the '96 amendment enters into force.

3.3.3 Emergency Response

Emergency response measures are taken in case of (threats of) accidents, when prevention standards have proved not to be sufficient.

3.3.3.1 Global Measures

Various global treaties deal with emergency response. Article 221(1) LOSC allows coastal States to respond proportionately to any actual or threatened damage likely to have major harmful consequences. Article 198 LOSC follows customary international law by requiring States that become aware of actual or imminent pollution damage of the marine environment to immediately notify other potentially affected States and the competent international organisation. Article 199 obliges these States to cooperate in eliminating the effects of pollution and preventing or minimising the damage by *e.g.* developing contingency plans for responding to these incidents.

The Intervention Convention 1969[119] together with its '73 protocol[120] provides coastal States with limited means to intervene on the high seas when a maritime casualty causing grave and imminent danger is likely to have harmful consequences to the coastal State (article I).[121]

The 1990 OPRC[122] requires its Parties to take appropriate measures to prepare for and respond to oil pollution incidents (article 1). Their ships, off-shore installations and ports must have oil-pollution emergency plans and the OPRC requires that oil spills be reported to the nearest coastal State (article 4). Each State must also establish a national system for preparedness and response, including the preparation of contingency plans, stockpiling appropriate equipment and holding practice exercises (article 6). The OPRC encourages regional co-operation in article 10. The protocol

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[119] International Convention Relating to Intervention on the High Seas in Cases of Pollution Casualties, Brussels, 29 November 1969. In force 6 May 1975.

[120] Protocol Relating to Intervention on the High Seas in Cases of Pollution by Substances other than Oil, London, 2 November 1973. In force 30 March 1983.

[121] The Intervention Convention is limited to accidents involving various types of oil, diesel, noxious substances, liquefied gases, radioactive substances and other substances, which are liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea (article 1 protocol).

[122] International Convention on Oil Pollution Preparedness, Response and Co-operation, London, 30 November 1990. In force 13 May 1995.

applying similar rules to ships carrying hazardous and noxious substances, adopted on 15 March 2000, is not yet in force.

The 1989 Salvage Convention[123] breaks with the traditional principle of "no cure, no pay" and places a duty on salvors to carry out salvage operations with due care to prevent or minimise damage to the environment (article 8(b)). If they prevent or minimise damage to the environment, salvors may be rewarded special compensation equivalent to their expenses plus an extra 30%, which may be increased to 100% (article 14). The compensation may be reduced or denied if salvors negligently fail to protect the environment.

3.3.3.2 Emergency Response Protocol[124]

The Barcelona Convention, including its emergency response protocol, is an example of regional cooperation called for in the global treaties dealing with the matter. The original 1976 protocol was the realisation of article 9 of the Convention, which requires its Parties to cooperate in taking measures for dealing with pollution emergencies and reducing or eliminating the resulting damage.[125]

At their Tenth Ordinary Meeting, held at Tunis in 1997, the Parties decided to replace the existing protocol,[126] which had not been included in the '95 revision process.[127]

The Preamble of the amended protocol not only refers to article 9 of the Convention but also mentions article 6, which calls on the Parties to take measures concerning

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[123] International Convention on Salvage, London, 28 April 1989. In force 14 July 1996.

[124] The Protocol Concerning Co-operation in Combating Pollution of the Mediterranean Sea by Oil and Other Harmful Substances in Cases of Emergency, Barcelona, 16 February 1976. In force 12 February 1978, which, as amended on 26 January 2002, changed its name in Protocol Concerning Cooperation in Prevention from Pollution from Ships and, in cases of Emergency, Combating Pollution of the Mediterranean Sea. In force since 17 March 2004.

[125] Besides that, article 9 repeats the LOSC in obliging those Parties that become aware of any pollution emergency to immediately notify the organisation and Parties likely to become affected.

[126] UNEP Report of the Tenth Ordinary Meeting of the Meeting of the Contracting Parties to the Convention for the Protection of the Mediterranean Sea Against Pollution and its Protocols, Tunis, 18-21 November 1997. UNEP(OCA)/MED IG.11/10 (1997), Annex IV Section II(b), p. 3.

[127] Unlike *e.g.* the dumping protocol, the emergency response protocol was not included in the overall MAP revision process launched by the Eighth Ordinary Meeting of the Parties because its provisions were thought to be reasonably adequate and it was felt that its inclusion would excessively complicate the support of the contracting Parties for the overall revision process. See: Raftopoulos, E., *"Relational Governance" for Marine Pollution Incidents in the Mediterranean: Transformations, Development and Prospects,* [The International Journal of Marine and Coastal Law], 16 (2001), p. 45.

pollution from discharges from ships in the Mediterranean and to ensure the effective implementation of internationally generally recognised rules relating to the control of this type of pollution. In various paragraphs, the Preamble clearly refers to international measures on both pollution from ships and emergency response.[128] Article 3 formalises this double objective of the protocol.

The '76 protocol left operational discharge entirely within the ambit of MARPOL 73/78, to which its preamble referred, and only covered accidental pollution. Intended pollution other than operational discharges was covered by the dumping protocol.[129] The amended version covers both accidental and operational pollution. This obviously leads to a less diffuse and less complicated regulatory framework.

The preamble further repeats a selection of the principles mentioned in article 4 of the Convention: the precautionary principle, the polluter pays principle, environmental impact assessment and best environmental practices, but fails to incorporate the requirement to promote the application of, access to and transfer of environmentally sound technology, especially needed in cases of emergency.

The new definition of "pollution incident" corresponds with the definition of oil pollution incident as given in the 1990 OPRC Convention (article 2(2) OPRC), but is broader since it covers also "hazardous and noxious substances". The definition is conform the precautionary principle since it covers "danger or threat" of accidents. Hazardous and noxious substances are defined in the new protocol.[130]

"Related interests", to which damage can be done, are defined in article 1 as the directly affected or threatened interests of a coastal State concerning among others: the conservation of biological diversity and the sustainable use of marine and coastal

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[128] "*Taking into account* the international conventions dealing in particular with maritime safety, the prevention of pollution from ships, preparedness for and response to pollution incidents, and liability and compensation for pollution damage"

[129] See: Raftopoulos, E., *"Relational Governance" for Marine Pollution Incidents in the Mediterranean: Transformations, Development and Prospects,* [The International Journal of Marine and Coastal Law], 16 (2001), p. 53.

[130] " […] any substance other than oil which, if introduced into the marine environment, is likely to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea."

biological resources.[131] The extension is clearly a result of the holistic approach for which sustainable development calls.

Article 1(f) gives the "Regional Centre", which remained unnamed in the '76 version, identity by appointing REMPEC as such.[132] Article 3 requires parties to cooperate to implement international regulations to prevent, reduce and control pollution of the Mediterranean Sea Area[133] and to take all necessary measures in case of pollution incidents.

The duty of the Parties to promote contingency plans is extended to become more comprehensive because it now explicitly requires the Parties to implement legislation and a competent authority on the matter. The new article 4 also requires the Parties to adopt measures to prevent pollution from ships in accordance with international law, and calls on their responsibilities as flag, port or coastal State to implement the relevant provisions and to develop their national capacity. Regrettably, the protocol does not provide detail on how to achieve this. Every two years, the Parties must present the measures taken to the Regional Centre, which is responsible for making a report (article 4). Article 18(2)a makes the meetings of the Parties responsible for examining and discussing the report. This formulation does not necessarily lead to a report-based improvement of policies, which would have made the implementation more efficient.

Whereas the former monitoring requirement was meant to collect information, the objective of the new provision has been changed into more ambitious goals such as preventing, detecting and combating pollution and to ensure compliance with the applicable international rules (article 5). Again, how this has to be achieved, is left to the individual Parties.[134]

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[131] And also activities in coastal waters, ports or estuaries, historical and tourist appeal, the health of the coastal population and has been extended by including cultural, aesthetic, scientific and educational value of the area and the conservation of biological diversity and the sustainable use of marine and coastal biological resources (instead of "The preservation of living resources").

[132] See above "Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea."

[133] Article 2 defines this area by referring to article 1 of the Convention.

[134] Article 4 must be regarded in relation to article 12 of the Convention: they should be carried out within the areas of national jurisdiction of the contracting Parties through their designated competent

Article 6 requires, in case of pollution danger of substances in packaged form, that the Parties cooperate in salvage and recovery of them in order to reduce the danger of pollution to the marine environment and, added by the amendment, to the coastal environment. The addition reflects the holistic approach, which includes coastal as well as marine areas.

Article 7 requires the Parties to share with other Parties information concerning the competent national authorities responsible for combating marine pollution, those in charge of receiving reports on marine pollution, those dealing with assistance measures between Parties and those dealing with prevention of pollution from ships, including the implementation of international measures. Parties must also inform each other on regulations dealing with emergency response and on new techniques on combating and eliminating marine pollution and the development of research programmes. The latter provision does not go as far as requiring the Parties to transfer these new technologies to developing Parties. There is no obligation for the Regional Centre to share the reports in accordance with article 4(3) with the Parties, which would have been beneficial for the insight of the state of implementation of the measures taken in the different member States.[135]

The extensive amendment to article 9, which renders the Annex to the '76 protocol obsolete, follows the more complete formulation of article 4 OPRC and remedies some of the weaknesses of the former version. Article 9(1) requires States to issue instructions to masters of ships *or other persons having charge of ships* (added)[136] flying their flag and to pilots of aircraft registered in their territory to report to them *and to the nearest coastal State* (added)[137] rapidly and using adequate channels *and*

authorities, and in areas beyond national jurisdiction through their participation in international arrangements.

[135] Information must in all cases be communicated to the competent regional centre, which spreads the information also among non-member Mediterranean States (article 7(2)). The information now includes treaties signed under the agreement too (article 7(3)). Parties must coordinate the utilisation of the means of communication and in this process, the regional centre plays a leading role (article 8).

[136] The new formulation solves the practicable problem arising under the former protocol, in case the master of the ship was absent.

[137] This addition addresses the impracticality of the former protocol that required the notified State to inform the coastal States likely to be influenced. The new formulation breaks with this indirect information-chain.

following applicable provisions of international agreements[138] the two following situations. First, all incidents that result or may result in a discharge of oil or hazardous and noxious substances.[139] Secondly, the presence, characteristics and extent of spillages of oil or hazardous and noxious substances, including hazardous and noxious substances in packaged form, observed at sea which pose or are likely to pose a threat to the marine environment or to the coast or related interests of one or more of the Parties.[140]

The amendment adds to the existing obligation of flag States that of port States to issue instructions to persons in charge of sea ports or handling facilities under its jurisdiction to report to it in accordance with applicable laws (article 9(3)).[141] The same obligation applies to persons in charge of offshore units under the coastal State's jurisdiction, provided that reporting takes place in accordance with the seabed protocol (article 9(4)).[142] Coastal States must also ensure that every ship in their territorial sea complies with the reporting requirement of article 9(1) (article 9(2)).[143]

Article 10 has been extended to cases of pollution incidents. It obliges the Parties in case of an emergency incident to make the necessary assessment of the nature and extent of the casualty or emergency, to take all practicable measures to avoid or reduce the effects of pollution, to inform all other Parties and to continue to report and observe on the matter in accordance with article 9. When action is taken to combat pollution, all possible measures shall be taken to safeguard human life and the ship

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[138] The new formulation gives appropriate effect to article 8 of MARPOL 73/78 system of reporting incidents.

[139] The former provision used the phrase "likely to result". The new formulation is obviously more precautionary, giving effect to the exhortations in the preamble.

[140] This formulation still uses the phrase "likely to present", though adopts a more precautionary approach by only requiring a "threat", instead of an "imminent threat", as required by its predecessor.

[141] The protocol does not specify which laws are intended. By using the word laws (instead of international regulations), it seems that domestic regulations are envisaged, which would clearly lead to diffuse and incomplete reporting.

[142] Protocol for the Protection of the Mediterranean Sea Against Pollution Resulting from Exploration or Exploitation of the Continental Shelf and the Seabed and its Subsoil, Madrid, 14 October 1994. Not in force.

[143] However, the latter requirement only addresses the master of a ship and does not include *other persons having charge of the ship.* Article 9 applies to incidents whether or not they are pollution incidents (article 9(5)), but only "pollution incidents" reported conform article 8 must be communicated to the Regional Centre (article 9(6)) and to other Parties likely to become affected (article 9(7)) using a standard form.

itself. The latter does unfortunately not include the requirement to respect the environment.[144]

Article 11 requires Parties to ensure that ships flying their flags have emergency plans on board, and that the master of the ship abides by them in case of a pollution incident.[145] The latter obligation also applies to masters of foreign ships in a Parties' territorial sea.[146] Authorities of sea ports and handling facilities under the jurisdiction of a Party are also required to have emergency plans as appropriate. Operators of offshore installations are required to have contingency plans to combat pollution incidents. The emergency plans must be coordinated with the IMO guidelines, as provided for in the 1991 amendment to Annex I to MARPOL 73/78, which adds regulation 26 dealing with shipboard oil pollution emergency plans.[147]

In taking measures to deal with a pollution incident, Parties may directly or via the regional centre ask for assistance starting with the Parties that appear likely to be affected by the pollution.[148]

A new provision explicitly dealing with reimbursement of assistance costs provides that, in the absence of a prior agreement, the requesting Party or, without request, the Party assisting on its own initiative shall bear the costs, unless they agree otherwise. This last provision may hold Parties back from assisting in case a request is impossible and seems contrary to the polluter pays principle and especially with the preamble and article 4(3)b of the Convention. The provision is also contrary to the Salvage Convention that introduced special compensation for salvors in similar situations. Paragraphs 3, 4 and 5 deal with calculation of costs, handling of compensation claims and rights of third parties to cover costs (article 13).

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[144] This would have been beneficial indeed, since some anti-pollution measures can cause damage to the environment, such as chemicals used for cleaning up oil.

[145] Again, the phrase "or other persons having charge of the ship" is omitted.

[146] Unfortunately, the internal waters are not explicitly mentioned.

[147] The vulnerability of the Mediterranean might need more stringent regulations, although these would be hard to enforce in respect of third States.

[148] The regional centre may, if approved of by the Parties concerned, coordinate these assistance activities (article 12). This article has without further specification been extended by providing a list of possible means of assistance (paragraph 1) and by requiring Parties to take necessary measures to facilitate on their territory emergency equipment and personnel (paragraph 3).

The Parties are required to have adequate reception facilities for ships and pleasure craft available in their ports and terminals and are invited to ponder on systems of charging reasonable costs for using them.[149] The facilities must be used without undue delay and with the least pressure on the marine environment. Parties are also obliged to inform ships using their ports with updated information relevant to the implementation of MARPOL 73/78 and other legislation applicable in this field (article 14).[150] The provision's environmental concern and the inclusion of small boats, which pose a special threat to the Mediterranean marine environment, is a favourable development.[151]

In conformity with generally accepted international rules and standards and within the IMO mandate, Parties must assess the environmental risk of recognised routes used for international traffic and take measures aimed at reducing the risk of accidents or the environmental consequences thereof (article 15). Therefore, a contracting Party is allowed to *e.g.* introduce a compulsory monitoring scheme within its ports and internal waters (article 25(2) LOSC).[152] In its territorial waters, the coastal State's right is subject to certain conditions related to innocent passage.[153] In its EEZ, a coastal State has jurisdictional powers in regard of the establishment and use of artificial islands, structures and installations, marine scientific research and the

[149] This non-binding formulation probably leaves the implementation of the polluter pays principle to the far future.

[150] The requirement that the facilities must be adequate to meet the needs of ships using them and without causing undue delay, is a reiteration of the standard condition of regulation 12 of Annex I to MARPOL 73/78. The requirement that the facilities must be available at reasonable costs and efficient at protecting their marine environment is an example of integrating environmental and equitable considerations in their use.

[151] Raftopoulos, E., *"Relational Governance" for Marine Pollution Incidents in the Mediterranean: Transformations, Development and Prospects,* [The International Journal of Marine and Coastal Law], 16 (2001), p. 61.

[152] Provided that the powers are exercised in accordance with the generally accepted international rules and standards as established by IMO conventions and resolutions.

[153] However, the adoption of laws and regulations in conformity with international law and the LOSC is allowed in respect of safety of navigation and the regulation of maritime traffic (article 21(1)(a) LOSC), the conservation of living resources of the sea (article 21(1)(d) LOSC), and the preservation of the environment of the coastal State and the prevention, reduction and control of pollution thereof (article 21(1)f) LOSC). The coastal State is not allowed to interfere with issues related to the internal safety of the foreign ship unless it gives effect to generally accepted international standards (article 21(2)). It should give due publicity to such legislation (article 21(3)). The coastal State must act with reasonableness and it should not discriminate (article 24).

protection and preservation of the marine environment.[154] Besides that, coastal States have under circumstances powers beyond the territorial sea under article 221 LOSC.[155] Within the framework of this provision, the establishment of a mandatory monitoring scheme may be properly included to regulate navigation and thereby help limit the environmental consequences of a maritime casualty.[156]

Parties must develop strategies in dealing with the reception of ships in distress presenting a threat to the marine environment (article 16). On this thorny issue, more details could have been given.[157]

Subregional agreements may be set up in order to implement the provisions of the protocol (article 17) and Parties may request the regional organisation to assist them. Ordinary meetings of the Parties to the Protocol shall be held in conjunction with ordinary meetings of the Parties to the Convention and extraordinary meetings of the Parties may also be held (article 18(1)). The formulation of their duties has been changed. It is their function to keep under review, examine and discuss the reports from the regional organisation on the implementation of the protocol, to formulate action plans, strategies and programmes for the implementation of the protocol, to consider the efficacy of the latter measures and the need for new measures. They can also discharge such other functions as may be appropriate for the implementation of the protocol (article 18). Unfortunately, the protocol does not provide for means to enforce implementation by way of *e.g.* binding recommendations and the requirements of article 18(2) do not seem to contain an obligatory linked system of review and recommendation. Therefore, the discussions and examinations of the reports do not necessarily lead to action plans for implementation *based* on this information.

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[154] A coastal State has also powers in the safety zones around artificial islands (articles 60(6) and 80 LOSC) and ships must respect these zones and comply with generally accepted international standards regarding navigation.

[155] See above "Port and Coastal State Control in Environmental Matters".

[156] Raftopoulos, E., *"Relational Governance" for Marine Pollution Incidents in the Mediterranean: Transformations, Development and Prospects,* [The International Journal of Marine and Coastal Law], 16 (2001), p. 63.

[157] It might have been beneficial to stress the importance of the presence of specially protected areas, the polluter pays principle for the costs involved and the regional cooperation to avoid duplication or omissions on this matter.

Article 19 declares the provisions of the Convention relating to any protocol to be applicable with respect to the emergency response protocol. [158] It further states that rules of procedure and financial rules adopted according to article 24 of the Convention shall apply to the protocol.

In the amended emergency response protocol, six final provisions have been provided for on topics including signature, ratification, accession and entry into force (articles 22-25). Article 20 allows its Parties to adopt stricter relevant domestic legislation in conformity with international law[159] and article 21 requires Parties to invite, where appropriate, non-Parties and international organisations to cooperate on the implementation of the protocol.

In the amended protocol the institutional role of REMPEC is enhanced, resulting in a more effective way of dealing with pollution incidents.[160] The functions assigned to it include: to act as a potential technical coordinator under article 17, as approved residuary coordinator for the operation of assistance activities, and as facilitator of the flow of all relevant information contributing to the development of a monitoring network and the operational transparency of the protocol regime. At the 1998 Meeting of REMPEC's Focal Points (Malta, 25-28 November 1998), the functions of the organisation were substantially strengthened.[161] REMPEC is vested with special secretariat functions, substituting the Coordination Unit of the Convention, while its technical functions are significantly enlarged.[162]

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[158] See for the implications above "Dumping protocol" under article 15.

[159] It is regrettable that the protocol does not allow for stricter regulations in case the circumstances demand them.

[160] Raftopoulos, E., *"Relational Governance" for Marine Pollution Incidents in the Mediterranean: Transformations, Development and Prospects,* [The International Journal of Marine and Coastal Law], 16 (2001), p. 63.

[161] REMPEC/WG.16/14. Cited in: Raftopoulos, E., *"Relational Governance" for Marine Pollution Incidents in the Mediterranean: Transformations, Development and Prospects,* [The International Journal of Marine and Coastal Law], 16 (2001), p. 63.

[162] Including assisting the Parties in reinforcing their national capacities, developing regional cooperation through specific actions and collecting and disseminating information on inventories in each coastal State. See: Raftopoulos, E., *"Relational Governance" for Marine Pollution Incidents in the Mediterranean: Transformations, Development and Prospects,* [The International Journal of Marine and Coastal Law], 16 (2001), p. 64.

3.3.4 Land-Based Sources

It is believed that nearly eighty percent of marine pollution originates from land-based sources (LBS).[163] Discharge takes place either deliberately from point sources or from diffuse sources by runoff of pesticides and fertilisers from agricultural land. Besides that, accidental spillage of polluting substances exists. Since this type of pollution takes place within national territory, it is generally covered by national legislation. Global instruments hardly exist, but some detailed regional programmes and agreements have been adopted.[164]

3.3.4.1 Global and Regional Measures

Article 207 LOSC provides general obligations on States in relation to pollution from LBS. States must adopt measures to prevent, reduce and control pollution of the marine environment, including rivers, estuaries, pipelines and outfall structures, from LBS taking into account internationally agreed rules, standards and recommendations. They must also harmonise their policies and establish rules at a regional and global level. Article 213 requires States to enforce their laws and regulations adopted under article 207, and to implement applicable international rules and standards.

A soft law instrument dealing with the matter is the 1995 Global Programme of Action,[165] developed under auspices of UNEP to update the 1985 Montreal Guidelines.[166] It provides advice on national action and on regional[167] and

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[163] In Chapter 17.18 of Agenda 21 this type of pollution is recognised to be the cause of 70% of total sea-pollution. See: Chapter 17 of Agenda 21, Action Programme of the United Nations Conference on Environment and Development for 1992. Rio de Janeiro, 14 June 1992. Data contained in the Washington Declaration and the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities, adopted in Washington by UNEP's Governing Council. Decision 18/31 of 25 May 1995. Reproduced in [Environmental Policy and Law], 26 (1996), p. 37-51. Available at: http://www.gpa.unep.org/documents/gpa/wadeclaration/washington_declaration.pdf, are even more alarming as they relate that almost 80% of sea-pollution is caused by land-based activities.

[164] R.R. Churchill and A.V. Lowe, The Law of the Sea, 3rd edition, Manchester University Press, Manchester 1999, p. 379. and A.E. Boyle, *Land-based sources of marine pollution: current legal regime,* [Marine Policy], 16 (1992), p. 26.

[165] Washington Declaration and the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities, adopted in Washington by UNEP's Governing Council. Decision 18/31 of 25 May 1995. Reproduced in [Environmental Policy and Law], 26 (1996), p. 37-51. Available at: http://www.gpa.unep.org/documents/gpa/wadeclaration/washington_declaration.pdf

[166] Montreal Guidelines for the Protection of the Marine Environment against Pollution from Land-Based Sources. Adopted in Montreal by UNEP's Governing Council. Decision 13/18 of 24 May 1985. Reproduced in [Environmental Policy and Law], 14 (1985), p. 77-83.

international cooperation leading to the prevention, reduction and elimination of LBS pollution, and contains recommended approaches by source category. It also contains a list of funding sources and mechanisms.

The 1974 Paris Convention,[168] which applied to the North-East Atlantic, adopted a traditional approach of listing prohibited and regulated substances. Article 4 required States to eliminate pollution of the marine environment by dangerous substances listed in Annex A, Part I, and to strictly limit less noxious substances in Annex A, Part II. The Paris Convention also recommended discharge standards for specific substances by setting uniform emission standards (UEM) and water quality objectives (WQO).[169]

The 1992 OSPAR Convention[170] replaced the Paris Convention in 1998 and concentrates more on the activities and industrial processes causing pollution rather than on individual polluting substances.[171] Article 3 requires Parties to take all possible steps to prevent and eliminate pollution from LBS, particularly as provided for in Annex I.[172] Article 10 and 13 provide for recommendations and binding

[167] Regional cooperation is regarded as crucial for successful actions to protect the marine environment from land-based activities: "This is particularly so where a number of countries have coasts in the same marine and coastal area, most notably in enclosed or semi-enclosed seas. Such cooperation allows for more accurate identification and assessment of the problems in particular geographic areas and more appropriate establishment of priorities for action in these areas. Such cooperation also strengthens regional and national capacity-building and offers an import avenue for harmonizing and adjusting measures to fit the particular environmental and socio-economic circumstances. It, moreover, supports a more efficient and cost-effective implementation of the programmes of action." (Paragraph 29 of the Global Programme).

[168] Convention for the Prevention of Marine Pollution from Landbased Sources, Paris, 4 June 1974. In force 6 May 1978. Terminated 25 March 1998.

[169] UES fixes uniform emission standards for the industry, making the cost for taking anti-pollution measures the same for all industries but without regard for differing water purifying capacities. For WQO this is *vice versa.* See: R.R. Churchill and A.V. Lowe, The Law of the Sea, 3rd edition, Manchester University Press, Manchester 1999, p. 379.

[170] Convention for the Protection of the Marine Environment of the North-East Atlantic, Paris, 22 September 1992. In force 25 March 1998.

[171] The OSPAR convention deals generally with marine pollution including dumping and incineration and pollution from offshore and other sources and is thus not confined to LBS pollution.

[172] Article 1 of the latter requires the use of best available techniques for point sources and best environmental practices for both point and diffuse sources, including clean technology where appropriate ("Best environmental practice" (BEP) and "best available techniques" (BAT) are defined in Appendix 1). Article 2 of Annex I requires strict authorisation or regulation by national authorities of point source discharges and releases into water or air, together with monitoring and inspection of compliance with them. Article 3 of Annex I requires the Commission to adopt plans for phasing out toxic, persistent and bioaccumulative substances from LBS together with programmes and measures

decisions by the Commission. Parties must report their national measures to the Commission (article 22), which may decide on steps to bring about compliance with the Convention and its own decisions and recommendations.

The 1974 Helsinki Convention[173] adopted a similar approach as the 1974 Paris Convention.[174] The current 1992 Helsinki Convention[175] is more process-based. Article 5 requires the elimination of pollution by harmful substances from any source. Annex I lists certain banned substances and defines criteria for identifying other harmful substances instead of listing them. Such substances may only be introduced into the Baltic with a prior special permit (article 6). Annex III contains more detailed criteria and measures for preventing pollution from industry, municipalities and agriculture than its predecessor, and prescribes principles and procedures for issuing permits. Article 6 requires the use of BEP for all land-based sources and best BAT for point sources.[176] The '92 Helsinki Convention is stricter than its predecessor, but still leaves discretion in the content and timing of measures, and contains no compliance mechanism apart from national obligations for reporting to HELCOM (article 16).

3.3.4.2 Land-Based Sources Protocol[177]

The Barcelona Convention requires its Parties to adopt appropriate measures on pollution from land-based sources in article 8. The Parties gave effect to the article in the 1980 protocol, which entered into force in 1983. The '80 protocol is similar to the 1974 Paris Convention, since it identifies toxic, persistent and bioaccumulable substances in Annex I that must be eliminated under article 5, and less noxious

for reducing inputs of nutrients. Parties to the Convention must assess the quality of the marine environment at regular intervals (article 6), and carry out scientific and technical research (article 8).

[173] Convention on the Protection of the Marine Environment of the Baltic Sea Area, Helsinki, 22 March 1974. In force 3 May 1980.

[174] The Parties undertook to counteract the introduction into the Baltic of hazardous substances listed in Annex I (article 5). Article 6 sets out general principles and obligations to take appropriate measures to control land-based pollution, and Annex II listed noxious substances for which the Parties were required to use the best practicable means to strictly limit pollution and for which they had to obtain a prior special permit. Annex III defined broad goals, criteria and measures that the Parties should endeavour to implement for certain matters.

[175] Convention on the Protection of the Marine Environment of the Baltic Sea Area, Helsinki, 9 April 1992. In force 17 January 2000.

[176] General criteria for identifying the latter two are provided in Annex II.

[177] The Protocol for the Protection of the Mediterranean Sea against Pollution from Land-based Sources, Athens, 17 May 1980. In force 17 June 1983. As amended in Syracuse on 7 March 1996, changed its name into Protocol for the Protection of the Mediterranean Sea against Pollution from Land-based Sources and Activities. Not in force.

substances in Annex II that must be strictly limited under article 6. The Parties must elaborate programmes and measures for these purposes, including common emission standards for Annex I substances. Discharges of Annex II substances must be subject to authorisation, taking into account criteria in Annex III. Article 7 requires the Parties to adopt common guidelines, standards or criteria. Compliance with the latter is insufficient and the 1980 protocol contains no quantitative targets or time limits for the elimination or reduction of pollutants.[178]

The 1980 protocol underwent an extensive amendment procedure, resulting in a change of its name. The amended protocol was adopted at Syracuse on 7 March 1996. It takes into account the objectives laid down in the Washington Global Programme of Action[179] and abandons the distinction between prohibited and regulated substances.[180] Like the 1992 OSPAR and Helsinki Conventions, the 1996 protocol concentrates on sectors of polluting activity.[181]

The preamble of the 1996 protocol refers to the amended Barcelona Convention that calls on the Parties to adopt additional protocols and measures on LBS pollution in article 8.[182] It requires its Parties to take measures concerning LBS pollution of the Mediterranean Sea Area from direct and indirect sources within their territory, and has been extended to include LBS pollution transported by air. Besides that, under the '96 version the Parties must draw up and implement plans for the reduction and phasing out of substances that are toxic, persistent and liable to bioaccumulate arising from LBS. The special care for these dangerous substances is a positive development.

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[178] P. Birnie and A.E. Boyle, International Law and the Environment, Oxford University Press, Oxford 2002, p. 414.

[179] See above "Global and Regional Measures" on LBS.

[180] On the different stages that led to the adoption of the '96 protocol, see: P. Birnie and A.E. Boyle, International Law and the Environment, Oxford University Press, Oxford 2002, p. 414.

[181] T. Scovazzi, *Marine Specially Protected Areas, The General Aspects and the Mediterranean Regional System,* Kluwer Law International, The Hague 1999, p. 85.

[182] Both the 1980 and the 1996 protocol refer to article 4(5) and 21 of the Convention, which allow the Parties to adopt additional protocols. Since the LBS protocol was not part of the '76 Barcelona Convention, the LBS protocols were additional protocols in the sense of article 21.

The amended preamble stresses the danger land-based sources and activities (LBSA) pose to not only the marine environment, but also to living resources. Special attention is drawn to substances that are toxic, persistent and liable to bioaccumulate.

The new version explicitly refers to some of the environmental principles listed in article 4 of the Convention, clearly inspired by Rio.[183] In this way, the Syracuse protocol follows the approach in the 1992 Helsinki and OSPAR Conventions, which also refer to the precautionary principle and to the polluter pays principle.[184] Besides that, the three conventional instruments contain identical annexes which define BAT and the BEP.[185] The identical definitions of such measures and processes considered indispensable to combat LBS pollution is a favourable development, above all in view of the desirable adoption of a global convention on the matter.[186] Like its predecessor, the preamble refers to the Global Programme of Action.

Article 1 is similar to the former provision, but includes substances that are toxic, persistent and liable to bioaccumulate.[187] The amended article 2 introduces a definition of "Hydrologic Basin", used in article 3 in regard of the extended Protocol Area. The new protocol applies to the Mediterranean Sea area as defined in article 1 of the Convention and to the hydrological basin of the Mediterranean Sea Area, being the entire watershed area within the territories of the Contracting Parties, draining into

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[183] I.e. the precautionary principle, polluter pays principle, environmental impact assessment and utilising the best environmental practice, including clean production technologies.

[184] Article 3 Helsinki and article 2(2)a-b of the OSPAR Convention.

[185] Annex IV '96 protocol, Annex II Helsinki and Appendix 1 OSPAR Convention.

[186] Magrone, E.M., *The Protection of the Mediterranean Sea Against Pollution Caused by Land-Based Sources and Activities,* In: Marchisio, S., Tamburelli, G., Pecoraro, L.: Sustainable Development and Management of Water Resources. A Legal Framework for the Mediterranean. Joint Report of the 1st MESDEL International Colloquium on Sustainable Development and Water Management in the Mediterranean Region (Rome-Naples, 11-12 December 1998). Published by Consiglio Nazionale delle Ricerche, Rome, 1999, p. 79-86, p. 81.
Available at http://www.ici.rm.cnr.it/en/pub/mesdel/copertina.pdf

[187] "The Contracting Parties to this Protocol shall take all appropriate measures to prevent, abate, combat and eliminate to the fullest possible extent pollution from the Mediterranean Sea Area caused by discharges from rivers, coastal establishment or outfalls, or emanating from any other land-based sources and activities within their territories, giving priority to the phasing out of inputs of substances that are toxic, persistent and liable to bioaccumulate." (Article 1) The '92 OSPAR Convention also includes pollution "through the air" in the definition of LBS pollution (article 1) and urges the Commission to draw up plans dealing with such substances (Annex I article 3(a)), which has been done. The '92 Helsinki Convention contains a similar provision as its predecessor and applies to "airborne" pollution too (article 2), yet without further specification. However, the amended protocol deals with airborne pollution in Annex III and article 4(1)b.

the Mediterranean Sea Area. Nothing changed in respect of the inclusion of internal waters up to the freshwater limit, but brackish waters and *coastal* salt waters including marshes and *coastal lagoons, and groundwaters* communicating with the Mediterranean Sea have been added to the former definition.[188] The additions are obviously a result of the holistic approach sustainable development demands and goes further than the 1992 Helsinki and OSPAR Conventions, which only include the internal waters up to the fresh water limit. The extension is important since most of the LBS pollution affects coastal areas more than other maritime zones.

The amended article 4 applies to LBSA pollution from point and diffuse sources.[189] Its formulation has been changed so as to extent its application to discharges taking place under the seabed with access from land. The protocol also applies to polluting substances transported by the atmosphere, subject to the conditions mentioned in Annex III. This Annex has been added in 1991 and was amended by the '96 version.

Annex III introduces a precautionary approach as to whether the substance, discharged into the air, could be transported to and pollute the Mediterranean Sea Area under the prevailing meteorological conditions.[190] No precautionary approach has been adopted concerning the character of the substances, since it is clearly stated that it must be hazardous for the marine environment. The protocol covers also atmospheric discharges from LBS (the definition omits "*and activities"*) within the territory of the Parties or from fixed man made structures that pollute the Mediterranean Sea Area. The obligations in the protocol to eliminate pollution from LBS (especially articles 5 and 6) apply to atmospheric emissions of those substances agreed by the Parties that are listed in Annex I. Annex II shall also be taken into account whenever appropriate.[191] Besides that, assessment methods of atmospheric pollution are provided for.

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[188] The former definition was "saltwater marshes communicating with the sea."
[189] Which were called direct and indirect sources and included examples.
[190] "The discharged substance is or could be transported to the Mediterranean Sea Area under prevailing meteorological conditions." This provision is based on the concern that most airborne pollution eventually pollutes the sea, including the Mediterranean, and should therefore be prohibited under the precautionary approach.
[191] Annex II deals with criteria for issuing authorisations for discharges. See below.

Article 4 repeats its predecessor by declaring the protocol applicable to pollution from fixed man-made offshore structures under the jurisdiction of the Parties that serve other purposes than exploration and exploitation of mineral resources of the continental shelf and the seabed and its subsoil (article 4(2)), for the latter are covered by the seabed protocol.[192]

An important new provision is that non-Parties into whose territory parts of the hydrological basin extend, are invited to cooperate in the implementation of the protocol (article 4(3)). This article reflects the holistic approach to pollution that demands cooperation of all possibly involved stake-holders in finding solutions, and can obviously do nothing more than force Parties to try to cooperate.

In accordance with the new Annex I, Parties are required to implement national and regional action plans and programmes containing measures and timetables for their implementation in order to eliminate pollution from LBSA and in particular to phase out inputs of toxic, persistent and bioaccumulating substances.[193] The introduction of timetables for the implementation of national plans is a favourable development, but this does unfortunately not address the delay in adopting the plans as such by the Parties (article 5). However, article 15(2) provides that short- and medium-term plans and programmes must be formulated and approved within one year of the entry into force of the amendments to the protocol. After approval, the subsequent meeting of the Parties can adopt them by a two-thirds majority.[194]

The new article 5(4) repeats the preamble by requiring the Parties to take into account BAT and BEP, including clean production technologies, taking into account the criteria listed in Annex IV when adopting these plans and programmes. Parties are

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[192] On which see below "Seabed protocol".

[193] Mrs Magrone's use of the terminus "black list" seems inappropriate, since Annex I only lists elements to be taken into account in the preparation of action plans and programmes. Neither the Annex, nor article 5 contains a real prohibition. Magrone, E.M., *The Protection of the Mediterranean Sea Against Pollution Caused by Land-Based Sources and Activities,* In: Marchisio, S., Tamburelli, G., Pecoraro, L.: Sustainable Development and Management of Water Resources. A Legal Framework for the Mediterranean. Joint Report of the 1st MESDEL International Colloquium on Sustainable Development and Water Management in the Mediterranean Region (Rome-Naples, 11-12 December 1998). Published by Consiglio Nazionale delle Ricerche, Rome, 1999, p. 79-86, p. 82.
Available at http://www.ici.rm.cnr.it/en/pub/mesdel/copertina.pdf

[194] See below under article 14.

also required to take preventive measures to reduce the risk of pollution by accidents (article 5(5)).

The protocol deals with harmonisation of the national action plans and programmes, to prevent diffusion in Annex I, which has been amended and has moved away from a substance-based approach and now contains three sections.[195] The Annex further provides that, in conformity with the Global Programme of Action,[196] priority will be given to substances that are toxic, persistent, or liable to bioaccumulate.[197]

The new article 6 introduces an authorisation system for point sources. A competent authority of the Parties,[198] taking due account of the new Annex II[199] and the recommendations of the meetings of the contracting Parties, is responsible for authorising these types of discharges. The Parties, who may request the Secretariat for assistance at this process, are required to set up a system of inspection and compliance with them, which is a refreshing provision, on which other protocols are silent. Parties must establish appropriate sanctions and ensure their application in case of non-compliance with authorisations and regulations. Article 6(4) does not specify what kind of sanctions should be established. Reference to the polluter pays principle at this point would have been positive. However, the innovation should not be overvalued because the infliction of the sanctions is entrusted to the Contracting Parties, that is to say

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[195] Section A enumerates sectors of activity that action plans and programmes should cover, section C lists 19 categories of substances and sources of pollution that should be covered and section B mentions characteristics of substances to which attention must be paid when establishing action plans and programmes.

[196] See above "Global and Regional Measures".

[197] In particular to persistent organic pollutants (POPs), as well as to wastewater treatment and management.

[198] A system of national authorities can only be effective and uniform if detailed rules and criteria on issuing authorisations exist. Mrs Magrone regards the Annex and recommendation to be sufficient. See: Magrone, E.M., *The Protection of the Mediterranean Sea Against Pollution Caused by Land-Based Sources and Activities,* In: Marchisio, S., Tamburelli, G., Pecoraro, L.: Sustainable Development and Management of Water Resources. A Legal Framework for the Mediterranean. Joint Report of the 1st MESDEL International Colloquium on Sustainable Development and Water Management in the Mediterranean Region (Rome-Naples, 11-12 December 1998). Published by Consiglio Nazionale delle Ricerche, Rome, 1999, p. 79-86, p. 83.
Available at http://www.ici.rm.cnr.it/en/pub/mesdel/copertina.pdf

[199] Annex II has not been changed much. It contains elements to be taken into account in issuing authorisations for discharges of wastes in accordance with article 6. Section A contains a list of characteristics and composition of the discharges, section B lists characteristics of discharge constituents with respect to their harmfulness, section C lists characteristics of discharge site and receiving environment, section D contains available waste technologies and section E lists potential situations of impairment of marine ecosystems and sea-water uses.

to the same subjects that must respect the Protocol. The monitoring requirement (article 8) and the reporting obligation (article 12) may slightly balance the weakness of the sanctioning system.[200]

Article 7 remains the same and requires the Parties to adopt, in cooperation with the competent international organisation, common guidelines and standards or criteria dealing with different aspects of LBSA pollution. It is hard to discern the ultimate scope of this provision, because of its generality.

The monitoring requirement has almost remained unchanged, but the amendment introduces the obligation to inform the public of the outcome of the monitoring activities (article 8), which is a positive development.[201]

Article 9 deals, as its predecessor, with scientific and technical cooperation related to pollution from LBSA[202] and requires its Parties to "endeavour" to exchange scientific and technical information and coordinate research programmes. A new paragraph adds to the latter the promotion of access to, and transfer of environmentally sound technology including clean production of technology. This addition must be regarded in the light of the -already existing- preamble provision that recognises the difference in levels of development between the coastal States and social imperatives of the developing countries, and goes beyond most other protocols. However, the formulation of "common but differentiated responsibility" is not a very demanding one, because Parties are only "endeavoured" to promote access and there are no

200 The Helsinki Convention, on the contrary, provides in detail the minimum content that the criteria for the authorisation to the discharges must include, as well as the possibility for the competent State Authorities to control the attainment of the permit requirements, to inspect the amount and the quality of the wastes, to verify their environmental impact and, if necessary, to review the permit previously granted. Which article 6(3) and Annex III, regulation 3. The Helsinki Convention seems to be less strict by allowing negligible quantities to be dumped without a permit.

201 However, it is unclear which public is intended and how the public can be reached. Besides that, the Parties must systematically asses levels of pollution, in particular with regard to the sectors of activity and categories of substances listed in Annex I and the effectiveness of action plans, programmes and measures implemented under the protocol.

202 The '96 version specifically mentions the development of clean production processes.

regulations on intellectual property rights, compensation and who should have access to what technology of which States.[203]

As in the '80 version, article 10 requires the Parties to cooperate in formulating and implementing -though only "as far as possible"- programmes of assistance to developing countries, particularly in the fields of science, education and technology concerning LBSA pollution.[204]

Article 11 remained unchanged, requiring that Parties to the protocol must cooperate on shared watercourses that are likely to pollute the protocol Area.[205] Disputes arising between Parties to the protocol should be resolved by way of consultation, negotiation or any other peaceful means (article 12). Unfortunately, the article still does not refer to article 28(2) of the Convention and therefore seems to impede the Parties to the protocol to resolve the dispute by means of arbitration, provided for by the Convention.

Article 13 changed in formulation and now requires reports to be submitted every two years, unless decided otherwise by the Parties. The content of the reports has not been changed and includes the state of implementation.[206] Meetings of the Parties are to be held in conjunction with ordinary meetings of the Parties to the Convention and extraordinary meetings of the Parties may also be convened. The functions of the meetings of the Parties have almost remained unchanged (article 14).[207]

Article 15 underwent the most important changes. It now requires that the Parties adopt, by a two-thirds majority, short- and medium-term regional action plans and

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[203] The '92 OSPAR and Helsinki Convention, on the other hand, do not provide any requirements in this regard at all. Especially the Helsinki Convention needs an effective provision on common but differentiated responsibility.

[204] Its broad formulation and reference to developing countries in general, thus including non-Party States, makes the practical impact of the provision less convincing.

[205] Parties are not responsible for pollution that originates in other States, and have only an obligation to cooperate with polluting non-member States.

[206] Reports must be submitted to the meetings of the Contracting Parties, through the Organisation. They deal with measures taken, results achieved and difficulties encountered in the application of the protocol. And must include *inter alia:* statistical data, monitoring data, quantities of discharged pollutants. Added to the list is: action plans, programmes implemented in accordance with article 5 and 15.

[207] Except that the efficacy of action plans and programmes have must now also be kept under review.

programmes containing measures and timetables for their implementation in regard of the general obligations of article 5. The plans and programmes must be formulated by the Secretariat and considered and approved by the relevant technical body of the Contracting Parties within one year at the latest of the entry into force of the amendments to the protocol. The measures adopted become binding on the Parties that have not objected to them. The possibility of objection clearly weakens the impact of the provision, but the binding character and inherent harmonisation of implementation programmes and plans are positive developments, which most other protocols lack.

Article 15 is the compromise of extensive negotiations between environmentalists and the chemical industry. The former accepted that their request for an absolute ban by the year 2005 of any kind of discharge and emission of substances that are toxic, persistent and liable to bioaccumulate would be impossible because of its economic and social impact. The latter agreed to be bound by measures and timetables having a legally obligatory nature, provided they relate to specific groups of substances.[208]

Article 16 remained unchanged and declares the provisions relating to any protocol to be applicable to this protocol and provides the same in respect of rules of procedure and financial rules.[209] Besides that, article 16 deals with signature, ratification, accession and entry into force.

[208] T. Scovazzi, *Marine Specially Protected Areas, The General Aspects and the Mediterranean Regional System,* Kluwer Law International, The Hague 1999, p. 85.
[209] See above the critics on article 15 of the "Dumping protocol".

3.3.5 Specially Protected Areas and Biodiversity

Increasing recognition of the need to manage vulnerable marine ecosystems in a more holistic way has been added to the traditional approach to the prevention of marine pollution, which concentrated on its sources. This trend is illustrated by *e.g.* article 194(5) of the LOSC, which provides that measures taken in regard of protection and preservation of the marine environment must include those necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life.[210]

In connection herewith, the Convention on Biological Diversity (CBD),[211] adopted at the Rio Earth Summit in 1992, requires its Parties *inter alia* to establish a system of protected areas in which special measures need to be taken to conserve biological diversity (article 8). Biological Diversity is defined to include living organisms from marine as well as terrestrial ecosystems (article 2). In 1995, the second conference of the Parties adopted an action plan called the Jakarta Mandate on Marine and Coastal Biodiversity,[212] which includes the establishment of marine and coastal protection areas.[213]

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[210] As mentioned above in the part on marine delimitations, specially protected areas within the territorial sea and EEZ, may be protected by the coastal State under article 220 LOSC, subject to the right of flag States under articles 223-232. On the high seas, however, only the flag State can enforce rules concerning the protected areas and if that State is not a Party to the relevant agreement, they are unenforceable.

[211] Framework Convention on Biological Diversity, Rio de Janeiro, 5 June 1992. In force 29 December 1993.

[212] Jakarta Mandate on Marine and Coastal Biological Diversity. Decision II/10 of the Conference of the Parties (1995). In this respect the terminus Large Marine ecosystems can be of interest. See on the matter: Wang, H., *Ecosystem Management and Its Application to Large Marine Ecosystems: Science, Law, and Politics,* [Ocean Development and International Law], 35 (2004), p. 41-74. And: Juda, L., *Considerations in Developing a Functional Approach to the Governance of Large Marine Ecosystems,* [Ocean Development and International Law], 30 (1999), p. 89-125.

[213] R.R. Churchill and A.V. Lowe, *The Law of the Sea*, 3rd edition, Manchester University Press, Manchester 1999, p. 394.

3.3.5.1 Global and Regional Measures[214]

The most important global Convention dealing with specially protected areas (SPAs) at sea is MARPOL 73/78, which makes IMO responsible for their establishment. Three of its Annexes identify special areas in which stricter limitations are imposed on pollution from ships. A Special Area is defined as a sea where for "recognised technical reasons in relation to its oceanographical and ecological condition and to the particular character of its traffic the adoption of special mandatory methods for the prevention of sea pollution […] is required."[215]

In 2001, IMO adopted guidelines for the designation of SPA and for the designation of Particularly Sensitive Sea Areas (PSSAs).[216] Proposals for the designation of new SPAs should be submitted by interested States to the Marine Environment Protection Committee (MEPC) of IMO in accordance with these guidelines, and, if approved, are designated by an amendment to MARPOL in accordance with article 16 and become thus binding and enforceable.

Unlike the designation of SPAs, the designation of PSSAs is not based on a treaty but on the guidelines only. A PSSA is defined in the guidelines as an area that needs special protection through action by IMO because of its significance for recognised

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[214] For a detailed analysis of more existing global and regional measures, See: Warner, R., *Marine Protected Areas beyond National Jurisdiction: Existing Legal Principles and a Future International Law Framework,* In: Integrated Oceans Management: Issues in Implementing Australia's Oceans Policy, edited by Marcus Haward. Research Report by the Cooperative Research Centre for Antarctica and the Southern Ocean, 26 May 2001, Hobart, Australia, p. 55-76. Mr. Warner mentions *inter alia* the United Nations List of Protected Areas and Chapter 17 of Agenda 21. See also Scovazzi, T., *Marine Protected Areas on the High Seas: Some Legal and Policy Considerations,* [International Journal of Marine and Coastal Law], 19 (2004), p. 2.

[215] Annex I largely prohibits the discharge of oil within special areas in the Mediterranean, Baltic, Black Sea, Red Sea, Gulfs, Gulf of Aden, Antarctic and North-West European Waters (reg. 10). Annex II strictly controls tank washing and the discharge of residues from chemical tankers in the Baltic, Black Sea and Antarctic (reg. 1). Annex V prohibits the disposal of garbage other than food waste from ships in the Mediterranean, Baltic, Black Sea, Red Sea, Gulfs, North Sea, Antarctic and Wider Caribbean (reg. 5). When Annex VI enters into force, the Baltic and North-Sea will become Sulphur Oxide Emission Control Areas, in which the maximum sulphur content of fuel will be a third of that permitted elsewhere.

[216] Guidelines for the Designation of Special Areas under MARPOL 73/78 and Guidelines for the Identification and the Designation of Particularly Sensitive Sea Areas. Adopted by the IMO Assembly on 29 November 2001 by Resolution A.927(22). (Available at: http://www.imo.org/includes/blastData.asp/doc_id=4404/927.pdf) Replacing the Guidelines for the Designation of Special Areas and the Identification of Particularly Sensitive Sea Areas. Adopted by the IMO Assembly on 6 November 1991 by Resolution A.720(17). The 1991 Guidelines had been supplemented by procedures approved in IMO Assembly resolution A.855(21) of 25 November 1999, which were also replaced by the 2001 Guidelines.

ecological, socio-economic, or scientific reasons, and because it may be vulnerable to damage by international shipping activities. PSSA status is a statement without any means of enforcement. Therefore, an application should include associated protective measures, utilising other powers available to IMO under international law.[217] PSSAs and MARPOL SPAs are not mutually exclusive.[218]

Article 211(6) LOSC empowers States to take additional national measures within a defined area in their EEZ, if normal international rules on pollution from vessels are inadequate. These measures must be approved by IMO and must correspond with the restrictions applicable to special areas. They may not impose design, construction, manning or equipment standards on foreign vessels, apart from generally accepted rules and standards.

In 1998, the OSPAR Commission added Annex V to the regional OSPAR Convention, which deals with the protection and conservation of ecosystems and biological diversity of the marine area. Its article 3 requires the Parties to develop means, consistent with international law, for instituting protective, conservation, restorative or precautionary measures related to specific areas or sites or related to particular species or habitats.

The revised '92 Helsinki Convention requires the Parties under article 15 to conserve natural habitats and biological diversity, protect ecological processes, and ensure sustainable use of natural resources in the Baltic Sea.

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[217] The measures may include provisions such as traffic separation schemes, areas to be avoided, compulsory pilotage, mandatory reporting and additional restrictions on pollution.

[218] Six PSSAs have been formally designated so far: Great Barrier Reef (Australia, 1990), Sabana-Camagüey Archipelago (Cuba, 1997), Malpelo Island (Colombia, 2002), Around the Florida Keys (United States, 2002), Wadden Sea (Denmark, Germany, Netherlands, 2002), Paracas National Reserve (Peru, 2003). In 2003, two other PSSAs were approved by IMO in principle for the Torres Strait (Australia and Papua New Guinea) and Western European Waters (Belgium, France, Ireland, Portugal, Spain, United Kingdom). Three more proposals (for the Baltic Sea, Canary Islands and Galapagos) are currently under consideration. See: Scovazzi, T., *Marine Protected Areas on the High Seas: Some Legal and Policy Considerations,* [International Journal of Marine and Coastal Law], 19 (2004), p. 13.

3.3.5.2 SPA and Biodiversity Protocol[219]

Article 10 of the amended Barcelona Convention requires its Parties to take all appropriate measures to protect and preserve biological diversity, rare or fragile ecosystems, as well as species of wild fauna and flora that are rare, depleted, threatened or endangered and their habitats. The '76 Convention did not contain such a requirement and, as its '95 counterpart, lacked a provision on specially protected areas.[220]

The protocol concerning Mediterranean Specially Protected Areas of 1986 limited its geographical scope to the territorial sea and internal waters up to the fresh water limit and included wetlands and coastal areas (article 2). Parties were required, as far as possible, to establish protected areas, either nationally or jointly with an adjacent State, and to take planning or regulatory measures to manage activities affecting them (articles 3, 6 and 7).

The 1995 revision of the Barcelona System would have such significant impact on the establishment of SPAs and biodiversity, that the existing protocol, which was generally regarded as rather modest, was not amended but replaced. The new protocol was adopted on 10 June 1995 and entered into force on 21 December 1999.[221]

The Preamble of the '95 protocol extends its concern from the marine environment to the littoral areas and ecosystems of the Mediterranean and stresses the importance of protecting the natural and cultural heritage, in particular through the establishment of protected areas and also by the protection and conservation of threatened species. The new preamble includes a reference to the UNCED instruments, in particular to the

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[219] The Protocol Concerning Mediterranean Specially Protected Areas, Geneva, 1 April 1982. In force 23 March 1986. To be replaced by the Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean, Barcelona, 10 June 1995. In force 12 December 1999.

[220] Therefore, the adoption of both the '82 and the '95 protocol are, at least partly, based on article 21 of the Barcelona Convention.

[221] Ferrajolo, O., *Specially Protected Areas and Biodiversity in the Mediterranean,* In: Marchisio, S., Tamburelli, G., Pecoraro, L.: Sustainable Development and Management of Water Resources. A Legal Framework for the Mediterranean. Joint Report of the 1st MESDEL International Colloquium on Sustainable Development and Water Management in the Mediterranean Region (Rome-Naples, 11-12 December 1998). Published by Consiglio Nazionale delle Ricerche, Rome, 1999, p. 68-78, p. 68. Available at http://www.ici.rm.cnr.it/en/pub/mesdel/copertina.pdf

CBD, and to the precautionary principle and the principle of common but differentiated responsibility.

Article 1 lists a range of definitions, including biological diversity.[222] The "Organisation" is the one referred to in article 2 of the Convention and the "Centre" indicates the SPA/RAC.[223]

The most important change of the protocol concerns its geographical area, which has been extended under article 2 to any sea area of the Mediterranean regardless of its juridical status. It includes the seabed and its subsoil, internal waters up to the fresh water limit, including seabed and subsoil and the terrestrial and coastal areas designated by each of the Parties, including wetlands. The protocol applies thus also to the EEZ and high seas,[224] which the '82 protocol specifically excluded.[225]

As most littoral States have not established claims beyond their territorial seas, the major part of the Mediterranean falls under the high seas regime. Therefore, under the old protocol, it was not possible to establish protected areas in most parts of the Mediterranean. The extension of the geographical coverage of the protocol was thus necessary to adequately protect *inter alia* highly migratory marine species, which spend a major part of their life outside territorial sea areas.[226]

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[222] Biological diversity is defined as in the CBD. Besides that, definitions are given for endangered, endemic and threatened species and for the conservation status of a species.

[223] See above "Specially Protected Areas Regional Activities Centre (SPA/RAC)".

[224] See below under articles 5 and 9.

[225] The '82 protocol had, as far as the geographical limitation is concerned, already become redundant for those Mediterranean States that were Parties to the LOSC, which allows for further reaching measures in articles 194(5) and 211(6). As a comparison, other regional arrangements on the same matter avoid the limitation of the '82 protocol. E.g. Protocol Concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region, Nairobi, 21 June 1985. In force 30 May 1996. And: Protocol Concerning Specially Protected Areas and Wildlife to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region, Cartagena de Indias, 17 January 1990. In force 18 June 2000.

[226] T. Scovazzi, *Marine Specially Protected Areas, The General Aspects and the Mediterranean Regional System,* Kluwer Law International, The Hague 1999, p. 86. Who quotes the Report of the Expert Meeting on Environmental Legislations Related to Specially Protected Areas and Endangered Species in the Mediterranean, Ustica, Italy, 18 September 1993. UNEP(OCA)/MED/WG.73/6. "As the protection of certain species cannot be effective if it does not cover their whole range area, the territorial application of the Protocol should not be restricted to the territorial sea of the Parties, as far as regulation of activities potentially affecting wildlife is concerned."

Article 2 introduces two elaborate disclaimer clauses that are meant to take away States' reluctance to establish protected areas, whose presence otherwise could potentially influence boundary delimitation claims. Paragraphs 2 and 3 of article 2 state that nothing in or related to the protocol shall prejudice the rights, claims or legal views of any State relating to the law of the sea or relating to national jurisdiction or sovereignty claims. These provisions are meant to prevent that the existence of unresolved delimitation issues would jeopardise or delay the adoption of measures necessary for the marine environment.[227]

Article 3 has been reformulated and requires the Parties to protect, preserve and manage in a sustainable and environmentally sound way areas of particular natural and cultural value, notably by establishing specially protected areas. Parties are also required to take measures to protect, preserve and manage threatened or endangered species of flora and fauna. The article also refers to sustainable use of biological diversity, inventories of components of biological diversity and their monitoring, adoption of plans and strategies for the conservation of biodiversity and the sustainable use of marine and coastal marine resources. The formulation of paragraph 5, concerning monitoring and the identification of activities "which have or are likely to have a significant adverse impact" on the conservation and sustainable use on biodiversity, reminds of article 7(c) of the CBD and implicitly restates the precautionary principle mentioned in the protocol's preamble as a criterion for the application of the protocol. Article 3(6) introduces the provision that measures provided for in the protocol must be applied without prejudice to the sovereignty or jurisdiction of other Parties or States and measures taken to enforce them must be in accordance with international law.

The protocol has thus moved away from the strictly preservationist approach as stated in its '82 predecessor, and focuses on both preservation and sustainable use and seems to adopt a holistic approach by including coastal marine areas in its scope. The influence of the CBD is clear, although no provision deals with benefit sharing, which

[227] The provisions remind of those used in article IV of the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR), Canberra, 20 May 1980. In force 7 April 1982. The Antarctic shares two common aspects with the Mediterranean: presence of vast areas of high seas and unsettled sovereignty issues. See: T. Scovazzi, *Marine Specially Protected Areas, The General Aspects and the Mediterranean Regional System,* Kluwer Law International, The Hague 1999, p. 87.

would be an interesting issue for the usage of high seas SPAs. The difference in development levels of the Mediterranean States calls for at least a cooperative sustainable use of SPAs giving effect to the principle of common but differentiated responsibility mentioned in the preamble. Cooperation and benefit sharing would improve the respect and understanding for their establishment and therefore enhance their effectiveness.

SPAs are intended to safeguard the objectives listed in article 4. They include representative types of coastal and marine ecosystems, habitats that are in danger of disappearing in the Mediterranean, habitats critical to the survival of threatened or endangered species of flora and fauna and sites of particular importance because of their scientific, aesthetic, cultural or educational interest.

Article 5 gives effect to the broad geographical scope of the '95 protocol by allowing the Parties to establish national SPAs in the marine and coastal zones subject to its sovereignty or jurisdiction, which include their EEZs. Parties are urged to cooperate if SPAs bordering other States, including non-member States, are established. However, the formulation of in particular the requirement to cooperate with other *member* States seems unreasonably soft.[228]

The Parties must take the protection measures required, in conformity with international law and taking into account the characteristics of each SPA. Article 6 proceeds by listing a range of activities that must be regulated or prohibited. Some interesting new points of attention have been added such as the trade in (parts of) plants and animals and the introduction of genetically modified species, the potentially hazardous effects of which may require a precautionary approach.

Article 7 requires the Parties to adopt planning, management, supervision and monitoring measures for the SPAs in accordance with international law and lists subjects to which they should be related. The list improves the harmonisation of the measures adopted. National contingency plans for the SPAs must be developed and

[228] "[…] the Parties shall *endeavour* to cooperate […]".

the Parties are urged to coordinate the administration and management of them covering both land and marine areas as a whole, giving effect to the holistic approach.

In addition to the national SPAs established under article 5, article 8 requires the Parties to draw up a list of Specially Protected Areas of Mediterranean Importance (SPAMI). SPAMIs must include sites that are of importance for conserving the components of biodiversity in the Mediterranean, which contain ecosystems specific to the Mediterranean Area or habitats of endangered species, or which are of special interest at the scientific, aesthetic, cultural or educational levels. Annex I guides the Parties in their choice which areas should be included, by listing common criteria.[229] The Parties recognise their importance and must comply with the measures applicable to them and may not authorise or undertake any activities that might be contrary to the objectives for which the SPAMIs were established.[230] Third States are not bound by the protocol and therefore enforcement on the high seas is problematic.

However, article 28 of the protocol requires member States to cooperate with third States and international organisations for the implementation of it and it requires them to adopt measures consistent with international law to ensure that no one engages in activities contrary to the purposes of the protocol.[231] In case of navigation, IMO is the appropriate international organisation and could adopt non-binding Resolutions or mandatory ship reporting systems or routing systems.[232] Besides that, under the LOSC, port States have some enforcement powers regarding rules applicable to high seas SPAMIs.[233]

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[229] The adoption of Annex I is based on article 16. All three Annexes to the protocol were adopted at the meeting of the Parties at Montecarlo on 24 November 1996.

[230] This provision could lead to the designation of SPAMIs in case the contracting States already agreed to apply particularly strict measures to ships flying their respective flags in regard of a special aspect *e.g.* navigation. In this respect, it is interesting to point to the case of the Strait of Bonifacio to which Mediterranean States could apply the holistic SPAMI regime. See above under "Strait of Bonifacio".

[231] See for enforcement the general comment above "Barcelona Convention" under article 27.

[232] Although the non-binding IMO Resolution A.766(18) of 4 November 1993 (MSC 62/25/Add. 2), which calls on IMO members to prohibit navigation of certain classes of ships flying their respective flag through the Strait of Bonifacio, was obviously not adopted according to the later '95 protocol, this type of international measures is probably envisaged by article 28 of the protocol. Besides that, the mandatory measures can be based on the International Convention for the Safety of Life at Sea (SOLAS), London, 1 November 1974. In force 25 May 1980. Regulation V/8. and V/8-1.

[233] See: Merialdi, A., *Legal Restraints on Navigation in Marine Specially Protected Areas,* In: T. Scovazzi, *Marine Specially Protected Areas, The General Aspects and the Mediterranean Regional*

Article 9 states, what is already implied in article 2 of the protocol: SPAMIs may be established in marine and coastal zones under the sovereignty or jurisdiction of the Parties and in zones partly or wholly on the high seas.[234] If the area is situated in a zone already delimited and over which the coastal State exercises sovereignty or jurisdiction, the proposal for inclusion in the SPAMI list is submitted to the National Focal Points by the Party concerned. If the area is situated partly or wholly on the high seas, or if the delimitation of the area is not clear, at least two or more neighbouring Parties must submit the proposal for inclusion. The proposal must be accompanied by an introductory report directed at the Centre.

The National Focal Point examines each submitted proposal on its conformity with the common guidelines and criteria adopted under article 16. From this stage onwards, the procedure to be followed for the inclusion of the area in the SPAMI list depends on its delimitation.[235]

System, Kluwer Law International, The Hague 1999, p. 29-43, p. 41. And see above: "Port and Coastal State Control in Environmental Matters". Mr Merialdi also mentions article 5(3) of EC Council Directive 93/75 of 13 December 1993, which requires the operators of ships headed for Community ports and departing from a port of a third State, to provide certain information to the competent authorities of the State to which they are destined. Mr Merialdi regards this Directive as an example of the right States have under customary international law to set conditions for access to their ports. He proposes that Mediterranean States make use of this power in order to obtain the compliance of foreign ships with the protective measures adopted in their protected areas.

[234] At the 17th meeting of the Parties to the Barcelona Convention and its protocols, held in Monaco in 2001, the first 12 SPAMIs were inscribed in the list: the island of Alborán, the sea bottom of the Levante de almería, cape of Gata-Nijar, Mar Menor and the oriental coast of Murcia, cape of Cresus, the Medas islands, the Coulembretes islands (all proposed by Spain), Port-Cros (proposed by France),the Kneiss islands, Galite, Zembra and Zembretta (all proposed by Tunisia), and the French-Italian-Monegasque Sanctuary for marine mammals (jointly proposed by the three States concerned). On the latter, see below "The Mediterranean Marine Mammals Sanctuary". See: Scovazzi, T., *Marine Protected Areas on the High Seas: Some Legal and Policy Considerations,* [International Journal of Marine and Coastal Law], 19 (2004), p. 13.

[235] When the proposal concerns an area already delimited and under national jurisdiction or sovereignty, the Organisation informs the meeting of the Parties, which decides on its inclusion. How the proposal reaches the Organisation is not specified. It is probable that the proposal is sent to them by the National Focal Point which is in charge of its assessment. When the proposal concerns an area wholly or partly on the high seas or without clear delimitation of national jurisdiction or sovereignty, the Centre is required to transmit the proposal to the Organisation, which informs the meeting of the Parties. It is not entirely clear how the proposal gets from the National Focal Points to the Centre. The Centre gets solely hold of an introductory report to the proposal (paragraph 3) and not of the proposal itself, which is submitted for assessment to the national Focal Points. Article 24, which states that the National Focal Points serve as a liaison with the Centre, probably implies that the former communicate the proposal to the latter.

Paragraph 4(c) of article 9 states that the decision to include the *high seas/non-delimited* area in the SPAMI list is taken by consensus by the Contracting Parties,[236] which are also responsible for approving its management measures. However, paragraph 4(b) merely states that the meeting of the Parties decides on inclusion of the *delimited* area and does neither mention consensus nor the responsibility of the Contracting/meeting of the Parties for approving the management measures applicable to the area. Whether the decision to include areas conform article 9(4)b are also made by consensus, remains therefore slightly unclear. The formulation of the second sentence of article 9(4)c is general[237] and could therefore also have been intended for article 9(4)b, yet is part of article 9(4)c only. However, most publicist assume that decisions in accordance with both article 9(4)b and 9(4)c are taken by consensus.[238]

The Parties that submitted the proposal must implement its protection and conservation measures. All Parties must "undertake" to observe these rules (article 9(5)). In this way, the protected area obtains international legitimation, absent under the '82 protocol. However, the formulation of the provision weakens the enforcement of the rules concerning SPAMIs and is paradox with article 8(3)b, which plainly requires all Parties to comply with the measures applicable to SPAMIs.[239]

Changing the legal status or boundaries of SPAMIs may only be decided upon when important reasons exist for doing so. The procedure laid down in article 9 must be followed (article 10). This provision potentially endangers the long-term protection special areas need and this concern should have be taken into account.[240]

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[236] Correct would be "meeting of the Parties", made responsible for deciding on the inclusion of an area in the SPAMI list under article 26(2)h.

[237] "[…]The decision to include the Area in the SPAMI list shall be taken by consensus by the Contracting Parties, which shall also approve the management measures applicable to the area."

[238] See: Merialdi, A., *Legal Restraints on Navigation in Marine Specially Protected Areas,* In: T. Scovazzi, *Marine Specially Protected Areas, The General Aspects and the Mediterranean Regional System,* Kluwer Law International, The Hague 1999, p. 29-43, p. 40. Who does not go into this ambiguity, but only states that all decisions are taken by consensus by all contracting Parties.

[239] Besides that, this weak formulation seems contradictory to the fact that the decision to include the areas in the list is taken by consensus (at least in case of article 9(4)c).

[240] Von Zharen, W.M., *An Ecopolicy Perspective for Sustaining Living Marine Species,* [Ocean Development and International Law], 30 (1999), p. 17.

Article 11 is the first of three articles on the protection and conservation of species. Some earlier articles (3(2-5) and 4) deal in a more general way with the conservation and sustainable use of biological diversity. Article 11 introduces a provision on protected status of endangered species at national level, whereas article 12 deals with those endangered species that are listed in Annex II and III to the protocol.

Article 11 requires Parties to manage species of flora and fauna in such a way as to maintain them in a favourable state of conservation[241] and to give endangered species under their jurisdiction protected status and regulate them adequately. Parties must take domestic and coordinated measures to control and, where appropriate, prohibit the taking, trade and disturbance of species of protected fauna. A similar provision applies to protected flora. Measures on ex-situ breeding are to be adopted and non-member range States are to be consulted with.[242] It is favourable that the requirement to consult with non-member States in this respect is stricter than a similar provision on cooperation with non-member States in article 5(3) dealing with the establishment of SPAs.

Article 12 requires the Parties to adopt cooperative measures to ensure the protection and conservation of flora and fauna listed in Annexes II and III to the protocol.[243] Besides that, Parties must adopt national measures for the benefit of the species listed in Annex II in accordance with article 11(3 and 5). Their habitats must be conserved and recovered, for which action plans shall be adopted.[244]

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[241] It is not clear what a "favourable state of conservation" is. This leaves the determination of the actual number of the respective species to be taken probably to the competent international organisation with which the States must cooperate. This could lead to varying standards for different species and might cause problems in case of interdependent species. It would have been beneficial to specify the standard in order to homogenise the taking of species in the entire Mediterranean region holistically.

[242] Range States are not defined in the protocol, but a definition can be found in article 1(1)f of the Convention on the Conservation of Migratory Species of Wild Animals, Bonn, 23 June 1979. In force 1 November 1983. "Range" means all the areas of land or water that a migratory species inhabits, stays in temporarily, crosses or overflies at any time on its normal migration route.

[243] All Annexes were adopted at the meeting of the Parties at Montecarlo on 24 November 1996. Annex II lists species threatened or endangered and Annex III lists species whose exploitation is regulated. Annexes can be amended in accordance with article 23 of the Convention and are subject to prior evaluation by the National Focal Points.

[244] In addition to articles 11 and 12, article 15 requires the Parties to compile inventories of those areas under national jurisdiction that contain rare or fragile ecosystems that are reservoirs of biological diversity or that are important for threatened and endangered species.

Species listed in Annex III must, in cooperation with the competent international organisation, be conserved and their exploitation must be regulated and authorised to maintain their favourable state of conservation. What exactly is a favourable state of Conservation is not defined.[245] Paragraph 5 requires States to cooperate if an endangered or threatened species crosses the border of another member State.[246] Paragraph 6 allows, under strict conditions, species listed in the Annexes to be taken for educational, scientific or management purposes.

Article 13 requires the Parties to take all appropriate measures to regulate the introduction of non-indigenous or genetically modified species into the wild and prohibit those that may have harmful impacts on the ecosystems, habitats or species.[247] Any species already existing in the Mediterranean causing or likely to cause damage to ecosystems, habitats or species must be eradicated, yet the protocol does not specify who is responsible for it.

Article 17 introduces an important obligation to evaluate the impact industrial and other projects and activities could have on protected areas in general.[248] However, the Parties are not required to evaluate the effect the protected area (potentially) has on certain species, habitats or ecosystems.[249]

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[245] See critics above.

[246] Paragraph 5 refers in general to endangered or threatened species and does not mention the Annexes. Is this provision limited to those threatened and endangered species that are listed in the Annexes, as might be expected in the context of the rest of the article, or is the provision to be taken literally and thus applicable to all endangered and threatened species?

[247] The formulation of article 13 is precautionary to a certain extent, but does not go as far as to define all genetically modified organisms as being possibly (or likely) hazardous to ecosystems, habitats or species *per se,* as some authors argue. See *e.g.*: Messer, E., *Food Systems and Dietary Perspective: Are Genetically Modified Organisms the Best Way to Ensure Nutritionally Adequate Food?* [Indiana Journal of Global Legal Studies], 9 (2001), p. 65-90. And: Bridgers, M., *Genetically Modified Organisms and the Precautionary Principle: How the GMO Dispute before the World Trade Organisation Could Decide the Fate of International GMO Regulation,* [Temple Environmental Law and Technology Journal], 22 (2004), p. 171-193.

[248] Parties must take into consideration the possible direct or indirect, immediate or long-term impact, including the cumulative impact of the projects and activities being contemplated.

[249] The general article 3(2, 4 and 5), or article 7(2)b, concerning national SPAs, or section D of Annex I, concerning SPAMIs, could possibly allow for environmental impact assessment. Nevertheless, it would have been a clear acknowledgement of the potentially adverse effect protected areas can have on (interdependent) species, habitats or ecosystems, to allow for environmental impact assessment of the protected areas itself.

Article 18 is the counterpart of article 7(2)c and requires the Parties to take into account the traditional subsistence and cultural activities of the local population, who may be exempted from protection measures applying to protected areas.[250] Parties granting exemptions must inform the contracting Parties afterwards. It is regrettable that these important decisions are taken nationally without prior consultation of other member States. This could lead to non-coordinated and differing standards and could encourage States to easily grant exemptions to their own constituency. However, most exemptions will probably deal with negligible quantities.[251]

As in the '82 protocol, the Parties are required to give publicity to the establishment of SPAs, their boundaries, applicable regulations, and to the designation of protected species, their habitats and applicable regulations (article 19). In addition to article 18, paragraph 2 of article 19 requires the Parties to inform "the" public (unfortunately *ex post facto*) of the interest and value of SPAs. Besides that, the Parties shall "endeavour to promote" the participation of their public and their conservation organisations in measures that are necessary for the protection of the areas and species concerned, including environmental impact assessment. This is an important provision though its formulation is very weak and has not really gone beyond the formulation of article 11 of the '82 Protocol.

Parties must develop and encourage scientific research relating to the aims of the protocol, sustainable use of SPAs and the management of protected species. To this aim, they must consult among themselves and with competent international organisations and exchange scientific and technical information, giving priority to SPAMIs and species listed in the Annexes (article 20). Article 20 does not mention

[250] However, a broader impact assessment of the protected area, taking into account social and economical aspects, would be more in line with the holistic approach demanded. Article 19(2) partly takes away this critic, but is very weakly formulated. See: Badalamenti, F. et al, *Cultural and socio-economic of Mediterranean marine protected areas,* [Environmental Conservation], 27(2) (2000), p. 117. Who points out that neglecting the broader impact of the protected area can lead to poor local consensus, if not hostility.

[251] However, article 18(1)a states that no exemptions are allowed that 1) endanger either the maintenance of ecosystems protected under this protocol or the biological processes contributing to the maintenance of those ecosystems; or 2) cause either the extinction of, or a substantial reduction in the number of individuals making up the populations or species of flora and fauna, in particular endangered, threatened, migratory or endemic species.

transfer of technology and its impact in the socio-economic widely differing Mediterranean remains therefore limited.

Article 21 requires the Parties to directly, or with the assistance of the Centre or international organisation concerned, establish cooperation programmes concerning various aspects of SPAs and protected species. Parties must also immediately notify other Parties, the State that might be affected and the Centre of situations that might endanger the ecosystems of SPAs or the survival of protected species.[252]

Parties must cooperate in formulating, financing and implementing programmes of mutual assistance, and assistance to developing countries that express a need for it with a view to implementing the protocol, giving priority to SPAMIs and species listed in the Annexes (article 22).

Article 23 requires the Parties to submit to ordinary meetings of the Parties a report on the implementation of the protocol. It remains that the protocol's provisions are not self-executing,[253] so that the protection of the Mediterranean marine and coastal environment and its natural resources will continue to depend, as in the other protocols, on measures adopted by member States through their domestic legislation.[254] However, the reporting obligation of the '82 protocol has been changed in the '95 version, but it is questionable whether it has become more stringent, since the requirement to designate persons responsible for protected areas has been eliminated.[255]

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[252] It is regrettable that the survival of a species must be at stake before Parties are required to *inform* the other Parties. Informing is obviously only the first stage of a chain, ultimately aimed at *acting.*

[253] However, see above "Barcelona Convention" under article 27.

[254] On its turn, the effective implementation of national legislative and administrative measures sometimes meets with additional difficulties. Italian legislation on marine protected areas offers a good example of questions of such kind. See on the latter: Ferrajolo, O., *Specially Protected Areas and Biodiversity in the Mediterranean,* In: Marchisio, S., Tamburelli, G., Pecoraro, L.: Sustainable Development and Management of Water Resources. A Legal Framework for the Mediterranean. Joint Report of the 1st MESDEL International Colloquium on Sustainable Development and Water Management in the Mediterranean Region (Rome-Naples, 11-12 December 1998). Published by Consiglio Nazionale delle Ricerche, Rome, 1999, p. 68-78, p. 74.
Available at: http://www.ici.rm.cnr.it/en/pub/mesdel/copertina.pdf

[255] See article 14 of the '82 protocol. Strangely enough, there is no provision as in the other protocols that deals with the applicable provisions of the Convention. Therefore, the implicated provisions as analysed above under the "dumping protocol" do not apply to the SPA and biodiversity protocol.

National Focal Points, serving as a liaison with the Centre must be established (article 24) and the Organisation, responsible for coordinating the implementation of the protocol, may entrust the Centre, from which it gets support, certain functions listed in article 25. Article 26 elaborates on the aims of the meetings of the Parties, including keeping under review the implementation of the protocol, overseeing the work of the Organisation and the Centre, considering the efficacy of the measures adopted, adopting guidelines, considering reports, making recommendations, examining the recommendations of the meetings of the National Focal Points, deciding on the inclusion of an area in the SPAMI list conform article 9(4), examining any other relevant matter and discussing and evaluating the exemptions allowed by the Parties in conformity with articles 12 and 18 of the protocol.

The protocol states in its final provisions, that it does not affect the rights of the Parties to adopt relevant stricter domestic implementation measures (article 27), it clears the relationship with third States (article 28), and provides for provisions on signature, ratification, accession and entry into force (articles 29-32).

The obligations of States under the new protocol are still very general, although the extension of its geographical scope to the high seas is a positive development. Annex II and III to the Protocol provide for some specification, by requiring the contracting Parties to undertake the protection of species of flora and fauna clearly identified and singularly designated.[256]

3.3.5.2.1 The Mediterranean Marine Mammals Sanctuary

The French-Italian-Monegasque Sanctuary for marine mammals was established under an agreement signed at Rome on 25 November 1999, which entered into force on 21 February 2002.[257] The sanctuary covers an area of approximately 96,000 square

[256] See: Ferrajolo, O., *Specially Protected Areas and Biodiversity in the Mediterranean,* In: Marchisio, S., Tamburelli, G., Pecoraro, L.: Sustainable Development and Management of Water Resources. A Legal Framework for the Mediterranean. Joint Report of the 1st MESDEL International Colloquium on Sustainable Development and Water Management in the Mediterranean Region (Rome-Naples, 11-12 December 1998). Published by Consiglio Nazionale delle Ricerche, Rome, 1999, p. 68-78, p. 74. Available at http://www.ici.rm.cnr.it/en/pub/mesdel/copertina.pdf

[257] Agreement on the Creation of a Mediterranean Sanctuary for Marine Mammals, Rome, 25 November 1999. In force 21 February 2002. The agreement was the outcome of a long process that began with a trilateral declaration signed on 22 March 1993.

kilometres between the three countries and the islands of Corsica and Sardinia[258] and is inhabited by eight cetacean species regularly found in that part of the Mediterranean.[259] At the 17th meetings of the Parties to the Barcelona Convention and its protocols, held in Monaco in 2001, 12 area's, including the mammal sanctuary, were inscribed in the SPAMI list.[260] When the '95 protocol on SPAs and Biodiversity enters into force, the Parties to the protocol must respect the regulations laid down in the protocol in respect of the sanctuary area. Currently, the only instrument applying to the sanctuary area is the 1999 trilateral agreement.

The area comprises of internal waters, territorial sea, high seas and the recently established French zone of ecological protection.[261] The Parties must adopt measures to ensure a favourable status of conservation of every species of marine mammals and to protect them and their habitat from negative impacts, both direct and indirect (article 4).[262] Article 5 requires the Parties to cooperate to periodically evaluate the general condition of the marine mammal population, the causes of their mortality rate and the possible threats to their habitats.

Article 6 is of relevance for the indirect implementation of the obligations arising from *inter alia* the Barcelona System. The Parties must exercise surveillance obligations and fight against any type of pollution in accordance with international obligations. National strategies aiming at eliminating the discharge of toxic substances in the Sanctuary, giving priority to the substances listed in Annex 1 of the LBS protocol (article 6). The formulation of article 6 is not very convincing, since the

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[258] Which therefore includes the Strait of Bonifacio. Article 3 of the sanctuary agreement contains a list of the coordinates of the sanctuary area.

[259] Fin whale (Balaenoptera physalus), sperm whale (Physeter catodon), Cuvier's beaked whale *(Ziphius cavirostris),* long-finned pilot whale *(Globicephala melas),* striped dolphin *(Stenella coeruleoalba),* common dolphin *(Delphinus delphis),* bottlenose dolphin *(Tursiops truncatus),* and Risso's dolphin *(Grampus griseus).*

[260] The Parties to the Sanctuary agreement urged themselves to do so under article 16 of the agreement.

[261] The French zone of ecological protection was established in Decree No. 2004-33 of 8 January 2004, which covers an area of 200 nautical miles measured from the baseline, in which protection measures in accordance with *e.g.* MARPOL are allowed. The Decree does not apply to fishing.

[262] Article 1 deems the status of conservation "favourable" when "the knowledge on the populations indicate that the marine mammals of the region are a vital component of the ecosystems to which they belong." Whatever a "vital component of the ecosystem is", remains undefined. "Habitat" is defined as every zone in the range area of marine mammals where they temporarily or permanently reside, in particular, feeding, calving or breeding grounds, and migration routes (article 1(b)).

article only deals with those discharges that take place in the Sanctuary and not with those that cause indirect pollution.[263]

The agreement does not introduce a ban on the use of all driftnets,[264] which is a weak aspect of the Sanctuary agreement and is a step back in respect of the 1993 Sanctuary (preliminary) declaration, which clearly prohibited the use and keeping on board of all driftnets.[265] Parties must regulate and harmonise, where possible, whale watching (article 8), and offshore competitions (article 9). The latter must be prohibited where possible. The formulation leaves a lot of discretion to the Parties, although they may adopt stricter domestic regulations (article 11).

The Parties are required to hold periodical meetings to review the implementation of the agreement. Within this ambit, they must encourage national research programmes aimed at the realisation of the implementation of the provisions of the agreement. They must also encourage awareness campaigns aimed at professional and other users of the sea and NGOs, in particular with regard to the prevention of collisions between ships and marine mammals and the communication of the presence of dead or

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[263] Deliberate taking or disturbance of mammals in the area is prohibited. ("Taking" is defined as hunting, catching, killing or harassing of marine mammals, as well as the attempts of such actions in article 1(c)). Non-lethal catches may be authorised in urgent situations or for *in situ* scientific purposes (article 7(a)). The Parties must adopt regulations on the utilisation of new fishing equipment that could result in the capture of marine mammals or could endanger their food supply (7(c)).

[264] Article 7(b) requires the Parties to comply with international regulations and those of the European Community regarding the use and the keeping on board of pelagic driftnet fishing equipment. The latter paragraph refers to EC Regulation No. 345/92 of 22 January 1992, Official Journal of the European Communities No. L 42 of 18 February 1992, laying down technical measures for the conservation of fishery resources, which prohibits the use of driftnets longer than 2,5 kilometres and refers to the subsequent EC Regulation 1239/98 of 8 June 1998, Official Journal of the European Communities No. L 171 of 17 June 1998, which prohibits as from 1 January 2002 the keeping on board, or the use for fishing of driftnets used for the catching of the species listed in an annex. (Whereas the Preamble to the Sanctuary Agreement mentions EC Regulation No. 1626/94 of 27 June 1994, Official Journal of the European Communities No. L 171 of 6 July 1994, which does not relate to the use of driftnets). Article 7(c) probably also refers to Resolution 44/225 of December 1989 and Resolution 46/215 of December 1991 of the General Assembly of the United Nations. The latter set a revised timetable for the phased introduction of the moratorium on all large-scale pelagic driftnet fishing on the high seas by the end of 1992. A series of subsequent UN Resolutions on an almost annual basis has been reaffirming this position (Resolution 57/142 of 12 December 2002 and Resolution 58/14 of 21 January 2004). Although Un Resolutions are not legally binding, widespread compliance may have caused them to become customary international law. See: See: R.R. Churchill and A.V. Lowe, *The Law of the Sea*, 3rd edition, Manchester University Press, 1999, p. 301.

[265] The EC member States are even allowed to adopt measures supplementary to or going beyond the minimum requirements of the system, provided such measures are compatible with Community Law and the Common Fisheries Policy (article 1(2) of Regulation 1626/94, mentioned in the Preamble to the Sanctuary Agreement).

endangered marine mammals to the competent authority (article 12). It is favourable that this provision provides detail on the kind of public at which measures must be aimed and the matters to be regulated.

National competent authorities responsible for patrolling are required to cooperate to implement the protocol and exchange all necessary information in this regard. The Parties must facilitate reciprocal utilisation of their ports through simplified procedures (article 13).

In the Sanctuary waters subject to sovereignty or jurisdiction, the Parties ensure the enforcement of the provisions of the protocol. In the other parts of the Sanctuary, the member States enforce the provisions in respect of ships flying their flags, and in respect of ships flying the flags of third States, as far as the rules established by international law allow (article 14).[266] The article has been subject to two interpretations: the first argues that the Parties cannot enforce the relevant provisions with regard to ships flying the flags of third States, since this would be contrary to the freedom of navigation applicable to the high seas. The other interpretation is based on the assumption that the entire Sanctuary area would fall under the EEZ of at least one of the three littoral States, had they claimed one, and that therefore these States are allowed to enforce the provisions, which fall within the rights included in the broad concept of the EEZ. The latter interpretation gives effect to the idea that those who can do more can also do less, but seems questionable.[267]

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[266] Had the Sanctuary been part of the EEZ, article 65 LOSC would have applied to it, allowing coastal States to prohibit, limit or regulate the exploitation of marine mammals within their EEZs, and calling for international cooperation with a view to the conservation of the species in question.

[267] Prof. Scovazzi argues that the second interpretation is a valid one. See: Scovazzi, T., *Marine Protected Areas on the High Seas: Some Legal and Policy Considerations,* [International Journal of Marine and Coastal Law], 19 (2004), p. 15. To complete the picture, the EC Council Directive 92/43 of 21 May 1992, Official Journal No. L 176 of 20 July 1993 on the conservation of natural habitats and of wild fauna and flora (Habitat Directive), deals with some cetacean species within the network of Special Areas of Conservation (SAC, Natura 2000). Besides that, the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area, Monaco, 24 November 1996. In force 1 June 2001 (ACCOBAMS) provides that the Parties must endeavour to establish and manage specially protected areas for cetaceans corresponding to the areas that serve as their habitats or important food resources for them (Annex 2, article 3). However, the implementation of ACCOBAMS is uncertain, as the formulation of the provisions will show. The Parties will undertake "to the maximum extent of their economic, technical and scientific capacities" management, conservation and research measures. Besides that, there is no provision on the enforcement in respect of ships flying flags of third States. Each party is expected to "adopt the necessary legislative, regulatory or administrative measures to give full protection to cetaceans in waters under their

sovereignty and/or jurisdiction and outside these waters in respect of any vessel under their flag or registered within their territory engaged in activities which may affect the conservation of cetaceans". The ACCOBAMS Administration and the Secretariat of the Barcelona Convention have established an Action Plan for the Conservation of Cetaceans in the Mediterranean Sea. To date, the Action Plan has focused on cetacean stranding within the Mediterranean region and in 2001 it was decided to establish a database to record such occurrences. See: Report of the Fifth Meeting of National Focal Points for SPAs, Valencia, 23-26 April 2001. UNEP(DEC)/MED WG.177/9, p. 11-12.

3.3.6 Exploitation and Exploration of the Seabed

Pollution from seabed activities results from both the normal operation of offshore installations and accidental causes. The major operational sources of pollution are contaminated water produced by oil wells, the release into the sea of drilling fluids, cuttings and well treatment chemicals. Accidental pollution may be caused by the blow-out of a well, fire, explosion, the collision between a ship and the installation, defective equipments, or the spillage of oil and chemicals.

3.3.6.1 Global and Regional Measures[268]

Since most offshore mineral extraction takes place on the continental shelf, the environmental regulations are primarily national and only limited regional and even less global measures on the matter exist.[269]

Article 208 LOSC requires States to adopt measures that are at least as effective as international rules, standards and recommendations to prevent pollution of the marine environment from these activities. Besides that, States are required to cooperate on a regional and global level to harmonise existing and establish new rules, standards and recommendations. Article 214 requires States to implement and enforce them.

In 1981 UNEP issued guidelines recommending that seabed activities require environmental impact assessment and prior authorisation.[270] MARPOL provides for binding measures for a limited number of sources of pollution from platforms, such as drainage of oil and the disposal of sewage or garbage.[271] However, Regulation 21 of Annex I on oil pollution requires that platforms and drilling rigs should, with a few

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[268] See: R.R. Churchill and A.V. Lowe, *The Law of the Sea*, 3rd edition, Manchester University Press, Manchester 1999, p. 370.

[269] For measures concerning accidental pollution from seabed activities see above, the emergency response protocol, which contains obligations on reporting and contingency plans (article 16 an 17) and allows the Parties to request assistance through REMPEC (article 18).

[270] UNEP 1981 Working Group of Experts on Environmental Law: Conclusions of the study of the legal aspects concerning the environment related to offshore mining and drilling within the limits of national jurisdiction, adopted at the 9th Meeting of the Governing Council on 26 May 1981 13/UNEP/GC.9/7. Available at: http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=69&ArticleID=668&l=en

[271] MARPOL includes fixed and floating platforms under its definition of "ship" (article 2(4)), but excludes discharges arising from the exploration, exploitation and associated offshore processing of seabed mineral resources (article 2(3)).

exceptions, comply with the rules applicable to ships other than oil tankers of more than 400 tons. The '72 LDC and its '96 protocol are primarily relevant when an offshore structure itself is abandoned at sea or is used for dumping unconnected with mineral development.[272]

Regional instruments such as the OSPAR and the Helsinki Conventions provide for more detailed measures. The '74 Paris predecessor of OSPAR applied to discharges from man-made structures within the Convention area and a number of decisions and recommendations of the Paris Commission extended its scope to offshore petroleum development. The '92 OSPAR Convention is more specific, but still rather general. Parties are required to take all possible steps to prevent and eliminate pollution from offshore sources, in particular as provided for in Annex III (article 5). Article 3 of Annex III prohibits dumping of wastes and other matter from offshore installations. Discharges and emissions of substances that may affect the maritime area must be subject to strict authorisation, regulation, monitoring and inspection by national authorities, which must implement the decisions, recommendation and agreements of the OSPAR Commission (Annex III, article 4). Annex III also contains provisions on dumping or abandonment of offshore installations and pipelines.

The '74 Helsinki Convention contained a general requirement to take all appropriate measures to prevent pollution of the Baltic from seabed exploration and exploitation and to ensure that adequate equipment was available to abate pollution (article 10). The '92 Helsinki Convention contains a similar provision in article 12 and, in addition, requires the Parties to implement procedures and measures set out in Annex VI on prevention of pollution from offshore activities.[273]

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[272] Article 1 of both the convention and the protocol includes in its definition of dumping the disposal of wastes from platforms or other man-made structures at sea unless they directly arise from, or are related to the exploration and exploitation and associated offshore processing of seabed mineral resources.

[273] These require the use of BAT and BEP (Annex VI, regulation 2). Environmental Impact Assessment is compulsory before any offshore activity is permitted to start, and the consequent effects must be monitored (regulation 3). Regulation 4 imposes restrictions on the use of oil-based drilling muds and the discharge of cuttings, while regulation 5 prohibits the discharge of chemicals under normal circumstances, and limits the oil content of discharged water. Disused offshore units must be entirely removed, and old drilling wells plugged (regulation 8). There are also requirements for reporting, contingency planning and the exchange of information.

3.3.6.2 Seabed Protocol[274]

Article 7 of the '76 Barcelona Convention requires the Parties to take all appropriate measures to prevent, abate and combat pollution of the Mediterranean resulting from exploration and exploitation of the continental shelf, the seabed and its subsoil. The '96 version adds "and to the fullest extent possible eliminate" pollution.

On 14 October 1994 the fifth protocol to the '76 Barcelona Convention was opened for signature at Madrid, but is not yet in force. The Madrid protocol is more detailed than the OSPAR, Helsinki and other regional measures.[275]

The Preamble stresses the importance of dealing with pollution from the increased offshore activity in the Mediterranean and refers to the LOSC and the Barcelona emergency and '82 SPA protocol. The protocol has thus not yet been updated by referring to the '96 SPA and Biodiversity protocol. Special attention is drawn to the principle of common but differentiated responsibility.

Article 1 of the protocol introduces an extensive list of definitions. "Resources" refer to all mineral resources whether solid, liquid or gaseous. The protocol does not apply to living sedentary species, although article 77 LOSC would have allowed this. Important endemic sedentary species, in particular invertebrates such as molluscs, support some of the more valuable fisheries, in particular the mussel culture in the Golfe du Lion and Adriatic.[276] The latter activities remain unaccounted for under the Barcelona system, unless they take place in SPAs or SPAMIs. "Activities" cover scientific research, exploration and exploitation. "Installations" cover also mobile offshore drilling units, taking away doubts about their nature (vessels *v* platform). For the definition of "operator", the protocol refers to the authorised natural or juridical person who carries out such activities and the non-authorised person who is *de facto* in control of these activities.[277] This broad definition of operator has been introduced

[274] Protocol for the Protection of the Mediterranean Sea against Pollution Resulting from Exploration or Exploitation of the Continental Shelf and the Seabed and its Subsoil, Madrid, 14 October 1994. Not in force.

[275] R.R. Churchill and A.V. Lowe, *The Law of the Sea*, 3rd edition, Manchester University Press, 1999, p. 373.

[276] See above "Species".

[277] The first paragraph includes two types of authorised natural or juridical persons: "Any […] person who is authorized by the Party […] to carry out activities *and/or* who carries out such activities;". The

to cover all persons engaged in seabed activities. "Wastes" do not include materials to be reused or recycled and "Harmful or noxious substances and materials" are defined conform the precautionary principle and include substances or materials of any kind, form or description, which *might* cause pollution if introduced into the protocol area. A special paragraph is devoted to "Chemical Use Plans", on which later more. "Oil" means petroleum in any form and includes the substances listed in the Appendix to the protocol. "Sewage", "garbage" and even "fresh water limit" are defined, although the latter term is used in several other protocols in which it is not specified.[278]

The geographical scope of the protocol extends to Mediterranean Sea Areas as defined in the Convention and includes, obviously, its continental shelf, seabed and its subsoil (article 2). As no point in the Mediterranean is located more than 200 nautical miles from the nearest land or island, the Protocol covers the entire Mediterranean seabed.[279] It further includes internal waters up to the fresh water limit including their seabed and subsoil. Their inclusion is important, since major activities of mineral exploration and exploitation are presently carried out in areas claimed as internal or historical waters by some member States.[280] Parties may also include wetlands or coastal areas of their territory under the protocol regime. The protocol, or acts adopted in accordance with it, do not affect the rights of any State concerning the delimitation of the continental shelf. The latter disclaimer clause is necessary because of the existence of unresolved delimitation disputes and reassures that legal disputes do not jeopardise or delay cooperation for the protection of the Mediterranean marine environment (article 2(3)).

Article 3 repeats article 7 of the '76 Convention but does not include the phrase "and to the fullest extent possible eliminate pollution". For this purpose, Parties should use

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word *or* probably implies an indirectly authorised or a delegated carrying out of the activities. However, the formulation could even imply a person that is not at all authorised or delegated to carry out the activities. The second paragraph covers those non-authorised persons that are *in control* of the activities: "Any person who does not hold an authorization […] but is *de facto* in control of such activities;".

[278] "Fresh water limit" means the place in watercourses where, at low tides and in a period of low freshwater flow, there is an appreciable increase in salinity due to the presence of seawater.

[279] T. Scovazzi, *Marine Specially Protected Areas, The General Aspects and the Mediterranean Regional System,* Kluwer Law International, The Hague 1999, p. 88.

[280] T. Scovazzi, *Marine Specially Protected Areas, The General Aspects and the Mediterranean Regional System,* Kluwer Law International, The Hague 1999, p. 88.

inter alia best available techniques that are environmentally effective and, rather uncommon in environmental treaties, economically appropriate. This might refer in an rudimental way to sustainable development, as one year later reflected in the '95 revision of the Barcelona System. Article 3 further requires the Parties to take all measures necessary to prevent pollution.

Section II introduces an authorisation system in which all activities, including erection on site of installations, are subject to the prior written authorisation by the competent authority.[281] The Authority is required to define an appropriate procedure, in accordance with which the authorisation must be granted.[282] The Authority must be satisfied that the installation has been constructed in accordance with international standards and practice and that the operator has the technical competence and the financial capacity to carry out the activities. If the activities are likely to cause significant adverse effects on the environment that cannot be avoided by imposing conditions, the authorisation must be refused. This provision reflects in a rudimental way the precautionary principle, but the threshold is set very high with the phrase "significant adverse effects" and the burden of proof is not laid on the side of the potential polluter by the word "likely".[283] The site of the installation may not cause detrimental effect to existing facilities (article 4).

Article 5 lists a number of requirements the application for or renewal of authorisation must include. These consist of e.g. a survey of the effects on the environment. This "light weight environmental impact assessment" may become a real EIA when the authority thinks this fit. The cheaper survey seems a reasonable solution in case an authorisation is being applied for for the first time, when it is not yet sure at all

[281] Established in accordance with article 28 by the member States.

[282] For reasons of competition, the procedures in the different States should be comparable. Unfortunately, the protocol leaves this aspect to the discretion of the various States, which could lead to diffusion and limited support by the industry.

[283] Instead of "The absence of scientific evidence can not be used to postpone or avoid measures for reducing the potential effects of a *threat* of adverse effects on the marine environment." Therefore, the formulation hardly reflects, as Prof Scovazzi sustains, Principle 15 of the Rio Declaration. See: T. Scovazzi, *Marine Specially Protected Areas, The General Aspects and the Mediterranean Regional System,* Kluwer Law International, The Hague 1999, p. 48.

whether it will be granted or not.[284] Other requirements include definition of the geographical area, particulars of the operator, safety measures, contingency plans, monitoring procedures, removal plans, precautions for SPAs and, very important, insurance to cover liability. The authority may limit the requirements in case of scientific research and exploration activities when the nature, scope, duration and technical methods employed so allow (article 5(2)). It is desirable to formulate paragraph 2 in a precautionary way.

Article 6 states that authorisation shall only be granted after examination of the requirements of article 5 and an EIA in accordance with Annex IV.[285] Parties are required to prescribe sanctions for the breach of obligations in connection with the authorisation (article 7). However, the protocol does not introduce any requirements to force the Parties to implement and enforce this and other provisions, apart from the possibility article 19(2) establishes for the Parties to set up a national monitoring system, where appropriate. The formulation is not very strong though and Parties reluctant to implement and enforce article 7 will probably have a similar attitude towards article 19.[286]

Section III deals with wastes, harmful or noxious substances and minerals. Article 8 requires operators to use best available, environmentally effective and economically appropriate techniques, to observe internationally accepted standards regarding wastes, as well as the use, storage and discharge of harmful or noxious substances and materials with a view to minimising the risk of pollution.

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[284] However, the probably less uncertain situation of renewal might ask for an EIA in the first place. This brings about an interesting point: the protocol does not say anything about a maximum or minimum period for which authorisation is granted.

[285] The authorisation must state the period of its validity, geographical area to which it is applicable and technical requirements. The authorisation may impose conditions in order to reduce to the minimum risks of and damage due to pollution resulting from activities. The Organisation must be informed of all granted and renewed authorisations and keep a register of them.

[286] Flag and Port State control only has impact on those offshore operations carried out from a vessel. In this regard see above “Barcelona Convention” under article 27.

Article 9 requires the use and storage of chemicals to be approved of by the authority on the basis of a Chemical Use Plan (CUP), which is defined in article 1k.[287] In accordance with guidelines to be adopted by the contracting Parties a contracting Party may limit, regulate or prohibit the use of chemicals. Substances being used must be accompanied by a compound description. Paragraph 4 requires that discharge of substances listed Annex I be prohibited, whereas paragraph 5 requires substances listed in Annex II only to be discharged with a prior special permit. All other harmful or noxious substances resulting from the activities covered by the protocol, which might cause pollution require a prior general permit (paragraph 6). The permits referred to in paragraphs 5 and 6 may only be issued after consideration of the factors set forth in Annex III.[288]

The Parties must prohibit the discharge of sewage from installations permanently manned by 10 or more persons (article 10) except in certain cases.[289] Stricter regulations may be imposed in case SPAs or currents so demand. It is questionable whether SPAMIs are also intended. If sewage is mixed with wastes or other substances having different disposal requirements, the more stringent requirements apply. Article 11 deals with garbage and prohibits the discharge of all plastics, and other non-biodegradable garbage. Discharge of food waste must take place in accordance with international rules and standards and as far from land as possible. The more stringent requirements apply when garbage is mixed with substances to which different requirements apply. Both article 10 and 11 are based on MARPOL. It is regrettable that the Parties could not agree on more stringent measures than the ones MARPOL provides for.[290]

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[287] A CUP is a plan drawn up by the operator of an installation which shows i) the chemicals the operator intends to use; ii) the purpose of their use; iii) the maximum concentrations of the chemicals; and iv) the area within which the chemicals may escape into the marine environment.

[288] Article 10 requires the Parties to formulate and adopt common standards for the disposal of oil and oily mixtures in accordance with the provisions of Annex V A. The same applies to drilling fluids and cuttings. The standards must be formulated in accordance with the provisions of Annex V B. The Parties are required to take measures to enforce these common standards.

[289] This is basically the case when some sort of treatment takes place. However, the exceptions do not apply if the discharge produces visible floating solids or produces colouration, discolouration or opacity of the surrounding water.

[290] The global MARPOL provisions dealing with vessels depend on flag State enforcement. More stringent regional measures are thus not enforceable in regard of vessels of third States from outside the region. MARPOL provisions applicable to offshore installations do not have these enforcement

The Parties must ensure that operators use onshore reception facilities, that instructions are given to personnel concerning proper means of disposal and that sanctions are imposed for illegal disposal. It is regrettable that the provision does not refer to the polluter pays principle and leaves the financial aspects of these reception facilities unspecified (article 13).[291]

Section IV is titled "Safeguards" and article 15 requires the Parties to take safety measures on design, construction, placement, equipment etc. Annex VI lists further specified requirements, which must be observed in accordance with guidelines adopted under article 23(1)c. Operators must have adequate equipment and devices for protecting human life, preventing accidental pollution and emergency response in accordance with, again, best available environmentally effective and economic appropriate techniques and the provisions of the operator's contingency plan of article 16. A certificate of safety and fitness is required for platforms and pipelines etc. "Through inspection", the Parties must ensure that the activities are conducted by the operators in accordance with article 15. However, there is no detailed provision on how and by whom this inspection must be carried out. Therefore, the Parties might take diffuse measures. It would be beneficial to establish a regional inspection organisation, to prevent the States from unjustifiably protecting their nationals.

An interesting provision in article 16 states that in case of emergency the Parties shall implement *mutatis mutandis* the emergency protocol. Operators are required to have a contingency plan to combat pollution, coordinated with the national contingency plan based on the emergency protocol. The protocol does not mention the possibility that the Parties to the seabed protocol are not Parties to the emergency protocol. The Parties are required to establish coordination for the development and implementation

problems and therefore stricter regional measures are enforceable (and thus make sense) in regard of installations present in the area under jurisdiction of the regional States.

[291] The provisions of the section on wastes and harmful or noxious substances and materials (articles 8-13) do not apply in case of *force majeur* and when the disposal is meant to save human life, ensure the safety of installations, and in case of damage to the installation or equipment (article 14). These disposals must be reported immediately to the Organisation. However, all reasonable precautions must have been taken to reduce the negative effects after the damage is discovered or after the disposal took place. The exception of article 14 does not apply when the operator acted with intent to cause damage or recklessly and with knowledge that damage will probably result.

of the contingency plans, which must be developed in accordance with guidelines issued by the competent international organisation and in particular in accordance with the provisions of Annex VII of the protocol.

Operators must immediately report to the competent authority any event on their installation or observed at sea causing, or likely to cause pollution (article 17). In cases of emergency, Parties may request help from the other Parties either directly or through REMPEC. Parties to the seabed protocol that are also Party to the emergency protocol must apply the pertinent provisions of the protocol (article 18). It is regrettable that the seabed protocol does not bind its Parties automatically to the provisions of the emergency Protocol. This omission is obviously meant to reduce the reluctance to sign the seabed protocol of candidate Parties that are not Party to the emergency protocol.

The operator is required to measure, or have measured by a qualified entity, the effects of the activities on the environment and to report them to the authority for the purpose of an evaluation according to a procedure established by the authority (article 19). At the same time, the authority must establish, though only where appropriate, a national monitoring system to monitor the installations and the impact of their activities on the environment to ensure that the conditions attached to the grant of the authorisation are being fulfilled (article 19). Again, a supra-national inspection team would be beneficial for standardising the criteria and improving the regional coordination.

Disused or abandoned installations must be totally removed by the operator, taking into account standards and guidelines adopted by the competent international organisation in order to ensure safety of navigation. Removal must have due regard to legitimate uses of the sea such as fishing and environmental protection.[292] Before

[292] The formulation of article 20(1) is not entirely clear: "The operator shall be required […] to remove any installation […], *in order to ensure safety of navigation* […]." The wording of the first sentence does not seem to indicate the way in which the removal takes place, but rather the objective of removal: safety of navigation. The second sentence, however, seems to imply the opposite: "Such removal shall *also* have due regard to *other* legitimate uses of the sea, in particular fishing, the protection of the marine environment and the rights and duties of other Contracting Parties." The second sentence, which seems to describe the way in which removal must take place and not the objective of removal,

removal, the operator is responsible for taking all appropriate measures to prevent spillage or leakage from the site of the activities. It is regrettable that article 20 uses the term operator as such, because at the time an installation is disused or abandoned, there might not be an operator anymore. Therefore, it would be clearer to refer to the "last operator". Disused pipelines must also be removed or the authority may allow them to be buried.[293] The authority may undertake, at the operator's expense, such action as may be necessary, in case the operator fails to comply with these provisions.

The Parties must take special measures in conformity with international law to prevent pollution arising from activities in those areas that are defined in the '82 SPA protocol and other areas established by the Parties. Article 21 further states that the requirements of the '82 protocol may be used as conditions for granting authorisation, and lists some other conditions.[294] It is interesting to see the influence the '82 protocol in this way can have on Parties to the seabed protocol that are not Party to the SPA protocol.[295]

Section V deals with "Cooperation". Parties must cooperate in promoting studies and undertaking programmes of scientific and technological research in accordance with article 13 of the '96 Convention (article 22). The Parties must cooperate directly or through the Organisation or other competent international organisation to establish appropriate scientific criteria for the formulation and elaboration of international rules, standards and recommended practices and procedures for achieving the aims of the protocol. The Parties must also formulate, elaborate and harmonise domestic legislation and exchange information in this regard with the other Parties. Besides

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does not refer explicitly to navigation, which seems odd. It is regrettable that the protocol does nto provide more clarity.

[293] In the latter case, the pipes must be cleaned and the authority must give appropriate publicity to their depth, position and dimensions. Besides that, such information must be indicated on charts and notified to the Organisation and other competent international organisations.

[294] A) Special restrictions or conditions when granting authorisation for such areas: i) the preparation and evaluation of EIA; and ii) the elaboration of special provisions in such areas concerning monitoring, removal of installations and prohibition of any discharge. And B) intensified exchange of information among operators, the competent authorities, Parties and the Organisation regarding the matter which may affect such areas.

[295] However, it is regrettable that the seabed protocol does not refer to the updated '96 version, which includes SPAs, SPAMIs and provisions on biodiversity and sustainable use. This omission leads to a rather anachronistic situation.

that, they must adopt guidelines in accordance with international practice and procedures to ensure observance of the provisions of Annex VI (article 23).

Article 24 gives effect to the Preamble by introducing a provision that requires the Parties to cooperate to formulate and implement programmes of assistance to developing countries. The important paragraph 2 goes further by providing that technical assistance must include training of personnel, as well as the acquisition, utilisation and production by developing countries of appropriate equipment on advantageous terms to be agreed upon among the Parties. This provision goes beyond similar provisions in the other protocols, but still does not elaborate on intellectual property rights, does not define "developing countries" and is substantially weakened by the phrase "to be agreed upon among the Parties", since the developing country is obviously not in the position to influence this agreement very much.[296]

Parties must inform each other of measures taken, results achieved and difficulties encountered in the application of the protocol (article 25). Article 26 requires the Parties to ensure that activities under their jurisdiction do not cause pollution beyond the limits of its jurisdiction. In case a Party becomes aware of (imminent danger of)[297] or damage to the marine environment by pollution, it shall notify Parties likely to be affected and REMPEC, which distributes the information immediately to all relevant Parties. Persons in other States affected by pollution should be granted equal access to and treatment in administrative proceedings. Non-member States causing pollution in the territory of a Party must be invited to cooperate to make possible the application of the protocol. The protocol does not provide for other means to put pressure on these non-member States.[298]

The progressive article 27 deals with liability and compensation. It repeats the soft obligation of article 16 to cooperate *as soon as possible* in formulating and adopting appropriate rules and procedures for the determination of liability and compensation

[296] The similar provision in the CBD (article 16(2)) has more practical impact, since developing countries generally possess the biological diversity the developed countries are interested in. Their negotiating position is thus more favourable.
[297] The word "imminent" substantially weakens its precautionary character.
[298] Mediterranean States could refuse vessels flying flags of theses non-member States entry into ports.

for damage resulting from the activities dealt with in the protocol, conform article 16 of the '96 Convention. However, paragraph 2 adds that, pending development of such procedures, each Party must take measures to make the operator liable for damage resulting from its activities. He must pay prompt and adequate compensation, for which he is required to have and maintain sufficient insurance cover or other financial security.[299] This requirement is exceptionally strong in comparison with the other protocols and the Convention, which remain silent on the topic.[300]

Section VI provides for the Final Provisions. Article 28 requires the Parties to appoint one or more competent authorities (also referred to as "authority") and lists its responsibilities and duties. Article 29 contains another refreshing provision, absent in the other protocols, that requires Parties to elaborate procedures and regulations regarding all activities initiated before the entry into force of the protocol to ensure their conformity with its provisions. This obligation goes further than the one of the Vienna Convention on the Law of Treaties, which only provides that pending ratification, States that signed a treaty are not allowed to do anything that would defeat the treaty's object and purposes if it came into force.[301] The meetings of the Parties are organised in a similar way as those of the other protocols (article 30). Article 31 provides a similar provision on the relation with the Convention as e.g. article 15 of the Dumping protocol and introduces general reporting requirements.[302] Article 32 deals with signature, ratification, accession and entry into force.

[299] In this respect reference can be made to article 5(1)i, which prescribes applications for authorisations to include proof of insurance or other financial security to cover liability.
[300] However, the EC and France entered a reservation on paragraph 2 of article 27. See: T. Scovazzi, *Marine Specially Protected Areas, The General Aspects and the Mediterranean Regional System,* Kluwer Law International, The Hague 1999, p. 89. And p. 216 for the Tables of Participation and Reservations to the Instruments of the Barcelona System. In: *ibidem* p. 211-217.
[301] Convention on the Law of Treaties, Vienna, 23 may 1969. In force 27 January 1980. Article 18.
[302] See above "Dumping protocol" under article 15.

3.3.7 Transboundary Movement of Wastes

From the 1980s onwards, stricter regulations for waste disposal in a growing number of developed countries were adopted, which stimulated export of wastes to developing countries. Several accidents took place with hazardous wastes in these countries, which led to the adoption of global and regional measures on the matter.

3.3.7.1 Global and Regional Measures

The first global agreement, the Basel Convention, was adopted under auspices of UNEP in 1989.[303] It establishes a framework to "protect, by strict control, human health and the environment against the adverse effects, which may result from the generation and management of hazardous wastes." The Basel Convention does not ban transboundary movement of hazardous waste. "Wastes" are defined as all substances that are disposed of, which includes both recycling, recovery, reclamation, re-use and final disposal (article 2). Those wastes that are subject to transboundary movement are regarded as "hazardous wastes" if they either belong to a category listed in Annex I, or are treated as hazardous wastes by the domestic legislation of the Party of export, import or transit.[304]

The obligations of the Parties include *inter alia* to ensure that the generation of hazardous and other wastes is reduced to a minimum, to ensure the prevention of pollution and, if pollution occurs, to minimise its consequences. Parties must also ensure that no export of the wastes takes place to States that have prohibited import, or if there is reason to believe that the wastes will not be managed in an environmentally sound manner (article 4(2)). A Party is not allowed to permit hazardous wastes to be imported from or exported to a non-Party (article 4(5)), except in accordance with a bi-, multilateral or regional agreement no less stringent than the

[303] Convention on the Transboundary Movement of Hazardous Wastes and their Disposal, Basel, 22 March 1989. In force 5 May 1992. (Basel Convention)

[304] Household wastes are classified as "other wastes", requiring special consideration if subject to transboundary movement. Radioactive wastes and wastes derived from the normal operations of ships are excluded from the Basel Convention if they are covered by other agreements (article 1).

environmentally sound management criteria of the Basel Convention (article 11).[305] Parties must prohibit the transport or disposal of wastes by unauthorized persons, and must require transboundary wastes to be packaged, labelled and transported in accordance with internationally recognised rules and standards (article 4(7)).

Transboundary movement is subject to prior informed consent (article 6). The State of export, generator, or exporter must notify the competent authorities of other States concerned (transit or import States) of any proposed activity and must provide information in accordance with Annex V. The State of import (and transit) must then respond.

A 1995 amendment to the Basel Convention,[306] which is not yet in force, will ban all export for final disposal and recycling (as for the latter by the end of 1997) from Annex VII countries (Those Parties to the Basel Convention that are member to OECD and EU plus Liechtenstein) to non-Annex VII countries.

Article 12 urges Parties to set up rules for compensation and liability. A Protocol to the Convention was adopted on 10 December 1999, but is not yet in force.[307] The Protocol will introduce strict liability on the person who gives notice of the transboundary movement. Once the waste comes into possession of the disposing party, strict liability is transferred from the notifier to the disposer (art. 4.1 Protocol).[308]

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[305] What exactly is environmentally sound management is not defined very precisely. See: Kummer, K., *The International Regulation of Transboundary Traffic in Hazardous Wastes: The 1989 Basel Convention,* [International and Comparative Law Quarterly], 41 (1992), p. 540.

[306] Ban Amendment to the Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal. Decision III/1.3, adopted by the Third Conference of the Parties (COP-3), Basel, 22 September 1995. Not in force. Available at: http://www.basel.int/pub/baselban.html

[307] Basel Protocol on Liability and Compensation for damage resulting from Transboundary Movements of Hazardous Wastes and their Disposal. Decision V/29, adopted by the Fifth Conference of the Parties (COP-5) on 10 December 1999. Not in force.
Available at: http://www.basel.int/pub/pub.html

[308] When the waste is classified as hazardous only in the State of import, the importer will also be liable until the disposer takes possession of it (art. 4.2 Protocol). Strict liability is limited by domestic law, although minimum limitation amounts are specified in the Protocol, which must be covered by insurance or other financial guarantees. Unlimited fault-based liability will additionally apply to any person who causes damage by non-compliance with the Basel Convention or by intentional, reckless or negligent acts or omissions (article 5 Protocol). The protocol is believed to be contrary to the polluter pays principle. See: Webster-Main, A., *Keeping Africa out of the Global Backyard: a Comparative*

Many developing countries wanted to ban import of hazardous wastes to their territories and as a result, the Organisation of African Unity (OAU; now the African Union) promoted a regional treaty in the sense of article 11 of the Basel Convention: the Bamako Convention.[309] It contains similar provisions as the Basel Convention, but is much stricter. Article 4(1) requires Parties to take all measures within the area under their jurisdiction to prohibit (instead of regulating) the import of all hazardous wastes into Africa from non-contracting Parties and to penalise such import. Dumping of hazardous wastes at sea and in internal waters is also prohibited (article 4(2)). The movement of such wastes between the contracting Parties is regulated rather than prohibited. "Hazardous wastes" are defined in broader terms than in the Basel Convention and include radioactive wastes (article 2).

3.3.7.2 Hazardous Wastes Protocol[310]

The '95 Barcelona Convention introduced a provision on transboundary movements of hazardous wastes, for which its predecessor had not provided.[311] After difficult negotiations, the Wastes protocol, which is a regional treaty in the sense of article 11 of the Basel Convention,[312] was adopted in October 1996.[313]

Study of the Basel and Bamako Conventions, [Environs Environmental Law and Policy Journal], 26 (2002), p. 75.

[309] Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa, Bamako, 30 January 1991. In force 22 April 1998.

[310] The Protocol on the Prevention of Pollution of the Mediterranean Sea by Transboundary Movements of Hazardous Wastes and their Disposal, Izmir, 1 October 1996. Not in force.

[311] Article 11 requires its Parties to take all appropriate measures against pollution of the environment, which can be caused by transboundary movements and disposal of hazardous wastes, and reduce such movements to a minimum, if possible.

[312] Buonvino, L., *Management of Hazardous Wastes Particularly Referred to the Transboundary Movements in the Mediterranean Sea,* In: Marchisio, S., Tamburelli, G., Pecoraro, L.: Sustainable Development and Management of Water Resources. A Legal Framework for the Mediterranean. Joint Report of the 1st MESDEL International Colloquium on Sustainable Development and Water Management in the Mediterranean Region (Rome-Naples, 11-12 December 1998). Published by Consiglio Nazionale delle Ricerche, Rome 1999, p. 63-67, p. 65.
Available at http://www.ici.rm.cnr.it/en/pub/mesdel/copertina.pdf

[313] Before 1996, during the Conference of Barcelona for the protection of the Mediterranean Sea (June 1995), the text about "Sectors of priority actions relating to environment and development of the Mediterranean area for the decade 1996-2005" was approved (UNEP (OCA)/MED IG.5/16, Annex X.). The management of wastes was among the priorities stressed, particularly with reference to the necessity of adopting a national program of management and disposal of wastes and, specifically, the hazardous ones. Finally, in the Declaration approved by the Conference of the Euro-Mediterranean Ministries on Environment (Helsinki 1997) the necessity was stressed of an integrated management of wastes and of minimising their volume. In the sphere of the general problem of the management of wastes, the transboundary movements of hazardous wastes represent a particularly important aspect. See: Buonvino, L., *Management of Hazardous Wastes Particularly Referred to the Transboundary*

Its extensive preamble refers to various international instruments, such as the LOSC, Basel and Bamako Conventions and the Rio Declaration. It recognises the sovereign right of any State to ban the entry, transit or disposal of hazardous wastes in its territory and expresses the intention to reduce or even eliminate the generation of those wastes and the ultimate aim of phasing out their transboundary movements. The preamble also refers to the principle of common but differentiated responsibility.[314]

Article 1 defines terms used in the protocol. "Wastes" are substances or objects that are disposed of or are intended or required by national law to be disposed of. Disposal is any operation specified in Annex III of the protocol. The Annex is split up in section A and B and is an exact copy of Annex IV of the Basel Convention.[315] "Hazardous wastes" are those substances as specified in article 3.[316] Most definitions are similar to or the same as the ones in the Basel Convention. The definition of "transboundary movement" therefore introduces the weaknesses of the Basel Convention, by providing that at least two States must be involved. For this reason the protocol does not apply to movements leaving the State of export for an area not under the national jurisdiction of another State, as is the case in export to the high seas, either for dumping,[317] incineration, or for wandering storage at sea.[318] However, these cases will generally be covered under the dumping protocol.

Interestingly, the protocol introduces a definition of "clean production methods", which are those methods that reduce or avoid the generation of hazardous wastes in

Movements in the Mediterranean Sea, In: Marchisio, S., Tamburelli, G., Pecoraro, L.: Sustainable Development and Management of Water Resources. A Legal Framework for the Mediterranean. Joint Report of the 1st MESDEL International Colloquium on Sustainable Development and Water Management in the Mediterranean Region (Rome-Naples, 11-12 December 1998). Published by Consiglio Nazionale delle Ricerche, Rome 1999, p. 63-67, p. 64.
Available at http://www.ici.rm.cnr.it/en/pub/mesdel/copertina.pdf

[314] For a binding version of these exhortations, see article 5 of the protocol.

[315] Section A covers all operations that do not lead to the possibility of resource recovery, recycling, reclamation, direct reuse or alternative uses, whereas section B covers those operations that may lead to them.

[316] On which see below.

[317] Dumping and incineration cases are covered by the dumping protocol, but there might exist some lacunae due to the different definitions of hazardous wastes and the substances covered by the dumping protocol.

[318] Cubel, P., *Transboundary Movements of Hazardous Wastes in International Law: The Special Case of the Mediterranean Area,* [International Journal of Marine and Coastal Law], 12 (1997), p. 465.

conformity with articles 5 and 8 of the protocol. The definition of "environmentally sound management" copies the one in the Basel Convention, but replaces the words "are managed" by the phrase "are collected, transported and disposed of (including after-care of disposal sites)". This minimal extension does not take away the main comments on the generality of the definition under the Basel Convention.[319] "Developing countries" are those States that are not member to the OECD and "developed countries" are those that are. Monaco will have the same rights as OECD member-States.[320]

The protocol applies to the area as defined in article 1 of the Convention and includes internal waters *per se* and coastal areas as defined by the Parties. Article 3 determines the scope of the protocol by defining hazardous wastes as wastes that belong to any category of Annex I to the protocol, which includes, as in the Bamako Convention, radioactive substances.[321] Interestingly, the protocol does not require the Annex I substances to possess one of the (hazardous) characteristics listed in Annex II, in order to be regarded as hazardous. In this respect, the protocol is more precautionary

[319] To guide the Parties to the Basel Convention in their capacities to manage in an environmentally sound way, and giving effect to article 4.8 of the Basel Convention, a "Guidance Document on the Preparation of Technical Guidelines for the Environmentally Sound Management of Wastes subject to the Basel Convention", adopted at the 2nd meeting of the Conference of the Parties to the Basel Convention, Basel, December 1999. (See: http://www.basel.int/meetings/sbc/workdoc/framewk.htm) was established, the core of which forms a list of criteria to assess environmentally sound management (ESM). However, these criteria remain Delphic in the sense that they use terms such as "adequate, appropriate, acceptable etc." Besides that, the Guidelines are not innovative since they re-iterate the provisions of Basel or refer to already existing international standards. The Guidance Document refrains from accepting some of the basic principles of environmental policy and states that these principles only "merit consideration" and that "some countries have found [them] useful." It states (at paragraph 10): "These principles are not absolute and are not meant to replace the principles agreed to in the Basel Convention, nor to define "environmentally sound management"." Nevertheless, the Guidelines are clear as to deny the environmentally sound status to wastes imported from countries with higher standards of waste disposal and makes conformation to non-binding international standards binding by referring to them. See: P. Birnie and A.E. Boyle, International Law and the Environment, Oxford University Press, Oxford 2002, p. 433.

[320] It does not refer to the EC and Liechtenstein, which are separately mentioned in Annex VII to the Basel Convention. See above.

[321] Annex I to the protocol is similar to Annex I and II of the Basel Convention. In addition to the substances listed in the Basel Annexes, the Annex to the protocol includes "All wastes containing or contamined by radionuclides, the radionuclide concentration or properties of which result from human activiy." These substances are better known as radioactive substances. France, the European Community and Israel opposed to this extension. France entered "a reservation on the question of transboundary movements of radioactive wastes, which should be dealt with by the competent international organizations at the global level, namely, IMO and IAEA, which have developed and are developing relevant rules in this area." See: Tables of Participation and Reservations to the Instruments of the Barcelona System in: T. Scovazzi, *Marine Specially Protected Areas, The General Aspects and the Mediterranean Regional System,* Kluwer Law International, The Hague 1999, p. 216.

than the Basel Convention and adopts the approach of the Bamako Convention. Besides that, hazardous wastes are those substances that are considered hazardous in the domestic legislation of the State of import, transit or export.[322] Substances that possess any of the characteristics of Annex II are also considered hazardous.[323] Finally, similar to the Bamako Convention, the protocol considers as hazardous wastes domestically prohibited goods or substances that are considered to be harmful for human health or the environment.[324] Wastes deriving from the normal operation of ships are excluded from the scope of the protocol if another international instrument covers the discharge of them.

Article 5 describes the general obligations and specifies the statements of the Preamble, yet without much detail. Parties must take all appropriate measures to prevent, abate and eliminate pollution of the protocol area, which can be caused by transboundary movements of hazardous wastes. The Parties must also reduce to a minimum and, where possible, eliminate the generation and transboundary movement of wastes. This is a stricter formulation than the Basel and Bamako Conventions use. However, the use of the terms "shall take all appropriate measures to reduce" and "where possible eliminate", offers an attractive escape clause for the Parties.

Again, the protocol states that States have the right to ban the import of hazardous wastes and adds that other Parties must respect this sovereign decision. Parties are also required to take all measures to prohibit the export and transit of hazardous wastes to developing countries. Those Parties that are not members of the European Community must prohibit all imports and transit of hazardous wastes.[325] Therefore,

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[322] Article 4 requires the Parties to inform the Organisation, within six months after becoming a Party, of all wastes considered to be hazardous under the respective domestic legislation and of any requirements concerning transboundary movement procedures applicable to such wastes.

[323] Annex II to the protocol mentions the same characteristics as Annex III to the Basel Convention.

[324] Hazardous wastes are those "hazardous substances that have been banned or are expired, or whose registration has been cancelled or refused through government regulatory action in the country of manufacture or export for human health or environmental reasons, or have been voluntarily withdrawn or omitted from the government registration required for use in the country of manufacture or export."

[325] For this purpose, Monaco has the same rights and obligations as Member States of the European Community. Israel, which objected to their status as developing country under article 1(u) and 1(v), entered a reservation, which influences their obligations under this article. See: Tables of Participation and Reservations to the Instruments of the Barcelona System in: T. Scovazzi, *Marine Specially Protected Areas, The General Aspects and the Mediterranean Regional System,* Kluwer Law International, The Hague 1999, p. 217.

"the protocol introduces a unique discrimination between developed and developing countries."[326] The only transboundary movements that the protocol allows are those from developing to developed countries and those from developed to developed countries. This precautionary measure is similar to the ban amendment of the Basel Convention.

Article 5 requires Parties also to cooperate with UN agencies and relevant international and regional organisations to prevent illegal traffic, which is defined in article 9. They must take appropriate measures to achieve this goal and introduce criminal punishment measures in accordance with their domestic legislation.

Article 6 shows the priorities the protocol tries to establish. If hazardous wastes cannot be disposed of in the country of origin in an environmentally sound way, transboundary movements may, in exceptional cases, unless otherwise prohibited, be allowed. This formulation gives effect to the idea of waste disposal at source.[327] The first exception concerns Mediterranean developing countries, incorporating the principle of common but differentiated responsibility. It is not clear from the formulation whether all developing countries are included, or only those that that do not have the technical capabilities nor the disposal facilities for the environmentally sound management of hazardous wastes, which would be the preferable interpretation.[328] The second exception to the prohibition of transboundary movement of hazardous wastes is the case in which the competent authority of the State of import ensures that the waste is disposed of in an approved site or facility with the technical capacity for its environmentally sound disposal.[329]

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[326] Cubel, P., *Transboundary Movements of Hazardous Wastes in International Law: The Special Case of the Mediterranean Area,* [International Journal of Marine and Coastal Law], 12 (1997), p. 467.

[327] Birnie and Boyle regard this principle as representing customary law. See: P. Birnie and A.E. Boyle, International Law and the Environment, Oxford University Press, Oxford 2002, p. 430.

[328] "[…] developing countries *which* do not have the technical capabilities nor […]" This formulation seems to imply the rather over-generalised idea that none of the developing countries has the technical capabilities to manage the waste in an environmentally sound way.

[329] Article 1(g) defines them as "site or facility […] authorized or permitted to operate for this purpose by a relevant authority of the State where the site or facility is located." Hence, the facility is authorised by the national competent authority, which is related to the national government and therefore has an obvious national interest. It is regrettable that there is no form of supervision or inspection of these national facilities.

The third exception refers to the general idea of the protocol, the case of prior written notification of the State of export in accordance with Annex IV, and the written consent of the State(s) of import and transit.[330] The protocol does not make any difference between transit States that are Parties, and those that are not.[331] In case of prior notification article 3(3) requires that, depending on the circumstances, the generator, importer or exporter must make sure, via the competent authorities of the respective State, that the particular waste, prior to its transboundary movement, is not subject to the protocol.

Article 6(4) clarifies to a certain extent an issue, which was left open to different interpretations in the Basel Convention,[332] and requires that the State of export notify the State of transit in accordance with Annex IV. The coastal States then "brings to the attention" of the State of export all applicable measures relating to passage through its territorial sea and protection of the environment in compliance with international law. When necessary, the coastal State may take measures in accordance with international law. However, the powers given to coastal States do not go beyond customary law and the LOSC.[333] New is the coastal States' right to "bring to the attention" of the foreign ship all applicable domestic laws, but States could have done

[330] Annex IV(A) to the protocol is similar to Annex VA to the Basel Convention, listing the information to be provided on notification. Annex IV(B) to the protocol is similar to Annex V B to the Basel Convention, but does not, as Annex IV(A) to the protocol, deal with general or specific notification. It further introduces the requirement to supply as information on the movement document "The insurance document, bond, or other guarantee as may be required by the Parties, as provided in Article 6, paragraph 5."

[331] The State of export thus needs the written consent of all transit States, whether Parties or not. This general proposition does not apply to conditions of passage through the territorial sea, which article 6(3) expressly excludes. Besides that, article 6(3) does not mention whether the import and transit States may impose any conditions to the movement and secondly, whether or not the transboundary movement may commence without the consent having been given by non-member transit States.

[332] The Basel Convention is applicable to movements in both land and marine areas. Transboundary movement is only allowed after prior written notification by the State of export to both the State of import and the State of transit and their prior written consent (article 5(3)). However, the disclaimer clause of article 4(12) protects both the sovereign rights and jurisdiction of coastal States and the freedom of navigation. Due to its vague wording, this provision is open to different interpretations. Therefore, some coastal States expect foreign ships passing through their EEZ or territorial sea to give prior notice, and others do not. See: P. Birnie and A.E. Boyle, International Law and the Environment, Oxford University Press, Oxford 2002, p. 432.

[333] Article 21, 24 and 211 LOSC already give coastal States these powers.

this anyway, since it is a mere informative gesture. Besides that, the provision leaves the issue of passage through the EEZ unresolved.[334]

Article 6(5) repeats in different words articles 4(9)c, 4(11) and 6(11) of the Basel Convention and refers to this instrument by requiring the States involved to respect international safety standards and financial guarantees, and in particular those of the Basel Convention. Therefore, the provision is hardly innovative.

Interestingly, the protocol does not allow as a separate category movements in case the hazardous wastes are required as a raw material for recycling or recovery industries in the State of import, which article 4(9)b of the Basel Convention allows.[335] A well-regulated case-by-case study for allowing hazardous wastes intended for recycling to be moved, might have been introduced by a detailed provision. However, the benefits of recycling are contested and under the Basel Convention there were problems with fraudulently labelling hazardous wastes as intended for recycling, and therefore the Basel Ban-amendment intends to phase out movements of wastes intended for recycling too.[336]

Article 7 requires States of export to re-import the hazardous wastes, if the transboundary movement cannot be completed. Notified transit States, which must be properly informed, may not oppose, hinder or prevent the return of those wastes to the State. This provision is stricter than its counterpart in the Basel Convention is, since it does not allow for alternative arrangements. However, there is no time-frame[337]

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[334] Parties acknowledged in the Final Act that the protocol was adopted in view of the absence of many EEZ claims in the Mediterranean Sea and that they envisaged a revision of the protocol in the event of a change of situation in the future. See: Cubel, P., *Transboundary Movements of Hazardous Wastes in International Law: The Special Case of the Mediterranean Area,* [International Journal of Marine and Coastal Law], 12 (1997), p. 469.

[335] Unless the specific recycling method is listed under the methods of "disposal" in Annex III B.

[336] There are strong arguments that in many cases waste intended for recycling is not recycled totally or appear to be more harmful than initially thought. Besides that, recycling itself causes often pollution and, generally speaking, encouraging the export of waste for recycling works against Basel's stated goal of waste minimisation. For all these reasons, including waste intended for recycling in the total ban, finds support. See: Kitt, J.R., *Waste Exports to the Developing World: A Global Response,* [Georgetown International Environmental Law Review], 7 (1995), p. 512.

[337] Except for the case dealt with in article 9(3), where a time limit of 30 days has been introduced.

within which the re-import must have taken place, which might lead to unjustifiable delay.[338]

Article 8 reiterates article 13 of the Barcelona Convention on regional cooperation in scientific and technological fields. Parties must submit annual reports to the Organisation regarding the hazardous wastes they generate and transfer, of which the Organisation must produce an audit. Interestingly, the protocol introduces the precautionary principle in this article and connects it with clean production methods.[339]

The protocol reinforces the basic principle that the State of export must bear the responsibility for the wastes. Contrary to the Basel and Bamako Conventions, article 9 of the protocol contains a general definition of illegal traffic, which is defined as any transboundary movement of hazardous wastes in contravention of the protocol or of general principles of international law. Parties are required to establish national legislation to prevent and punish illegal traffic, including criminal penalties on all persons involved in such illegal activities.

As the Basel and Bamako Conventions do, the protocol requires that, in case of illegal traffic due to the conduct of the generator or the exporter, the State of export bears the burden of ensuring that the waste is taken back to the State of export within 30 days from the time the illegal traffic has come to its attention.[340] Besides that, appropriate legal action must be taken against the contraveners.

In case the illegal traffic is due to the conduct of the importer or disposer, the State of import must ensure that the wastes are eliminated according to environmentally sound methods by the importer within 30 days from the time the illegal traffic has come to

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[338] Neither the Basel nor the Bamako convention introduces a time-limit within which the wastes must be back in the exporting country. The protocol does introduce the requirement on the State of export to properly inform the transit State, which the Basel Convention omits.

[339] "The Parties shall cooperate in taking appropriate measures to implement the precautionary approach based on prevention of pollution problems arising from hazardous wastes and their transboundary movement and disposal. To this end, the Parties shall ensure that clean production methods are applied to production processes."

[340] The formulation in the Bamako (article 9(3)) and Basel (article 9(2)) Conventions determines that the deadline starts when the State of export has been informed about the illegal traffic, which is an invitation for delay. The protocol uses the more correct phrase "has come to its attention".

the attention of the State of import. However, the principal improvement of the protocol is the obligation on eventually the exporter to re-import the wastes in case the illegal traffic is due to the conduct of the importer or disposer. Again, legal proceedings must be taken against the contraveners.[341]

Parties must forward all available information concerning illegal traffic to the Organisation, which distributes it further. Parties must cooperate to ensure that illegal traffic does not take place and the Organisation may be requested to assist Parties to identify cases of illegal traffic. The Organisation is responsible for the coordination with the Secretariats of the Basel Convention in relation to prevention and monitoring of illegal traffic by exchanging information, providing assistance and establishing a mechanism to prevent and monitor illegal traffic in the Mediterranean. It is regrettable that the obligation to coordinate with the Secretariat of the Basel Convention does not apply to other subjects than illegal traffic.

Article 10 requires the Parties to cooperate with a view to formulating and implementing programmes of financial and technical assistance to developing countries. The provision is very general, non-obliging and, strangely enough, does not require the Parties to cooperate *with* developing countries. The provision seems little more than a mere repetition of the preamble's principle of common but differentiated responsibility, without binding influence or sufficient specification.

Article 11 gives effect to article 26 of the Convention and requires the Parties to disseminate to one another, through the Organisation, information on measures taken, results achieved and difficulties encountered. Article 12 requires the Parties to ensure that information is available on the movements of hazardous wastes taking place.[342]

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[341] This positive development is partly being annulled by paragraph 5, which does not appoint a Party bearing the ultimate responsibility for proper waste disposal in case the responsibility for the illegal traffic cannot be assigned to the importer, generator or exporter. In this case, article 9(5) merely requires the Parties to cooperate to dispose of the wastes in an environmentally sound way.

[342] Paragraph 2 requires the Parties in a non-binding way to give "the public" an opportunity to participate in "relevant" procedures with the aim of making known its views and concerns. Without more detailed guidance, this provision will probably be disregarded.

A very interesting and, within the Barcelona System, rare provision[343] is introduced by article 13, which allows Parties that have reason to believe that another Party acts or has acted in breach of its obligations under the protocol to inform the Organisation and simultaneously the Party against whom the allegations are made. The Organisation must carry out a verification through consultation and submit a report, thus providing supranational inspection. It is not clear to what extent this provision introduces a right or an obligation. It would have been more effective to introduce a clear obligation, in order to take away hesitation to give voice to allegations for political and diplomatic reasons.

The liability provision does nothing more than repeating the non-binding provision of the Convention (article 14). Article 15 deals with meetings of the Parties to the protocol in a similar way as the other protocols.

An interesting new provision (article 16) requires the Parties to adopt, by a two-thirds majority, additional programmes or measures for the prevention and elimination of pollution from transboundary movements of hazardous wastes and their disposal.[344] The final clauses of article 17 are similar to the ones in the other protocols and deal with relating provisions, rules of procedure and financial rules, signature, ratification, accession and entry into force.

[343] Article 12 of the Dumping protocol contains a similar provision.
[344] This provision is the counterpart of article 21 of the Barcelona Convention.

3.3.8 Integrated Coastal Area Management

The 12th meeting of the Contracting Parties to the Barcelona Convention and its Protocols, held in Monaco from 14-17 November 2001, approved recommendation II-C-4, inviting the Parties to "work on a feasibility study of a regional legal instrument on sustainable coastal area management". This initiative is a follow-up to a large number of activities and recommendations,[345] underscoring the need to take into account the vulnerability of coastal areas in the sustainable development policies of the Mediterranean, to which the amended Barcelona Convention pays special attention in article 4(3)e.[346]

The adoption of a new protocol to the Barcelona Convention on Integrated Coastal Areas management (ICAM), which is juridically possible,[347] could be beneficial for the Mediterranean since existing national legislation and international soft law instruments have not stopped further deterioration of the Mediterranean coastal environment.[348] The adoption of a new protocol is envisaged for the near future and will be based on article 21 of the Convention. A special protocol on the matter would harmonise and develop in a systematic way all the provisions having a bearing on sustainable coastal management, which are scattered in the sectoral protocols, such as the SPA and Biodiversity protocol,[349] the LBS protocol,[350] the Seabed protocol[351] and the emergency response protocol.[352]

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[345] During the 1975-1995 period of Mediterranean cooperation, the MAP coordinating unit made efforts to assist coastal and island regions in setting up coastal area management programs. The task was carried out by the PAP/RAC.

[346] "In order to protect the environment and contribute to the sustainable development of the Mediterranean Sea Area, the Contracting Parties shall: […] commit themselves to promote the integrated management of the coastal zones, taking into account the protection of areas of ecological and landscape interest and the rational use of natural resources."

[347] In the Convention, ICAM could be based on article 1(2) and 1(3) and 4(3)e.

[348] Coccossis, H., Mexa, A., Collovini, A., *Good Practices Guidelines for Integrated Coastal Area Management in the Mediterranean*. Published by PAP/RAC, Split 2001, p. 15.
Available at: www.pap-thecoastcentre.org/ pdfs/Good%20Practices%20Guidelines.pdf

[349] E.g. the SPA and Biodiversity protocol applies to the terrestrial coastal zones designated by each of the Parties, including wetlands" (article 2), and aims at safeguarding "representative types of coastal and marine ecosystems" (article 4(a)), as well as the "biological diversity and the sustainable use of marine and coastal biological resources" (article 3, para. 4), which shall be integrated into the relevant sectoral and intersectoral policies. The coastal belt as a natural unity is covered in article 7, para. 4. The existence of an integrated coastal management plan is considered as a favourable factor for the inclusion of the area in the SPAMI List (Annex I, para. B(4)e).

[350] The LBS protocol applies to the "hydrologic basin" of the Mediterranean Sea Area (article 3), this being "the entire watershed area within the territories of the Contracting Parties, draining into the Mediterranean Sea Area"(article 2).

[351] The Parties to the Seabed protocol "may also include in the scope of the Protocol, wetlands or coastal areas of their territory" (article 2, para. 2).

[352] The emergency protocol aims at preventing or combating pollution incidents, which pose or may pose a threat to the marine environment, the coastline or related interests. The "related interests" are broadly defined as concerning, among others: (i) maritime activities in coastal areas, in ports or estuaries, including fishing activities; (ii) the historical and tourist appeal of the area, including water sports and leisure activities; (iii) the health of the coastal population; (iv) the cultural, aesthetic, scientific and educational value of the area; (v) the conservation of biological diversity and the sustainable use of marine and coastal biological resources" (article 1(d)).

Conclusive Remarks

Assessment

The LOSC, and arguably customary international law, provide coastal States with various instruments that allow for enforcement of domestic environmental legislation in their EEZ (articles 211 and 220 LOSC). The establishment of this zone could thus be beneficial for the enforcement of domestic anti-pollution legislation in these vast maritime areas. The small Mediterranean Sea could be covered entirely by EEZs if States had claimed them. However, due to complicated delimitation issues and long established fishery practices, the littoral States have been reluctant to do so. The EEZs that have been claimed in the Mediterranean (the Moroccan and Egyptian) have a questionable juridical status and are thus of limited importance for the enforcement of issues. The establishment of EFZs, apart from creating powers solely for fishery-related issues, has not resulted in completely covering the Mediterranean, since the established EFZs all apply to small areas. However, the EFZ Spain claimed, is different from the ones Malta, Tunisia and Algeria have established, in that it has been created for protecting the fish stocks, and therefore has an environmental rather than a commercial scope. Of more interest are the recent Croatian and French zones of ecological protection. The French zone, however, only creates powers in regard of pollution and does not deal with the management of living resources, which weakens the impact of the zone. The Croatians, on the other hand, established a zone for both the enforcement of anti-pollution legislation and fisheries, but exempts European vessels from the fishing prohibition. As a result, the Mediterranean Sea falls almost entirely under the regime applicable to the high seas. On the high seas, the enforcement of legislation depends on the willingness of the flag State and only in a limited number of cases, port and coastal States have the power to intervene in this area, which is an unsatisfactory result.

Some coastal States have (jointly) adopted environmental regulations in maritime zones other than EEZs. The regime in the Strait of Bonifacio is an example of such cooperation on environmental issues between France and Italy, which was strengthened by IMO regulations. The regime in the Strait of Messina is based on Italian domestic legislation only. The adoption of legislation in these Straits is an

important development, but lacks coordination. Ships passing through the Strait of Bonifacio are therefore subject to different legal regimes when passing from Italian to French waters or *vice versa.*

A different cooperative initiative is the Ligurian Marine Mammals Sanctuary, which has been established by France, Italy and Monaco. Since the major part of the area is situated at high seas, the ultimate enforcement of the regulations applicable to this area depends on the willingness of flag States. From the fact that the Sanctuary Area could have been situated in EEZs, had the littoral States claimed one, Professor Scovazzi concludes, that France, Italy and Monaco can exercise and enforce legislation in the Sanctuary as if it were part of their EEZs. This conclusion is based on neither the LOSC nor customary law.

The adoption of EEZs and the adoption of coordinated domestic legislation implementing the provisions of the Barcelona Convention conform international standards would obviously be an ideal solution for the enforcement problems on the high seas, since the entire Mediterranean Sea would become subject to the (limited) enforcement jurisdiction of the coastal States. Unfortunately the establishment of EEZs is not a practicable solution. Various delimitation issues have already led to tense situations, if not hostilities and the cooperative adoption of EEZs would probably result in irresolvable tension.

As a compromise, a collective EEZ declaration through an international forum such as the Barcelona Convention could be made, which would provide a coordinated approach to individual initiatives, without being binding. Besides that, binding arbitration in delimitation disputes is probably a necessary passage on the way to eventually clarified maritime borders and thus to adoption of a binding coordinated approach.

The Barcelona System is the most successful and detailed legal instrument of the entire UNEP regional seas programmes. The amended Barcelona Convention introduces some interesting and promising new provisions in order to make a holistic approach to the solution of environmental problems in the Mediterranean possible. To this end, its application has been extended to cover both internal waters and estuaries.

Its application may also be extended to coastal areas by the individual States and to the areas to which the various protocols apply. The area to which the protocol potentially applies is sufficient for a holistic approach. The holistic idea is also visible in the new provision which requires Parties to invite non-member States to implement the provisions of the Barcelona System. This requirement, though non-enforceable, is an important acknowledgement of the fact that pollution issues are complicated and interdependent and demand a solution from as many stakeholders as possible. In this light, the new provision on public participation must be read. Unfortunately, there is no definition of the public and there are no details on how the public should participate. The holistic approach is supplemented by a range of established environmental principles, yet without much detail. Unfortunately, the provision on liability has not changed, but in the 1994 seabed protocol, some Parties could agree on a further-reaching formulation, which gives hope for future improvement. UNEP carries out the Secretariat functions, which might be problematic, because the Mediterranean is only one of a range of UNEP's responsibilities. The Parties must send reports to the Secretariat on the state of national implementation. This requirement now also includes the reporting on the effectiveness of the measures taken and the problems encountered. However, there is no specification on what has to be done with the reports. The meeting of the Parties is responsible for assessing compliance and may adopt recommendations in this regard. A possible improvement of the assessment of enforcement could be to require flag States to report on enforcement measures taken under article 217 LOSC. The role of port States could also be enhanced by explicitly naming their powers under the LOSC and by coordinating the existing regional port State control agreements. The dispute settlement procedure still depends on the mutual agreement of the Parties involved, which could be improved by appointing ITLOS for binding dispute resolution.

The dumping protocol also reflects a somewhat more holistic approach by including incineration, burial under the seabed, yet does not cover dumping from offshore installations, and Parties are not encouraged to take measures on the high seas. The approach to dumping has been changed under influence of the precautionary approach. Dumping is forbidden except for five categories. It would have been beneficial to call on Parties to entirely phase out dumping, or not allow any dumping at all. The permits, needed for dumping, unfortunately do not demand environmental

impact assessment, nor take explicitly into account the presence of specially protected areas. The requirement to implement measures is supplemented by neither port State powers, nor deadlines within which the implementation must have taken place. The meeting of the Parties is required to study national dumping reports, but there is no provision on what has to be done with the results.

The new emergency protocol not only deals with emergency accidents, but also with prevention of pollution. This is reflected in the requirement that monitoring is not limited anymore to the collection of information, but also to the prevention of pollution. Environmental principles are incorporated in the preamble, but do not include access to and transfer of technology, which weakens the principle of common but differentiated responsibility. The precautionary principle is reflected in the definition of pollution incidents, which now covers also the danger or threat of pollution. Related interests include biodiversity of marine and coastal areas and its sustainable use. The emergency protocol does call on flag, port and coastal States to implement the provisions, yet without further specification. Implementation requirements have become more comprehensive and include the obligation to establish competent authorities in this regard. Two-yearly reports on national measures of implementation must be adopted, but the question to what their assessment must lead, has been left unanswered. Substantial practical improvements on the issuing of instructions have been introduced, which now also have to be issued to the person actually in charge of the ship and not any longer to the master of the ship only. Further instructions must be distributed to a larger number of persons. Unfortunately, the new provision on reimbursement of salvage costs does not reflect the polluter pays principle.

The LBS protocol focuses on sectors of pollution activity instead of substances. However, special attention is given to substances that are toxic, persistent and liable to bioaccumulate. The holistic approach is reflected in the new geographical area to which the protocol applies: the hydrologic basin, including coastal waters, lagoons and groundwaters. This is a positive development in the approach of pollution from land-based sources, which are obviously situated on the land around the sea. Again, non-member States in whose territory the hydrologic basin extends, must be invited to cooperate in the implementation. Parties must set up action plans with time-limits for

the implementation of provisions and harmonise them between themselves. However, there is no time limit for the actual adoption of the *plans* by the Parties. Besides that, Parties are required to set up a monitoring and inspection system for compliance control, on the result of which "the public" must be informed. The formulation of the protocol seems to impede the Parties to make use of the arbitration procedure of the Convention. The protocol mentions some environmental principles, of which the one on access to and transfer of technology and the sharing of results of scientific research are among the most important ones, yet the formulation of the requirement is very weak.

The new SPA and Biodiversity protocol applies to the entire Mediterranean Sea area, explicitly including high seas and EEZs, plus the coastal areas, reflecting a holistic approach. Parties must protect areas of particular importance and endangered and threatened species of flora and fauna. However, the protocol allows for their sustainable use instead of strictly preserving them, though without providing on access to and benefit sharing of biological diversity. The Parties must cooperate to implement programmes of assistance to those developing countries that need it. Besides establishing national SPAs, Parties must cooperate to list SPAMIs, which may be established on the high seas. Proposals for inclusion of areas in the SPAMI list must be in accordance with a procedure that unfortunately has not been formulated very clearly. It is also unclear whether the Parties must endeavour to observe or simply comply with protection measures applicable to SPAMIs. Species of flora and fauna must be maintained in a favourable state of conservation, without specifying its exact meaning. To this end, non-member range States must be consulted with, which reflects a holistic approach. Species listed in Annex III may be sustainably exploited in cooperation with the competent international organisation, yet again, nothing on benefit sharing is specified. Impact of industrial and other projects and activities on protected areas must be assessed, yet this obligation does not apply *vice versa.* Traditional subsistence and cultural activities of the local population must be taken into account when adopting protective measures. These groups can also be exempted from protective measures. Unfortunately, there is no regional coordination of these exemptions. "The public" must be informed of the value of the protected areas and their participation in the taking of measures should be promoted. The latter

provision has been formulated weakly. Again, implementation reports must be submitted to the meetings of the Parties.

The seabed protocol refers to the old '82 SPA protocol and does not apply to living sedentary species. The definition of "operator" refers to the person who is in actual control and thus reflects ultimately the polluter pays principle. The protocol area covers the entire Mediterranean, including internal waters and the entire seabed and subsoil. Authorisation of activities that are *likely* to cause *significant* adverse effect may not be granted, which is a very restricted precautionary approach. The presence of SPAs may be of influence on the decision to grant authorisation. Parties must adopt sanctions for breach of the obligations imposed by the conditions of the authorisation. The protocol does not introduce any requirements to force the Parties to implement the provisions, apart from the possibility to set up a national monitoring system. A supra-national inspection body would have been preferable. Operators must use onshore reception facilities, to which the polluter pays principle does not apply. In case of emergency, the Parties shall implement *mutatis mutandis* the emergency protocol and inform REMPEC. Disused or abandoned installations must be entirely removed, for which the operator is responsible. Unfortunately, cases in which there is no longer an operator are not covered by this formulation. Assistance programmes to developing countries must be adopted. Persons in other States affected by pollution should be granted equal access to and treatment in administrative proceedings. The operator must be made liable for damage resulting from the activities. Signatories of the protocol must develop procedures and regulations regarding all activities initiated before the entry into force of the protocol.

The hazardous wastes protocol is a result of the amended Barcelona Convention which introduced a new provision on transboundary movements of wastes. The ultimate aim of the protocol is phasing out movements. For this reason it introduces a prohibition on movement, yet with some exceptions. Movements are only possible with prior informed consent of all States involved. This even applies to non-member transit States, which can lead to an odd situation, because they are of course not bound to respond to a notification. The protocol introduces some of the weaknesses of the Basel convention: environmentally sound management has not been defined precisely and transboundary movements always require two parties involved.

Radioactive wastes are covered, although nuclear Mediterranean States have made reservations to this issue. The protocol introduces a precautionary approach to the system of prohibition: substances listed in Annex I are *always* prohibited (and do not need to possess a hazardous characteristic) as are other substances that have one of the characteristics of Annex II. Non-EU member States must prohibit import of wastes, which gives also effect to the precautionary approach. Transit States through whose territorial sea the movement takes place must also be notified, but a similar provision for the EEZ has unfortunately not been introduced. There is no time-limit on the requirement to re-import illegally moved wastes, yet ultimately the *exporter* must re-import the wastes that were moved illegally by the importer or generator. However, if no importer, exporter or generator can be found, the protocol does not appoint an ultimately responsible party. The Parties are required to adopt additional programmes or measures for the prevention and elimination of pollution from transboundary movements of hazardous wastes and their disposal.

Conclusion

The Barcelona System has over the last ten years been updated to include in a more holistic way a broad range of sources of pollution. The amendments to and adoption of new protocols have introduced *inter alia* some aspects of sustainable development and a holistic approach to dealing with pollution, which the semi-enclosed shallow Mediterranean Sea needs. Without doubt, the Barcelona System is an example for other regional seas programmes.

However, there is little specification on most aspects dealt with in the protocols and the Convention. Furthermore, environmental principles such as the polluter pays principle and the principle of common but differentiated responsibility have hardly left preambular status. The lack of especially the latter principle can become problematic because of major socio-economic differences between the littoral States of the Mediterranean. Together with the absence of the polluter pays principle this could endanger the acceptance of preventive measures in developing States, which generally cause less pollution. The few provisions to compensate for this lack of broad participation in the decision making process, are often weakly formulated, not specified to a certain public, and in most cases limited to an *ex post facto* informing of the value of the decisions taken.

Although the Secretariat is the only body that could be made responsible for inspection of the implementation of the *entire* Barcelona System, the various protocols appoint the respective meeting of the Parties for this task, which results in a sectoral review. They analyse reports but do not have the power to make binding recommendations based on the information they receive. The Barcelona System neither introduces time limits for the implementation of its provisions, nor establishes a supranational body to control compliance with them.

The holistic intention of the revision process has unfortunately not led to a more scientific based approach to *inter alia* the delimitation of the areas covered by the various protocols. The littoral States are ultimately responsible for *ad hoc* inclusion of coastal areas. Nevertheless, the geographical scope of the Barcelona Convention has been extended, but the major part of the Mediterranean Sea is still high seas. Enforcement in these waters is almost impossible except for flag States. The few initiatives to claim protective zones on the high seas has had some effect, though lacks coordination.

The Barcelona System does not force Parties to binding dispute settlement nor provides, with one exception, for liability and compensation for environmental damage.

The Barcelona System provides for potentially far-reaching measures, but needs specification and depends too much on the willingness of littoral States for its implementation.

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PAP/RAC: www.pap-thecoastcentre.org

REMPEC: www.rempec.org

SPA/RAC: www.rac-spa.org.tn