

Land-based pollution in the Mediterranean Sea Area

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Abstract

This paper deals with the political and legal regional approach adopted by the Mediterranean coastal States in order to prevent, abate, combat and eliminate to the fullest possible extent pollution of the Mediterranean Sea Area caused by discharges from rivers, coastal establishments or outfalls, or emanating from any other land-based sources and activities within their territories. Special attention is paid to the 1996 amendments to the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources (Athens, 17 May 1980).

Introduction

Since the adoption of the Mediterranean Action Plan ¹ in Barcelona, on 4 February 1975 (Tangi, M. 1975; De Hoyos, D. 1976; Yerroulanos, M. 1982; Raftopoulos, E. G. 1988; UNEP 1992b; Skjærseth, J. B. 1993), the coastal States of the Mediterranean Sea and the European Community, in close collaboration with the United Nations Environment Programme, have successfully co-operated on a regional basis in order to protect the marine environment of this semi-enclosed sea. As a result of this regional co-operation, the Barcelona system for the protection of the Mediterranean Sea was built, being integrated by several political and legal instruments ² (Juste Ruiz, J. 1993a; Leanza, U. 1993; Scovazzi, T. 1994; *ibid.* 1995a).

¹.- Hereinafter, quoted as MAP.

².- The texts of the MAP, the Barcelona Convention for the Protection of the Mediterranean Sea against Pollution, the Protocol for the Prevention of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft, the Protocol concerning Co-operation in Combating Pollution of the Mediterranean Sea by Oil and

At the Eighth Ordinary Meeting of the Contracting Parties to the Convention for the Protection of the Mediterranean Sea against Pollution and Its Related Protocols, held in Antalya, Turkey, from 12 to 15 October 1993, the Contracting Parties decided to begin a revision process of the whole Barcelona system for the protection of the Mediterranean Sea in order to update these political and legal instruments and to adjust them to the new environmental trends that had appeared after the celebration of the United Nations Conference on Environment and Development (UNCED). In concrete, the Contracting Parties decided "to evaluate, revise and refocus Mediterranean Action Plan's activities in a spirit of transparency with the intention of addressing more effectively the challenge of sustainable development and the irreversible nature of impacts on the environment and resources". Moreover, regarding the legal instruments that constituted the Barcelona system, "it was agreed that the Secretariat would organize a meeting of national experts to examine ... the possibility of adapting the texts of the Barcelona Convention and its related Protocols to the latest developments in international environmental law" (see UNEP(OCA)/MED IG.3/5, p. 25, para. 139). Nearly at the same time, the Bureau of the Contracting Parties asked the Co-ordinating Unit for the MAP to take into account the results of the Ministerial Conference on Sustainable Development in the Mediterranean, that was going to be held in Tunis at the end of 1994.

After convening several meetings of legal and technical experts, and during the twentieth anniversary of the adoption of the MAP, the revision process ended at the Conference of Plenipotentiaries that was held in Barcelona, from 9 to 10 June 1995, where new political and legal instruments were adopted (see UNEP(OCA)/MED IG.6/7)³. On the one hand, the political instruments adopted at this Conference of Plenipotentiaries consisted in the Barcelona Resolution on the Environment and Sustainable Development in the Mediterranean Basin, the Action Plan for the Protection of the Marine Environment and the Sustainable Development of the Coastal Areas of the Mediterranean (MAP Phase II) and the Priority Fields of Activities for the Environment and Development in the Mediterranean Basin (1996-2005). On the other hand, the new legal instruments were the Amendments to the Convention for the Protection of the Mediterranean Sea against Pollution, the Amendments to the Protocol for the Prevention of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft and the adoption of a new Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean⁴ (Bou Franch, V. 1995; *ibid.* 1996; International 1995; Juste Ruiz, J. 1995a; *ibid.* 1995b; *ibid.* 1995c; Marchisio, S. 1995; Ros Vicent, J. 1995; Scovazzi, T. 1995b; Vallega, A. 1995).

It is worth noting that, once the revision process was concluded, neither any new amendment was adopted to the Protocol for the Protection of the Mediterranean Sea against

Other Harmful Substances in Cases of Emergency, the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and the Protocol concerning Mediterranean Specially Protected Areas are published in UNEP 1992a. Later on, a Protocol for the Protection of the Mediterranean Sea against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and Its Subsoil and a Protocol on the Prevention of Pollution of the Mediterranean Sea By Transboundary Movements of Hazardous Wastes and Their Disposal, have been adopted in Madrid, on 14 October 1994, and in Izmir, on 1 October 1996, respectively. See UNEP(OCA)/MED IG.4/4 and UNEP(OCA)/MED IG.9/3.

3.- An integrated version of all the Mediterranean instruments can be found in UNEP 1995a.

4.- When this last Protocol enters into force, it will replace the 1982 Specially Protected Areas Protocol.

Pollution from Land-Based Sources (Athens, 17 May 1980)⁵, nor any new protocol was adopted in order to replace the 1980 LBS Protocol. It is true that, at the beginning of the revision process of the Barcelona system, some amendments to the 1980 LBS Protocol were drafted and discussed both with general⁶ and particular attention⁷. But several reasons, such as the large amount of work to be done in a limited period of time, the complexity of this matter, the discrepancies existing among the different national delegations ... recommended to postpone this legislative process after the conclusion of the revision process of the Barcelona system.

Nevertheless, and although no new legal innovation on land-based pollution was adopted during the revision process of the Barcelona system, several political arrangements adopted both at the Tunis Conference and at the very same revision process, dealt with this matter and they have exerted a great influence on the subsequent legal practice of the Contracting Parties.

Once this revision process was ended, another Meeting of Legal and Technical Experts was held in Syracuse (Italy), from 3 to 5 March 1996, aimed at concluding the negotiations on the draft amendments to the 1980 LBS Protocol (see UNEP(OCA)/MED WG.107/4). After this Meeting of Experts, the Conference of Plenipotentiaries that finally adopted the amendments to the 1980 LBS Protocol was also held in Syracuse, from 6 to 7 March 1996 (see UNEP(OCA)/MED IG.7/4).

The Tunis Conference on Sustainable Development in the Mediterranean "MED 21"

The Ministerial Conference on Sustainable Development in the Mediterranean "MED 21" was held in Tunis on 1 November 1994. The "MED 21" Conference was the result of the invitation formulated by the President of the Tunis Republic, Mr. Zine El Abidine Ben Ali, on 5 June 1993, to the Mediterranean countries⁸ to hold a conference that

5.- Hereinafter, quoted as 1980 LBS Protocol.

6.- The Meeting of Legal and Technical Experts held in Barcelona, from 14 to 18 November 1994, discussed the draft amendments to the Barcelona Convention, to the Dumping Protocol, to the 1980 LBS Protocol, to the Specially Protected Areas Protocol and to the MAP (see UNEP(OCA)/MED WG.82/4).

7.- Another Meeting of Legal and Technical Experts convened to discuss exclusively the draft amendments to the 1980 LBS Protocol, was held in Syracuse (Italy), from 4 to 6 May 1995. Although before it took place, there were high expectations on it (see UNEP(OCA)/MED IG.5/3, p. 10, para. 31), it was soon evident that another Meeting of Legal and Technical Experts was needed for discussing more intensively the draft amendments to the 1980 LBS Protocol. The different existing views among the national delegations can be seen in UNEP(OCA)/MED WG.92/4, para. 11 et seq. Due to the lack of time, this new Meeting ought to take place after the conclusion of the revision process.

8.- The "MED 21" Conference was attended by 13 Ministers in charge of the environment in this geographical region (Spain, France, Monaco, Italy, Slovenia, Croatia, Greece, Turkey, Israel, Malta, Tunisia, Algeria and Morocco) and by Mr. Klaus Topper, Minister in charge of the Environment in Germany which then assumed the presidency of the European Union, who participated as the President of the United Nations Commission for Sustainable Development. Egypt, Cyprus and Bosnia-Herzegovina participated in this Conference through delegations headed by their ambassadors accredited in Tunis. Also participated in the preparation and organization of the Conference the MAP Co-ordinator

would transparently assess the state of the environment in the region, identify an agenda aiming at conciliating environment and development in the spirit of the Rio Agenda 21, and establish more adequate conditions for promoting co-operation in the fields of sustainable economic and social development in a way likely to meet the requirements and aspirations of the present generations without jeopardizing the rights and opportunities of future generations.

The results of the "MED 21" Conference were the approval of four political documents concerning sustainable development in the Mediterranean Region, but only one of them, that is, Agenda MED 21, dealt with topics related directly or indirectly to marine land-based pollution⁹. The Agenda MED 21 is a Mediterranean reading of the Rio Agenda 21 and contains an analysis, Chapter by Chapter, of the main characteristics of the Mediterranean area, of useful orientations for national or bilateral actions and of suggestions for inter-Mediterranean co-operation. This document, though not being mandatory in character, will constitute one of the basic reference documents for the forthcoming work of the Mediterranean Commission for Sustainable Development, once this is set up. It was also used both to readjust the MAP and during the revision of the Barcelona Convention and its related protocols.

It is curious to note that both the Rio Agenda 21 and the Agenda MED 21 underline the importance of this source of marine pollution. Following the wording of the Rio Agenda 21, more than 70 per cent of marine pollution results from land-based sources; pursuant to Agenda MED 21, "more than 80% of the pollution in the Mediterranean Sea results from land-based activities (direct land-based pollution, air pollution)". But with these figures, it is not easy to understand why neither of the two agendas devoted a whole Chapter to this source of marine pollution. At least, Programme Area B of Chapter 17 of the Rio Agenda 21 gives prominence to this kind of marine pollution¹⁰ (Treves, T. 1994), but this is not certainly the case with Chapter XVII of Agenda MED 21¹¹, which does not include any particular reference to this source of marine pollution among the suggestions made at regional level.

Another important difference between the two agendas lies in the fact that the references contained in the Rio Agenda 21 on the need both to implement the Guidelines for

and his immediate collaborators, the directors of the MAP regional activity centres, and representatives from several international organizations (FAO, UNDO, UNEP, UNESCO, WWO, the World Bank and the Arab League), as well as from several NGOs (CEDARE, the Tunisian NGO Committee for Med 21, Friends of the Earth, MIO/ECSDE and Greenpeace International).

9.- The texts of the Tunis Declaration for Sustainable Development in the Mediterranean Basin, the Resolution Related to the Creation of a Mediterranean Commission on Sustainable Development, the Resolution Relative to the Use of Land Policy Tools to Ensure the Conservation of the Mediterranean Coastal Areas and the Agenda MED 21, are published in Republic of Tunisia, 1995.

10.- Programme Area B is entitled "Marine environmental protection". Chapter 17 of the Rio Agenda 21 is entitled "Protection of the oceans, all kinds of seas, including enclosed and semi-enclosed seas and coastal areas and the protection, rational use and development of their living resources".

11.- Chapter XVII of Agenda MED 21 is entitled: "Protection of the sea and coastal areas: protection, rational use and development of their biological resources".

the protection of the marine environment against pollution from land-based sources (Montreal, 24 May 1985) (Guruswamy, L. D. et al, 1994) and to amend and strengthen the existing regional protocols on marine pollution resulting from land-based sources, have disappeared in the Agenda MED 21. In fact, Chapter XXIX of the Agenda MED 21, entitled "International legal instruments and mechanisms", does not say a single word on this special source of marine pollution.

However, the Agenda MED 21 does contain stipulations related directly or indirectly to land-based pollution, but they are scattered throughout its Chapters. Accordingly, among the suggestions recommended to each Mediterranean State at national level on the one hand, the Agenda MED 21 mentions the following:

- 1.- to develop national plans for the treatment of urban household waste through underground disposal (Chapter X, point 15);
- 2.- to follow-up and assess, on a regular basis, sources of land pollution and their impact on land and marine resources, and take the appropriate preventive, curative and control measures to stop this dumping of waste (Chapter XVII, point 15);
- 3.- to adopt clear policies on the production, consumption, transport, storage and discharge of toxic substances and, among other things, ask industries to develop programmes for safe substitutes and bear the cost of collection, handling and storage of toxic products according to the most stringent OECD standards (Chapter XIX, point 8);
- 4.- to direct efforts towards decreasing the quantities of pesticides in order to reduce land pollution (ibid., point 13);
- 5.- to encourage the use of the least pollutant fertilizers in order to limit soil degradation and water pollution (ibid., point 14);
- 6.- to prioritize strategies to replace and ban the use of chlorine and chlorinated compounds to protect the environment and because of the effect they have on health and the fact that other safe substitutes are available (ibid., point 16);
- 7.- to strengthen the management systems for hazardous waste by supervising the various stages from generation to elimination of waste and improve, in particular, monitoring of all industries that generate hazardous waste (Chapter XX, point 7);
- 8.- to limit recourse to technologies that generate hazardous waste and enhance the use of clean technologies especially in countries in the process of industrialization, within the framework of new investment that allows the recycling of residues or that generate a lower quantity of waste (ibid., point 9);
- 9.- to draft national plans for the reduction and elimination of production of hazardous waste, and offer incentives for local industries to implement clean production processes (ibid., point 13);
- 10.- to elaborate, within the framework of its general policy on environmental protection, national programmes for the reduction, management and reuse of solid waste and sewage (Chapter XXI, point 7);
- 11.- to minimize the impact of urban and industrial effluents on underground aquifers and coastal waters (ibid., point 14); and

12.- to implement a system of strict responsibility concerning production, management, transport and discharge of radioactive waste (Chapter XXII, point)

On the other hand, among the suggestions aimed at the strengthening of the co-operation among all the Mediterranean States at regional level, Agenda MED 21 also includes some provisions concerning marine pollution resulting from land-based sources and activities, such as the following:

- 1.- to promote integrated disease-handling practices as a mean to diminish and then eliminate dependence on pesticides (Chapter X, point 19);
- 2.- to adopt action programmes to eliminate the use of organo-chlorates and organo-phosphates by around the year 2005 (ibid., point 20);
- 3.- to co-operate in the biological control of pests, using plant-care products in an ecologically rational way and adopting action plans to eliminate the use of organo-chlorate and organo-phosphate pesticides by around the year 2005 (Chapter XIV, point 16);
- 4.- to prepare and disseminate widely a list of toxic chemicals and to publish manuals on their management, storage, treatment, reduction, elimination and substitution in order to facilitate handling of accidents (Chapter XIX, point 20);
- 5.- to enforce the protocols related to the Barcelona Convention with respect to the banning of waste discharges into the Mediterranean Sea (ibid., point 24);
- 6.- to develop a regional plan of action to put into effect the decisions made by the Contracting Parties to the Barcelona Convention in the 1980 LBS Protocol (ibid., point 26).

The revision process of the Barcelona system

Although, as we have already mentioned, no legal measure on marine land-based pollution was adopted during the revision process of the Barcelona system, the three political instruments approved in it, dealt in some way or another with this important source of marine pollution. Accordingly, these three instruments have established a complex set of political arrangements, to be reached during the forthcoming years, aimed at, among other things, preventing, abating, combating and eliminating to the fullest possible extent land-based pollution in the Mediterranean Sea Area.

The Barcelona Resolution on the Environment and Sustainable Development in the Mediterranean Basin

In the Barcelona Resolution, the three following political understandings must be pointed out. First of all, the Ministers in charge of the Environment in the Mediterranean States and the member of the European Commission in charge of the Environment entrusted the Co-ordinating Unit of the MAP with the task of concluding the process of preparing the amendments to the 1980 LBS Protocol, and requested the Executive Director of UNEP to convene a Conference of Plenipotentiaries to adopt these amendments by March 1996.

These political decisions were effectively carried out and, as we have already said, the amendments to the 1980 LBS Protocol were adopted in Syracuse, on 7 March 1996.

Secondly, and despite the difficulties of its negotiations, the Ministers also agreed to the reduction by the year 2005 of discharges and emissions which could reach the marine environment, of substances which are toxic, persistent and liable to bioaccumulate, in particular the organohalogenes, to levels that are not harmful to man or nature, with a view to their gradual elimination. To this end, they also agreed to implement substantial reductions of such discharges and emissions, and if necessary, to supplement the reduction measures with programmes aiming at banning the use of such substances.

With the aim of guaranteeing the elimination by the year 2005 of the greatest possible number of these substances, in particular the organohalogenes, and in order to facilitate and speed up the definition of methods, programmes and timetables, by categories of substances and by industrial branches, and of the best available technologies, it was agreed, on the one hand, to instruct the Contracting Parties to review regularly the relevant timetables. On the other hand, they entrusted UNEP with organizing consultations with the Contracting Parties, scientific experts, industrialists and NGOs. To this end, a first meeting was decided to be held as soon as possible and by 1 July 1996 at the latest. This meeting was effectively held in Montpellier from 1 to 5 July 1996.

Lastly, they committed themselves to promote actively the transfer of clean technologies, in particular to developing countries, to encourage the establishment of clean production centres where required, and to research, promote, collect and disseminate information on clean production processes. Implementing this political understanding, at the IXth Ordinary Meeting the Government of Spain offered, and it was unanimously accepted, that the Barcelona Centre for cleaner production initiatives became a new Regional Activity Centre of the MAP for cleaner production initiatives in the Mediterranean (see UNEP(OCA)/MED IG.5/16 (8 June 1995), para.s 110-111).

The Action Plan for the Protection of the Marine Environment and the Sustainable Development of the Coastal Areas of the Mediterranean (MAP Phase II)

The new MAP Phase II was designed taking into account the achievements and shortcomings of MAP's first twenty years of existence, as well as the results of recent developments such as the United Nations Conference on Environment and Development (UNCED) (Rio de Janeiro, 1992), the Eighth Meeting of the Contracting Parties to the Barcelona Convention (Antalya, 1993), and the Conference "MED 21" on Sustainable Development in the Mediterranean (Tunis, 1994).

One of the most important characteristics of the new MAP Phase II consists in that, for the first time, its objectives are now expressly described. The main objectives of MAP Phase II are: to ensure sustainable management of natural marine and land resources and to integrate the environment in social and economic development, and land-use policies; to protect the marine environment and coastal zones through prevention of pollution and by reduction and, as far as possible, elimination of pollutant inputs, whether chronic or accidental; to protect nature, and protect and enhance sites and landscapes of ecological or cultural value; to strengthen solidarity among Mediterranean coastal States in managing their

common heritage and resources for the benefit of present and future generations; and to contribute to the improvement of the quality of life.

MAP Phase II is, without any doubt, the instrument that more accurate political understandings contains concerning marine pollution resulting from land-based sources and activities. Its Chapter II, entitled "Strengthening of the legal framework", expressly states that the amendments to the 1980 LBS Protocol are expected to be soon adopted. In this context, its Chapter I, entitled "Sustainable development in the Mediterranean", embodies many references to land-based sources and activities of marine pollution that had to be taken into account during the negotiations of the 1996 amendments to the 1980 LBS Protocol. This is the case, for instance, with Subsection 1.1.2 concerning industry, or with Section 1.4 on integrated coastal area management.

Special attention deserves its Section 3, entitled "Assessment, prevention and elimination of marine pollution", particularly its Subsection 3.2.1 concerning prevention and elimination of the pollution of the marine environment from land-based activities. This Subsection begins with the assertion that marine pollution from land-based sources and activities has long been recognized as a major problem in the marine environment. Then it revises what has already been achieved in the framework of the MAP during the last twenty years, by stating that one of the responses of the Mediterranean countries to this problem was the adoption of the 1980 LBS Protocol. Implementing this Protocol, by the end of 1994 thirteen Mediterranean recommendations concerning common measures for the control of land-based sources of pollution had been adopted by the Contracting Parties (see UNEP, 1995b). As a measure for the further strengthening of the 1980 LBS Protocol, the Mediterranean marine pollution monitoring and research programme (MED POL) is gradually refocusing on problems of direct relevance to the prevention and elimination of pollution from land-based activities.

Afterwards, the objective of this component of the new MAP Phase II for the forthcoming years is described as the protection of the Mediterranean marine environment from the pollution from land-based activities. This objective will be met through the specific activities arising from the provisions of the LBS Protocol and common measures for the elimination of pollution. This objective could be achieved through the formulation and the adoption of a regional action plan for the reduction and, as far as possible, the elimination of pollution from land-based activities, which will include quantitative objectives and a calendar of implementation. This plan should be based on the environmental principles and techniques that arose after the United Nations Conference on Environment and Development (UNCED), such as: the polluter-pays principle; the clean-production technology principle; an anticipatory rather than reactive approach; environmental impact assessment; environmental accounting, economic instruments (user fees, specific taxes, pricing policies and practices) and voluntary agreements (covenants).

After settling down this broad objective, Subsection 3.2.1 lists the activities recommended at regional and national levels. On the one hand, at regional level, this Subsection recommends the following four activities:

- 1.- to develop proposals for concrete measures for pollution prevention, reduction and elimination, based on the precautionary approach, as required by the Barcelona Convention and its Protocols;
- 2.- to develop technical guidelines for the implementation of the measures adopted and to assist developing countries in their implementation and enforcement;
- 3.- to collect information on the implementation of the measures adopted or recommended by the Contracting Parties and on their effectiveness, and to inform the Contracting Parties accordingly; and
- 4.- to identify problems experienced by the Contracting Parties in the implementation of the measures and to formulate proposals which may help to overcome those problems.

At least, it strongly calls our attention the fact that "the formulation and adoption of a regional action plan for the reduction and, as far as possible, the elimination of pollution from land-based activities, which will include quantitative objectives and a calendar of implementation", that was considered to be an appropriate way to reach the objective of this component of MAP Phase II, is not included among the recommended regional activities for the next years.

On the other hand, the activities recommended at national level pretend to formulate and implement national action programmes or plans, based on the precautionary approach, to prevent and eliminate pollution from land-based activities. Those programmes or plans should (and not shall) include, as appropriate:

- 1.- the setting up or the strengthening of a public administration specialized in the prevention of and fight against pollution and the provision of adequate funds for its funding;
- 2.- the development of adequate national legal instruments and the formulation and the adoption of measures for the prevention and the elimination of pollution;
- 3.- the creation or strengthening of bodies of environmental inspectors having specific training and administrative authority;
- 4.- the use of appropriate economic instruments deriving from the "polluter pays" principle and the precautionary approach;
- 5.- to encourage voluntary agreements (covenants) for the reduction and elimination of pollution, where appropriate;
- 6.- to establish a calendar for the full implementation of the common measures against pollution adopted by the Contracting Parties, as well as the relevant points of the Genoa Declaration;
- 7.- to develop and implement national compliance monitoring programmes, carried out by participating national collaborating institutions; and
- 8.- the provision for mandatory country reporting on the implementation of national action plans, including the monitoring of compliance.

The Priority Fields of Activities for the Environment and Development in the Mediterranean Basin (1996-2005)

The Priority Fields of Activities for the Environment and Development in the Mediterranean Basin is the programme of activities that is going to substitute the Declaration of the Second Mediterranean Decade (Genoa, 13 September 1985). Nevertheless, the Priority Fields of Activities follows a complete different strategy than the Genoa Declaration. While in the Genoa Declaration the Contracting Parties identified ten targets to be achieved during the second decade of the MAP (1986-1995), the Priority Fields of Activities lists twelve fields of activities, which receive priority in conformity with the Agenda MED 21, and which contain up to 61 priority objectives to be reached during the forthcoming decade (1996-2005).

The twelve fields of activities selected for the Third Mediterranean Decade do reflect the major concerns for sustainable development in this geographical area during the next years¹². However, some particular reference to activities and substances that alter and disturb the atmospheric environment and on climate change is missed, being these subjects linked with marine pollution resulting from land-based activities. Moreover, although none of the twelve priority fields of activities deals exclusively with land-based pollution, at least there are 13 objectives, out of the 61 priority objectives, related to this important source of marine pollution. These objectives, though they are very different in scope, are the following:

- 1.- to promote appropriate treatment and reuse of waste water and saline water;
- 2.- to encourage the installation of infrastructures for the treatment of urban sewage of 100 Mediterranean coastal cities corresponding to a pollutant load of approximately 10 million people;
- 3.- to prepare and adopt national programmes on reduction and environmental management of hazardous wastes on the basis of methodology guidelines for a rational environmental management;
- 4.- to prepare and adopt national programmes on the environmental management of urban wastes on the basis of methodology guidelines for a rational environmental management;
- 5.- to encourage the installation of controlled discharges or treatment plants in coastal towns of over 100.000 inhabitants;
- 6.- to encourage the installation of at least one secure depot and, where necessary, a treatment plant for hazardous wastes in each Mediterranean country;
- 7.- to stimulate actions for the control of marine and coastal litter, especially persistent synthetic materials;
- 8.- to encourage the preparation of national and regional strategies in the Mediterranean based on controlled, appropriate and rational use of seeds, fertilizers and pesticides;

¹² - The twelve priority fields of activities deal with the following matters: integration of environment and development; integrated management of natural resources; integrated management of coastal areas; waste management; agriculture; industry and energy; transport; tourism; urban development and the environment; information; assessment, prevention and control of marine pollution; conservation of nature, landscape and sites.

9.- to identify the best available and environmental sound techniques and best environmental practices, prioritizing the aspects of availability, accessibility, cost and effectiveness, especially in the production and use of energy, paper, tanneries and derivatives, cement works, metallurgy, agro-industries, and organic and inorganic chemical industry;

10.- to promote the development and application of programmes for the transfer, adaptation of and expertise in appropriate technology, prioritizing clean and safe technologies and taking into account the additional costs involved;

11.- to develop and implement programmes to reduce polluting emissions and monitor industrial residues;

12.- to assess, on the basis of agreed methodologies, the inputs of pollutants in the sea from water courses, the atmosphere and diffuse sources, and to evaluate in each country the major sources of marine pollution; and

13.- to promote the reduction of the amount of pollution carried into the marine environment, particularly by strengthening capabilities for implementing the 13 specific common measures already adopted pursuant to the 1980 LBS Protocol.

The 1996 Amendments to the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources

The need to improve the legal protection of the marine environment from land-based sources and activities, responsible of more than 80% of the pollution existing in the Mediterranean Sea, was the main reason for revising the 1980 LBS Protocol. The intention of the 1996 Amendments is to develop an international treaty that allows for the control and the most effective elimination of land-based pollution in the Mediterranean, both at the regional and national levels, and to update the 1980 LBS Protocol in conformity with the results of the United Nations Conference on Environment and Development (UNCED) and with the provisions of the Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (see UNEP(OCA)/LBA/IG.2/6)¹³. It must also be highlighted that the Convention for the Protection of the Marine Environment of the North-East Atlantic (Paris, 22 September 1992) (Hey, E.; Ijlstra, T.; Nollkaemper, A. 1993; Juste Ruiz, J. 1993b) also exerted a strong influence on the revision of the 1980 LBS Protocol.

However, it is not clear at all the reason why the Contracting Parties preferred to negotiate a set of amendments to the Protocol adopted in Athens seventeen years ago, rather than celebrating a new Protocol that would replace the old 1980 LBS Protocol, as they effectively did with the 1995 Protocol on Specially Protected Areas and Biological Diversity in the Mediterranean. Despite the fact that the 1980 LBS Protocol, after the Amendments

¹³.- The Global Programme of Action exerted a strong influence along the whole revision process of the 1980 LBS Protocol. Thus, in the very First Meeting of Legal and Technical Experts for the revision of this Protocol, the Secretary informed on the results of the Meeting of Reykjavik (March, 1995) and on the Draft Global Programme of Action (see UNEP(OCA)/MED WG.92/4, p. 3, para. 12). Afterwards, during the Second Meeting of Experts, the Secretary provided a detailed report on the results of the Meeting of Washington D.C. and on the final adoption of the Global Programme of Action, by presenting the document UNEP(OCA)/MED WG.107/Inf.3.

approved in Syracuse on 7 March 1996, is a wholly different international treaty, both for the quantitative and qualitative importance of the new amendments adopted, the possibility of negotiating a new Protocol to replace the old one was not even taken into consideration.

The most important change that has been introduced is the new objective and philosophy of the 1996 amended Protocol. It must be remembered that the old 1980 LBS Protocol was aimed at preventing, abating, combating and controlling this polluting source in the Mediterranean Sea Area (Art. 1). In order to achieve this aim, the 1980 LBS Protocol distinguished between pollution from land-based sources caused by substances listed in Annex I¹⁴, that ought to be eliminated (Art. 5), and pollution from land-based sources caused by substances or sources listed in Annex II¹⁵, that had to be strictly limited (Art. 6), but without needing to be fully eliminated. In fact, discharges of this second kind of substances were allowed under the condition of getting a previous authorization granted by the competent national authority taking due account of the provisions of Annex III¹⁶.

On the other hand, the 1996 amended Protocol underlines the idea of the gradual elimination of pollution deriving from land-based sources and activities. Indeed, pursuant to the amended Article 1, the Contracting Parties undertake to prevent, abate, combat and eliminate to the fullest possible extent this kind of pollution¹⁷, giving priority to the phasing out of inputs of substances that are toxic, persistent and liable to bioaccumulate¹⁸ and existing only one list of categories of substances¹⁹.

An important set of new provisions has been introduced in the 1996 amended Protocol, in order to facilitate the prosecution of this more radical aim. Among the new

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- 14.- The substances listed in this Annex were mainly selected on the basis of their toxicity, persistence and bioaccumulation.
- 15.- The substances, families and groups of substances, or sources of pollution listed in Annex II were mainly selected on the basis of criteria used for Annex I, while taking into account the fact that they are generally less noxious or are more readily rendered harmless by natural processes and therefore generally affect more limited coastal areas.
- 16.- Annex III listed the characteristics and composition of the waste, the characteristics of waste constituents with respect to their harmfulness, the characteristics of discharge site and receiving marine environment, the availability of waste technologies and the potential impairment of marine ecosystems and sea-water uses.
- 17.- The new amended Art. 5.-1 insists again on the idea of progressive elimination. This Article reads as follows: "The Parties undertake to eliminate pollution deriving from land-based sources and activities, in particular to phase out inputs of the substances that are toxic, persistent and liable to bioaccumulate listed in Annex I".
- 18.- The expression "substances that are toxic, persistent and liable to bioaccumulate" was introduced in conformity with paragraph six of the Barcelona Resolution.
- 19.- In the First Meeting of Experts held in Syracuse, Greenpeace International proposed to keep the system of double list. All the national delegations preferred the system of only one list, except the Spanish delegation, who backed the Greenpeace proposal. However, in the Second Meeting of Experts held in Syracuse, the attitude of the national delegations surprisingly changed. Only a few days before the beginning of this Meeting, Italy formally proposed to reintroduce the system of double list (see UNEP(OCA)/MED WG.107/3 Add. 2, pp. 3-4). The Italian proposal was not backed by any other national delegation, and among the national delegations that expressly opposed its proposal, the Spanish delegation was the most radical one in not reconsidering this subject.

provisions, it must be pointed out the express reception for this Protocol of the new environmental principles and techniques that arose after the Rio Summit, such as the references to the precautionary principle and the polluter pays principle, undertaking environmental impact assessment and utilizing the best available techniques and the best environmental practices, including clean production technologies²⁰.

It is also important to highlight that the geographical scope of this Protocol has been extensively broadened. On the one hand, the area to which this Protocol applies, comprises, from now onwards, not only the Mediterranean Sea Area where the 1995 amended Barcelona Convention applies²¹, but also the hydrological basin of this region²², as well as the brackish waters, the coastal salt waters including marshes and coastal lagoons, and the ground waters communicating with the Mediterranean Sea (Art. 3). On the other hand, the wording regarding the sources and activities to which the 1996 amended Protocol shall apply, has been notably improved²³, introducing an invitation to States that are not Contracting Parties to this Protocol but have in their territories parts of the hydrologic basin of the Mediterranean Area to co-operate in its implementation²⁴.

20.- Preamble, para. 5. The repetition of these principles and techniques in this Protocol, previously ruled in Article 4 of the 1995 amended Barcelona Convention, is partly explained as a result of the celerity of the revision process of the Barcelona system. In the Meeting of Experts held in Barcelona in February 1995, there was an unanimous agreement on the material lack of time in order to discuss the annexes to the Barcelona Convention concerning the criteria for the definition of the best available techniques and the best environmental practices. For filling up this gap, it was agreed to introduce these annexes among the amendments to the 1980 LBS Protocol.

21.- Its geographical coverage is the Mediterranean Sea Area, which is defined by its Article 1.-1 as the maritime waters of the Mediterranean Sea proper, including its gulfs and seas, bounded to the west by the meridian passing through Cape Spartel lighthouse, at the entrance of the Straits of Gibraltar, and to the east by the southern limits of the Straits of the Dardanelles between Mehmetcik and Kumkale lighthouses.

22.- Pursuant to the new Art. 2 (d), "hydrologic basin" means the entire watershed area within the territories of the Contracting Parties, draining into the Mediterranean Sea Area as defined in Article 1 of the 1995 amended Barcelona Convention.

23.- According to its Article 4, this Protocol shall apply to discharges originating from land-based point and diffuse sources and activities within the territories of the Contracting Parties that may affect directly or indirectly the Mediterranean Sea Area; to inputs of polluting substances transported by the atmosphere to the Mediterranean Sea Area from land-based sources or activities within the territories of the Contracting Parties; and to polluting discharges from fixed man-made offshore structures which are under the jurisdiction of a Party and which serve purposes other than exploration and exploitation of mineral resources of the continental shelf and the sea-bed and its subsoil. See the new Annex III, entitled Conditions of application to pollution transported through the atmosphere. This so broad wording is also reflected in the new title of the 1996 amended Protocol: Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities.

24.- This provision is a very concrete application of the new Article 3.-4 of the 1995 amended Barcelona Convention and it is thinking in non Mediterranean States, such as Switzerland or Sudan, that enjoy international waterways running through their territories but that finally flow into the Mediterranean Sea. The new Article 3.-4 of the 1995 amended Barcelona Convention shall apply, for instance, in the hypothesis of third States that, due to activities carried out within their territories, pollute the Mediterranean Sea Area with substances transported by the atmosphere.

The most important innovation introduced by the 1996 Amendments consists in the undertaking of the Contracting Parties to elaborate and implement, individually or jointly, as appropriate, national and regional action plans and programmes, containing measures and timetables for their implementation, in order to progressively eliminate pollution deriving from land-based sources and activities (Art. 5.-2). These action plans, programmes and measures are the instruments that are going to be used for achieving the objectives of the 1996 amended Protocol. Therefore, the 1996 amended Protocol pays a particular attention to the criteria and conditions that will be taken into account in their preparation and adoption. Thus, these action plans, programmes and measures will aim to cover the sectors of activity listed in Section A²⁵ and also cover the groups of substances enumerated in Section C²⁶, selected on the basis of the characteristics listed in Section B²⁷ of Annex I²⁸. In preparing action plans, programmes and measures, the Contracting Parties, in conformity with the Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities, adopted in Washington D.C. in 1995, will give priority to substances that are toxic, persistent and liable to bioaccumulate, in particular to persistent organic pollutants, as well as to waste water treatment and management (Annex I, para. 4). In their adoption, the Contracting Parties shall also take into account, either individually or jointly, the best available techniques and the best environmental practices including, where appropriate, clean production technologies, taking into account the criteria set forth in Annex IV²⁹. Finally, the

- 25.- The fact that Section A of Annex I lists 30 different sectors of activity that will be primarily considered when setting priorities for the preparation of action plans, programmes and measures for the elimination of the pollution from land-based sources and activities, seems to be an excessive number and makes doubts up on the convenience and usefulness of this Section. It is difficult to think on a concrete sector of activity not listed in this Section. Therefore, it should be more appropriate to delete the whole Section A of Annex I.
- 26.- It must be pointed out that the very first category of substances among the 19 categories of substances and sources of pollution listed in Section C of Annex I is the following: "Organohalogen compounds and substances which may form such compounds in the marine environment. Priority will be given to Aldrin, Chlordane, DDT, Dieldrin, Dioxins and Furans, Endrin, Heptachlor, Hexachlorobenzene, Mirex, PCBs and Toxaphene". This wording links the Mediterranean coastal States initiative to reduce by the year 2005 "discharges and emissions which could reach the marine environment, of substances which are toxic, persistent and liable to bioaccumulate, in particular the organohalogens, to levels that are not harmful to man or nature, with a view to their gradual elimination" (para. 6 of the Barcelona Resolution) with the decision 18/32 adopted by the 18th Governing Council of UNEP in May 1995, entitled "Persistent Organic Pollutants", which launched a world-wide initiative looking for realistic response strategies, policies and mechanisms for the reduction and/or elimination of emission, discharge and losses of persistent organic pollutants (i.e. PCBs, dioxins and furans, aldrin, dieldrin, DDT, endrin, chlordane, hexachlorobenzene, mirex, toxaphene and heptachlor), including the possibility of negotiating an appropriate international legal mechanism which should be submitted to the 19th Governing Council of UNEP meeting in January 1997. On these twelve substances, see GREENPEACE INTERNATIONAL 1995; *ibid.* 1996.
- 27.- The characteristics of substances listed in Section B of Annex I were proposed by the Secretary to the Second Meeting of Experts (see UNEP(OCA)/MED WG.107/3, p. 12), and this proposal was a repetition, nearly word by word, of the Appendix 2 to the Convention for the Protection of the Marine Environment of the North-East Atlantic (Paris, 22 September 1992).
- 28.- See Article 5.-3. Annex I is entitled: "Elements to Be Taken into Account in the Preparation of Action Plans, Programmes and Measures for the Elimination of Pollution from Land-Based Sources and Activities".
- 29.- See Art. 5.-4. Annex IV of the 1996 amended Protocol is entitled: "Criteria for the Definition of Best Available Techniques and Best Environmental Practices". The history of the negotiations of this Annex deserves some comments. At the First Meeting of Experts held in Syracuse, there was not real time to begin its

last requirements for the adoption of action plans, programmes and measures are provided for by Article 7.-3. According to it, they shall be adopted by taking into account, for their progressive implementation, both the capacity to adapt and reconvert existing installations, and the economic capacity of the Contracting Parties and their need for development.

In order to ensure the implementation of these action plans, programmes and measures, several safeguards clauses have been introduced by the 1996 Amendments to this Protocol. For instance, it must be pointed out that the Organization undertakes to formulate short-term and medium-term regional action plans and programmes containing measures and timetables for their implementation within one year at the latest of the entry into force of the amendments to this Protocol (Art. 15.-2). Moreover, for the first time in the history of the MAP, the measures and timetables for implementing the regional action plans and programmes shall enjoy a mandatory character³⁰, and a very flexible procedure for their entry into force has been established³¹

In fact, it also deserves a particular attention the mechanisms for the implementation of this Protocol, that have been notably improved and strengthened. On the one hand, the 1996 amended Protocol stresses that both point source discharges into the Mediterranean Sea Area, and releases into water or air that reach and may affect the Mediterranean Area, shall be strictly subject to authorization or regulation by the competent authorities of the Contracting Parties. These authorizations shall be granted taking due account of the provisions of the

negotiation. Therefore, it was decided to distribute on an informal basis the text of Appendix 1 to the Convention for the Protection of the Marine Environment of the North-East Atlantic (Paris, 22 September 1992), concerning the criteria for the definition of best available techniques and best environmental practices. The Contracting Parties undertook to send their comments on this Appendix 1 to the Secretary before the end of June 1995, in order to enable the Secretary to prepare a Draft Annex on this subject, designed particularly for the Mediterranean. The Draft Annex proposed by the Secretary can be found in UNEP(OCA)/MED WG.107/3, pp. 15-17. Once again immediately before the beginning of the Second Meeting of Experts, the Italian Delegation formally proposed that the Annex to be adopted on this subject should be a repetition word by word of Appendix 1 to the 1992 Paris Convention (see UNEP(OCA)/MED WG.107/3 Add. 2, pp. 6-8). Neither of the two proposals was discussed until the very last minute of this Meeting. At the dawn of the last day, the Italian Delegation introduced its proposal, with the only argument that it was already in force for France and Spain, as they are coastal States both of the North-East Atlantic and of the Mediterranean Sea. Without any additional argument, the delegations of France, Greece, European Union and Israel backed the Italian proposal. The Spanish Delegation held that it was able to accept either of the two proposals. As it was evident that States responsible of the most land-based pollution in the Mediterranean preferred the wording of Appendix 1 to the 1992 Paris Convention, the Meeting approved by unanimity the Italian proposal, without discussing the contents of neither of the two proposals.

30.- Therefore, a distinction must be made between the thirteen measures adopted pursuant to the old 1980 LBS Protocol, that lack any mandatory character, and the measures and timetables that shall be adopted after the entry into force of the 1996 Amendments, that shall be binding for the Contracting Parties and so it will be legally possible to claim their implementation.

31.- Pursuant to Article 15, the meeting of the Contracting Parties shall adopt, by a two-thirds majority, the regional action plans and programmes containing measures and timetables for their implementation. These measures and timetables shall become binding for the Contracting Parties after a period of 180 days, except for the Contracting Parties which have notified the Secretariat of an objection before that deadline.

1996 amended Protocol, particularly its new Annex II ³², as well as the relevant decisions or recommendations approved at the Meetings of the Contracting Parties. In order to assess compliance with these authorizations and regulations, the Contracting Parties shall provide for systems of inspections by their competent authorities, and undertake to establish appropriate sanctions in case of non-compliance with the authorizations and regulations and ensure their application (Art. 6).

On the other hand, these duties are complemented with the undertaking of the Contracting Parties to carry out at the earliest possible date monitoring activities and to make their findings accessible to the public. These monitoring activities shall be carried out in order both to systematically assess, as far as possible, the levels of pollution along their coasts, in particular with regard to the sectors of activity and categories of substances listed in Annex I, and to evaluate the effectiveness of action plans, programmes and measures implemented under the 1996 amended Protocol to eliminate to the fullest possible extent pollution of the marine environment. The results and findings of these environmental monitoring activities shall be accessible to the public (Art. 8) and the Contracting Parties shall submit reports on these matters to the Meetings of the Contracting Parties for their consideration and for keeping under review the implementation of the 1996 amended Protocol (Articles 13.-1 and 14.-2).

Conclusions

During the last three years, the Mediterranean Coastal States and the European Community have constantly expressed their will of strengthening their efforts to prevent, abate, combat and eliminate to the fullest possible extent pollution in the Mediterranean Sea Area resulting from land-based sources and activities. Since the end of 1994, they have adopted several political understandings that embrace different arrangements concerning land-based pollution that have to be implemented during the next years.

Nearly at the same time, they also amended the old 1980 LBS Protocol with the same purpose. The 1996 Amendments to the 1980 LBS Protocol provides, for instance, for the adoption of accurate measures and timetables that, for the first time in the history of the MAP, will enjoy a mandatory character.

But although it is true that the Mediterranean Coastal States and the European Community have established a very strong political and legal framework to fight against this special source of marine pollution, the practical implementation of all these political and legal undertakings is something that remains to be seen. We have to bear in mind that the fight against land-based pollution is very expensive and technical in nature, and that only very few Mediterranean States are in good conditions to comply with all the new provisions of the 1996 amended LBS Protocol. Therefore, and to a large extent, the future success of all these

32.- The amended Annex II is entitled: "Elements to Be Taken into Account in the Issue of the Authorizations for Discharges of Wastes". This Annex lists the characteristics and composition of the discharges, the characteristics of discharge constituents with respect to their harmfulness and the characteristics of discharge site and receiving environment. It also deals with the availability of waste technologies and the potential impairment of marine ecosystems and sea-waters uses.

political and legal undertakings will depend upon the development of an effective solidarity among all the Mediterranean States.

References

BOU FRANCH, V. (1995), Protected areas and species: the Mediterranean Basin. In: E. Özhan (ed.), Proceedings of the Second International Conference on the Mediterranean Coastal Environment, vol. 2, pp. 671-695.

BOU FRANCH, V. (1996) Hacia la integración del medio ambiente y el desarrollo sostenible en la región mediterránea, Anuario de Derecho Internacional, 12, pp. 201-251.

DE HOYOS, D. (1976), The United Nations Environment Program: the Mediterranean Conferences, Harvard International Law Journal, 17, pp. 639 et seq.

GREENPEACE INTERNATIONAL (1995), "Dirty Dozen" Chemical Profiles. Paper prepared by Greenpeace International for the Intergovernmental Conference on Protection of the Marine Environment from Land Based Activities, Washington D.C. from October 23 - November 3, 1995, 22 pp.

GREENPEACE INTERNATIONAL (1996), From Washington to Syracuse: a regional ban on persistent toxic chemicals, 15 pp.

GURUSWAMY, L. D. et al (1994), Supplement of Basic Documents to International Environmental Law and World Order.

HEY, E.; IJLSTRA, T.; NOLLKAEMPER, A. (1993), The 1992 Paris Convention for the Protection of the Marine Environment of the North-East Atlantic: A Critical Analysis, The International Journal of Marine and Coastal Law, 8, pp. 1-49.

INTERNATIONAL Law Facing Mediterranean Sustainable Development: the Revision of the Barcelona Convention and its Related Protocols, ICCOPS International Workshop 1995: Regional Seas towards Sustainable Development in the Mediterranean, Genoa, 19-22 April 1995.

JUSTE RUIZ, J. (1993a), The Evolution of the Barcelona Convention and Its Protocols for the Protection of the Mediterranean Sea against Pollution. In: Edward L. Miles; Tullio Treves (eds.), The Law of the Sea: New Worlds, New Discoveries, pp. 208-238.

JUSTE RUIZ, J. (1993b), La Convention pour la protection du milieu marin de l'Atlantique Nord-Est, Revue Générale de Droit International Public, 97, pp. 365-393.

JUSTE RUIZ, J. (1995a), El Plan de Acción para el Mediterráneo 20 años después: la revisión del Convenio de Barcelona y sus protocolos, Meridiano Ceri, 6, pp. 12-15.

JUSTE RUIZ, J. (1995b), Le Plan d'action pour la Méditerranée vingt ans apres: las revision des instruments de Barcelone, Espaces et ressources maritimes, 9, pp. 249-259.

JUSTE RUIZ, J. (1995c), The Revision of the Barcelona Convention and its Related Protocols. In: ICCOPS Meeting, Genoa 20-23 April 1995, invited paper.

LEANZA, U. (1993), Il nuovo diritto del mare e la sua applicazione nel Mediterraneo, Torino, pp. 485 et seq.

MARCHISIO, S. (1995), Mediterranean Sustainable Development in International Law. In: E. Özhan (ed.), Proceedings of the Second International Conference on the Mediterranean Coastal Environment, vol. 2, pp. 657-669.

RAFTOPOULOS, E. G. (1988), The Mediterranean Action Plan in a Functional Perspective: A Quest for Law and Policy. MAP Technical Report Series N° 25, UNEP, Athens, 105 pp.

REPUBLIC OF TUNISIA (1995), The Tunis Conference on Sustainable Development in the Mediterranean, 2 vols..

ROS VICENT, J. (1995), Introducció. In: Generalitat de Catalunya (ed.), Conveni de Barcelona per a la protecció de la mar Mediterrània, pp. 7-18.

SCOVAZZI, T. (1994), The Fifth Protocol to the Barcelona Convention for the Protection of the Mediterranean, IJO Newsletter, November 1994, pp. 14 et seq.

SCOVAZZI, T. (1995a), Il quinto protocollo alla convenzione di Barcellona sulla protezione del Mediterraneo, Rivista giuridica dell'ambiente, 1995, pp. 365 et seq.

SCOVAZZI, T. (1995b), Nuovi sviluppi nel "sistema di Barcellona" per la protezione del Mediterraneo dall'inquinamento, Rivista Giuridica dell'Ambiente, 1995, pp. 735-740.

SKJÆRSETH, J. B. (1993), The "effectiveness" of the Mediterranean Action Plan, International Environmental Affairs, 1993, pp. 313 et seq.

TANGI, M. (1975), Plan d'Action pour la Méditerranée après 1973. In: La Méditerranée, Ann. études int., 6, pp. 134 et seq.

TREVES, T. (1994), The Protection of the Oceans in Agenda 21 and International Environmental Law. In: Luigi Campiglio et al, The Environment After Rio. International Law and Economics, pp. 161-171.

UNEP (1992a), Mediterranean Action Plan and Convention for the Protection of the Mediterranean Sea against Pollution and its related protocols, Athens, 61 pp.

UNEP (1992b), The Mediterranean Action Plan. Saving our common heritage, Athens, 40 pp.

UNEP (1995a), Mediterranean Action Plan Phase II and Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols, Athens, 129 pp.

UNEP (1995b), Common Measures for the Control of Pollution adopted by the Contracting Parties to the Convention for the Protection of the Mediterranean Sea against Pollution, MAP Technical Reports Series No. 95, Athens, 69 pp.

UNEP(OCA)/LBA/IG.2/6 (5 December 1995): Report of the Intergovernmental Conference to Adopt a Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities, 103 pp.

UNEP(OCA)/MED IG.3/5: 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.

UNEP(OCA)/MED IG.4/4: Final Act and Protocol for the Protection of the Mediterranean Sea against Pollution Resulting From Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil (Madrid, 13-14 October 1994).

UNEP(OCA)/MED IG.5/3 (15 April 1995): Report of the Executive Director on the Implementation of the Mediterranean Action Plan during 1994-1995.

UNEP(OCA)/MED IG.5/16 (8 June 1995): Report of the Ninth Ordinary Meeting of the Contracting Parties to the Barcelona Convention for the Protection of the Mediterranean Sea against Pollution and its Related Protocols.

UNEP(OCA)/MED IG.6/7: Final Act of the Conference of Plenipotentiaries on the Amendments to the Convention for the Protection of the Mediterranean Sea against Pollution, to the Protocol for the Prevention of Pollution of the Mediterranean Sea by

Dumping from Ships and Aircraft and on the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean, Athens, 409 pp.

UNEP(OCA)/MED IG.7/4 (15 March 1996): Final Act of the Conference of Plenipotentiaries on the Amendment of the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources, 113 pp.

UNEP(OCA)/MED WG.107/Inf.3 (5 February 1996): Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities and Other Activities Relevant to the Process of Amendment of the LBS Protocol and Its Implementation. Information paper by the Secretariat, 16 pp.

UNEP(OCA)/MED WG.107/3 (9 January 1996): Proposed Amendments to the Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources.

UNEP(OCA)/MED IG.9/3 (29 September 1996): Draft Protocol on the Prevention of Pollution of the Mediterranean Sea By Transboundary Movements of Hazardous Wastes and Their Disposal.

UNEP(OCA)/MED WG.107/3 Add. 2 (23 February 1996): Proposed Amendments to the Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources. Addendum 2.

UNEP(OCA)/MED WG.82/4 (25 November 1994): Report of the Meeting of Legal and Technical Experts to Examine Amendments to the Barcelona Convention and its Related Protocols and the Mediterranean Action Plan (MAP).

UNEP(OCA)/MED WG.92/4 (11 May 1995): Report of the Meeting of Legal and Technical Experts to Examine Amendments to the Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources (Syracuse, 4-6 May 1995)

UNEP(OCA)/MED WG.107/4 (5 March 1996): Report of the Second Meeting of Legal and Technical Experts to Examine Amendments to the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-based Sources.

VALLEGA, A. (1995), The Mediterranean after the 1995 Convention. The historical sense of a turnaround point. In: E. Özhan (ed.), Proceedings of the Second International Conference on the Mediterranean Coastal Environment, vol. 2, pp. 719-732

YERROULANOS, M. (1982), The Mediterranean Action Plan: a Success Story in International Co-operation, Coastal Management, 49, pp. 175 et seq.