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THE DEVIL IS IN THE DETAILS: INCREASING INTERNATIONAL LAW'S INFLUENCE ON DOMESTIC ENVIRONMENTAL PERFORMANCE—THE CASE OF ISRAEL AND THE MEDITERRANEAN SEA*

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INTRODUCTION

International environmental law has emerged as a major catalyst for promoting domestic environmental agendas. Local environmental advocates frequently attempt to leverage their own legislation by relying on standards that have been set in international treaties, even if their own country is not yet a party to the agreement.¹ The Convention for the Protection of

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¹For instance, Israel, though it is not a party, is trying to meet the provisions of the United Nations Convention on the Law of the Sea, *concluded on* Dec. 10, 1982, 1833 U.N.T.S. 3 (entered into force Nov. 16, 1994). See Dorit Talitman, *Oil and the I.D.F. – Should the Prevention of Sea-Water Pollution by Oil Ordinance (New Version), 1980 Apply to the Israeli Army?*, 14 *Law & Army* 209, 220 (2000). Furthermore, although Israel is not required to adopt a “carbon ceiling” under the Kyoto Protocol to the United Nations Framework Convention

Mediterranean Sea Against Pollution² (the “Barcelona Convention”), adopted in 1976,³ along with its subsequent protocols⁴ and action plans,⁵ was among the first examples of a

on Climate Change, *adopted* Dec. 10, 1997, 37 I.L.M. 22, *available at* <http://unfccc.int/resource/docs/convkp/kpeng.pdf> [hereinafter Kyoto Protocol], and only report according to it, the Israeli Ministry of the Environment tries to find ways to meet Protocol standards and integrate the country into the Kyoto system. *See generally* ISRAELI MINISTRY OF ENVIRONMENT, ISRAEL NATIONAL REPORT ON CLIMATE CHANGE (2000), *available at* <http://unfccc.int/resource/docs/natc/isrnc1.pdf>. The United Nations Framework Convention on Climate Change, *done* May 9, 1992, can be found at 1771 U.N.T.S. 165, *available at* <http://unfccc.int/resource/docs/convkp/conveng.pdf> (entered into force Mar. 21, 1994).

²Convention for the Protection of Mediterranean Sea Against Pollution, *adopted* Feb. 16, 1976, 1102 U.N.T.S. 27 (entered into force Feb. 12, 1978) [hereinafter Barcelona Convention].

³*See* U.N. Env’t Programme Mediterranean Action Plan (UNEP MAP), Status of Signatures and Ratifications of the Barcelona Convention for the Protection of the Mediterranean Sea Against Pollution and its Protocols (Feb. 28, 2002), *at* <http://www.unepmap.gr/pdf/statusofsignatures.pdf>. As of February 28, 2002, the contracting parties to the Barcelona Convention were the European Union and the following nations: Albania, Algeria, Bosnia-Herzegovina, Croatia, Cyprus, Egypt, France, Greece, Israel, Italy, Lebanon, Libya, Malta, Monaco, Morocco, Slovenia, Spain, Syria, Tunisia, and Turkey. *See id.*

⁴Four protocols to the Barcelona Convention are in force today. Two of them were signed along with the Barcelona Convention: the Protocol for the Prevention of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft, *adopted* Feb. 16, 1976, 1102 U.N.T.S. 92 (entered into force Feb. 12, 1978); and the Protocol Concerning Co-operation in Combating Pollution of the Mediterranean Sea by Oil and Other Harmful Substances in Cases of Emergency, *adopted* Feb. 16, 1976, 1102 U.N.T.S. 122 (entered into force Feb. 12, 1978). Two other protocols were signed and entered into force subsequently: the Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources, *adopted* May 17, 1980, 1328 U.N.T.S. 105, 120 (entered into force June 17, 1983) [hereinafter LBS Protocol] and the Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean, *adopted* June 10, 1995, <http://www.unepmap.gr/pdf/spa.pdf> (entered into force Dec. 12, 1999) (replacing Protocol Concerning Mediterranean Specially Protected Areas, *adopted* Apr. 3, 1982, 1425 U.N.T.S. 153, 161 (entered into force Mar. 23, 1986)). As of February 28, 2002, three additional protocols have been adopted, but have not yet entered into force. Protocol Concerning Cooperation in Preventing Pollution from Ships and, in Cases of Emergency, Combating Pollution of the Mediterranean Sea, *adopted* Jan. 25, 2002, <http://www.unepmap.gr/pdf/newemergency.pdf>; 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, *adopted* Oct. 14, 1994, <http://www.unepmap.gr/pdf/offshore.pdf>; Protocol on the Prevention of Pollution of the Mediterranean Sea by Transboundary Movements of Hazardous Wastes and their Disposal, *adopted* Oct. 1, 1996, <http://www.unepmap.gr/pdf/hazardous.pdf>.

⁵The Mediterranean Action Plan (MAP) “tackles Mediterranean environmental

modern environmental treaty with the specific goal of galvanizing all the riparians of an international body of water to work together to save an endangered resource.⁶

The State of Israel was a particularly enthusiastic participant in the Barcelona Convention negotiations. The motivation, in retrospect, was much more “geo-political” than “ecological” in nature.⁷ The 1970s, in the aftermath of the Yom Kippur War,⁸ the attendant oil boycott, and the political climate in the Middle East, was a period of acute international isolation for Israel in the community of nations.⁹ This “seclusion” culminated in the 1975 United Nations decision that “defined” Zionism (Jewish

and sustainable development issues. With the future in mind, it gets different sectors of the Mediterranean society involved in preserving the region’s rich human and natural resources” UNEP MAP, MAP! . . . What MAP?: The Plan, at <http://www.unepmap.gr>. (last visited Feb. 9, 2003). MAP has twenty-one members who are the contracting parties to the Barcelona Convention. The members decide on the MAP strategies, budget and programme. UNEP MAP, MAP! . . . What MAP?: The MAP Structure, at <http://www.unepmap.gr>. One of the programmes of MAP is the Mediterranean Marine Pollution Monitoring and Research Programme (the “MED POL Programme”), which was created in 1975 “to answer the specific needs to better assess, qualify and quantify the marine environmental problems of the Mediterranean sea” U.N. Env’t Programme, *Atmospheric Input of Persistent Organic Pollutants to the Mediterranean Sea*, in 130 MAP TECHNICAL REP. SERIES preface (2001). The MED POL secretariat assisted the countries in the formulation and formal adoption of a regional Strategic Action Programme (SAP) to address pollution from land-based activities. MAP includes six regional activity centers, “each offering expertise in specific fields of action.” UNEP MAP, MAP! . . . What MAP?: The MAP Structure, *supra*. Some of these activity centers produce their own strategic plans for specific subjects. UNEP MAP, Regional Activity Centre for Specially Protected Areas, at <http://www.rac-spa.org.tn> (last visited Feb. 9, 2003) (providing links to action plans for the protection of monks seals, sea turtles, cetaceans, and marine vegetation).

⁶Not only did the Barcelona Convention establish high standards, it also set the grounds for several levels of specifications: the Convention itself, the specific protocols, and the most specific action plans, including both goals and timetables. It was also the first convention that was amended, expanded and renamed in line with Agenda 21. See PATRICIA W. BIRNIE & ALAN E. BOYLE, *INTERNATIONAL LAW AND THE ENVIRONMENT* 357 (2d. ed. 2002). Agenda 21 can be found at Report of the United Nations Conference on Environment and Development Annex II: Agenda 21, U.N. Doc. A/CONF.151/26 (Vol. III) (1992), available at <http://www.un.org/esa/sustdev/agenda21text.htm> [hereinafter Agenda 21].

⁷ALON TAL, *POLLUTION IN A PROMISED LAND: AN ENVIRONMENTAL HISTORY OF ISRAEL* 269 (2002).

⁸The Yom Kippur War lasted from the 6th to the 24th of October 1973.

⁹See CHAIM HERZOG, *THE ARAB-ISRAELI WARS: WAR AND PEACE IN THE MIDDLE EAST* 323 (Vintage Books 1984) (1982).

Nationalism) as a form of racism.¹⁰ The Barcelona meetings, which began in 1974, were a lone ray of light on Israel's dark diplomatic landscape at the time. The professional atmosphere of the discussions allowed Israelis to sit with representatives of the most "hardline" Arab nations and participate fully in substantive discussions and agreements, without facing the indignity of denunciations, walk-outs, and diplomatic conspiracies.

It is little wonder that the nation's executive and legislative branches moved swiftly (by local standards) to ratify the specific protocols of the Barcelona Convention. After years of neglect, domestic legislation was passed¹¹ and inspectors were appointed.¹² Unlike many environmental problems in Israel, marine pollution has been the focus of regulatory efforts by the central government for over two decades. Indeed, it is often viewed as a success story due to a drop in certain pollution parameters.¹³

For purposes of the present research, marine pollution prevention unquestionably constitutes the one prominent medium in Israel for which a comprehensive enforcement effort exists and has been operating for some time.¹⁴ Two main statutes are implemented by the Israeli marine pollution enforcement system, the Prevention of Pollution from Land-Based Sources Law, 1988 (the "LBS Statute")¹⁵ and the Prevention of Sea-Water Pollution from Oil Ordinance (New Version), 1980 (the "Oil Ordinance").¹⁶ Since both statutes are operated and implemented by the same body—the Israeli Ministry of the Environment¹⁷—a basis for

¹⁰AVI BEKER, *THE UNITED NATIONS AND ISRAEL: FROM RECOGNITION TO REPREHENSION* 56 (1988).

¹¹Prevention of Pollution of the Sea from Sources on Land Law 5748-1988 (Isr.), *translated in* ENVIRONMENTAL PROTECTION LEGISLATION 109 (Aryeh Greenfield trans., 2d ed. 2002) [hereinafter LBS Statute].

¹²The appointed inspectors initially worked under the umbrella of the Marine and Shores Department of the Israeli Environmental Protection Service, which eventually joined the new Ministry of Environment in 1989. For a description of activities during the early years of the Department see TAL, *supra* note 7, at 270-71.

¹³See Alon Tal & Dorit Talitman, *The Enforcement System of the Ministry of Environment*, Internal Report (2000).

¹⁴See, e.g., Israeli Ministry of the Interior, *Establishing the Marine Pollution Prevention Department in the Environmental Protection Service*, in 11 ENVTL. QUALITY IN ISR. 147 (1985).

¹⁵LBS Statute, *supra* note 11.

¹⁶Seawater Pollution by Oil (Prevention) Ordinance (New Version), 1980, 3 L.S.I. 124, (1981) [hereinafter 1980 Oil Ordinance].

¹⁷See Israeli Ministry of the Environment, Information Kiosk: Marine and

comparing the two exists. Also, due to the time difference in the passage of these two statutes, much may be learned from such a comparison. Whereas the LBS Statute belongs to a new generation of Israeli environmental legislation, the origins of the Oil Ordinance are much older.¹⁸

About twenty-five years have passed since Israel signed the key protocols to the Barcelona Convention and began this process. To date, there has never been an empirical evaluation of Israel's marine pollution enforcement system, nor has there been an attempt to understand the international versus the domestic causes for progress (or the lack thereof). There also does not appear to be similar analyses in other Mediterranean countries. Although the United Nations Environment Programme (UNEP) has initiated a broad review of the main obstacles to implementation of the Barcelona Convention, both the criteria utilized in the analysis and its recommendations are very generalized.¹⁹ The vagueness can be attributed to a desire to include the full range of contracting parties, or perhaps even a hesitation to make aggressive demands for specific actions. This Article attempts to assess the performance of the Israeli marine pollution enforcement system within the context of Israel's ratification of the Barcelona Convention and its Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources (the "LBS Protocol").²⁰

The Article opens with a review of the conditions in the Mediterranean environment during the past quarter-century in general, and in the local Israeli context in particular. In Part II, the Barcelona Convention, along with its LBS Protocol and action plan, is reviewed with special emphasis on Israel's legislative response to the Barcelona Convention. The main provisions of the Oil Ordinance will be discussed as well for comparative purposes. In Part III, the results of a comprehensive empirical survey of Israel's enforcement efforts to protect the Mediterranean will be presented. The Israeli experience confirms the underlying

Coastal Environment, http://english.sviva.gov.il/Eng-site/Kiosk/Kiosk_frame.htm (last visited Feb. 16, 2003).

¹⁸See *infra* Part II.

¹⁹See, e.g., U.N. ENV'T PROGRAMME, IDENTIFICATION OF PRIORITY POLLUTION HOT SPOTS AND SENSITIVE AREAS IN THE MEDITERRANEAN: MAP TECHNICAL REP. SERIES NO. 124 (1999).

²⁰LBS Protocol, *supra* note 4.

argument of this Article—international treaties (and the Barcelona Convention in particular) can bring about fundamental change in a country's attitude towards a transboundary natural resource. While this positive phenomenon is readily manifested in the statutory realm, it may do little to expedite efficient and effective implementation. The sundry obstacles to a truly effective and responsible domestic marine pollution prevention policy suggest an agenda for the next generation of international treaties.

Part IV of this Article presents the broader aspect of this argument, examining the appropriate amount of specificity in international environmental treaties in general. This Part argues that while political expediency and economic capacity may constitute the most typical obstacles to implementing international environmental commitments,²¹ a lack of specificity in the expectations placed on parties to such commitments may also contribute to disappointing results.²² This is especially true with respect to regulatory performance, enforcement programs, and implementation. Israel's experience in implementing its obligations under the Barcelona Convention suggests that international law was indeed critical in galvanizing local environmental concerns to launch a regulatory program.²³ However, it also suggests that present flaws in implementation could greatly benefit from a more thorough, more specific, stricter version of this important regional instrument. Only after an enhanced level of detail is integrated into international agreements, addressing the practical problems involved by implementing a broad international mission, will there be meaningful improvement in the quality of an environmental resource.

²¹Ronald B. Mitchell, *Compliance Theory: A Synthesis*, 2 REV. EUR. CMTY. & INT'L ENVTL. L. 327, 329 (1993).

Some states may sign treaties to garner the political benefits of membership, never intending to comply. Some may sign with the intention of complying with most but not all rules. Actors may also be unable to comply. Actors who perceive compliance as beneficial may lack the necessary financial, administrative or technological resources to comply.

Id.

²²See generally Geoffrey Palmer, *New Ways to Make International Environmental Law*, 86 AM. J. INT'L. L. 259 (1992) (describing the problems with existing methods of making international environmental law and related consequences).

²³See LBS Statute, *supra* note 11.

I

THE STATE OF THE MEDITERRANEAN SEA

The Mediterranean Sea is almost entirely enclosed by land, leading to a relatively slow renewal period of eighty to one-hundred years for its waters.²⁴ The languid rate of recharge delays dilution by oceanic waters and contributes to the accumulation of persistent hazardous pollutants.²⁵ The relentless expansion of riparian populations, increasingly dense coastal urbanization, and the growing popularity of Mediterranean beaches as tourist destinations combine to impose extreme pressures on the Mediterranean environment and its aquatic habitats.²⁶

In fact, even after two decades of cooperative international efforts, the state of the marine environment of the Mediterranean is far from encouraging. A recent report by UNEP on the state of the marine environment provides a long menu of gloomy empirical data to this effect.²⁷ The following pollutants join the noxious waste stream each year:

about 1.7×10^9 cubic metres of municipal waste water [is] discharged directly into the sea, mostly (about three-quarters) without treatment; about 66×10^9 cubic metres of industrial waste water [is] likewise discharged; [and] some 120,000 tons of mineral oils; 60,000 tons of detergents; heavy metals, phosphates, nitrates in excess of admissible levels.²⁸

The Mediterranean's assimilative capacity is too small for this pollution burden.²⁹ These alarming figures are manifested in the

²⁴See Silvio De Flora et al., *Genotoxic, Carcinogenic, and Teratogenic Hazards in the Marine Environment, with Special Reference to the Mediterranean Sea*, 258 MUTATION RES. 285, 297 (1991); ALEXANDRE KISS & DINAH SHELTON, INTERNATIONAL ENVIRONMENTAL LAW 160 n.11 (1991).

²⁵See De Flora, *supra* note 24, at 297.

²⁶U.N. ENV'T PROGRAMME, THE MEDITERRANEAN ACTION PLAN 6 (1997) [hereinafter MAP]. More information on the Mediterranean Action Plan is available at <http://www.unepmap.org> (last visited Mar. 7, 2003).

²⁷See U.N. ENV'T PROGRAMME, THE STATE OF THE MARINE AND COASTAL ENVIRONMENT IN THE MEDITERRANEAN REGION: MAP TECHNICAL REP. SERIES NO. 100, 111 (1996) [hereinafter STATE OF THE MARINE AND COASTAL ENVIRONMENT]. For more estimations, see U.N. ENV'T PROGRAMME, SURVEY OF POLLUTANTS FROM LAND-BASED SOURCES IN THE MEDITERRANEAN SEA: MAP TECHNICAL REP. SERIES NO. 109 (1996) [hereinafter SURVEY OF POLLUTANTS FROM LAND-BASED SOURCES].

²⁸STATE OF THE MARINE AND COASTAL ENVIRONMENT, *supra* note 27, at 111.

²⁹For a fine popular review of the Mediterranean's condition see Fred Pearce, *Dead in the Water*, NEW SCIENTIST, Feb. 4, 1995, at 26. For a more technical

higher mercury concentrations present in dead dolphins that were found close to Mediterranean shores than in those found on the shores of other oceans.³⁰ Several studies (mostly performed in the framework of the Mediterranean Marine Pollution Monitoring and Research Programme (MED POL)) have tested for carcinogenic, teratogenic, and mutagenic substances in the Mediterranean seawater, sediments and biota, finding varying concentrations of such substances.³¹

The main sources of marine pollution in the Mediterranean are land-based.³² At the time of the adoption of the Barcelona Convention in 1976, it was estimated that more than eighty percent of the pollution load of the Mediterranean Sea originated from land-based sources.³³ In Israel, the reports of the Marine and Coastal Environment Division in the Ministry of the Environment have consistently identified land-based sources as the major cause of marine pollution, due to their contribution to both volume and toxicity.³⁴ Accordingly, the reports produced by Israel Oceanographic and Limnological Research Ltd. (IOLR)³⁵ stress

discussion of carrying capacity and carrying capacity assessment see PRIORITY ACTIONS PROGRAMME REGIONAL ACTIVITY CENTRE, UNEP MAP, GUIDELINES FOR CARRYING CAPACITY ASSESSMENT FOR TOURISM IN MEDITERRANEAN COASTAL AREAS, U.N. Doc. PAP-9/1997/G.1 (1997), available at <http://www.pap-thecoastcentre.org/pdfs/GuidelinesCarryng.pdf>.

³⁰See H. Augier et al., *Mercury Contamination of the Striped Dolphin Stenella coeruleoalba Meyen from the French Mediterranean Coasts*, 26 MARINE POLLUTION BULL. 306, 309 (1993).

³¹See De Flora, *supra* note 24, at 297-98.

³²See Daniel Bodansky, *Protecting the Marine Environment from Vessel-Source Pollution: UNCLOS III and Beyond*, 18 ECOLOGY L.Q. 719, 724 (1991) (noting that, together with atmospheric sources, land-based sources account for seventy-seven percent of all marine pollution); De Flora, *supra* note 24, at 295-96 ("60-65% of the [teratogenic, mutagenic and carcinogenic load of pollution in the Mediterranean comes from land-based sources], half of which [is] from industry and about a quarter each [is] from domestic sewage and agriculture"). See also MAP, *supra* note 26, at 21.

³³SURVEY OF POLLUTANTS FROM LAND-BASED SOURCES, *supra* note 27, at 3.

³⁴See ENVIRONMENTAL PROTECTION SERVICE, ISRAELI MINISTRY OF INTERIOR, ANNUAL REPORT NO. 6: THE ENVIRONMENT IN ISRAEL 1978 (1979) [hereinafter 1978 ANNUAL REPORT]; AGENCY FOR ENVIRONMENTAL CONSERVATION, ISRAELI MINISTRY FOR INTERNAL AFFAIRS, ANNUAL REPORT NO. 7-8: THE ENVIRONMENT IN ISRAEL 1979-1980 (1981) [hereinafter 1970-80 ANNUAL REPORT]; ENVIRONMENTAL PROTECTION SERVICE, ISRAELI MINISTRY OF INTERIOR, ANNUAL REPORT NO. 1: THE ENVIRONMENT IN ISRAEL 1973 (1974) [hereinafter 1973 ANNUAL REPORT]. Prior to the establishment of the Israel Ministry of the Environment, these matters were handled by the Minister of the Interior.

³⁵For a description of this Israeli scientific institution, which oversees the

the crucial component of land-based sources in the marine pollution profile while singling out certain sources in particular.³⁶ The data indicate that some pollution parameters, such as mercury,³⁷ are on the rise, while others, such as nickel, cadmium, copper, lead,³⁸ and nutrients maintain high concentration levels.³⁹

This Article does not attempt to fully characterize the pollution profile of the marine environment of the Mediterranean. It does, however, make two basic assumptions, supported by two decades of UNEP reports:⁴⁰ first, the situation is severe and needs to be addressed without delay; and, second, the dominant fraction of the pollution in the Mediterranean Sea originates from land-based sources.

monitoring of the marine environment, see Israel Oceanographic and Limnological Research Institute (IOLR), <http://marine.ocean.org.il/index.html> (last visited Feb. 16, 2003).

³⁶See IOLR, *The Quality of the Territorial Water of Israel in the Mediterranean Sea – Results of the Monitoring of the Marine Pollution and its Sources - 1998*, IOLR Report H 23\99 (1999), at 5a [hereinafter IOLR Report 23/99]. In addition, the head of IOLR states that the main cause of marine pollution in Israel is industrial, originating from the population centers. See Yuval Cohen, *National Priorities in the Marine Environment in Israel*, in *Sea & Shores 2000*, 19, 22 (2000).

³⁷See IOLR, *Monitoring of Heavy Metals Along the Mediterranean Shore of Israel in 1997*, IOLR Report H 18\98 (1998), at 24 [hereinafter IOLR Report 18/98].

³⁸See IOLR Report 23/99, *supra* note 36, at 2b.

³⁹See IOLR, *Pollution of the Territorial Water of Israel in Nutrients from Land Based Sources and Rivers Data Summary 1990-1998*, IOLR Report H 25\98 (1998), at 24 [hereinafter IOLR Report 25/98]. In the same report, IOLR presents the need for a more comprehensive monitoring program in Israel, following the Barcelona Convention requirements. The current program monitors only heavy metals and nutrients in the Israeli marine territorial waters. Based on the available data, the Haifa Bay and the Kishon River are the most polluted marine areas in Israel. The pipeline outflow of the sewage treatment facility of Gush Dan (the Shafdan) and the area next to the effluent pipeline outlet of Ashdod Refineries and Agan Chemicals plant in Ashdod are also highly polluted. Recently, in June of 2002, the Ministry of the Environment adopted marine ambient standards. This is an encouraging and innovative development that could serve as a reference for the monitoring data concerning the Mediterranean Marine Environment. See ISRAELI MINISTRY OF THE ENVIRONMENT, *AMBIENT STANDARDS FOR THE MEDITERRANEAN MARINE ENVIRONMENT IN ISRAEL* (2002), available at http://www.sviva.gov.il/Environment/Static/Binaries/EnvironmentLibrary/tkanim_yamtichon_1.pdf [hereinafter AMBIENT STANDARDS].

⁴⁰For a list of such reports, see MAP Technical Reports, <http://195.97.105.164/sample/Final/MTSFull.htm> (last visited Mar. 7, 2003).

II

THE BARCELONA CONVENTION AND ISRAEL'S MARINE POLLUTION
STATUTES

In this Part, the principle obligations of the Barcelona Convention, along with its implementing LBS Protocol and action plan, will be described. The two main statutes upon which the Israeli marine pollution control system are based will also be discussed. The primary focus of this Part involves the normative directives regarding the enforcement system. This includes legal proscriptions and expectations concerning monitoring and reporting of discharges. It is worth noting the level of specificity contained in the Barcelona Convention and the two aforementioned Israeli laws. Like many environmental treaties, it should not be surprising that the tone of the Barcelona Convention is highly generalized.⁴¹ Yet, one might expect the language contained in the specific action plans drafted pursuant to the Convention to be rich in detail and clear in its expectations of the Parties. In fact, as will be discussed in further detail in a later section, many important specifications are conspicuously missing. This cannot help but contribute to the poor environmental performance of many Mediterranean countries.

A. *The Barcelona Convention*

The antecedents of international concern regarding Mediterranean marine conditions can be found long before the formal passage of the Barcelona Convention, its protocols, and implementation plans. The Convention was, in fact, the result of a natural progression in a line of international activities that had begun to acknowledge and consider the problem.⁴² In 1975,

⁴¹Generalized conventions are referred to as "framework conventions" in the international literature, since "they are no more than a 'framework', laying down only very general requirements for states 'to take measures' or enact 'all practicable measures', as in the case of the 1992 Climate Change Convention, the 1985 Convention for the Protection of the Ozone Layer or the 1979 Convention on Long-Range Transboundary Air Pollution . . ." BIRNIE & BOYLE, *supra* note 6, at 14.

⁴²For more detailed information about the origins and main events leading to the adoption of the Barcelona Convention, see MAP, *supra* note 26. For instance, the International Study Meeting on Marine Pollution, which was held in Monaco in 1974, established that the pollution of coastal water was the chief problem in the Mediterranean. UNEP initiated the Regional Seas Programme which today concerns thirteen sea areas, including the Mediterranean, considered as the pilot

sixteen Mediterranean countries and the European Commission approved the Mediterranean Action Plan (MAP) and its component MED POL.⁴³ Among the three constituents of the MAP is an institutional and legal section, as embodied in the Barcelona Convention and its protocols.⁴⁴ In 1976, the Barcelona Convention was signed; it entered into force in 1978.⁴⁵ In 1980, the LBS Protocol was signed at Athens.⁴⁶ The Barcelona Convention was amended in 1995,⁴⁷ and the LBS Protocol was amended in 1996.⁴⁸ Both were expeditiously signed by Israel.⁴⁹ In accordance with the amended LBS Protocol, the contracting parties adopted the regional Strategic Action Programme (SAP).⁵⁰

The Barcelona Convention includes general provisions⁵¹ followed by specific reference to a broad menu of pollutants.⁵² According to the general provisions, the contracting parties are obliged to “take all appropriate measures . . . to prevent, abate, combat and to the fullest possible extent eliminate pollution of the Mediterranean Sea Area . . . so as to contribute towards its sustainable development.”⁵³ Moreover, the parties are also required to adopt several central “environmental axioms.” Among these are:

- *The precautionary principle*, “by virtue of which where there are threats of serious or irreversible damage, lack of

region. *Id.* at 7.

⁴³*Id.*

⁴⁴The other two components are the scientific section (pollution assessment) and the socio-economic analysis (prospects and integrated planning). *Id.*

⁴⁵*Id.* at 7-8; Barcelona Convention, *supra* note 2.

⁴⁶MAP, *supra* note 26, at 9; LBS Protocol, *supra* note 4.

⁴⁷Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, *adopted* June 10, 1995, *available at* <http://www.unepmap.gr/pdf/barcelonaconvention.pdf> (not yet in force) [hereinafter 1995 Barcelona Convention].

⁴⁸Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources and Activities, *adopted* March 7, 1996, *available at* <http://www.unepmap.gr/pdf/lbs.pdf> (not yet in force) [hereinafter 1996 LBS Protocol].

⁴⁹All future references to the Barcelona Convention and LBS Protocol in this section refer to the amended versions.

⁵⁰U.N. ENV'T PROGRAMME, STRATEGIC ACTION PROGRAMME TO ADDRESS POLLUTION FROM LAND-BASED ACTIVITIES, MAP TECHNICAL REP. SERIES NO. 119 (1998) [hereinafter SAP].

⁵¹*See* 1995 Barcelona Convention, *supra* note 47, arts. 3-4.

⁵²*See id.* arts. 5-8, 11.

⁵³*Id.* art. 4(1).

full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation;”⁵⁴

- *The polluter pays principle*, “by virtue of which the costs of pollution prevention, control and reduction measures are to be borne by the polluter, with due regard to the public interest.”⁵⁵ The SAP stipulates that according to this demand, the Parties should “introduce pollution fees and fines to reduce the environmentally harmful impacts of certain activities.”⁵⁶
- *The conducting of environmental impact assessments* “for proposed activities that are likely to cause a significant adverse impact on the marine environment and are subject to an authorization by competent national authorities;”⁵⁷
- *International cooperation in pollution control*, especially regarding areas with shared effect upon states;⁵⁸
- *Utilization of best available techniques (BAT) and best environmental practices (BEP)*, while “taking into account the social and technological conditions.”⁵⁹

Following these general principles are the specific obligations of the Parties to combat different kinds of marine pollution, including, *inter alia*, pollution from land-based sources.⁶⁰ In addition, the Parties take upon themselves the responsibility to establish a monitoring system for waters within their own jurisdictions and to participate in regional monitoring programs.⁶¹ Of critical significance is the commitment of Parties to implement the Convention and its Protocols in their own domestic

⁵⁴*Id.* art. 4(3)(a).

⁵⁵*Id.* art. 4(3)(b).

⁵⁶SAP, *supra* note 50, at 71.

⁵⁷1995 Barcelona Convention, *supra* note 47, art. 4(3)(c).

⁵⁸*Id.* art. 4(3)(d).

⁵⁹*Id.* art. 4(4)(b).

⁶⁰Articles 5 through 8 and Article 11 of the 1995 Barcelona Convention specifically mention the following kinds of pollution: pollution caused by dumping from ships and aircraft or incineration at sea; pollution from ships; pollution resulting from exploration and exploitation of the continental shelf and the seabed and its subsoil; pollution from land-based sources; and pollution from transboundary movements of hazardous wastes and their disposal. *Id.* arts. 5-8, 11. The contracting parties are bound to take measures to “prevent, abate and to the fullest possible extent eliminate pollution of the Mediterranean Sea Area” of the specific types of pollution mentioned above. *See id.*

⁶¹*See id.* art. 12.

legislation.⁶²

B. *The Land-Based Sources Protocol*

Arguably, the most important of the protocols to be adopted by the contracting Parties (including Israel) is the LBS Protocol. According to the Protocol, “[t]he 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.”⁶³ They also commit themselves to developing action plans with timetables and measures for implementation, while using BAT and BEP (which are described more fully in the third annex).⁶⁴ This action plan has taken the form of the aforementioned SAP.⁶⁵

Furthermore, according to the LBS Protocol, each discharge or release into the Mediterranean Area “shall be strictly subject to authorization or regulation” by the national authorities.⁶⁶ Permits to discharge into the Mediterranean should follow the considerations specified in Annex II to the Protocol, which include: the characteristics and composition of the discharges; characteristics of discharge constituents with respect to their harmfulness; characteristics of discharge site and receiving environment; availability of waste technologies; and potential impairment of marine ecosystems and seawater uses.⁶⁷ The Parties are also expected to provide “a system of inspections by their competent authorities to assess compliance with authorization and regulations” and “establish appropriate sanctions in case of noncompliance.”⁶⁸

In addition, the Parties must meet the monitoring demands,⁶⁹ engage in technology sharing,⁷⁰ and report every two years to the Meeting of the Contracting Parties⁷¹ concerning statistical data on

⁶²See *id.* art. 14.

⁶³1996 LBS Protocol, *supra* note 48, art. 5(1).

⁶⁴*Id.* art. 5(2)-(4).

⁶⁵SAP, *supra* note 50.

⁶⁶*Id.* art. 6(1).

⁶⁷See *id.* annex II.

⁶⁸*Id.* art. 6(2), (4).

⁶⁹*Id.* art. 8.

⁷⁰*Id.* art. 9.

⁷¹*Id.* art. 13.

the authorizations granted,⁷² data from monitoring,⁷³ quantities of pollutant discharges,⁷⁴ and action plans adopted.⁷⁵

C. *The Strategic Action Programme*

As mentioned above, the SAP is an action plan that was created in order to implement the Barcelona Convention and the LBS Protocol. Since it is a rather comprehensive document, the following discussion shall only elaborate on the points that are of direct relevance to the focus of this Article, in particular reporting, monitoring and enforcement demands. The SAP is based upon the preliminary findings of a diagnostic analysis that synthesized regional actions that should be taken to protect the marine environment from LBS activities.⁷⁶ This study indicated that a lack of adequate legal and institutional frameworks was one of the five main causes for the grave Mediterranean marine environment situation.⁷⁷ This, as exemplified by inadequate pollution compliance and trend monitoring, was considered to be at the root of the Mediterranean Sea's present environmental problems.⁷⁸

The principle obligations that were adopted by the Parties include the reporting of toxic emissions into the different environmental media by polluting facilities.⁷⁹ Another demand for reporting can be found in the "Reporting" section of the SAP, which proposes an obligation "to develop public tracking and reporting system of pollutants . . ."⁸⁰ Another focus of the SAP relates to the need for monitoring and enforcement, proposing "[t]he establishment of inspection systems to ensure compliance" and "[t]he establishment of monitoring programmes to evaluate the effectiveness of actions and measures implemented under [the

⁷²*Id.* art. 13(2)(a).

⁷³*Id.* art. 13(2)(b).

⁷⁴*Id.* art. 13(2)(c).

⁷⁵*Id.* art. 13(2)(d).

⁷⁶SAP, *supra* note 50, at 2.

⁷⁷*See id.* at 3. The other four "root causes" cited for the situation of the Mediterranean marine environment were: "[i]nadequate planning and management at all levels"; "[i]nsufficient human and institutional capacity"; "[i]nsufficient involvement of stakeholders"; and "[i]nadequate financial mechanisms and support." *Id.*

⁷⁸*Id.*

⁷⁹*Id.* at 6.

⁸⁰*Id.* at 38.

SAP].”⁸¹ It is also worth noting that within the budget plan⁸² recommended to support the Parties in implementing the Convention is a table containing the estimated costs for establishing an inspection system and for ensuring compliance.⁸³

In addition, the SAP identifies many subjects that will require regulatory treatment,⁸⁴ sets the targets that should be reached and corresponding timetables, and proposes a series of actions that should be taken in order to reach them.⁸⁵ In general, among the activities suggested to be undertaken at the national level are the implementation of environmental audits,⁸⁶ the application of BAT and BEP to the extent possible,⁸⁷ and the preparation of national programs for meeting the required targets.⁸⁸

Nonetheless, the SAP avoids any clear delineation of the actions that should be taken in order to achieve those well defined goals. While the establishment of an inspection system to ensure compliance and a monitoring system to evaluate its effectiveness are general objectives,⁸⁹ there are no recommendations about how to launch them, nor is there guidance on the personnel, technical capabilities, and legal authorities that will be needed. The SAP also fails to elaborate specific criteria to evaluate performance and compliance levels. If the SAP was already perceived as too comprehensive to include such specifications, perhaps a more specific plan for enforcement and compliance should have been considered as an appendix. Annex II of the LBS Protocol,⁹⁰ which sets forth the considerations that should be taken by the Authorization Committee, might have set an example on this matter.

⁸¹*Id.* at 34.

⁸²This is a monetary plan aimed at assisting the Mediterranean countries in financing their activities.

⁸³*See id.* at 66.

⁸⁴*See id.* at 7-33 (referring to urban environment, industrial development, and physical alterations and destruction of habitats).

⁸⁵*See id.*

⁸⁶*See, e.g., id.* at 16.

⁸⁷*See, e.g., id.* at 12, 16, 17, 24.

⁸⁸*See, e.g., id.* at 7, 9, 17, 23.

⁸⁹*Id.* at 34.

⁹⁰*See supra* note 67 and accompanying text.

D. *Israel's Land-Based Sources Marine Pollution Law*

Israel took its commitment under the Barcelona Convention seriously. Ratification of the LBS Protocol took the form of the LBS Statute,⁹¹ which was approved by the Israeli Knesset in 1988,⁹² and subsequent regulations that made the statute operational in 1990.⁹³ Before the LBS Statute, the Oil Ordinance⁹⁴ was the only normative framework regulating marine pollution in Israel. In the absence of any statutory proscriptions, there were practically no prevention and control activities concerning marine pollution for substances other than oil.⁹⁵ This flew in the face of the unequivocal recognition by Israeli authorities that land-based pollution sources were the primary obstacles to environmental quality in the Mediterranean.⁹⁶ Both the legislation itself and the accompanying language in the proposed bill confirm that the underlying aim of this statute was to implement the LBS Protocol in Israeli legislation.⁹⁷

⁹¹LBS Statute, *supra* note 11.

⁹²D.K. (1988) 3236.

⁹³Regulations for the Prevention of Marine Pollution from Land Based Sources, 1990, K.T. 5240, 250.

⁹⁴1980 Oil Ordinance, *supra* note 16.

⁹⁵See 1978 ANNUAL REPORT, *supra* note 34; 1979-80 ANNUAL REPORT, *supra* note 34; 1973 ANNUAL REPORT, *supra* note 34.

⁹⁶*Id.*

⁹⁷See Legislation Suggestion Prevention of Pollution from Land-Based Sources Law, 1988, H.H. 1884 (1988). This statute was legislated prior to the establishment of the Israeli Ministry of the Environment (in 1989), while activities involving environmental protection were largely controlled by Israel's Ministry of the Interior. Simultaneously, two legislative proposals were prepared: a governmental initiative and a private bill by parliament members Edna Solodor and Dedi Tzucker. The two bills were merged into the present legislation. Telephone Interview with Ruth Rotenberg, Head of the Legal Department, Ministry of the Environment, in Isr. (July 21, 2002).

In the Knesset discussion prior to the vote, parliament member Edna Solodor explained that the statute was designed to cover a lacuna in the Israeli legal system, since the land-based source pollution had not yet been regulated in any law. She added that about ten years earlier, the Mediterranean countries had joined together to sign the Barcelona Convention, and its most important annex—the LBS Protocol. As such, Israel was unable to ratify the Protocol without that legislation. She also expressed the hope for a cleaner marine environment in the Mediterranean. D.K. (1988) 3236.

According to the Israeli Ministry of the Environment's Legal Department, the 1996 amendments to the Barcelona Convention and Protocol are to be ratified by the approval of proposed amendments to Israel's LBS law. Such amendments have been prepared both by the government and by former Knesset member Nehama Ronen. Telephone Interview with Rachel Adam, Legal Department,

The LBS Statute is a criminal statute that forbids the discharge or disposal of any substances into the sea without a permit.⁹⁸ The criminal intent required in order to convict for this offense is the “intention to discharge into the sea either directly or indirectly.”⁹⁹ Furthermore, the law allows polluters to claim a defense if all reasonable measures were taken to prevent the discharge or disposal into the sea, and the discharge was due to damage, accident, or an eminent danger to the lives of human beings.¹⁰⁰ The maximum fine for a violation of Section 2 is 146,000 NIS (approximately \$30,400), and in the case of a continuous offense, an additional fine of 2,900 NIS (approximately \$600) for each day the offense continues.¹⁰¹ In addition to the fine, the polluter can also be assessed cleanup expenses.¹⁰² Moreover, in order to receive a permit for establishing new business, the provisions of the marine legislation must be met and licenses can be modified accordingly.¹⁰³ Fines that are paid according to this statute enter the Prevention of Seawater Pollution Fund that finances marine pollution abatement activities.¹⁰⁴

The statute also establishes an inter-ministerial permitting committee headed by a representative of the Minister of the Environment (previously the Minister of the Interior) with six members representing the Ministries of Defense, Health, Agriculture, Transportation, Tourism, and Industry and Trade.¹⁰⁵ Once a permit is granted, permittees must report on each disposal or discharge into the sea.¹⁰⁶

The regulations defining the mechanics for implementing the LBS Statute were promulgated in 1990.¹⁰⁷ They set forth

Ministry of the Environment, Israel (Mar. 17, 2003).

⁹⁸LBS Statute, *supra* note 11, § 2, at 109.

⁹⁹*Id.*

¹⁰⁰*Id.* § 7, at 111.

¹⁰¹*Id.* § 6(a), at 110.

¹⁰²*Id.* § 9, at 111-12.

¹⁰³*Id.* § 11, at 112.

¹⁰⁴The Fund was established under the 1980 Oil Ordinance as will be elaborated in the following section. *See* 1980 Oil Ordinance, *supra* note 16, ¶¶ 13-17, at 125-26.

¹⁰⁵LBS Statute, *supra* note 11, § 3(a), at 109.

¹⁰⁶*Id.* § 4, at 110.

¹⁰⁷Regulations for the Prevention of Marine Pollution from Land-Based Sources, 1990, K.T. 5240, 250 [hereinafter Land-Based Sources Regulations].

procedures for the permitting committee,¹⁰⁸ and specified the criteria for issuing a permit¹⁰⁹ and the considerations that the committee must weigh.¹¹⁰ These include the quality of the waste or sewage and its ingredients,¹¹¹ the quality of the waste or sewage in relation to its environmental damage,¹¹² the characteristics of the dumping site in the sea,¹¹³ and the possibilities of negative impacts upon the marine environment.¹¹⁴

For enforcement purposes, the LBS Statute obliges the Minister of the Environment to appoint inspectors who are authorized to enter premises when there is a reasonable basis to assume that unauthorized discharges are occurring.¹¹⁵ Moreover, inspectors have powers vested in police officers according to other criminal statutes.¹¹⁶

E. *Israel's Oil Ordinance and the MARPOL Convention*

The first environmental law in Israel regulating marine pollution was passed in 1980. The Oil Ordinance¹¹⁷ replaced a 1936 ordinance first enacted during the days of the British Mandate.¹¹⁸ The 1980 law is similar to the 1936 ordinance in many respects, but includes several additions and changes. The 1936 ordinance was in fact based upon a British statute—The Oil in Sea Lakes and Rivers Act of 1922.¹¹⁹ In 1980, the Prevention of Marine Water Pollution by Oil Regulations (Implementation of the Convention) were promulgated.¹²⁰ They were later replaced by the

¹⁰⁸*Id.* §§ 4, 9, 10, 11, 14.

¹⁰⁹*Id.* §§ 6, 7.

¹¹⁰*Id.* § 8.

¹¹¹*Id.* annex 3, § 1.

¹¹²*Id.* annex 3, § 2.

¹¹³*Id.* annex 3, § 3.

¹¹⁴*Id.* annex 3, § 4.

¹¹⁵LBS Statute, *supra* note 11, § 5, at 110. Previous to the establishment of the Israeli Ministry of the Environment, this authority was in the hands of the Minister of the Interior.

¹¹⁶*Id.* § 5(d), at 110.

¹¹⁷1980 Oil Ordinance, *supra* note 16.

¹¹⁸The Prevention of Oil Spill into the Sea Ordinance, 1936, I.R. 187.

¹¹⁹*See id.*

¹²⁰Those regulations were meant to implement the 1969 amendments to the International Convention for the Prevention of Pollution of the Sea by Oil, 1954, *opened for signature* May 12, 1954, 12 U.S.T. 2989, 327 U.N.T.S. 3 (entered into force July 26, 1958). The regulations are available at <http://www.sviva.gov.il/>.

much more detailed 1987 regulations¹²¹ that were designed to implement the International Convention for the Prevention of Pollution from Ships 1973¹²² and its 1978 Protocol¹²³ (collectively, MARPOL).

Notwithstanding the enormous significance of MARPOL as an instrument for international marine pollution control,¹²⁴ it would not be useful to elaborate on the specific contents of MARPOL here. First, efforts to update Israeli Oil Ordinance preceded MARPOL's passage. Second, the focus of this Article involves the influence of international environmental law on domestic legislation and local environmental conditions—in particular the effect on discharges into the Mediterranean Sea. The aims and scope of the MARPOL Convention are quite different. MARPOL focuses primarily on pollution from ships in all maritime areas and the responsibilities of flag states, port states, and coastal states, as well as on technical and construction demands from ships and procedures for pollution prevention.¹²⁵

It is worth noting, however, that the MARPOL Convention contains two articles that delineate reporting demands,¹²⁶ and a protocol that elaborates on them.¹²⁷ Reports are to be submitted under certain circumstances, for example when discharges take

¹²¹Prevention of Marine Water Pollution by Oil Regulation (Implementation of the Convention), 1987, K.T. 5006, 438 [hereinafter 1987 Oil Regulations].

¹²²International Convention for the Prevention of Pollution from Ships, 1973, *done* Nov. 2, 1973, 1340 U.N.T.S. 184. The Treaty did not enter into force until amended and incorporated by the Protocol of 1978 Relating to the International Convention for the prevention of Pollution From Ships, 1973, *concluded* on Feb. 17, 1978, 1340 U.N.T.S. 61 (entered into force Oct. 2, 1983) [hereinafter MARPOL 1973].

¹²³Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships, 1973, *concluded* on Feb. 17, 1978, 1340 U.N.T.S. 61 (entered into force Oct. 2, 1983).

¹²⁴See Ronald B. Mitchell, *Compliance with International Treaties: Lessons from International Oil Pollution*, ENV'T, May 1995, at 10.

¹²⁵For further details on MARPOL, see Rebecca Becker, Note, *MARPOL 73/78: An Overview in International Environmental Enforcement*, 10 GEO. INT'L ENVTL. L. REV. 625 (1998). See also Jeff B. Curtis, Comment, *Vessel-Source Oil Pollution and MARPOL 73/78: An International Success Story?*, 15 ENVTL. L. 679 (1984-85); Andrew Griffin, Comment, *MARPOL 73/78 and Vessel Pollution: A Glass Half Full or Half Empty?*, 1 IND. J. GLOBAL LEGAL STUD. 489 (1994). An excellent review of MARPOL's implementation can be found in Mitchell, *supra* note 124.

¹²⁶MARPOL 1973, *supra* note 122, arts. 6, 8, 1340 U.N.T.S. at 187-88.

¹²⁷*Id.* protocol I, 1340 U.N.T.S. at 194-95.

place that are not permitted under the MARPOL Convention.¹²⁸ It is also important to acknowledge that Israel's Oil Ordinance and its regulations contain a broad array of MARPOL-related prescriptions. These include the management of an oil record book,¹²⁹ special instructions for monitoring and auditing,¹³⁰ technical instructions concerning ship design standards,¹³¹ and specification of procedures and locations for the emptying of ballast waters.¹³²

It is important to focus on issues concerning Section 18 of the Oil Ordinance, which defines any oil spill into the sea as a criminal offense.¹³³ Section 18 relates both to the owner or the captain of a ship, as well as the owner or the person in charge of a land-based facility from which an oil spill occurs.¹³⁴ Therefore, legal liability under this section applies to oil spills from both ships and land-based sources.

In accordance with the above-mentioned scope of the LBS Statute, we can conclude that the two statutes overlap regarding certain offenses. Specifically, an oil spill from a land-based source can be prosecuted by either one of these statutes. Under the Oil Ordinance, the maximum fine is 218,000 NIS (approximately \$45,400).¹³⁵ The offense is not defined as being continuous in nature. In addition, authorities can demand that the defendant bear the costs of moving, reducing, and cleaning up the pollution.¹³⁶ The port manager can demand financial guarantees to cover the expenses associated with clean-up.¹³⁷

Note that violations under the Oil Ordinance are defined as strict liability offenses.¹³⁸ In order to convict polluters of an offense, no intent or negligence needs to be proven.¹³⁹ Only in the

¹²⁸*Id.* protocol I, art. III, 1340 U.N.T.S. at 194.

¹²⁹1980 Oil Ordinance, *supra* note 16, ¶ 5(a), at 123; 1987 Oil Regulations, *supra* note 121, §§ 8-17.

¹³⁰1987 Oil Regulations, *supra* note 121, §§ 34-39.

¹³¹*Id.* §§ 18-33.

¹³²*Id.* §§ 2-7.

¹³³1980 Oil Ordinance, *supra* note 16, ¶ 18, at 126.

¹³⁴*Id.*

¹³⁵*Id.*

¹³⁶*Id.* ¶ 29, at 128-29.

¹³⁷*Id.* ¶ 28, at 128.

¹³⁸Cr.A. 96/258, *The State of Israel v. Pipeline Eilat-Ashkelon L.T.D.* (unpublished opinion).

¹³⁹*Id.*

event that violators take all possible actions to prevent the discharge can they be exonerated.¹⁴⁰ The burden of proof in this regard falls on the defendant.¹⁴¹ To implement the statute, the Minister of the Environment¹⁴² must appoint inspectors for "prevention of pollution of the sea by oil."¹⁴³ The Minister can also grant them authority to perform searches and inquiries comparable to those given to police officers in other criminal statutes.¹⁴⁴

One of the most important components of the Oil Ordinance's enforcement provisions is the possibility of assigning administrative penalties to violators in lieu of a full-fledged court prosecution.¹⁴⁵ This means that the accused violator is given the option to pay a fine and avoid a criminal trial. If, however, the accused fails to pay the fine, a regular trial is conducted. The maximum fine that can be issued as an administrative penalty is 36,000 NIS (about \$7,500) for a first offense and 73,400 NIS (\$15,290) for repeated offenses.¹⁴⁶ Inspectors are empowered to issue such notices. Whoever pays the fine is considered to have admitted to committing the crime and fulfilled the sentence.¹⁴⁷ Specific criteria for issuing fines were published in a special government order.¹⁴⁸ They include the type of polluter (with a distinction between tankers, other ships, and land-based sources, according to the size of each), whether it is a first or repeated offense, and whether the violator reported the offense or not.¹⁴⁹

Under the Oil Ordinance, the Minister of the Environment can issue regulations to establish a fund for the prevention of marine pollution. Such a fund was indeed established, even before the

¹⁴⁰1980 Oil Ordinance, *supra* note 16, ¶ 21, at 126-27.

¹⁴¹*See* YACKOV KEDMI, ON CRIMINAL LAW 46 (updates and supplement part I, 1996)

¹⁴²Before the establishment of the Israel Ministry of the Environment, this authority was in the hands of the Minister of the Interior. *See* 1980 Oil Ordinance, *supra* note 16, ¶ 6, at 123.

¹⁴³*Id.*

¹⁴⁴*Id.* ¶ 9, at 123-24.

¹⁴⁵*Id.* ¶ 24, at 127.

¹⁴⁶*Id.* ¶ 25, at 127.

¹⁴⁷*See* YACKOV KEDMI, ON CRIMINAL LAW 1246 (updates and supplement part II, 1998).

¹⁴⁸The Spilling of Oil into the Marine Water (Fine Offenses), 1972, K.T. 2948, 501 [hereinafter 1972 Fine Offenses Order].

¹⁴⁹*Id.* annex I.

current version of the Oil Ordinance.¹⁵⁰ Today all revenues generated by fines assessed under this and the LBS statute are deposited into Marine Pollution Prevention Fund.¹⁵¹ The regulations determine the operational and management procedures for the Fund.¹⁵²

F. *Israel's Enforcement of the Marine Pollution Laws*

The Marine and Coastal Environment Division of the Ministry of the Environment is in charge of enforcing marine pollution laws in Israel, supervising the 190 kilometers of Israel's Mediterranean shores and the fourteen kilometers of the Eilat shores of the Red Sea.¹⁵³

In the year 2001, 5,790 ships visited the Israeli ports (in Eilat, Ashdod and Haifa), 197,000 passengers went through these ports and thirty-two million tons of cargo were transported.¹⁵⁴ In addition, 100 industrial plants, 100 facilities, which contribute brine and water discharges, and forty local authorities are the subject of regular inspection and authorization by the Marine and Coastal Environment Division.¹⁵⁵

As mentioned above, inspectors are appointed by the Minister of the Environment to implement both the LBS Statute and the Oil

¹⁵⁰The fund was established by the Regulations for the Prevention of Oil Spills into the Sea (the Establishment of the Prevention of Marine Pollution), 1979, K.T. 96, 306 [hereinafter Fund Establishment Regulations]. The Regulations were enacted in accordance with the 1936 version of the Oil Ordinance. See The Prevention of Oil Spill into the Sea Ordinance, *supra* note 118.

¹⁵¹LBS Statute, *supra* note 11, § 10, at 107.

¹⁵²Fund Establishment Regulations, *supra* note 150.

¹⁵³See Israeli Ministry of the Environment, Information Kiosk, Marine and Coastal Environment, <http://www.sviva.gov.il/> (last visited Feb. 16, 2003).

¹⁵⁴See PORTS & RAILWAYS AUTHORITY, ISRAEL, 2001 ANNUAL REPORT 7 (2002), at <http://www.israports.org.il/about/about.html>. The following data is updated for the year 2001.

	Number of Ships	Cargo (in million tons)	Passengers (in thousands)
Eilat Port	153	1.7	257
Haifa Port	2956	16.7	121
Ashdod Port	2681	13.6	76
Total	5790	32.0	197

Id.

¹⁵⁵See Israeli Ministry of the Environment, <http://www.sviva.gov.il/> (last visited Feb. 16, 2003).

Ordinance.¹⁵⁶ They conduct inspections of ships, ports, fuel refineries, industrial plants, and sewage treatment facilities and are authorized to conduct investigations and to collect evidence.¹⁵⁷ The collected evidence and the results of the investigations are summarized in investigation files, which are passed to the deputy of the head of the department, who adds his recommendations for further actions.¹⁵⁸ After the investigation is concluded, the files are delivered to the Ministry of the Environment's Legal Department, which determines whether it is appropriate to press charges.¹⁵⁹ The following Part analyzes the actual results of these cases and their implications for Israeli enforcement policy.

III

AN EVALUATION OF THE MARINE POLLUTION CONTROL SYSTEM IN ISRAEL

According to the Barcelona Convention's LBS Protocol, Israel is obliged to "eliminate" pollution from land-based sources into the Mediterranean.¹⁶⁰ The contracting Parties are also required to ensure that a system of inspections is established in order to assess compliance with the relevant domestic laws.¹⁶¹ For this purpose, Parties are also expected to establish appropriate sanctions in case of non-compliance.¹⁶² These demands, as mentioned, are detailed further in the SAP.¹⁶³

In order to comply with its Barcelona commitments, Israel

¹⁵⁶1980 Oil Ordinance, *supra* note 16, ¶ 6, at 123; LBS Statute, *supra* note 11, § 5, at 110.

¹⁵⁷Interview with Elic Adler, Head of the Marine and Coastal Environment Division, Ministry of the Environment, in Haifa, Isr. (Jan. 31, 2000); Interview with Ilan Malister, Head of Land Based Sources Section, Marine and Coastal Environment Division, Ministry of the Environment, in Haifa, Isr. (July 21, 1999); Interview with Nimrod Utitz, Inspector, Marine and Coastal Environment Division, Ministry of the Environment, in Haifa, Isr. (June 8, 1999); Interview with Oved Meitav, Inspector, Marine and Coastal Environment Division, Ministry of the Environment, in Haifa, Isr. (Jan. 31, 2000).

¹⁵⁸Interview with Issac Ben-David, Deputy of the Head of the Marine and Coastal Environment Division, Ministry of the Environment, in Jerusalem, Isr. (May 25, 2000).

¹⁵⁹*Id.*

¹⁶⁰*See supra* Part II.

¹⁶¹*Id.*

¹⁶²*Id.*

¹⁶³*Id.*

enacted a special statute to regulate land-based sources.¹⁶⁴ For more than a decade, an enforcement system has been in place that ostensibly enables Israel to meet its land-based source obligations. But have the expectations of the Barcelona Convention really been met?

It is important to consider this question while remaining cognizant of the first and paramount obligation in the LBS Protocol—to eliminate pollution.¹⁶⁵ To achieve this goal, a strong enforcement system must be created. Furthermore, according to UNEP, two of the fundamental causes of all seven of the worst types of environmental problems in the Mediterranean¹⁶⁶ are inadequate “capacity necessary for the implementation of legislation” and “inadequate pollution compliance and trend monitoring.”¹⁶⁷ In other words, enforcement is lacking. Apart from acknowledging the problem and making general suggestions for improvement,¹⁶⁸ however, the United Nations remains silent with respect to specific recommendations for improving enforcement systems. Nor does there appear to be any systematic program to evaluate marine enforcement systems in Mediterranean countries.

The research that is described in the following sections sought

¹⁶⁴LBS Statute, *supra* note 11.

¹⁶⁵*See id.* arts. 1, 5, at 120-21.

¹⁶⁶According to the SAP, the seven major types of problems are: degradation of coastal and marine ecosystems; unsustainable exploitation of coastal and marine resources; loss of habitats supporting living resources; decline in biodiversity, loss of endangered species and introduction of non-indigenous species; inadequate protection of coastal zone and marine environment and increased hazards and risks; worsened human-related conditions; and inadequate implementation of existing regional and national legislation. SAP, *supra* note 50, at 3.

¹⁶⁷*See id.*

¹⁶⁸*See* U.N. ENV'T PROGRAMME, GUIDELINES FOR AUTHORIZATIONS FOR THE DISCHARGE OF LIQUID WASTES INTO THE MEDITERRANEAN SEA: MAP TECHNICAL REP. SERIES NO. 107, at 34 (1996) [hereinafter DISCHARGE GUIDELINES]. Some ways for improving enforcement are mentioned, for instance:

- (a) improvements in the action process itself, (b) improvements in the modalities for the issue of permits and authorizations, (c) enhancement of monitoring programmes, (d) the development of cooperative agreements, (e) the strengthening of controls and sanctions, (f) the devising of incentive measures, (g) enhancing information and publicity, and (g) [sic] increasing the capacity of the relevant agency or agencies.

Id.

to answer one basic question: is Israel really on the right path for achieving the primary goal of the LBS statute, that is, *elimination of pollution discharges into the Mediterranean*? The answer required a qualitative and quantitative evaluation of the effectiveness of the enforcement system that was established pursuant to Israel's international obligations. While conducted in an academic context, the evaluation surely meets one of the SAP's requirements for evaluating those measures taken under a country's marine protection program.¹⁶⁹

At the core of an empirical evaluation of the Israeli marine pollution enforcement system lies the general aim of improving regulatory policies with an eye toward achieving the ultimate objective of zero discharges into the Mediterranean. The study therefore seeks to identify factors that weaken Israel's marine pollution enforcement system—problems in both Israel's statutory provisions and in the Ministry of the Environment's enforcement program. The results reveal several possible ideas for improvements in both the national and international arenas.

The analysis was done by evaluating all the investigation files against polluters that were opened by the Ministry of the Environment's Marine and Coastal Environment Division during the last decade.¹⁷⁰ From these files, certain variables were extracted and tested using a variety of statistical methods. The following section considers a small portion of the findings, with a focus on two of the dependent variables: detection of offenses and level of fines. These serve to illuminate some basic problems with the implementation of the LBS Statute.

The research only considered the effectiveness of a traditional command and control system, as no alternative compliance mechanisms (*i.e.*, economic incentives) yet exist in this field in

¹⁶⁹See SAP, *supra* note 50, at 34 (recommending “[t]he establishment of monitoring programmes to evaluate the effectiveness of the actions and measures implemented under this Programme”).

¹⁷⁰The analysis included 187 investigation files. Only those cases that had been litigated to completion were addressed (all the cases that were opened but had not come to a resolution at the time of the research were not included in the data base). Files were opened due to violations of either the LBS Statute or the 1980 Oil Ordinance. A Hebrew synopsis of the results was reported in Dorit Talitman, *Enforcement of Marine Pollution Prevention Legislation: A Quantitative Assessment of the Israeli Experience*, in ENVIRONMENT AND POLICY 32 (Eidelman et al. eds., Jerusalem Institute for Israel Studies, 2002).

Israel.¹⁷¹ The deterrence model upon which the research is based “assumes that most regulated entities are rational economic actors that act in order to maximize their profits.”¹⁷² An economically rational business will choose whether to obey or to disobey an environmental statute according to its perceived options, which include either bearing the cost of compliance (which involves prevention of the pollution by using the proper technological devices) or being subject to the cost of legal sanctions, assuming it gets caught.¹⁷³ According to deterrence theory, potential polluters will comply only when they perceive the cost of noncompliance as exceeding the actual cost of compliance. Theoretically, the cost of noncompliance is a function of the anticipated penalties imposed on the polluter, multiplied by the probability that the violation will be detected.¹⁷⁴ The task of enforcement agencies, therefore, is “to make penalties high enough and the probability of detection great enough that it becomes economically irrational for facilities to violate environmental requirements.”¹⁷⁵

Based on these assumptions, three dependant variables were selected for evaluating the performance of the enforcement system. Naturally, actual fines were chosen to represent the penalties. Detection is broken down according to the manner in which violations were detected (self-reporting clearly presented a higher probability of detection),¹⁷⁶ as well as the likelihood of non-conviction or the file being closed without any financial punishment.¹⁷⁷ It is worth noting that while the LBS Statute

¹⁷¹In a workshop for experts on compliance and enforcement of legislation in the Mediterranean for control of pollution resulting from land-based sources and activities, the Parties “shared the view that voluntary agreements with economic actors, industry in particular . . . could play an important role in implementation and compliance and should be strengthened, with a view to adopting an integrated approach.” U.N. ENV’T PROGRAMME, REPORT OF THE WORKSHOP FOR EXPERTS ON COMPLIANCE AND ENFORCEMENT OF LEGISLATION IN THE MEDITERRANEAN FOR CONTROL OF POLLUTION RESULTING FROM LAND-BASED SOURCES AND ACTIVITIES 8, U.N. Doc. UNEP (OCA)/MED WG.160/1 (1999) [hereinafter LBS Workshop].

¹⁷²Clifford Rechtschaffen, *Deterrence vs. Cooperation and the Evolving Theory of Environmental Enforcement*, 71 S. CAL. L. REV. 1181, 1186 (1998).

¹⁷³See David A. Dana, *The Perverse Incentives of Environmental Audit Immunity*, 81 IOWA L. REV. 969, 979 (1996).

¹⁷⁴Rechtschaffen, *supra* note 172, at 1187.

¹⁷⁵*Id.*

¹⁷⁶See *infra* Part III(A).

¹⁷⁷See *infra* Part III(C).

contains prison sentences, in practice, sanctions are limited to monetary fines.¹⁷⁸

The representative variables for detection were chosen because both of them represent the possibility of the polluter being punished. In some parts of the analysis, a distinction was made between the characteristics of the LBS Statute and the Oil Ordinance. This was done for comparative reasons. Although some parameters can be discussed jointly and are common to both statutes and their enforcement, others involve completely different legal situations and need to be considered separately.

A. *Detection of Offenses*

As mentioned above, detection of violations is a critical parameter for achieving compliance. Detection can be accomplished by:

- enforcement officers appointed by government authorities (inspectors);
- individuals from the general public; or
- the polluters themselves (self-reporting).

Shortage of adequate resources that would enable environmental authorities to detect all violations on their own is an acknowledged problem in the United States,¹⁷⁹ and a “major bottleneck” according to UNEP, at least in a number of the Mediterranean countries.¹⁸⁰ In Israel, which is a smaller country with much more limited resources, this problem is even more pervasive and is well known to the Marine and Coastal Environment Division.¹⁸¹ Basing detection solely on inspectors

¹⁷⁸Interview with Elli Warburg, Director of Marine Pollution Prevention, Eilat Station, Ministry of the Environment, in Isr. (Oct. 24, 2002).

¹⁷⁹See Michael Ray Harris, *Promoting Corporate Self-Compliance: An Examination of the Debate Over Legal Protection for Environmental Audits*, 23 *ECOLOGY L. Q.* 663, 665 (1996); Roger M. Klein, *The Continuing Nature of Notification Violations Under Environmental Statutes*, 26 *ENVTL. L.* 565, 567 (1996); Peter P. Knight, Note, *Encouraging Regulated Entities to Comply with Federal Environmental Mandates: The Need for a Federal Environmental Audit Protection Statute*, 3 *N.Y.U. J. LEGIS. & PUB. POL’Y* 125, 128 (1999-2000); Douglas C. Michael, *Cooperative Implementation of Federal Regulations*, 13 *YALE J. ON REG.* 535, 557 (1996); Rechtschaffen, *supra* note 172, at 1225.

¹⁸⁰DISCHARGE GUIDELINES, *supra* note 168, at 34.

¹⁸¹This was one of the major problems mentioned by officials in the Marine and Coastal Environment Division. Interview with Adler, *supra* note 157; Interview with Malister, *supra* note 157; Interview with Utitz, *supra* note 157; Interview with Meitav, *supra* note 157.

promises to be ineffective. Mechanisms that engage the cooperation of the public and self-reporting are required.

1. *Public Reporting*

Israel is known for its sunny beaches, and, given the relatively short coastline for a population of six million, the shores are rarely vacant. Thus, individual citizens are perfectly capable of reporting pollution events or even identifying the polluter in action. In fact, the study's results indicate that sixty-three percent of known violations of the marine pollution statutes are detected by the public.¹⁸² The predominant percentage of reports comes from segments of the population with a special connection to the sea, such as surfing clubs, diving clubs, and fishermen.¹⁸³ Reports are relatively frequent during the summer when people spend their leisure time at the sea (especially from those engaging in water sports).¹⁸⁴ Special attention should be paid to the fact that almost half of the violations reported by the public were made by port workers (twenty-five percent of all reports).¹⁸⁵

As indicated above, the cooperation of the public in reporting violations is of great value. Some of the Ministry of the Environment marine inspectors have come to rely on this information.¹⁸⁶ To encourage public participation, some inspectors meet with the port management, send appreciation letters and complimentary tee shirts to cooperating individuals, and try to establish a rapport with other organizations that might be helpful.¹⁸⁷ This initiative, however, is largely idiosyncratic, depending on an individual inspector's proclivities and operating methods. Internal instructions or procedures do not exist.¹⁸⁸ Codifying some of the more innovative methods could ensure their application by all present Israeli coastal inspectors, as well as by future ones.

¹⁸²Dorit Talitman, *An Empirical Evaluation of the Marine Pollution Enforcement System in Israel* 76 (2000) (unpublished M.A. thesis, Tel-Aviv University) (on file with author and Tel-Aviv University Geography Library) [hereinafter Talitman M.A. Thesis]. This analysis includes all 187 investigation files.

¹⁸³Interview with Ronen Alkalai, Inspector, Marine and Coastal Environment Division, Ministry of the Environment, in Tel-Aviv, Isr. (May 27, 1999).

¹⁸⁴Talitman M.A. Thesis, *supra* note 182, at 76.

¹⁸⁵*Id.*

¹⁸⁶Interview with Utitz, *supra* note 157.

¹⁸⁷*Id.*

¹⁸⁸*Id.*

Another existing mechanism for stimulating public reporting is the possibility of granting an award of up to 1,000 NIS (approximately \$200) to individuals who assist in identifying violations.¹⁸⁹ Praiseworthy as this initiative is, some key elements seem to be missing. For one, there is no proper publication of the award system. An organized mechanism for selecting award winners would seem consistent with principles of fairness. In our opinion, a better approach for encouraging reliable reports can be found in the American Marine Plastic Pollution Research and Control Act of 1987 (MPPRCA).¹⁹⁰ This statute compensates any person who provides information leading to conviction, with rewards allowed for up to half the value of the imposed fine.¹⁹¹ This system not only encourages public participation, but also discourages false reports (since only reliable information can be rewarded). A similar system could easily be integrated into present Israeli laws. Anchoring an award system in legislation both officially reinforces the value of public reporting and facilitates proper publication. Alternatively, the newly improved internet site of Israel's Ministry of the Environment¹⁹² could be another forum for organizing such awards.

In order to further encourage the public to report, there should be a convenient and accessible way for the public to inform government enforcement agents about marine pollution. To date, no emergency center, operating twenty-four hours a day, exists. The inspectors themselves are aware of the public's frustration in wanting to inform authorities about pollution events but not knowing how to do so.¹⁹³ Establishing this kind of center, and operating a round-the-clock hotline where the public can report marine pollution violations would greatly facilitate involvement by

¹⁸⁹*Id.*

¹⁹⁰Marine Plastic Pollution Research and Control Act of 1987, Pub. L. No. 100-220, §2105, 101 Stat. 1460, 1463 (1987) (codified as amended at 33 U.S.C. § 1908 (2000)).

¹⁹¹*Id.*

¹⁹²*See* Israeli Ministry of the Environment, <http://www.sviva.gov.il> (last visited Feb. 16, 2003).

¹⁹³Interview with Gidi Batelahim, Inspector, Marine and Coastal Environment Division, Ministry of the Environment, in Tel-Aviv, Isr. (Aug. 8, 1999); Interview with Oved Meitav, Inspector, Marine and Coastal Environment Division, Ministry of the Environment, in Tel-Aviv, Isr. (Aug. 8, 1999); Interview with Nimrod Utitz, Inspector, Marine and Coastal Environment Division, Ministry of the Environment, in Tel-Aviv, Isr. (August 8, 1999).

the public, allowing them to help identify marine pollution events.¹⁹⁴

Public participation is addressed vaguely in the SAP,¹⁹⁵ but is not specifically included in the recommended activities or proposed national targets. The recommendations concentrate on raising awareness and disclosing information,¹⁹⁶ which are two important issues, but which lack direct operational results. We recommend that public reporting be incorporated into future action plans, especially since the bond with the sea of many cohorts within the local Israeli population is probably indicative of the situation in other Mediterranean countries. Public reporting, therefore, holds enormous potential as a supplementary tool to government inspection activities.

In summary, although public reporting exists today and plays a positive role in the detection of violations, additional measures need to be taken to encourage and reinforce the phenomenon. Internal guidelines for enforcement personnel, derived from the inspectors' experience with the public, can help channel regulatory energies to improve outreach. A more comprehensive and better-publicized award system, along the lines of the American MPPCA method, are also promising. Finally, establishing an emergency center, accessible by a hotline number that is broadcast through public interest advertising, would serve to better enlist the Israeli public. These are just some of measures that could be taken in order to increase reporting by the public. There is no reason why they should not be integrated into future joint action plans in the Mediterranean region as well.

2. *Self-Reporting*

The value of self-reporting is well documented in numerous jurisdictions and is increasingly common in countries around the world.¹⁹⁷ Israel's limited resources make utilization of other

¹⁹⁴In the United States such a system is overseen by the Coast Guard. See Jeffrey S. Dehner, Note: *Vessel-Source Pollution and Public Vessels: Sovereign Immunity v. Compliance, Implications for International Environmental Law*, 9 EMORY INT'L L. REV. 507, 540-43 (1995).

¹⁹⁵See SAP, *supra* note 50, §§ 8, 10.10, at 37, 46.

¹⁹⁶See *id.*

¹⁹⁷In Sweden, facilities performing any activity which might pollute the environment are required to apply for a permit. All permits stipulate that the regulated entity is obliged to conduct self-monitoring, according to specific requirements that must be followed in any monitoring program. See Agneta

detection mechanisms imperative. As cooperative and enthusiastic as citizens can be, pollution control programs cannot depend solely on them, since they cannot be expected to be present whenever pollution occurs. Moreover, for many contaminants, visual detection is not possible, and more sophisticated surveillance and monitoring is necessary.

Beyond its ability to supplement limited resources, there are many substantive reasons for advocating self-reporting. Typically, it is impossible for authorities to monitor and measure the concentrations and quantities of a particular regulated pollutant,

Melin, *The Swedish System for Compliance and Environmental Enforcement*, in 1 INT'L ENFORCEMENT WORKSHOP 151, 152 (1990), available at <http://www.inece.org/1stvol1/melin.pdf>. In Poland, requirements for self-reporting, self-monitoring and self-record-keeping exist in disparate areas such as water pollution, air pollution and waste storage. When a regulated entity fails to meet the reporting demands it is fined for each day of violation, since the violation is of a continuing nature. See Jerzy Jendroska, *Compliance Monitoring in Poland: Current State and Development*, in 1 INT'L CONF. ON ENVTL. ENFORCEMENT 351, 353 (1992), available at <http://www.inece.org/2ndvol1/JENDROSk.html>. In Finland, environmental permits are also required in order to perform activities with air emissions or water discharges. Such permits include requirements for self-monitoring and self-reporting. See Markku Hietamäki, *Self-Monitoring, Reporting and Compliance Monitoring in Finland*, in 1 FIFTH INT'L CONF. ON ENVTL. COMPLIANCE AND ENFORCEMENT 285, 285 (1998), available at <http://www.inece.org/5thvol1/hietamaki.pdf>. In Norway, large enterprises are required to "self monitor" and file a more comprehensive environmental report once a year, where any deviations from the standards must be precisely detailed. See Gro Rødland, *Compliance Monitoring in Norway*, in 1 INT'L CONF. ON ENVTL. ENFORCEMENT 319, 320 (1992), available at <http://www.inece.org/2ndvol1/rodland.htm>; Gro Rødland & Angela Miller, *Results from Monitoring Compliance and Enforcement, Norway 1993*, in 2 THIRD INT'L CONF. ON ENVTL. ENFORCEMENT 111, 112 (1994), available at <http://www.inece.org/3rdvol2/miller.pdf>. In the United States, a complex system of requirements of self-reporting, self-monitoring, and self-record-keeping exists, providing much of the evidence for the country's extensive environmental enforcement actions. See U.S. EPA, *PRINCIPLES OF ENVIRONMENTAL ENFORCEMENT* 6-15 (July 15, 1992), available at <http://www.inece.org/enforcementprinciples.html>. In England, self-monitoring and self-reporting requirements exist as well. See William Howarth, *Self-Monitoring, Self-Policing, Self-Incrimination and Pollution Law*, 60 MOD. L. REV. 200, 210 (1997). Australian law also incorporates the requirements for self-monitoring. See *Env't Prot. Auth. v. Caltex Refining Co. Pty. Ltd.* (1993) 68 A.L.J.R. 127, 130 (Austl.); Zada Lipman, *Old Wine in New Bottles: Difficulties in the Application of General Principles of Criminal Law to Environmental Law*, 8-10, in 26 AUSTRALIAN INST. CRIMINOLOGY CONF.: ENVTL. CRIME (Neil Gunningham et al. eds., 1995), available at <http://www.aic.gov.au/publications/proceedings/26/lipman2.pdf>.

especially when dealing with large and complex facilities.¹⁹⁸ Furthermore, the rapid detection associated with self-reporting helps to minimize the resulting environmental damage from a pollution event. Knowledge of the very existence of marine pollution, early on, may not only be important for enforcement considerations but also enables authorities to take care of the spill and mitigate its effects.¹⁹⁹ The inspectors of the Marine and Coastal Environment Division are highly trained to contain spills and employ various techniques to reduce the damage.²⁰⁰ In addition, the obligation to report each spill or discharge into the sea cannot help but raise the awareness of the regulated community of polluters' actions. A regulated entity that knows it has to report each spill is more likely to be attentive. And most obvious of all, self-reporting also raises the possibility of penalizing individuals who otherwise would never be caught.

Beyond the intrinsic merits of self-reporting as a tool for enhancing environmental compliance, it is also important to bear in mind that the Barcelona Convention, the LBS Protocol, and the SAP all require the contracting Parties to implement a program of self-reporting.²⁰¹ As mentioned, one of the basic principles of the Barcelona Convention is the "polluter pays principle,"²⁰² which demands that all costs of prevention, control and reduction measures be borne by the polluter.²⁰³ It also implies that the monitoring of discharges should be paid by the polluter. To

¹⁹⁸ See Michael, *supra* note 179, at 556-57.

¹⁹⁹ See Klein, *supra* note 179, at 566-67. The value of receiving information promptly in order to prevent or limit the effects of an event has been recognized by the United States Congress. See *id.*

²⁰⁰ For the Israeli response techniques for an oil spill, see ZOSIA RAZ, MARINE AND SHORES DEPARTMENT, ISRAELI MINISTRY OF THE ENVIRONMENT, NATIONAL CONTINGENCY PLAN FOR ABATING MARINE OIL POLLUTION, (2001), available at http://www.sviva.gov.il/Environment/Static/Binaries/Articals/talmat_a_0.pdf.

Other works provide an elaboration on oil spill response techniques in general. See Richard R. Lessard & Greg DeMarco, *The Significance of Oil Spill Dispersants*, 6 SPILL SCI. TECH. BULL. 59 (2000) (discussing the use of dispersants); Joseph V. Mullin & James S. Lane, *R&D Users Guide to the Ohmsett Oil Spill Response Test Facility*, 6 SPILL SCI. TECH. BULL. 77 (2000) (discussing the capabilities of the National Oil Spill Response Test Facility); Randall von Wedel, *CytoSol – Cleaning Oiled Shorelines with a Vegetable Oil Biosolvent*, 6 SPILL SCI. TECH. BULL. 357 (2000) (discussing the effectiveness of the Cytosol "biosolvent" formulation).

²⁰¹ See *supra* Part II.

²⁰² 1995 Barcelona Convention, *supra* note 47, art. 4(3)(b).

²⁰³ *Id.*

strengthen, clarify, or perhaps even expand upon this concept, the SAP recommends that parties “ensure routine and standardized reporting of toxic emissions . . . by polluting facilities.”²⁰⁴ This demand also requires transparency on the part of potentially polluting industries in providing the information to the public, bearing in mind legitimate needs for business confidentiality.²⁰⁵

Two polar approaches towards promoting self-reporting exist—at one end is a punitive approach and at the other are economic incentives. As different as they are in their rationales, a combination of both systems may produce the best results.

The primary catalyst for self-reporting is a legislative requirement. The self-reporting obligation contained in the LBS Statute is only directed at effluent discharge permit holders.²⁰⁶ Until recently, Israel’s Oil Ordinance did not include reporting obligations. On April 28, 1999, however, the Prevention of Sea-Water Pollution from Oil Ordinance (Implementing the Convention) Regulations (amendment) were published.²⁰⁷ Regulation 13 contains a new reporting obligation for any oil spill or potential oil spill into the sea.²⁰⁸ While this is better than failing to include such an obligation, there still are two drawbacks. One is the pitifully low penalties associated with committing such an offense. The maximum fine is 9,600 NIS (about \$2,000) for non-reporting,²⁰⁹ as opposed to a maximum fine for causing an oil spill, which can reach 218,000 NIS (approximately \$45,000).²¹⁰

In addition, establishing this kind of obligation in secondary regulations, as opposed to a statute, fails to convey the same symbolic significance. Upgrading the present prescription to that of a recognized *statutory* obligation sends a clear signal regarding the importance of a requirement and can produce an educational effect.

Besides upgrading the normative basis for self-reporting, a penalty substantial enough to create deterrence should be established and the enforcement system redesigned accordingly.

²⁰⁴SAP, *supra* note 50, at 6.

²⁰⁵*Id.*

²⁰⁶LBS Statute, *supra* note 11, § 4, at 110.

²⁰⁷The Prevention of Sea-Water Pollution from Oil Ordinance (Implementing the Convention) Regulations (Amendment), 1999, K.T. 5968, 688.

²⁰⁸*Id.*

²⁰⁹1987 Oil Regulations, *supra* note 121, § 52(b).

²¹⁰1980 Oil Ordinance, *supra* note 16, ¶ 18, at 126.

One of the dynamics of self-reporting is that when penalties for non-reporting are not severe enough, the regulated community is tempted not to fulfill this obligation; this is especially true when the chance of getting caught is very low.²¹¹ Hence, the punishment for failing to meet reporting demands should be significant.

An example of a well-functioning self-reporting system can be found in the United States' Clean Water Act (CWA).²¹² This success of the American enforcement system is not only a function of the substantial administrative and judicial fines meted out, but also a strict requirement of self-reporting via the Discharge Monitoring Reports filed by NPDES permit holders.²¹³ Several environmental statutes (the CWA among them) impose penalties of \$25,000 per day for each continuing, unreported violation; thus, the cumulative fine for not reporting an offense can quickly exceed the maximum fines for the pollution violation itself.²¹⁴ The enormous environmental benefits associated with early knowledge of a violation is one of the central justifications for penalizing unreported, continuous violations. In addition, suspension of permits for perennial offenders may well constitute a more painful punishment for seamen. This should be considered as an automatic sentence for repeat notification violators.

While beefing up the severity of an enforcement response, an incentive system's potential for promoting self-reporting should not be overlooked. Incentives could take the form of alleviating tedious permitting procedures, expediting government rewards and grants, reducing taxes or even openly reducing the frequency of inspections and the associated burdens on permittees.²¹⁵ Furthermore, specifically directing regulators and judges to issue

²¹¹ See Klein, *supra* note 179, at 567 n.9.

²¹² 33 U.S.C. §§ 1251-1387 (2000).

²¹³ See Michael, *supra* note 179, at 576. The authority for monitoring reports is found in 33 U.S.C. § 1318 (2000), while the NPDES permitting authority is found in 33 U.S.C. § 1342 (2000).

²¹⁴ See Klein, *supra* note 179, at 569. Klein reviews the continuing nature of notification violations in environmental statutes in the United States, while specifically referring to the Clean Air Act, the Toxic Substances Control Act, the Emergency Planning and Community Right to Know Act, the Comprehensive Environmental Response, Compensation, and Liability Act, and the Resource Conservation and Recovery Act. Klein reviews the court opinions that establish these statutes as continuing offenses and criticizes those opinions that reject this approach while relying heavily on judicial decisions on the subject. See *id.* at 566-79. See also Michael, *supra* note 179, at 576 n.210.

²¹⁵ See Michael, *supra* note 179, at 545.

reduced fines for individuals and facilities that inform authorities about their own violations should be a centerpiece of sentencing policy.

In theory, such considerations should already be reflected in the level of fines imposed under Israel's Oil Ordinance. According to the first Appendix of the Discharge of Oil into the Marine Water (Fine Violations) 1972 Order,²¹⁶ whenever regulators have the option of issuing a more moderate administrative penalty rather than filing a full-blown prosecution, one of the first considerations that they should take into account is whether the offender reported the offense. In fact, whenever a pollution event is followed by prompt reporting, the imposed fine should only be half of that issued when violations were flagged by inspectors or the public.²¹⁷ Fines should also be alleviated for first offenses.²¹⁸ Therefore, according to the specific *normative* policy directive, a first reported offense should only be fined one quarter of the penalty of a repeat offense that was not reported.²¹⁹

If this policy was in fact implemented, one could expect a higher percentage of repeat offenders reporting than first-time offenders. Presumably, the prosecution process should send a clear message, suggesting that self-reporting is in the polluter's self-interest. In practice, however, our review of marine pollution cases during the 1990s indicates that the self-reporting percentage for first offenses is similar to that of repeated offenses.²²⁰ A compelling explanation for the lack of any increase in self-reporting among repeated offenders might be the absence of any meaningful difference between fines levied on non-reporters and those imposed on reporters.²²¹ The level of marine pollution fines also appears to be independent of the number of offenses committed by the defendant.²²² In short, the policy and clear

²¹⁶1972 Fine Offenses Order, *supra* note 148.

²¹⁷*Id.* annex I.

²¹⁸*Id.* §2.

²¹⁹*Id.* annex I.

²²⁰The percentage of self-reporting for first offenses was 16.3 percent whereas the percentage of self-reporting in repeated offenses is 17.8 percent. Statistical tests (chi square, fisher exact test, phi test and Cramer's V test) show no significant difference between these groups. The statistical tests were performed on all 187 files. See Talitman M.A. Thesis, *supra* note 170, at 42.

²²¹Linear regression models showed that the fines are independent of reporting. The same results came from bivariate correlations. See *id.* at 45.

²²²*Id.*

instructions of the above-mentioned Order are completely ignored by Israeli courts and inspectors.

Clearly, the legislative intent to make self-reporting an important component in penalty policy needs to be respected. Part of the problem is a lack of awareness. The anticipated reduction in fines for self-reporters must be publicized appropriately, so that potential polluters will know of its existence and hopefully respond accordingly. We advise repeated publication of the policy in marine notices in all Israeli ports, as well as among regulated facilities and plants.

In conclusion, self-reporting is of great environmental value due to its potential to increase the likelihood of detection, raise the awareness of polluters, and expedite mitigation efforts. Raising the rate of self-reporting can be achieved through a combination of "carrots" and "sticks." Creating a legally-binding demand for self-reporting (preferably in a statute) is an important first stage, while establishing stiff penalties for continuing violations of reporting requirements can create deterrence and help achieve this objective. On the other hand, setting a system of positive incentives for those meeting the reporting obligation should supplement a sophisticated and non-compromising, conventional enforcement program.

It is important to remember that creating enforcement program systems on paper will fail to produce results unless the system actually conforms to its own guidelines. Not only has Israel failed to establish a fully-developed enforcement program, relying on both public reporting and self-reporting, but the present system also fails to implement even the existing provisions relating to reporting. First and foremost, the enforcement system should embrace, as a top priority, policies that support self-reporting and punish non-reporting. While self-reporting emerges as an important component of the Barcelona Convention,²²³ lack of specificity in the expectations towards domestic legislation renders it largely a symbolic stipulation.

B. *The Penalty System of Marine Pollution Laws in Israel*

The fines imposed as a result of environmental legislation in Israel, until recently, have been extremely low. For example, the average fines levied by the United States Environmental Protection Agency (EPA) against polluters are twelve and one-half times

²²³ See *supra* Part II.

higher per capita than those of the Israeli enforcement system.²²⁴ This does not include the considerable fines imposed by enforcement agencies in the individual states.²²⁵ As it turns out, the fines imposed under marine pollution statutes in Israel are considered the highest in the country's environmental enforcement system. The mean level of fines for violations of marine pollution statutes is roughly \$10,000.²²⁶

In addition, there is no set of guidelines for either judges or inspectors that might provide an objective basis for determining the severity of fines. This is true for the entire environmental enforcement system in Israel, but is particularly conspicuous in the arbitrary levels of fines issued under marine pollution statutes. As mentioned, an early Order promulgated under the Oil Ordinance specifically authorizes the rewarding of self-reporting²²⁷ and the penalizing of repeat offenses.²²⁸ The aforementioned Order also stipulates that the size of the ship is to be considered when setting penalties.²²⁹ The empirical data tell a different story—fines issued pursuant to both the LBS Statute and the Oil Ordinance fail to conform to these directives. A statistical analysis suggests that the magnitude of Israeli fines are solely a function of the size of the polluter²³⁰ and/or the volume of the pollution.²³¹ To be sure, fines

²²⁴Tal & Talitman, *supra* note 13, at 29.

²²⁵*Id.*

²²⁶The data refer only to files that were opened between the years 1990 and 1998. The number includes all costs for the polluter—both the fine and the cleaning expenses. The average fine of other Israeli environmental statutes is about \$2,000. See Alon Tal, *Assessing the Benefits of Non-Compliance: The Role of Economic Analysis in Environmental Enforcement*, 6(1) ECOLOGY AND ENVIRONMENT 3, 3 (2000). For comparison, in the Australian State of New South Wales, between 1993 and 1998, the range of penalty fines imposed on companies for severe environmental offenses was between \$60,000 and \$100,000, far higher than the fines imposed for similar violations in Israel. See Maria Comino & Paul Leadbeter, *Enforcement of Pollution Laws in Australia - Past Experience and Current Trends*, in 1 FIFTH INT'L CONF. ON ENVTL. ENFORCEMENT 57, 66 (1998), available at <http://www.inece.org/5thvol1/comino.pdf>.

²²⁷See 1972 Fine Offenses Order, *supra* note 148, annex I.

²²⁸*Id.* §2.

²²⁹*Id.*

²³⁰The Order divides the general fleet into five different levels according to the polluting potential of the vessel. The order distinguishes between tanker, ship and LBS, and their size. The following categorization is found in the Order (in an ascending scale):

1. Ships under 500 tons.
2. Ships 500-5000 tons; tanker under 4000 tons; or a vehicle for oil

for marine pollution in Israel have risen in real terms with the years.²³² Nonetheless, the severity of the fines does not allow consideration of either self-reporting by violators or the existence of previous offenses.²³³

Examples of statutes that mandate clear criteria and specific considerations for environmental sentencing are numerous. The U.S. Clean Air Act, for instance, requires consideration of the following criteria prior to deciding a proper fine:

the gravity of the violation, the economic benefit or savings (if any) resulting from the violation, the size of the violator's business, the violator's history of compliance with this subsection, action taken to remedy the violation, the effect of the penalty on the violator's ability to continue in business, and such other matters as justice may require²³⁴

Eight different U.S. federal statutes, regulating media such as water pollution, hazardous substances, pest control, and marine pollution, have a similar section requiring the courts to consider certain factors in determining the penalty.²³⁵

In Australia, several criteria exist for deciding whether to close a case or opt for a prosecution, many of which are relevant for determining a proper fine, including: the seriousness of the offense; the harm or potential harm to the environment caused by the offense; any mitigating or aggravating circumstances; the degree of culpability of the alleged offender in relation to the offense; whether the breach is a continuing or second offense.²³⁶ In addition, whether or not offenders report an offense should be a clearly stated consideration. While requiring parties to "establish

transportation.

3. Ships 5000-15000 tons; tanker 4000-40000 tons; oil storage facility or oil transportation facility.
4. Ships over 15000 tons; tanker 40000-80000 tons; floating oil transportation facility.
5. Tankers over 80000 tons; LBS.

See Talitman M.A. Thesis, *supra* note 182.

²³¹*Id.*

²³²*Id.*

²³³*Id.* at 42.

²³⁴Clean Air Act, 42 U.S.C. § 7524(b) (2000).

²³⁵Tal, *supra* note 226, at 5.

²³⁶For a more complete list of considerations used by Australia's Environment Protection Authority to determine whether prosecution is appropriate, see Comino & Leadbeter, *supra* note 226, at 64.

appropriate sanctions in case of non-compliance,”²³⁷ the LBS Protocol fails to interpret precisely what “proper sanctions” means, and the SAP is mute as well about appropriate measures that should be taken. Why the Barcelona Convention, along with its protocols and action plans, fails to delineate such considerations remains a mystery, especially when a meticulous degree of specification exists in other matters, such as the considerations that must be weighed by the contracting parties when granting a discharge permit.²³⁸ In the latter case, the very same criteria were duly assimilated into the Israeli legislation.²³⁹

A fundamental theory of enforcement is that fines can affect behavior.²⁴⁰ Therefore, they should be wielded in a transparent way that reveals the thinking behind them. The considerations should also be consistent and lead to an appropriate level of punishment. Such a systematic approach to enforcement has not been adopted by the Israeli environmental regulatory agencies, nor can it be inferred from the obligations of the contracting Parties under the Barcelona Convention. Guidelines, such as those indicated above, should be adopted in both the national and international systems, and, more importantly, they should be followed. If, for instance, self-reporting is recognized as critical to regulatory success, it needs to find expression in national penalty policies.

C. *Implementation of Israel’s Land-Based Sources and Suggested Improvements*

1. *The Shortcomings of the LBS Statute*

As documented in the Part II of this Article, land-based

²³⁷See *supra* Part II (discussing the LBS Protocol).

²³⁸See *id.*; see also 1996 LBS Protocol, *supra* note 48, annex II.

²³⁹See *supra* Part II. The criteria were assimilated in Land-Based Sources Regulations, *supra* note 107, annex III.

²⁴⁰See generally Kathleen Segerson & Tom Tietenberg, *The Structure of Penalties in Environmental Enforcement: An Economic Analysis*, 23 J. ENVTL. ECON. & MGMT. 179 (1992) (examining, *inter alia*, the varying incentives that different fines create). See also Rechtschaffen, *supra* note 172, at 1188; U.S. EPA, *supra* note 197, at 2-3; D.J. Van Zeben & M.E. Mulkey, *Choosing Among Criminal, Civil Judicial, and Administrative Enforcement Options: A Comparative Discussion of United States and Netherlands Experience*, in 1 INT’L CONF. ON ENVTL. ENFORCEMENT (1992), available at <http://www.inece.org/2ndvol1/vzeben.htm>.

sources contribute a major percentage of Mediterranean pollution loadings, both in quality and quantity. According to IOLR reports, not only do land-based sources contribute the dominant component to Israel's marine pollution profile, but actual damage to the marine environment can also be traced to materials other than oil.²⁴¹ Given this dynamic, one might expect that the predominant number of enforcement files in the marine realm would involve the LBS Statute. And yet, during the period covered by the study, only nineteen of the 187 Israeli marine prosecution files reviewed were conducted (and concluded) under the LBS Statute.

Numerous explanations can be offered for the trivial number of land-based source prosecutions. Among them is an internal policy of the Marine and Coastal Environment Division that perceives criminal investigation as a last resort, and prefers less drastic solutions.²⁴² Even if this explanation made sense, the relatively lax attitude taken toward land-based marine pollution sources would be hard to justify during the past decade, when contamination of the Mediterranean remained so very severe. The persistence of high levels of marine pollution and the increases in certain parameters,²⁴³ suggest that the present methods of inducing compliance are not sufficiently effective. For meaningful progress to be made, either new approaches for confronting polluters must be sought, or more tenacious adherence to fundamental command and control practices are needed. In short, if the paucity of land-based prosecution files can be traced to an intentional policy of the Marine and Coastal Environment Division, then that policy should be revised.

Another, almost default, explanation for the small number of cases might be chronic personnel shortages.²⁴⁴ This hardly seems

²⁴¹See IOLR Report 23/99, *supra* note 36; IOLR Report 18/98, *supra* note 37; and IOLR Report 25/98, *supra* note 39, and accompanying text; *see also supra* Part I.

²⁴²Director Elic Adler explained that administrative measures are used prior to opening a criminal investigation file (and the attendant notices, warnings and hearing procedures). Only after exhausting all other measures does the department open an investigation file. Interview with Adler, *supra* note 157. Land-based source regulator Dr. Ilan Malister advocates cooperation with plants. In his opinion, launching investigations against plants that are generally cooperative can do more harm than good. Interview with Malister, *supra* note 157.

²⁴³See IOLR Report 18/98, *supra* note 37; and IOLR Report 25/98, *supra* note 39, and accompanying text; *see also supra* Part I.

²⁴⁴As indicated above, the lack of adequate human resources is an admitted

a compelling rationalization for such limited formal enforcement actions on behalf of the Israeli government. Rather, personnel shortages are part of most regulatory realities, and only serve to heighten the need for self-reporting. While adding manpower to address land-based source pollution is likely to constitute a blessing, there are other reforms which are as important.

A different explanation for the diminutive number of land-based source cases prosecuted was suggested by the Israeli chapter of Greenpeace. It claims that discharge permits are granted too easily.²⁴⁵ Hence, the pollution continues, but with government authorization, thus granting the dischargers functional immunity from future prosecutions.²⁴⁶ Greenpeace asserts that plants conveniently claim that technological solutions to their problems lie beyond present BAT.²⁴⁷ Yet when these same polluters face a healthy dose of pressure, they “miraculously” find a technological answer.²⁴⁸ As an example, Greenpeace points to the Haifa Chemicals Plant, which for decades received discharge permits from the government, until a private criminal action was filed in 1995 by the public interest law group Israel Union for Environmental Defense (IUED) and a group of fishermen.²⁴⁹ In a court-approved settlement, Haifa Chemicals agreed to establish a new effluent treatment facility at a cost of many millions of dollars, to make substantial payments that created an environmental fund for research in the Haifa area, to provide monetary compensation to area fishermen who could document damage to their vessels, and to cover IUED’s attorney fees.²⁵⁰

The number of criminal prosecutions filed by a regulatory agency alone should not constitute a definitive indicator of the

problem in the Israeli environmental enforcement system. *See supra* note 157 and accompanying text. One of the specific reasons for the shortage of files given by Director Elic Adler was that most of the offenses occur as violations of permit conditions. Interview with Adler, *supra* note 157. Detection of such violations requires considerable time and attention from inspectors.

²⁴⁵Interview with Miya Elasar, Head of the Campaign Against Marine Pollution, Greenpeace Mediterranean, Israel Chapter, in Tel-Aviv, Isr. (Feb. 3, 2000).

²⁴⁶*Id.*

²⁴⁷*Id.*

²⁴⁸*Id.*

²⁴⁹*See* Daniel Fisch, *Israel's Environmental Problems*, 5 PALESTINE-ISRAEL J. POL., ECON., AND CULTURE 20, 24 (1998); Ruth Yaffe, *The Public's Right to Participate in Environmental Decision-Making in Israel: A Progress Report on Issues of Law and Policy*, 14 TEL AVIV U. STUD. IN L. 9, 13 (1998).

²⁵⁰*See* Fisch, *supra* note 249, at 24; Yaffe, *supra* note 249, at 13-15.

efficacy of a law or its implementation.²⁵¹ Yet, such a dramatically low number of legal actions over a protracted period, when marine pollution remained significant, raises the possibility that something might be wrong with the statute, the enforcement system, or both. Another trend that emerged from the research clarifies the picture in this regard. About half of the files prepared by attorneys representing the government were directed against land-based sources, while the other half focused on polluting ships.²⁵² Yet, only eleven percent of the prosecution cases that were ultimately filed were based on the LBS Statute.²⁵³

As described, there is an area of overlap between the two statutes. Land-based sources that discharge oil can be successfully sued under either law. In only one out of forty-five such cases did authorities use the LBS Statute in addition to the Oil Ordinance.²⁵⁴ In all other cases, the Oil Ordinance was the statute of choice for enforcement attorneys.²⁵⁵ Not once did they prefer utilizing the LBS Statute alone. Therefore, from a strictly tactical perspective, an obvious preference for the Oil Ordinance exists. It is reasonable to assume that this striking result is associated with some underlying practical deficiencies in the LBS statute.²⁵⁶

Two other factors confirm our view regarding the relative inferiority of the LBS Statute as an enforcement instrument, as compared to the Oil Ordinance. Both of these relate to the resolution of investigation files. Once a criminal investigation begins, there are a number of ways that it can be resolved. The government will either opt not to charge the polluter, who thus avoids punishment, or the suspected polluters will be charged. If a polluter is charged, several possible outcomes exist—the case may be closed (due to lack of public interest or insufficient evidence); the polluter may be found innocent; the polluter may be convicted and fined; or the polluter may be convicted but not fined, instead receiving a suspended sentence. An analysis of the ultimate results of marine pollution investigations that were launched offers insights into the relative efficiency of the statutes. Since the same

²⁵¹ See MALCOLM K. SPARROW, *THE REGULATORY CRAFT* 109-17 (2000).

²⁵² Talitman M.A. Thesis, *supra* note 182.

²⁵³ *Id.*

²⁵⁴ *Id.* at 45.

²⁵⁵ Talitman M.A. Thesis, *supra* note 182.

²⁵⁶ Interview with Hagit Fadhel, Lawyer, Tolchinsky & Shtern Law Firm, in Tel-Aviv, Isr. (Aug. 8, 1999).

regulatory body oversees investigations involving both laws, it is fair to assume that the same considerations guide them in closing a case. As both statutes are criminal, they both demand proof beyond a reasonable doubt and face the same procedural challenges. In short, if there is a significantly larger number of unresolved or non-penalty files under one of the statutes, difficulties in conducting investigations and proving the existence of the offense under the other statute can be inferred.

Indeed, an analysis of marine filings from the past decade shows that four times the number of files directed against land-based sources under the LBS Statute were closed (twenty-one percent) than under the Oil Ordinance (six percent).²⁵⁷ In addition, the relatively large percentage of files in which the courts chose not to fine defendants probably also contributes to a low level of deterrence. Here again, a significant difference between the Oil Ordinance and the LBS Statute emerged. Whereas thirteen percent of the Oil Ordinance cases ended without any monetary penalties, thirty-two percent of the LBS Statute cases concluded without a fine.²⁵⁸ A partial explanation for this disparity might be the nature of defendants. For instance, municipalities, whose sewage flows into the sea, are occasionally prosecuted under the LBS Statute, and judges may be hesitant to fine public representatives or an entire city whose budget may already be paltry. Nonetheless, this alone cannot explain a 250 percent difference in judicial outcomes.²⁵⁹

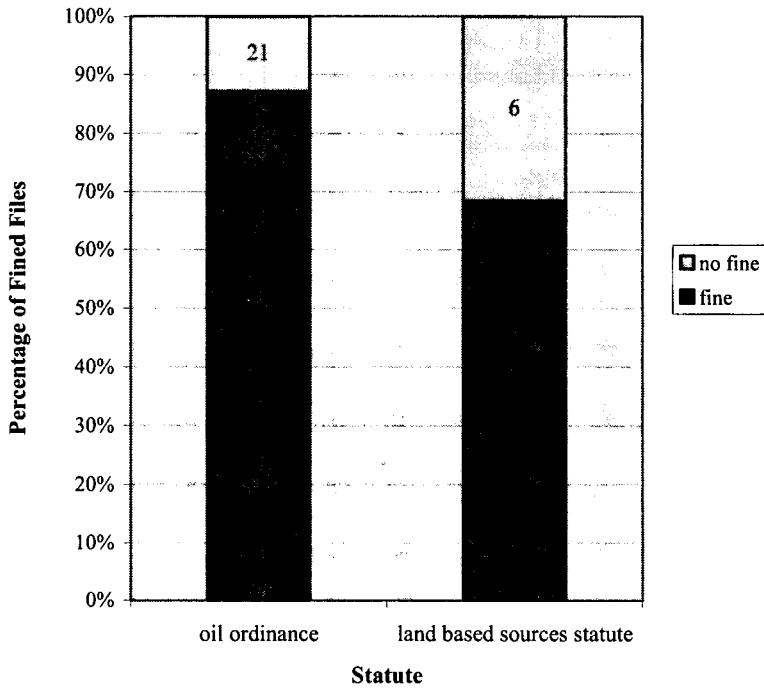
²⁵⁷The results are significant, according to phi test. See Talitman M.A. Thesis, *supra* note 182, at 45.

²⁵⁸The results are statistically significant according to Fischer and phi tests. *Id.*

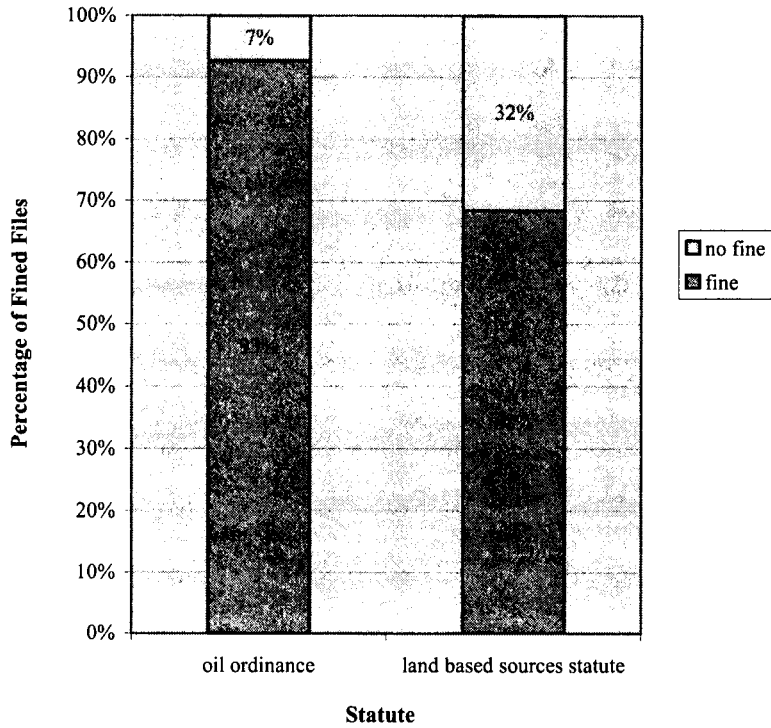
²⁵⁹

	LBS Statute	Oil Ordinance
Percentage of Closed Files	21%	6%
Percentage of Non-Fined Files	32%	13%

**A Comparison Between
Land-Based Sources Statute and Oil
Ordinance:
The Percentage of Cases Ending in Fines**



A Comparison Between Land-Based Sources Statute and Oil Ordinance: The Percentage of Fined Files Against Land Based Sources



Beyond the apparent legal inferiority of the LBS Statute, another physical factor should be emphasized. All of the LBS Statute-based criminal investigations were initiated in response to noticeable pollution events.²⁶⁰ Only clearly visible sewage, effluents, or organic residues were the subject of prosecution.²⁶¹ In no case was a file directed at inconspicuous pollutants such as heavy metals or organic solvents, even though these contaminants are far more toxic and are often as prevalent as conventional, visible pollutants.²⁶² By their nature, oil spills are highly visible.

In short, when comparing the two Israeli statutes that regulate marine pollution, several deficiencies within the LBS Statute emerge in comparison to the actual implementation of the Oil Ordinance. These deficiencies are even more striking while bearing in mind that for some polluting activities, the statutes actually overlap. The small number of cases actually initiated is one indication. The percentage of closed and/or non-penalty LBS Statute cases in comparison to Oil Ordinance prosecutions further highlights the gap. In the following section, some reasons for these differences are identified, and recommended solutions are proposed.

2. *Reasons for Land-Based Source Deficiencies*

In seeking explanations for the ostensible differences in regulatory accomplishments under the two marine statutes, we identified five major issues that affect the efficacy of the LBS Statute. These include problems regarding:

- the level of legal liability;
- the use of administrative penalties;
- the use of temporary injunctions;
- the definition of violations as continuous offenses; and
- the decisions of the permitting committee.

The first two issues will be considered in relation to the contrasting provisions of the Oil Ordinance. Defining violations as continuous offenses and utilizing temporary injunctions are areas where both statutes need to be amended. Finally, issues involving an administrative permitting committee are only relevant for the LBS Statute and will be considered accordingly.

²⁶⁰Talitman M.A. Thesis, *supra* note 182.

²⁶¹*Id.*

²⁶²*Id.*

a. *Standard of Care and Liability*

The LBS Statute requires that the State prove an intention by violators to pollute the sea, while the Oil Ordinance sets a standard of strict liability for offenders.²⁶³ The need to prove criminal intent imposes a heavy burden on the prosecution. In the event of an accident or negligence, even if the polluter did not do whatever was possible to prevent the offense (a requirement under the Oil Ordinance), conviction may be impossible. The lower standard of criminal liability in the LBS Statute makes the likelihood of conviction far more remote.²⁶⁴ In practice, defendants have used excuses such as a drop in the electrical power or unanticipated damage to the facility as a defense, which rendered their discharge into the sea “involuntary.”²⁶⁵ From an ethical perspective, a strict liability standard should be applied in all marine pollution statutes. Since offenses are potentially severe and can cause irreversible harm, the highest standard of precaution should be expected of parties who have the ability to prevent pollution. Only when a party does whatever possible to prevent an offense should prosecution be waived. In all other cases, including negligence, a marine polluter should be charged with violating the law.

b. *Administrative Penalties*

A second advantage of the Oil Ordinance is the discretion granted to the enforcement agency to choose “administrative penalties” and issue relatively modest fines, typically in the case of minor infractions.²⁶⁶ The procedure is generally quick and efficient.²⁶⁷ The administrative penalties option offers the prosecution an intermediate position between closing a case and trying it as a full-fledged criminal prosecution. This both reduces the number of cases that reach the courts (since most polluters

²⁶³Compare LBS Statute, *supra* note 11, § 2, at 109, with 1980 Oil Ordinance, *supra* note 16, ¶ 18, at 126. See also *supra* Part II.

²⁶⁴The consensus among attorneys who work as prosecutors for the Ministry of the Environment in marine pollution cases is that the requirement for intent to pollute should be removed from the LBS statute. Interview with Hagit Fadhel, Lawyer, Tolchinsky & Shtern Law Firm, in Tel-Aviv, Isr. (Aug. 8, 1999); Interview with Zohar Shkalim, Legal Advisor, Legal Department, Ministry of the Environment, in Tel-Aviv, Isr. (Aug. 8, 1999).

²⁶⁵Interview with Adler, *supra* note 157.

²⁶⁶1980 Oil Ordinance, *supra* note 16, ¶ 24, at 127.

²⁶⁷Tal & Talitman, *supra* note 13, at 27.

decide to pay the fine and avoid a legal procedure) and the number of cases that are closed due to reluctance on the part of the prosecution to bring violations to court.

c. *Injunctions and Continuous Offenses*

Two major modifications should be considered for both Israel's Oil Ordinance and its LBS Statute concerning redefining violations as "continuous offenses." The first involves the possibility of issuing an injunction. In many cases, violators continue to pollute even after a charge is filed.²⁶⁸ Granting a request for a temporary injunction order not only mitigates environmental harm, but sends a clear message to the polluter that the enforcement agency is serious. Such authority has already been granted under several Israeli environmental statutes according to the Environment Law (Punitive Measures) (Amendments).²⁶⁹ It would be appropriate to add such a procedure to the LBS Statute, as well as the Oil Ordinance.

A second, related modification that should be integrated into both statutes involves changing the status of violations to that of "continuous offenses." Under the LBS Statute, at present, imposing an additional fine for each day that a violation continues only becomes possible after conviction.²⁷⁰ The Oil Ordinance includes no such provision at all. Penalizing a perennial pollution source, however, is likely to be most effective prior to conviction. Moreover, due to the backlog in Israeli courts and needless delay by defense attorneys, there is often a considerable time lag between the filing of an indictment and the commencement of a trial.²⁷¹ It may take years to reach a verdict. As there is frequently enormous ecological significance to speedy detection and abatement, making continuous offenses expensive may provide critical leverage in efforts to stop pollution. An additional fine for each day of continuing discharge from the day that it can be shown that a polluter was aware of its polluting activities can drastically change the dynamics of pre-trial negotiations, and for the better.

²⁶⁸For instance, a restaurant in the Tel-Aviv port continued to discharge its sewage into the sea even after an indictment was filed against it. Interview with Alkalai, *supra* note 183.

²⁶⁹1997, S.H. 5748, 118.

²⁷⁰LBS Statute, *supra* note 11, § 6, at 110-11.

²⁷¹Tal & Talitman, *supra* note 13, app. A.

d. *The Permitting Committee*

The discharge permits granted under the LBS Statute were not empirically analyzed in this research. Nevertheless, a few aspects are worth noting and should be the subject of more systematic future research. The task of the Permitting Committee, appointed pursuant to the LBS Statute (in accordance with the Barcelona Convention and its LBS Protocol) is to grant permits for plants that seek permission to discharge effluents and wastes into the sea.²⁷² The very concept of granting permits is implicitly linked to a perception of the Mediterranean Sea as a waste disposal site. Many environmentalists have long questioned the philosophical legitimacy of “licensing” factories to pollute.²⁷³ Historically, however, there have always been two opposing streams of thought among environmentalists towards this position.

On the one hand, those seeking economic optimization take a pragmatic view of the marine environment. They believe that the sea has considerable carrying capacity, which can be defined as the amount of matter that a water body can absorb without any significant negative effect.²⁷⁴ The approach is based upon the assumption that the marine environment has a physical threshold up to which it is able to absorb anthropogenic pollutants without incurring excessive damage or at least irreversible harm.²⁷⁵ Technical problems certainly exist when this perspective is applied in practice. Real-time tests and monitoring that allow for quick intervention when threshold levels are approached or damage is identified have not yet been developed. Quantification of the adverse effects upon the system is generally imprecise, and ecological risk assessment remains a very blunt instrument.²⁷⁶

Yet, the pragmatic view holds that a carrying capacity approach is preferable from an *environmental* perspective.²⁷⁷ The argument is that for many waste streams, discharging into the sea,

²⁷²Land-Based Sources Regulations, *supra* note 107, §7.

²⁷³This view is largely associated with deep ecology and organizations such as Greenpeace and Earth First. See Barry Commoner, *Why We Have Failed*, GREENPEACE MAG., Sept.-Oct. 1989, at 163.

²⁷⁴Avital Gazit & Avigdor Ebelson, *Mercury in the Sea – Forms, Dispersion and its Biologic Ramifications*, in *Sea & Shores 2000*, 113, 119 (2000).

²⁷⁵*Id.*

²⁷⁶*Id.*

²⁷⁷Interview with Baruch Weber, Head of the Industrial Effluents, Fuel and Soil Division, Ministry of the Environment, in Tel-Aviv, Isr. (Jan. 24, 2000).

with its enormous assimilative capacity and natural systems for breaking down wastes, is preferable to land-based disposal.²⁷⁸ This is especially true in the Middle East, where there is heavy reliance on groundwater for drinking supplies and where aquifers are already suffering from a broad array of environmental insults.²⁷⁹

The opposing view is largely associated with the “precautionary principle” or the preventive approach.²⁸⁰ Theoretically, this was the position adopted by UNEP and embraced as part of the Barcelona Convention.²⁸¹ The precautionary principle holds that a lack of scientific certainty should not delay protective environmental decisions, especially when the potential ramifications of delay are great.²⁸² According to this view, at the very least, discharge should only be permitted after a thorough inspection is made to ensure that it will not harm the marine environment either in the short- or the long-term. In contrast to a carrying capacity approach, which enables decisions to be made according to subjective evaluations (even if they are expert opinions), the precautionary approach requires that permits

²⁷⁸*Id.*

²⁷⁹TAL, *supra* note 7, at 199-242.

²⁸⁰Gazit & Ebelson, *supra* note 274, at 119.

²⁸¹1995 Barcelona Convention, *supra* note 47, art. 4(3)(a); *see supra* Part II.

²⁸²Definitions of the precautionary principle can be found in diverse international instruments. *See* U.N. General Assembly, Report of the United Nations Conference on Environment and Development Annex I: Rio Declaration on Environment and Development, princ. 15, U.N. Doc. A/CONF.151/26 (Vol. I) (1992), reprinted in 31 I.L.M. 874, 879, available at <http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm> (last updated Jan. 12, 2000) [hereinafter Rio Declaration]; Agenda 21, *supra* note 6, § 35.3; Cartagena Protocol on Biosafety to the Convention on Biological Diversity, Jan. 29, 2000, annex III, ¶ 4, 39 I.L.M. 1027, 1045, available at <http://www.biodiv.org/biosafety/protocol.asp> (last updated Aug. 28, 2002). Patricia Birnie and Alan Boyle have noted that:

[t]he 1985 Ozone Convention and its 1987 Montreal Protocol are perhaps the best examples of the application of the precautionary principle or approach . . . because they required action on the part of states before the causal link between ozone depletion and CFCs had been conclusively demonstrated. Since 1990 the precautionary principle or approach has also been adopted by a growing number of treaty institutions, or incorporated in the text of treaties dealing with marine pollution, international watercourses, air pollution and climate change, transboundary trade in hazardous waste, and endangered species, and the conservation of biological diversity and marine living resources.

BIRNIE & BOYLE, *supra* note 6, at 117-18 (citations omitted).

be granted only after regulators have received verifiable, relevant information. The precautionary principle thus places a heavy burden of proof on the shoulders of the polluter to show that no significant environmental risk exists. A carrying capacity approach is more likely to tolerate existing pollution, giving dischargers the benefit of doubt until a negative impact is clearly documented.²⁸³

To a certain extent the two extremes create a continuum in which regulators can operate. Yet, it would seem that Israel, like many Barcelona Convention Parties, pays greater lip service to the precautionary principle than it does towards real societal investment in its actual implementation.²⁸⁴ Choosing the precautionary principle approach would require changing the current policy that grants discharge permits on the assumption that the marine environment has the ability to absorb considerable amounts and types of wastes without causing unacceptable damage. The dominant criterion for deciding whether to allow the disposal into the sea involves a guess, based on less-than-rigorous science about the potential damage that might be caused to the marine environment, while at the same time comparing it to the ecological and economic alternatives.²⁸⁵ In short, even though the precautionary principle was theoretically adopted by the Barcelona Parties in 1996, it has not yet been translated into an operational decision rule in the domestic Israeli discharge permit system.

Other observations about present permitting procedures are worthy of mention. First, one of the main flaws in the present system is that “red lines,” or quantifiable environmental indicators,

²⁸³Gazit & Ebelson, *supra* note 274, at 119.

²⁸⁴The “precautionary principle,” unlike other environmental axioms such as the “polluter pays principle,” has begun to appear in official policy statements published by Israel’s Ministry of Environment, but remains an amorphous declaration rather than an operational guideline that informs legislation and secondary legislation. See SHOSHANA GABBAI, ISRAELI MINISTRY OF THE ENVIRONMENT, *THE ENVIRONMENT IN ISRAEL* 29, 139 (2002). This stands in contrast to the European Union, where it has been formally adopted. See Communication from the Commission on the Precautionary Principle, COM(00) 1 final; see generally PROTECTING PUBLIC HEALTH & THE ENVIRONMENT: IMPLEMENTING THE PRECAUTIONARY PRINCIPLE (Carolyn Raffensperger & Joel Tickner eds., 1999); see also Wybe Th. Douma, *The Precautionary Principle*, 49 ÚLFLJÓTUR 417 (1996). An updated version of the Douma article is available at <http://www.eel.nl/virtue/precprin.htm> (last visited Mar. 16, 2003).

²⁸⁵Cohen, *supra* note 36, at 36.

have not yet been defined regarding the carrying capacity of the Mediterranean Sea.²⁸⁶ Few, if any, Mediterranean nations set ceilings for marine water quality after receiving discharged effluents that could effectively guide decisions regarding the granting of permits.²⁸⁷ As mentioned, in 2002, Israel promulgated such ambient marine quality standards.²⁸⁸ It is too soon, however, to evaluate the efficacy of these standards in practice.

Second, the institutional affiliations of several members of the Permitting Committee in Israel raise doubts about the legitimacy of their own considerations and goals. Only one of the members represents environmental concerns, while many others represent competing national interests (e.g., Defense, Transportation, and, critically, Industry and Commerce).²⁸⁹ Furthermore, the Minister of Agriculture and the Minister of Health do not always see eye-to-eye with their colleagues from the Ministry of the Environment on environmental interests. Although a recent bill that allows for a non-governmental organization representative on the Committee was recently enacted,²⁹⁰ its present composition does little to forward the formulation of clear criteria based on an environmentally-driven precautionary principle.

This Part has focused on suggestions for improving Israel's LBS Statute. Upgrading to a strict liability standard for polluters and adding administrative penalties were two propositions that are relevant to the LBS Statute. Facilitating the issuance of injunctions in the event of a continuing offense and increasing penalties in such a situation should improve the effectiveness of both the LBS Statute and the Oil Ordinance. Lastly, flaws in the decision-making criteria and the makeup of the inter-ministerial Permitting Committee, as it functions today, were identified. Modest amendments to the present statutes could readily ameliorate most of these problems.

²⁸⁶See *id.*; Interview with Prof. Lev Fishelson, Head of the Institute for Nature Conservation Research, Tel-Aviv University, in Tel-Aviv, Isr. (Feb. 28, 2000).

²⁸⁷Cohen, *supra* note 36.

²⁸⁸See AMBIENT STANDARDS, *supra* note 39.

²⁸⁹LBS Statute, *supra* note 11, § 3(a), at 109.

²⁹⁰The Representation of Environmental Public Interest Groups on Government Committees Law, Proposed, passed July 23, 2002. The final version is available at http://www.sviva.gov.il/Enviroment/Static/Binaries/law/klali33_1.pdf.

IV

SPECIFICITY IN INTERNATIONAL ENVIRONMENTAL AGREEMENTS

As we have seen, the Barcelona Convention has influenced Israel's marine pollution control strategy. Nevertheless, more specificity regarding desirable actions, especially concerning the promotion of compliance and enforcement, could have advanced existing efforts. This Part will discuss the role of specificity in international treaties in promoting local environmental activities. The perils of excessive vagueness in treaty language will be presented, with a call for a more detailed and demanding approach to international environmental commitments.

The question of what the international community can expect from the countries that sign on to an environmental convention constitutes the critical theoretical and tactical question for actors in the international environmental sphere. In evaluating progress under many international environmental instruments, the answer seems to be "not much." History suggests that the desire to draft a document that can be ratified by many nations often makes ambiguity, imprecision, and vagueness the order of the day.²⁹¹

The link between poor environmental performance and compliance with vague treaty provisions is not unknown to scholars and practitioners in the field. As one expert observes:

a certain flexibility is often the price which has to be paid to secure international agreement Most environmental treaties therefore tend to lay down only general principles,

²⁹¹This dynamic was particularly apparent at the 2002 World Summit for Sustainable Development (WSSD) in Johannesburg. At the start of the Summit, despite several preparatory conferences, over one-fifth of the Plan of Implementation—the instrument that was to be the key treaty ratified by the Summit—remained in dispute. The specificity of the expectations for national policies (as opposed to the general environmental aims) were at the heart of almost every controversy. With very few exceptions, clear, quantitative objectives, such as the proposed Article 19(e) target to reach fifteen percent renewable global energy supply by 2010 or eco-labeling that was envisioned in early versions of Article 14 to reduce "unsustainable patterns of consumption and production", were not accepted due to the negotiators' "consensus-based" *modus operandi*. Alon Tal, *World Summit on Sustainable Development – Johannesburg 2002: Triumph or Tragedy?*, Address Before the Environmental Scholars Review at the Heschel Center for Environmental Learning and Leadership (Nov. 21, 2002). For the final version of the Plan of Implementation as adopted by the WSSD, see REPORT OF THE WORLD SUMMIT ON SUSTAINABLE DEVELOPMENT at 7, U.N. Doc. A/CONF.199/20, U.N. Sales No. E.03.II.A.1 (2002), available at http://www.johannesburgsummit.org/html/documents/summit_docs/131302_wssd_report_reissued.pdf.

relegating the detailed standards to annexes which can be easily amended by the parties, or easily supplemented by new annexes provided the parties can agree Inevitably therefore, a lot of discretion is often left to governments as the only way to achieve agreement on something.²⁹²

Some commentators believe that the vague descriptive prescriptions of international law are philosophically important and help to avoid a dynamic of imperialistic domination.²⁹³ According to this view, domestic interpretation of international law should constitute a “translation” that reflects local circumstances. As one commentator noted, “just as we know that translation from one language to another requires more than literalness, we must recognize the creativity, and therefore the uncertainty, involved in domestic interpretation.”²⁹⁴ According to this view, “multivocality” rather than uniformity in implementation should be the objective.

Yet, the latitude inherent in this approach almost guarantees that nations will take the path of least resistance. Without a central, overseeing, fully-empowered authority, it is unclear whether any competent international body will ever identify those nations that undertake merely symbolic implementation of international environmental agreements, much less take these polluting nations to task.

There are innumerable examples of international conventions where generality in tone has led to less-than-rigorous implementation. For example, the Convention on International Trade in Endangered Species,²⁹⁵ which limits trade in endangered

²⁹²BIRNIE & BOYLE, *supra* note 6, at 8-9; *see, e.g.*, Chowdhury R. Abrar, *International Agreements and Environmental Management Follow-up in Bangladesh*, 2 REV. EUR. CMTY. & INT’L ENVTL. L. 375 (1993) (describing Bangladesh’s efforts to implement various environmental treaties); Palmer, *supra* note 22, at 269 (“The Stockholm Declaration is a good example All politicians know the value of ambiguity. It can serve to secure agreement where agreement may otherwise not be achieved. International instruments are frequently drafted with studied ambiguity.”).

²⁹³*See* Karen Knop, *Here and There: International Law in Domestic Courts*, 32 N.Y.U. J. INT’L L. & POL. 501, 504 (2000) (“The application of international law is thus fraught with the anxiety of imperialism: how can international law be perceived as legitimate by a community that has not participated equally in its creation or does not see its own reality reflected in international law?”).

²⁹⁴*Id.* at 506.

²⁹⁵Convention on International Trade in Endangered Species of Wild Fauna and Flora, March 3, 1973, 27 U.S.T. 1087, 993 U.N.T.S. 243 (amended June 22, 1979), available at <http://www.cites.org/eng/disc/text.shtml> (last visited Feb. 16,

species, has had great influence in many Western countries and is generally considered a model for success.²⁹⁶ But in many nations, this “flagship” Convention has moved neither legislatures nor regulators to act expeditiously.²⁹⁷ Nor has the Convention always succeeded in overcoming pervasive cultural reluctance to cease the importation and hunting of specimens with perceived medicinal or spiritual values.²⁹⁸ This phenomenon is especially prevalent in developing nations with respect to natural resource exploitation; their economic circumstances often make international environmental standards extremely difficult to meet. Experience in water management, for example, has shown that “[r]espect for international environmental law is of little concern to a developing nation since the lesser developed nations will not abide by current *ambiguous* international law adverse to their own developmental and sovereignty policies.”²⁹⁹

Protecting a shared natural resource, and triggering real enforcement activity to advance the multi-national objectives is, of course, a complex task for developed nations as well. Here, the perils of poor specificity are well documented. For example, in 1991, the Arctic Environmental Protection Strategy³⁰⁰ was signed

2003).

²⁹⁶See Peter H. Sand, *Whither CITES? The Evolution of a Treaty Regime*, 8 EUR. J. INT’L L. 29 (1997), available at <http://www.ejil.org/journal/Vol8/No1/art2.html>. For the definitive documentation of CITES’ history and ultimate impact, see also WILLEM WIJNSTEKERS, *THE EVOLUTION OF CITES* (6th ed. 2001), available at <http://www.cites.org/common/docs/Evol2001.pdf>. For a comprehensive description of one country’s implementation of CITES, see generally JANE HOLDEN, *BY HOOK OR BY CROOK: A REFERENCE MANUAL ON ILLEGAL WILDLIFE TRADE AND PROSECUTIONS IN THE UNITED KINGDOM* (1998).

²⁹⁷See, e.g., Abrar, *supra* note 292, at 377 (noting the failure of the Bangladeshi legislature to pass implementing legislation establishing a strong regulatory authority to aid in enforcement).

²⁹⁸Wang Xinxia, *The Implementation of CITES in China*, 2 REV. EUR. CMTY. & INT’L ENVTL. L. 370, 372-73 (1993).

²⁹⁹Shashank Upadhye, *The International Watercourse: An Exploitable Resource for the Developing Nation Under International Law?*, 8 CARDOZO J. INT’L & COMP. L. 61, 62 (2000) (emphasis added).

³⁰⁰Arctic Environmental Protection Strategy, June 14, 1991, 30 I.L.M. 1624, available at http://www.arctic-council.org/files/pdf/artic_environment.PDF. The agreement was signed in Rovaniemi, Finland in June 1991. *Id.* preface, 30 I.L.M. at 1627. Signing this “non-binding agreement” were the eight Arctic nations: Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden, and the United States. The agreement is implemented through the Arctic Council, which is currently chaired by Iceland and based in Reykjavik. See Arctic Council,

by the eight Arctic countries to protect this seemingly remote, but actually threatened, region. Among the primary objectives of the agreement was “to identify, reduce, and, as a final goal, eliminate pollution.”³⁰¹ Persistent organic contaminants, oil pollution, heavy metals, radioactivity and acidification were among the target pollutants for abatement.³⁰² A subsequent agreement among the Parties resulted in the establishment of the Arctic Council,³⁰³ which is roughly analogous to the Barcelona Convention’s Secretariat and MAP. The results, to date, however, have been disappointing. Despairing at local implementation and enforcement, there has been a call for common international enforcement effort:

[T]he Council needs to create enforcement and adjudicatory authorities within its umbrella organization. Without such, the organizations lack credibility, and, as a result, the organization’s initiatives could be completely ignored Once enforcement mechanisms and appropriate funding schemes have been established, the Council should create additional programs designed to address environmental problems in the Arctic.³⁰⁴

Yet, even in North America, where there is relative economic homogeneity,³⁰⁵ it is unlikely that international enforcement efforts can replace domestic programs, pushing the Arctic nations to a “higher common denominator.” Specific environmental and institutional performance targets for the Parties would prove more effective.

There is no more ambiguous term in the international

About, <http://www.arctic-council.org/about.html> (last visited Feb. 21, 2003).

³⁰¹ Arctic Environmental Protection Strategy, *supra* note 300, art. 2.1, 30 I.L.M. at 1631.

³⁰² *Id.* art. 3, 30 I.L.M. at 1634.

³⁰³ Declaration on the Establishment of the Arctic Council, Sept. 19, 1996, 35 I.L.M. 1387, available at <http://www.arctic-council.org/establ.asp>.

³⁰⁴ Richard J. Ansson, Jr., *The North American Agreement on Environmental Protection and the Arctic Council Agreement: Will These Multinational Agreements Adequately Protect the Environment?*, 29 CAL. W. INT’L L.J. 101, 129 (1998).

³⁰⁵ According to the world development indicators published at the Center for International Comparisons at the University of Pennsylvania, the United States, Canada and Mexico, with purchasing power estimated at \$34,000, \$27,000 and \$9,000, were in the top one-third of the world’s economies. Data is taken from the World Bank. See Alan Heston et al., *Penn World Table Version 6.1, Center for International Comparisons at the University of Pennsylvania* (2002), at <http://pwt.econ.upenn.edu/>.

environmental jargon than “sustainable development.”³⁰⁶ Some developers see it as a license for growth, while many environmentalists see “sustainable growth” as an oxymoron.³⁰⁷ The popularity of this amorphous concept has led to its appearance as an operational objective in international treaties,³⁰⁸ leaving enormous room for interpretation. Regarding the ability of the 1997 Treaty of Amsterdam³⁰⁹ to affect the domestic environmental

³⁰⁶See generally Michael McCloskey, *The Emperor Has No Clothes: The Conundrum of Sustainable Development*, 9 DUKE ENVTL. L. & POL'Y F. 153 (1999) (discussing the lack of an operational definition of the term “sustainable development”).

³⁰⁷See Nigel Haigh, *Introducing the Concept of Sustainable Development into the Treaties of the European Union*, in THE TRANSITION TO SUSTAINABILITY: THE POLITICS OF AGENDA 21 IN EUROPE 64, 70-75 (Timothy O'Riordan & Heather Voisey eds., 1998).

³⁰⁸The first group of multilateral agreements in which sustainable development provided a common theme were those spawned by the United Nations Conference on Environment and Development held in June 1992 in Rio de Janeiro, Brazil. These include Agenda 21, *supra* note 6 (an extensive, descriptive statement of objectives and programs related to sustainable development); Rio Declaration, *supra* note 282 (the political declaration of the conference that contained a synopsis of fundamental principles on sustainable development); the Convention on Biological Diversity, June 5, 1992, 31 I.L.M. 818, *available at* <http://www.biodiv.org/doc/legal/cbd-en.pdf> (entered into force Dec. 29, 1993) (creating a framework for national identification and protection of biological resources); the U.N. General Assembly, Report of the United Nations Conference on Environment and Development, Annex III: Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests, U.N. Doc. A/CONF.151/26 (Vol. III), *reprinted in* 31 I.L.M. 881, *available at* <http://www.un.org/documents/ga/conf151/aconf15126-3annex3.htm> (a non-binding agreement on development, preservation, and management of the Earth's remaining forests); and the United Nations Framework Convention on Climate Change, *supra* note 1 (being implemented under the Kyoto Protocol, *supra* note 1, whose objective is to reduce the emissions of greenhouse gasses that contribute to global warming). The recent agreements approved at the 2002 World Summit for Sustainable Development continue this trend. See Johannesburg Declaration on Sustainable Development, *adopted* Sept. 4, 2002, in REPORT OF THE WORLD SUMMIT ON SUSTAINABLE DEVELOPMENT, *supra* note 291, at 1; Plan of Implementation of the World Summit on Sustainable Development, *adopted* Sept. 4, 1992, in *id.* at 7. The term “sustainable development” dominates these and many other environmental treaties and reaffirms the centrality of “sustainable development” as an international objective and as a “mantra” in the international legal nomenclature.

³⁰⁹TREATY OF AMSTERDAM AMENDING THE TREATY ON EUROPEAN UNION, THE TREATIES ESTABLISHING THE EUROPEAN COMMUNITIES AND CERTAIN RELATED ACTS, Oct. 2, 1997, O.J. (C 340) 1 (1997).

quality of European nations, Banny Pootschi writes:

Will the new express reference to the term “sustainable development” lead to the improvement of the situation described above? This will depend on two things: whether or not the amendments are adequately clear in defining the concept of sustainable development and whether they strengthen the status of the concept within the Treaties to such a degree that its practical application within the policy making of the EU and the Member States is ensured.³¹⁰

The spotty record of most countries in implementing documents like Agenda 21³¹¹ highlights the problem of using sustainable development as an operational standard for domestic environmental programs.³¹²

At the same time, international environmental progress can often be linked to specificity. Environmental scientist and advocate Barry Commoner has long argued that the clearest, and ultimately most successful, forms of environmental regulation are production phase-outs and bans.³¹³ This appears to apply within the context of international law, as well as domestic law. In the late 1980s, for instance, no sooner had the Montreal Protocol on Substances that Deplete the Ozone Layer³¹⁴ come into force than nations expeditiously began phasing out chlorofluorocarbon production.³¹⁵ The clear phase out schedules left little “wiggle

³¹⁰Banny Pootschi, *The 1997 Treaty of Amsterdam – Implications for EU Environmental Law and Policy-making*, 7 REV. EUR. CMTY. & INT’L ENVTL. L. 76, 77 (1998).

³¹¹Agenda 21, *supra* note 6.

³¹²See generally A SURVEY OF SUSTAINABLE DEVELOPMENT: SOCIAL AND ECONOMIC DIMENSIONS (Jonathan M. Harris et al. eds., 2001). For a particularly harsh diatribe on sustainable development, see Jan Lundberg, *Where Lies Failure of the World Summit on Sustainable Development*, CULTURE CHANGE E-LETTER No. 4, at <http://www.culturechange.org/e-letter-4cont.html> (last visited Feb. 6, 2003).

³¹³Commoner, *supra* note 273.

³¹⁴Montreal Protocol on Substances that Deplete the Ozone Layer, *concluded on* Sept. 16, 1987, 1522 U.N.T.S. 29 (entered into force Jan. 1, 1989), *available at* <http://www.unep.org/ozone/pdf/Montreal-Protocol2000.pdf>. This is a protocol to the Vienna Convention for the Protection of the Ozone Layer, *concluded on* Mar. 22, 1985, 1513 U.N.T.S. 323 (entered into force Sept. 22, 1988), *available at* <http://www.unep.org/ozone/viennaconvention2002.pdf>.

³¹⁵But see Steven J. Simberg, *Stratospheric Ozone and Climate Protection: Domestic Legislation and the International Process*, 21 ENVTL. L. 2174 (1991) (describing U.S. environmental legislation, which imposed more stringent domestic pollution controls than required under the Montreal Protocol).

room” for parties, and the environmental results were impressive. Similarly, in a review of MARPOL implementation internationally, compliance with equipment standards, requiring nations to install separated ballast tanks (and banning the old polluting technology), was exceedingly high, even among countries that had not signed the Treaty.³¹⁶ Trying to get countries and ship owners to comply with discharge standards for oil, on the other hand, was largely unsuccessful.³¹⁷

Ultimately, the most direct benefits of specificity will be realized in the many cases where international law speaks to an issue for which there is no clear domestic position or where domestic law would otherwise take a less environmentally protective position. In many countries, such as Israel, only customary international law trumps local legislation.³¹⁸ But in some nations, like the United States, treaties enjoy a formal status on par with federal statutes and prevail over state laws.³¹⁹ In the Netherlands, international law has priority over national law.³²⁰ If a provision in an environmental convention is too nebulous, however, it will not be given direct effect by national courts. For example, the Netherlands Supreme Court has held that treaty provisions are directly applicable only when they are capable of “function[ing] in the domestic legal order as ‘objective law’.”³²¹

³¹⁶See Mitchell, *supra* note 124, at 12-13.

The most striking contrast was between the almost universal compliance with MARPOL equipment standards requiring tankers to install segregated ballast tanks (SBTs), which remove a major source of oil pollution from ships, and the frequent violations of MARPOL discharge standards limiting the amount and location of discharges. Tanker owners installed SBTs even though this entailed significant investments with no offsetting benefits and even though decreasing oil prices were increasing the pressure to cut costs.

Id.

³¹⁷*Id.*

³¹⁸See YORAM DINSHTEIN, *INTERNATIONAL LAW AND THE STATE* 147 (1971).

³¹⁹Daniel Bodansky, *International Environmental Law in United States Courts*, 7 *REV. EUR. CMTY. & INT’L ENVTL. L.* 57, 57 (1998).

³²⁰See André Nollkaemper, *Judicial Application of International Environmental Law in the Netherlands*, 7 *REV. EUR. CMTY. & INT’L ENVTL. L.* 40, 40 (1998).

³²¹See *id.* at 40-41 (citing Neth. Ry./Transp. Union of the Fed’n of Neth. Trade Unions, HR [Supreme Court], May 30, 1986, NJ 1986 (Neth.), *translated in* 18 *NETH. Y.B. INT’L L.* 389, 392). In addition, despite the formal supremacy of treaties in the United States, courts give treaties direct effect only if they are deemed to be “self-executing,” that is, when the treaty “operates of itself without the aid of any legislative provision.” Bodansky, *supra* note 319, at 57.

In his theoretical review considering the phenomenon of non-compliance by nations with international environmental treaties, Ronald Mitchell ultimately acknowledges the merits of specificity, stating, “[p]rimary rules can also increase compliance by increasing specificity. More specific rules help those predisposed to comply by reducing the uncertainty about what they need to do, while removing the excuses of inadvertence and misinterpretation from actors predisposed to violation.”³²²

It has been observed that the degree of clarity of European Union environmental laws has been intimately related to the subsequent level of compliance by the member states.³²³ Other commentators have also argued that precision has a role in the effectiveness of international instruments.³²⁴

As has been presented, ambiguity and vagueness in international treaties often results from an attempt to achieve a wide consensus over treaties, as well as an attempt to alleviate the suspicions of developing countries as to the imperialistic motives of developed countries.³²⁵ Yet, thirty years after international environmental law entered its present “aggressive” stage, the ability of many treaties to achieve concrete environmental results is uncertain. On the other hand, setting precise environmental targets, while using phase-outs, bans, and restrictions has proven to be much more successful. Bearing in mind both the desire to achieve wide participation in treaties and the desire to meet the real purpose of environmental treaties—achieving effective environmental results—an “integrated” or “combined” approach is suggested.

The integrated approach supports a framework treaty, with general obligations, supplemented by detailed annexes. The form of the more specific provisions ultimately should be a function of the format of a given convention, but there are many reasons why it makes sense to codify them in annexes, affiliated action plans, or

³²²Mitchell, *supra* note 124, at 329.

³²³Fiona Gaskin, *The Implementation of EC Environmental Law*, 2 REV. EUR. CMTY. & INT’L ENVTL. L. 335, 336 (1993).

³²⁴See Daniel Bodansky & Jutta Brunnée, *The Role of National Courts in the Field of International Environmental Law*, 7 REV. EUR. CMTY & INT’L ENVTL. L. 11, 12 (1998).

³²⁵See THOMAS G. WEISS ET AL., *THE UNITED NATIONS AND CHANGING WORLD POLITICS* 229 (3d ed. 2001) (discussing the less-than-enthusiastic response of developing countries to the imposition of standards to lower environmental pollution).

other supplementary instruments.³²⁶ One must note the relative ease of amending such instruments, given the flexibility needed to adapt to future technological developments. It is also helpful to keep treaties as concise as possible, making them accessible to laypersons and utilizing them as educational tools. What truly matters is that the annexes, protocols, or plans carry the full force of international law and are not dismissed by parties as being of secondary importance just because they are analogous to secondary legislation.

The 1995 Barcelona Convention, along with its protocols, annexes, and action plans, is an example of an international agreement which follows this approach. Nevertheless, the lack of adequate specificity in its protocols and annexes, as has been discussed above, frequently undermines its primary environmental objective of protecting the Mediterranean Sea against pollution. Therefore, when implementing an integrated approach, specifications should be set forth in annexes and, of course, rigorously implemented by parties to the treaty.

CONCLUSION

As we have seen, the state of the marine environment in the Mediterranean is disheartening, both from an international standpoint, as well as in Israel's coastal waters. Ecological damage can primarily be linked to land-based sources of pollution. An international response to this situation almost twenty years ago took the form of the Barcelona Convention, along with its protocols and action plans. These international instruments were precedent-setting at the time, and held the hope of promoting national responses to the plethora of land-based sources polluting the Mediterranean.

³²⁶BIRNIE & BOYLE, *supra* note 6, at 8-9.

Because environmental problems tend to require flexible solutions to allow for changing scientific evidence, new control technologies, new political priorities, and the differing circumstances of various states, a treaty which casts precise rules in stone may be hard to renegotiate and thus too inflexible to respond to changing conditions. Most environmental treaties therefore tend to lay down only general principles relegating the detailed standards to annexes which can be easily amended by the parties, or easily supplemented by new annexes provided the parties can agree.

Id.

Ostensibly, Israel is complying with the Convention and may even be one of the “model” Mediterranean countries which take seriously their commitments under the treaty.³²⁷ After decades of neglect, statutes were legislated, regulations were enacted, and an enforcement program was initiated with the aim of reducing marine pollution. Yet the Mediterranean remains a very sick sea, highly polluted with population pressures exacerbating the situation from year to year.³²⁸ Decision-makers would do well to consider how they can make the Mediterranean’s next twenty years healthier than the past twenty.

With relatively modest amendments, the Barcelona Convention offers an excellent basis for leveraging domestic environmental regulation. Although it may seem like the Barcelona Convention is very detailed and sets clear standards for action by the contracting Parties, in fact, technical, legal, and institutional guidance is missing in critical areas, especially with respect to enforcement methods. The present form of the treaty belies a lack of familiarity with the real world obstacles to implementation and an almost total absence of systematic and objective program evaluation on the part of the signatory states.

When regulatory expectations were duly specified, the details found their way into local laws and regulations. When the text was ambiguous, setting no clear targets or specified decision criteria, local legislation failed to create the specifications itself. In Israel, as in most Mediterranean democracies, regulation is a very complicated business. The time it takes to pass new legislation is extremely protracted, and the obstacles that can derail environmental initiatives along the way are numerous.³²⁹

³²⁷Israel is considered to be one of the Mediterranean countries that implement the Barcelona Convention’s demands in a conscientious way. For instance, Israel is one of the few countries that are performing biological monitoring. Telephone Interview with Ori Livne, Head of International Department, Ministry of the Environment, in Isr. (Oct. 29, 2002). This conclusion can also be derived from the reports that were submitted by all Mediterranean countries, regarding the measures for controlling LBS pollution in each state. See, e.g., Ilan Malester, *The Israel Ministry of the Environment, Country Report*, in LBS Workshop, *supra* note 171, annex III.

³²⁸See *supra* Part I.

³²⁹Yizhak Goren, General Director, Ministry of the Environment, Presentation at Air Pollution Legislation—New Directions Workshop (Ketura, Israel, May 9, 2002); Ruth Rotenberg, Legal Advisor, Ministry of the Environment, Presentation at Air Pollution Legislation—New Directions Workshop (Ketura, Israel, May 9, 2002).

International obligations help to facilitate regulation, as was clearly shown in the enactment of the LBS Statute. Israeli environmentalists are well aware of this and are using the Johannesburg World Summit for Sustainable Development as a focal point for demanding the ratification of numerous international treaties that are hitherto unsigned.³³⁰ Yet, as the Barcelona Convention experience has shown, vague international commitments will probably not translate into serious environmental progress.

None of this absolves local environmental decision-makers from attending to their responsibilities. International treaties can supplement and strengthen domestic efforts, but certainly cannot supplant them or provide the political will and economic capacity for implementation. Nonetheless, numerous measures can be taken without delay that will improve Israel's marine pollution performance. The fact that difficult economic conditions make major budgetary increases unlikely for the foreseeable future only increases the regulatory challenge. It does not make progress impossible.

Many important policy changes have been discussed in this article. Expanding public participation in inspection and enforcement would strengthen enforcement efforts without incurring serious additional expense. This can be facilitated through formalized procedures for reaching out to the public, a more comprehensive system that awards effective public monitoring (preferably following the MPPCA model), and the establishment of an emergency center that is accessible to an increasingly engaged public.

But even if the public joins the energetic and professional inspection staff, enforcement will not ultimately be successful without the cooperation of the regulated community itself. Encouraging an increase in self-reporting should be a key policy objective, and can be achieved through both deterrence and

³³⁰HEINRICH BOLL FOUNDATION, PATHS TO SUSTAINABILITY: SHADOW REPORT TO THE GOVERNMENT OF ISRAEL'S ASSESSMENT OF PROGRESS IN IMPLEMENTING AGENDA 21, 10 (2002). In preparation for the World Summit in Johannesburg in the summer of 2002, Israeli NGOs called for the ratification of the amendments to the Barcelona Convention and its Protocols, the Amendment to the Montreal Protocol, and the ratification of the Aarhus (public participation) Convention, as well as a more expeditious implementation of greenhouse gas reduction efforts under the Kyoto Protocol.

mitigation. In order to deter polluters, a legally binding, statutory-based requirement for self-reporting must be enacted in Israel (as well as other Mediterranean countries), establishing high penalties for continuing violations. Incentives to reward individuals who meet their obligations or who conscientiously pursue clean-up efforts are no less important.

Above all, Israel's enforcement system must ensure that it applies its own criteria and guidelines, especially in light of the fact that it has failed to implement the few relevant procedures that are in place today. The penalty system should become more transparent, revealing the administrative and judicial considerations behind fines, with an eye to sending a message to—and altering the behavior of—potential polluters. Guidelines for setting penalties, such as those indicated above, must be adopted and followed in both the national and international systems.

Naturally, this call to action is intended to reach beyond just domestic Israeli legislation and seeks to promote these recommendations in the international arena. The challenge for the next generation of marine control conventions in general, and the Barcelona Convention in particular, is to encourage the type of enforcement activities that have proven successful in the laboratories of domestic regulatory policy around the world.

In their review of implementation of international environmental treaties, Bodansky and Brunnée suggest that the remedy for non-compliance by countries is ultimately dependent on their motivations.³³¹ If non-compliance is a function of “bad faith” or political recalcitrance then the answer should be in more coercive institutional arrangements, dispute settlements and sanctions.³³² If non-compliance is committed in “good faith,” then precision and detail can make the difference.³³³ Certainly, the Israeli experience suggests that it is neither political resistance, nor even economic exigency, that limits implementation under the Barcelona Convention. Most Mediterranean nations, with a strong economic interest in Mediterranean water quality for their own citizens' recreation, as well as for international tourism, share a sincere commitment to cleaning up this marine resource. They will be better able to reach this goal if they can join together within

³³¹Bodansky & Brunnée, *supra* note 324, at 12.

³³²*Id.*

³³³*Id.*

the framework of an amended Barcelona Convention that not only upgrades the substantive expectations of member nations and the collective objectives of the Mediterranean riparians, but prescribes the specific measures that Mediterranean countries must take as part of their domestic environmental programs.

Like the pollution it is trying to control, the mechanics of marine regulation are messy. International instruments like the Barcelona Convention created a multinational infrastructure for addressing a problem that can only be solved through regional cooperation. The Mediterranean countries are “engaged,” but this engagement has not yet been manifested in the quality of the marine environment. After almost thirty years it is time to move on to the next stage—international treaties must begin to address the nuts and bolts of the problems they were intended to solve, to ensure that we do not wake thirty years hence to find that, while compliance with their vague provisions is improving, the actual environment they are trying to save is not.