

Chapter 3

INNOVATIVE TOOLS FOR PREVENTING MARINE POLLUTION FROM SHIPS

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ABSTRACT

This short commentary aims to provide a general background and view on the environmental impact caused by maritime transport on oceans, focusing our attention on the pollution caused by crude oil leaked into them.

Based on worldwide trends and statistics, the report also provides a range of innovative ideas to improve the applicability of environmental conventions to sub-standard ships that menaces the marine preservation.

The protection of ocean environment has evolved from the early treatment of pollution as an appendix of maritime safety to the current engagement with prevention and control of marine pollution from ships.

Although the first step in preventing marine pollution from ships was done in 1992 through the British Oil in Navigable Waters, which prohibited the discharge of oil and oily mixtures within the United Kingdom territorial waters, the concerns of international shipping community to strengthen their compromise with safety and environmental protection can be traced as of 1967 onwards, when the Torrey Canyon disaster took place and maritime shipping sector was visualized as source of marine pollution and consequently liable for compensation.

Since then, a thick variety of international treaties dealing with this topic were negotiated by States under the auspices of the IMO as a specialized agency of the United Nations. That organization has played a key role in enforcing worldwide obligations and standards since shipping is –together with aviation– the most international mode of transport in the world. This feature may obviously be source of conflict of law rules, which can be addressed by applying specific treaties or, in most cases, through national law.

Ships, in fact, are moving constantly between different countries and jurisdictions, and very often ship-owners, operators, officers and crew, charterers, insurers and the classification

society not only belong to different nationalities but frequently none of these is from the country whose flag the ship flies. This situation, close connected with sub-standard ships flying flags of convenience (FOCs),¹ menaces the implementation and concrete enforcement of those maritime conventions whose main goal is the environmental protection of oceans.

Statistically speaking, about 6,000 oil tankers carry 1.5 billion tons of crude oil around the world yearly. On average, 15 major accidents as well as 45 smaller ones occur per year. For example, between 1970 and 2008 there have been 1,305 smaller spills (from 7 to 700 tonnes) and 454 large ones (over 700 tonnes), and as a result of such tanker accidents or incidents the total amount of oil spilt is estimated in 5,652,000 tonnes along the last 28 years.

The Mediterranean Sea records more than 100,000 illegal and routine oil discharges from ships every year, namely, up to 275 daily unlawful dumps. Such illegal practices represent three times the amount of black tides caused by spills and eight times the amount of fuel discharged by “Prestige” into de Spanish and French coast in November 2002.

Statistics also demonstrate that: (1) in most of cases the spills from tankers are the result of routine operations, such as loading, discharging and bunkering; (2) the spills normally occur in ports or at oil terminals; (3) to a greater degree such operational spills are small (less than 7 tonnes in 91% of cases); (4) large spills are caused by collisions and groundings (84% of cases).

To sum up, although it is true that, in comparison with other means of transport the maritime shipping is the one that pollute the environment to a lesser degree, its environmental impact is also substantial not only due to the sheer size of the sector,² but also due to the fact that the tanker industry carries two third of the total amount of oil transported annually.³

WHAT KIND OF LEGAL RESPONSES ARE IN FORCE TO DEAL WITH THE PROBLEM?

A thick array of international treaties addresses this complex topic.

Among those ruling liability issues can be quoted the 1969 International Convention on Civil Liability for Oil Pollution Damage (1969 CLC), and the 1971 International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (1971 Fund Convention). Both conventions were amended in 1992 mainly to provide higher limitation figures (1992 CLC and 1992 Fund). Such limits were increased again in 2000 and in 2003, in the last case by negotiating the International Supplementary Fund for Compensation for Oil Pollution Damage. Additionally, a high number of shipowners who are members of the International Group of P&I Clubs later agreed on two voluntary compensation provisions, the Small Tanker Oil Pollution Indemnification Agreement (STOPIA), and the Tanker Oil Pollution Indemnification Agreement (TOPIA). Finally, the 2001 International Convention on Civil Liability for Bunker Oil Pollution Damage regulates damage caused by spills of oil, when carried as fuel in ships' bunkers.

¹ A flag of convenience ship is one that flies the flag of a country other than the country of ownership.

² BOON, Bart (2007). Report on Maritime Transport and the Environment for Latin America. Santiago de Chile, UNECLAC, Serie 127.

³ Oil Tanker Spill Statistics: 2008. (2009) ITOPE, London.

From the preventive point of view, the 1973/1978 Convention for the Prevention of Pollution from Ships and its six Annexes (MARPOL 73/78) play a key role in developing proper technical standards and practices to avoid marine pollution from maritime transport. The same preventive pattern is followed by 13 Regional Seas Programmes (they cover the Red, Baltic, Mediterranean, Black, and Caribbean Seas, for just quoting some of them); the 1974 International Convention for the Safety of Life at Sea (1974 SOLAS) and its 1978 and 1988 Protocols; the 1990 International Convention on Oil Pollution Preparedness, Response and Co-operation (1990 OPRC); and the 1969 International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties (1969 Intervention), whose 1973 Protocol extended the Convention to cover substances other than oil.

Currently, 121 countries are members of the 1992 CLC representing 96.39 per cent of the world tonnage; 104 states are parties of the 1992 Fund and only 24 are members of the 2003 Fund, representing 94.17 and 19.87 per cent of the world tonnage, respectively.

The acceptance of MARPOL convention (Annex I)⁴ is even higher, with 149 states representing the 99.01 per cent of the world tonnage. The 1974 SOLAS is in force among 159 States which represents 99.04 percent of world tonnage. 98 States are parties of the OPRC representing the 67.29 per cent and, finally, 86 countries are members of the 1969 Intervention with 74.40 per cent of the world tonnage.

Nevertheless, and despite the high acceptance of the treaties, the audit series conducted during 2006 and 2007 by the Sub-Committee on Flag State Implementation (FSI) within the framework of the Voluntary IMO Member State Audit Scheme have shown that:

- 300 incidental spillages up to 50 tonnes or more were reported (in most cases, the type of substance spilled was oil);
- 48 cases of alleged discharge violations were reported (in most cases, oil);
- 1,053 ships were detained in port or were denied entry during the Port State Control process in 2006. Namely, 2 per cent of those 51,589 ships boarded for control that year; and
- 67 ships were reported as having no International Oil Pollution Prevention Certificate (IOPP) or equivalent; 755 ships were reported to have discrepancies in their IOPP Certificate or equivalent; 129 ships were reported to have no Oil Record Book or equivalent; 2,930 ships were reported to have discrepancies in their Oil Record Book or equivalent; 192 ships lacked required pollution prevention equipment on board; and 2,952 ships were reported with required equipment not functioning;

IMO, in the report mentioned above, declares that “Although, at 24.6 per cent, the rate of reporting in 2006 was better than in previous years, it still remained low and the Sub-Committee urged all Parties to MARPOL to submit mandatory reports.”⁵ In other words, it reveals that –to some extent- the set of international treaties addressing oil marine pollution from ships are not as effective as they should be and that it is necessary to implement other measures to strengthen their effectiveness.

⁴ Annex I is about the Prevention of Pollution by Oil.

⁵ IMO NEWS, Number 3, Set 2008, London, pp. 15-16.

Despite the fact that there is a rich collection of international treaties controlling the marine pollution from oil tankers, it is a ludicrous situation that coastal areas and oceans are still under threat. Therefore, the lack of legislation doesn't hamper the control of undesirable activities as much as does the lack of law enforcement.

There is no doubt that IMO conventions are applicable by Contracting States on their own ships (ships flying their flags), but it is also evident that States have limited powers on the ships of other countries. There is also no doubt that most of sub-standard ships flied FOCs for reducing operating costs or for avoiding government regulations, many of them stemming from environmental obligations (i.g., Antigua and Barbuda, Bahamas, Cambodia, Cyprus, Liberia, Marshall Island, Panama, etc).

Then, how can be improved the applicability of those treaties to sub-standard ships?

A catalogue of such additional steps may consist in:

- strengthening the *erga omnes* feature of those international conventions dealing with preventive measures and compensation arising from oil marine pollution from ships. To the author's point of view the *erga omnes* opposability will broaden the group of States bound by such treaties obligations. Its immediate strategic effect is to assure their observance in *global commons* and those areas where none State have jurisdiction or sovereignty, and also to take appropriate countermeasures in response to serious *erga omnes* breaches;
- carrying out periodical *Assessment of law enforcement* to outline responses that are likely to overcome such legal "*misdesign*" and consequently to deal with the problem of "lack of or insufficient law enforcement";⁶
- adding other relevant Conventions to the Port State Control policy (PSC). With the main purpose of eradicating sub-standard shipping practices and protecting the marine environment, Port States are entitled to control foreign ships visiting their own ports to ensure that deficiencies are rectified before leaving. The effectiveness of this useful preventive tool largely depends on the number and sort of international duties controlled at local ports. However, a comparison among the current nine PSC regional systems demonstrates that only eight Conventions among the more relevant fifteen ones are implemented by Port States;
- introducing differentiated port dues based on the environmental performance of ships. This goal could be reached through the Green Award Flag in order to limit costs of implementation and control. The Green Award Flag⁷ is an initiative of the Dutch Ministry of Transport –establishes as of 1994- that offers incentives for environmentally responsible shipping. Candidates to apply for are those ship-owners that adhere to high standards in the field of quality, safety, and environmental

⁶ CAPALDO, Griselda (2006). Legal and Jurisprudential Trends on the Prevention of Marine Pollution from Land-Based Sources. In Griselda Capaldo Editor, *Sinergias ambientales entre las aguas continentales y las marinas*, (pp. 169-180). Buenos Aires. Mare-Magnum (WCS-CONICET) Publishers.

CAPALDO, Griselda (2008) *General Guidance for Protecting Marine Environment from Land-based Activities*. Buenos Aires: MNEMOSYNE Ed.

Book also available at www.sea-sky.org/ss_esp/mare-magnum.htm

⁷ See www.greenaward.org. Since 1 January 2000 the organization is completely independent.

protection. The Certificate is valid for 3 years and with the Award, they receive beneficial treatment, such as a reduction in port fees or dues rate at around 50 ports around the world and discounts in insurance contracts;⁸

- employing and admitting in legal actions against shipowners the latest technology - such as Satellite information and images- as *evidence* before courts in order to punish any law infringement (international or national). In the *Singapore Case*, for instance, an ERS-SAR satellite image showing near-real-time oil discharge from a tanker was accepted as evidence in a court of law and the responsible party was subsequently pleaded guilty and heavily fined. On the contrary, in many other cases as Courts could not adequately meet the *onus probandi*, polluters have been given the benefit of doubt (i.e. Bangladesh, India, Pakistan, Maldives, Sri Lanka). In its juridical sense, *evidence* is a narrow term that includes only the kinds of proof that according to the domestic legal rules may be submitted at a trial. Many States don't accept them because they are neither documentary nor expert witness evidence. They would be a sort of sum of both, that is a third kind of burden of persuasion. This "procedural gap" may be filled admitting satellite information / images by legislation and courts as evidence to prosecute wrongdoers.⁹ The direct benefit is not only to enhance the legal control but mainly to improve law and treaties enforcement.¹⁰

⁸ BOON, Bart: op. quoted in footnote 2, p. 54.

⁹ CAPALDO, Griselda. Op. cit in footnote 6.

¹⁰ See the outcomes of the UNESCO conference on "New space services for maritime users: the impact of satellite technology on maritime legislation", Paris 21-23 February 2005. Available at http://www.esa.int/esaCP/SEMUIOXEM4E_index_0.html (last visited August 26, 2009)

