LIABILITY FOR DAMAGE TO THE MARINE ENVIRONMENT

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FOREWORD BY ALLAN PHILIP, PRESIDENT OF
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FOREWORD

BY ALLAN PHILIP, PRESIDENT
OF THE COMITÉ MARITIME INTERNATIONAL

The principal topic for lawyers in the 90s is pollution and the environment. To maritime lawyers oil pollution since the *Torrey Canyon* incident and the 1969 CLC Convention has been an every day subject. To-day oil pollution is just one of many problems covered by environment law. IMO, already for a long time, has been wrestling with the problems of drafting a general HNS (hazardous and noxious substances) Convention.

The Comité Maritime International has as its object the unification of maritime law. In the CMI we came to the conclusion in 1991, not least as a result of the introduction of the Oil Pollution Act, 1990 in the United States, that environmental law should be looked at from this angle. A questionnaire was circulated to national assocations, members of the CMI, which is our customary working method. The replies resulted in a decision to take up the problem of damage assessment in environmental law as a subject, as it is described in the CMI discussion paper reproduced in Chapter 19 of this book.

However, it was felt that in order to ensure that participants in the debate should know exactly what was the basis of the discussions, it would be useful before beginning the discussions in the CMI to take stock of the present situation in national and international law with respect to pollution of the marine environment. Consequently, a seminar was arranged for the CMI in Genoa in October 1992 by its secretary-general, professor Norbert Trotz, within the framework of the celebrations in Genoa of the 500 years anniversary of the discovery of America by Christopher Columbus. At the seminar contributions were given by 18 of the most knowledgable people in the field, including the secretary-general of IMO and the director of the Oil Pollution compensation Fund. The contributions to the seminar form the principal contents of this book, ably edited for the CMI by Mr Colin de la Rue, member of the CMI Sub-Committee on Pollution Damage.

The seminar was intended as a basis for and introduction to the colloquium which followed it. However, it has been thought that the contributions to the

seminar together form such an important introduction to the present status of the law of the marine environment that it should be available to a broader audience. Therefore, this book. Having the proofs of the book in front of me I am in no doubt that this was a correct decision.

I wish to thank the editor, Colin de la Rue, for his efforts.

Copenhagen, June 1993 ALLAN PHILIP

PREFACE

On 21–23 September 1992 a seminar was held in Genoa under the auspices of the Comité Maritime International (CMI) on the subject of Liability for Pollution Damage, followed on 24–25 September by a colloquium dealing with the Legal Assessment of Damage to the Marine Environment. This book sets out the text of the 18 papers presented at the seminar, together with the discussion paper debated at the colloquium and a summary of the discussion.

The background to the seminar and colloquium was the emergence in the early 1990s of a conflict between two very different legal systems for compensating damage caused by oil pollution from ships. The international system, represented by the Civil Liability Convention 1969 and the Fund Convention 1971, had achieved widespread acceptance, with the notable exception of the United States, the world's largest importer of oil. In order to bring compensation levels up to date, and also to attract the United States into joining the international regime, agreement was reached at an IMO Diplomatic Conference in 1984 on Protocols to introduce various amendments to both Conventions, including substantial increases in the limits of financial cover. Entry into force of the Protocols depended very heavily on their ratification by the United States, but despite the commitment given by the US delegation at the 1984 Conference their acceptance in the United States was delayed by internal political problems, and ultimately ruled out in the aftermath of the *Exxon Valdez* disaster in 1989. This led to unilateral legislation in the form of the Oil Pollution Act 1990 (OPA), with a liability framework quite different in character from that of the international system.

The seminar papers describe in detail the contrasting features of these two regimes, and outline from various perspectives the practical problems resulting particularly from the more controversial features of OPA. However, they are not limited to questions of liability for civil compensation, but address also public law issues including prevention and response. They are not confined to pollution from ships, but extend to pollution from offshore activities. Nor are they restricted to pollution by oil: consideration is given also to problems caused by other hazardous and noxious substances, including issues surrounding hazardous waste and dumping at sea.

The paper debated at the colloquium was founded on the replies received to a

questionnaire which had been circulated to all the national maritime law associations affiliated to the CMI. It stimulated considerable discussion as to the types of claim which ought to be recoverable as a consequence of pollution damage. The debate included contributions by many eminent maritime lawyers, some of whom had been actively involved in the work which led to the 1969 and 1971 Conventions, whilst others had taken part in the negotiations resulting in the 1984 Protocols. Contributions were also made by representatives of industry, government and others with first hand experience of working under OPA and the international regime. Those discussions left little room for doubt that the CMI will have a valuable role to play through further work in this field over the years ahead.

Rarely if ever have so many distinguished experts gathered together to deal so thoroughly with the different legal aspects of marine pollution. In these circumstances the editor's work has been comparatively limited, but by way of postscript, mention should be made here of certain significant events occurring in the months between the Genoa Seminar and the publication of this book.

Two months after the seminar, in November 1992, an IMO Diplomatic Conference was held in London with a view to negotiating terms enabling the 1984 Protocols to enter into force without the need for ratification by the United States. A number of speakers in Genoa looked ahead to these important discussions. An obstacle lay in the fact that over 32 per cent. of the funds required for settlement of all claims paid under the Fund Convention in the period 1978–91 had been contributed by Japan, which felt that the proposed increase in available compensation would impose on its oil industry a burden which was not only very high but also unfair. In the event a compromise was struck, whereby the contributions of any one State were "capped" at a level of 27.5 per cent., but only during a transitional period until either (a) the total quantity of contributing oil received by all contracting States in a calendar year had reached 750 million tonnes, or (b) five years had elapsed after the entry into force of the Protocols, whichever first occurred. This compromise enabled the 1984 Protocols to be re-affirmed and re-embodied in what will henceforth be known as the 1992 Protocols. The success of the Conference may be gauged from the fact that when its Final Act was opened for signature on the last day of the meeting, 49 States signed at once. It remains to be seen how soon sufficient ratifications will accumulate for the Protocols to enter into force, but early indications suggest a reasonable prospect that they will do so in the foreseeable future, thereby increasing the available compensation to more than double the present limit of some US$83m.

The succeeding six weeks saw two significant oil spills in European waters—first the *Aegean Sea* incident outside the port of La Coruña, Spain, in December 1992, followed a month later by the *Braer* casualty in the Shetland Islands, UK, in January 1993. Both cases attracted intense media attention, but initial reports of environmental catastrophe on a par with *Exxon Valdez* proved well wide of the mark. Each incident was governed by the Civil Liability and Fund Conventions, and at the time of writing the precise cost of these spills has yet to be

finally determined. However there is every indication that the present compensation limits—let alone the revised limits provided for in the Protocols—remain more than adequate in all but the most exceptional cases. That said, both of these recent cases have led to claims which underscore the difficulties involved in defining the precise types of claim which qualify for compensation under the Conventions. In combination with similar problems emerging from the *Haven* incident in 1991, they have brought fresh demand for clarification of the legal issues debated at the Genoa Colloquium, particularly those concerning the scope of recovery for economic loss.

From these events it may be concluded that although US legislation in this field has attracted the lion's share of publicity in the early 1990's, the established international system nevertheless remains alive and well, and indeed continues to progress from strength to strength. Supporters of both systems will have challenges to face in the years ahead, but in the pages of this book the reader should find ample guidance on the law as it stands at present.

June 1993 COLIN DE LA RUE

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CHAPTER 1

PROTECTION OF THE MARINE ENVIRONMENT: THE PUBLIC INTERNATIONAL LAW APPROACH[1]

PATRICIA BIRNIE*

I. INTRODUCTION: RELEVANT SOURCES OF INTERNATIONAL LAW

It is vital to an understanding of the role of public international law in protecting the marine environment to identify the means of developing, applying and enforcing it, which so far as State actions are concerned, involves difficult and sensitive questions of sovereignty and jurisdiction and of State responsibility and liability, but can also, since municipal laws and actions may provide evidence of State practice, concern individual responsibility and the decisions of national courts. As marine environmental law is neither more nor less than a specialized branch of international law it derives primarily from the traditional sources, namely treaties and customs and general principles of law, with judicial decisions and the writings of eminent lawyers providing secondary sources.[2] It is, however, becoming increasingly difficult to identify the crystallization of international law in the marine environmental field by these means in the context of the changing nature and composition of international society.[3] We now live in what some international lawyers have referred to as a divided[4] or a multicultural world.[5] The number of States involved in the law-making process,

* Director, IMO International Maritime Law Institute. The views presented in this paper are exclusively those of the author and do not necessarily represent those of the IMO or the IMO International Maritime Law Institute.

1. There is now a vast literature on this subject but for succinct overviews reference can be made to R. R. Churchill, A. V. Lowe, *The Law of the Sea* (2nd ed, Manchester: 1988), Ch. 15; M. L. McConnell, E. Gold, "The Modern Law of the Sea, Framework for the Protection and Preservation of the Marine Environment", 23 Case West Res. JIL (1991) pp. 83–105; P. W. Birnie and A. E. Boyle, *International Law and the Environment* (Oxford: 1992), on which parts of this chapter are based; *passim*, esp. Ch. 7, pp. 251–299.

2. I. Brownlie, *Principles of Public International Law* (4th ed., Oxford: 1990), Ch. 1, pp. 1–31.

3. W. Friedman, L. Henkin, O. Lissitzyn (eds.), *Transnational Law in a Changing Society* (New York: 1974).

4. A. Cassese, *International Law in a Divided World* (Oxford: 1986), esp. pp. 171–99.

5. R. J. Dupy (ed.); *The Future of International Law in a Multicultural World* (The Hague: 1985); R. Jennings, "What is International Law and how do we tell it when we see it?", *Ann. suisse DDIC* (1981) pp. 59–88.

following recent events in Eastern Europe and elsewhere, is now about 180 and they are of increasingly diverse legal, political, religious, and cultural systems, as geographical size and political and economic strength. All seek to ensure that legal developments take account of their interests, which include protection of their development, whether rich or poor, through economic uses of the ocean—navigation, fishing, dumping, and extraction of mineral resources—as well as protection of the environment.

There has, however, been increasing recognition of the need to protect the marine environment as a whole and lay down principles and rules within the framework of international goal-setting strategies that attend to the developmental and environmental aspects.[6] International organizations, including the UN and its specialized agencies, *ad hoc* intergovernmental and non-governmental bodies at global, regional and sub-regional level, have played an increasing role in developing these, in promoting new treaties and finding new ways of contributing to the process of customary law making. The concern for protection of the marine environment has resulted in the application of all these law-making processes to certain priority issues such as preventing marine pollution by oil, toxic discharges, and dumping; controlling atmospheric pollution; regulating the transboundary movement of hazardous wastes and preserving endangered marine species. The process accelerated following the convening of UN's 1972 Stockholm Conference on the Human Environment (UNCHE), and its adoption of a Declaration of Principles on the Human Environment,[7] and is likely to intensify following the UN Conference on Environment and Development's (UNCED) adoption of an Earth Declaration and Agenda 21, its action programme, Chapter 17 of which covers the oceans and all kinds of seas, implementing and expanding upon the previous strategies to promote sustainable development.

This has required that international law be developed more quickly and by more flexible means than in the past and that it adopts new concepts and principles recognizing the interdependence of the ecosystems constituting the marine environment and the interests of States themselves in preserving it on an economically as well as environmentally sustainable basis. The framework of marine environmental treaties developed under the auspices of the International Maritime Organization (IMO), the United Nations Environment Programme (UNEP), concerned UN and other agencies and *ad hoc* conferences outside the UN System, reflects these perceptions and needs. A broad framework of

6. These include the Stockholm Conference Action Plan (see below); IUCN's World Conservation Strategy (1980), revised in 1991 as "Caring for the Earth" to take more account of sustainable development; the UN's Global Perspective to the Year 2,000 (1990); the Report of the World Commission on Environment and Development (Brundtland Commission: 1986)) and the IMO's Clean Seas programme.

7. Report of the United Nations Stockholm Conference on the Human Environment, UN Doc. A/CONF. 48/14, UNEP (Nairobi: 1972).

evant treaties, principles and codes has gradually emerged but there is also increasing resort, occasioned by the diversity of States and their interests and the complexity and political, social and economic issues involved, to the use of non-binding so-called "soft law"[8] methods, which include "framework" or "umbrella" treaties, declarations, codes of conduct, guidelines, recommendations and recommended principles, etc., rather than binding obligations—so called "hard law"—laid down in Conventions, customary law or legal principles. "Soft law" may itself harden through State practice in implementing it or subsequent codification treaties but is often accepted as sufficient in itself to achieve the desired effect of influencing enactment of national legislation, as for example the IMO's International Maritime Dangerous Goods Code.[9] Treaties nonetheless remain the most frequent method of establishing binding rules but the negotiating and ratification process can be slow, and even when in force they bind only their parties unless codifying or generating new custom[10]; moreover, some allow reservations. IMO treaties provide examples of these problems, as this seminar will illustrate. A further problem is that treaties do not always lay down clear and precise rules and, because of the difficulties emanating from the need to accommodate the interests of the heterogeneous international community, this is increasingly the case: they may lay down only very general requirements to "take measures" or use "all practicable means", as in the case of the UNEP Regional Seas treaties; further action is then required by States to fill in the gap by enacting national laws or negotiating further protocols.

Customary law[11] is important also, especially in laying down fundamental guiding principles, such as those concerning State responsibility for marine environmental harm, and may be preferred for some purposes but as it is largely derived from a generalization of frequent and uniform State practice, it is an inappropriate vehicle for developing specific regulations or settling the limits of liability, even though a much broader view is taken nowadays as to what constitutes State practice and *opinio juris*. Even consensus, as achieved at the Third United Nations Conference on the Law of the Sea (UNCLOS III) on marine environmental protection issues or declarations such as those issued by the International North Sea Conferences, oblige participating States to carry out their undertakings in good faith, despite the fact that both are non-binding and thus do not entail international responsibility or allow for resort to international

8. T. Grouchalla-Wesierski, "A Framework for Understanding 'Soft Law' ", *30 McGill LJ* (1984), p. 37; Chinkin, "The Challenge of Soft Law: Development and Change in International Law", 38 *ICLQ* (1989) p. 850; P. Birnie, "Legal Techniques of Settling Disputes: the " 'Soft Settlement' Approach", in W. E. Butler (ed.) *Perestroika and International Law*, (Dordrecht, 1990), p. 166.

9. See Carriage of Goods, Status of Adoption and Implementation of the International Maritime Dangerous Goods (IMDG) Code, IMO DOC. MSCCr. 497, 26 July 1988, Ref. T 33.06.

10. I. Brownlie, *Principles*, above n. 2, pp. 603–835.

11. Brownlie, ibid., pp. 4–11.

tribunals.[12] Custom lacks the burdensome procedures of treaty making and acquiescence by States in a practice is sufficient to crystallize it; thus "the inactive are carried along by the active".[13] On the other hand, it is accepted that persistent objection by a State prevents the rule crystallizing in relation to it, unless it is *jus cogens*, a term which, like "sustainable development" is one "that everyone understands and no one is able to define".[14] It is also useful for developing new concepts such as the "precautionary principle",[15] "the polluter pays principle",[16] "common interest" or "common concern",[17] "inter-generational rights and equities",[18] a human right to a healthy environment, and other ideas for enhancing principles of responsibility and liability. Moreover, customary law often provides the catalyst and frame for enactment of more specific national and international laws, as in the case of liability and compensation funds.[19]

General principles of law have in the past generally been given a very restricted interpretation confining them largely to principles commonly applied in municipal systems to ensure an equitable legal process, but the practice of the International Court of Justice suggests that it may take cognisance in certain circumstances of principles that can be generalized from customary or treaty law or that have been established by States to provide basic standards of behaviour for international society; it has invoked "equitable principles" not as rules of law but as the means of facilitating an equitable solution.[20] Of particular interest to our concerns here, is the *Chorzow Factory Case*[21] in which the court enunciated the general principles of State responsibility and of reparation for damage, including the principle of *restitutio in integrum*; it has also referred to the doctrines of abuse of rights and good faith, and, somewhat generally, to inherent natural-law principles that are the foundation of human rights, including recent proposals for establishment of a right to a clean and healthy environment.[22]

12. Y. Van der Mensbrugghe, "Legal Status of International North Sea Conference Declarations", 15 *IJECL* (1990) pp. 15–22.

13. H. Meijers, "How is International Law Made? The Stages of Growth of International Law and the Use of its Customary Rules", 9 *Neths. YIL* (1978) pp. 4–26.

14. L. Caldwell, *International Environmental Policy and Law* (1st ed. Durham N.C.: 1980) p. 170.

15. L. Gundling, "The Status in International Law of the Principle of Precautionary Action", 5 *IJECL* (1990) pp. 23–29; D. Freestone, in RR Churchill, D. Freestone, *International Law and Global Climate Change* (London: 1991) pp. 21–40; E. Hey, "The Precautionary Approach and the LDC", annexed to LDC 14/4. 4 September 1991.

16. *The Polluter Pays Principle* (OECD, Paris: 1975).

17. J. Brunnee, "Common Interest—Echoes from an Empty Shell?", 49 *ZAOV* (1989), pp. 789–808.

18. E. Brown-Weiss, "Our Rights and Obligations to Future Generations for the Environment", 84 *AJIL* (1990) p. 198.

19. The US Oil Pollution Act 1990 is a case in point.

20. *Libya-Malta Continental Shelf Case*, ICJ Rep. (1985), p. 13; *Gulf of Maine Case*, ICJ Rep. (1984), p. 246.

21. *Chorzow Factory Case* (Indemnity) (Jurisdiction), PCIJ Ser. A, No.8/9, (1927), p. 31.

22. E.g. P.–M. Dupy in R.–J. Dupy (ed.), *The Right to Health as a Human Right* (Alphen aan den Rijn: 1979), p. 340; Natural Heritage Institute, Preliminary Report on Legal and Institutional Aspects of the Relationship between Human Rights and the Environment (Geneva: 1991).

II. THE EMERGENT REGIME

1. Concepts underlying the emerging regulatory regime

(i) "Harm", "damage" and "pollution"

There is no doubt that in customary international law States are now required to take steps to control and regulate all sources of pollution or of harm to the marine environment that lie within their territory, such as land-based sources, or that are subject to their jurisdiction and control, such as vessels, dumping and offshore minerals exploration and exploitation. It is not now, as it perhaps was in the past, necessary to wait for harm or damage to occur, i.e. the principle is no longer limited to obligation of reparation of damage, as referred to in the *Chorzow Factory Case*. Even in the famous *Trail Smelter* arbitration, where the tribunal, in awarding damages for harm caused in the USA by transboundary air pollution emanating from a Canadian smelter, applying the principle *sic utere tuo ut alienum non laedas*, held that "no state has the right to use or permit the use of its territory in such a manner as to cause injury . . . in or to the territory of another", it agreed that measures to control pollution should be taken, which it prescribed at the parties' request.[23] Later cases and instruments support this conclusion. Principle 21 of the Declaration adopted by the 1972 UNCHE postulates States' sovereign rights to exploit their resources, pursuant to their own environmental policies but subjects this to their responsibility "to ensure that activities within their jurisdiction and control do not cause damage to the environment of other States or to areas beyond the limits of national jurisdiction". This is generally regarded as reflecting customary international law and has influenced the drafting of such conventions as the London Dumping Convention,[24] the Basel Convention on Transboundary Movement of Hazardous Wastes,[25] the United Nations Convention of the Law of the Sea,[26] General Assembly Resolutions and UNEP Principles referred to elsewhere in this chapter.

The principle protects the interests of the international community as such[27] protecting the marine environment of international areas, such as the high seas. The International Law Commission in its draft articles on State responsibility has proposed that "massive pollution of the . . . seas" is an international crime,

23. *Trail Smelter* arbitration. 33 AJIL (1939). p. 182: 35 AJIL (1941) p. 684. at 716.

24. Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter (London: 1972). 11 ILM 1294 (1972): in force 1975.

25. Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (Basel: 1989) 28 ILM 657 (1989): in force 1992.

26. United Nations Convention on the Law of the Sea (Montego Bay: 1982): 21 ILM 1261 (1982): not in force.

27. J. Charney. Third State Remedies for Environmental Damage to the World's Common Spaces. in F. Francioni and T. Scovazzi (eds.) *International Responsibility for the Environmental Harm* (Dordrecht: 1991), pp. 149–178.

the implication being that all States are injured thereby and can resort to whatever means of response are legally available.[28] The UNCLOS, in Article 194, states the rule as one of prevention and control as will be explained later in this chapter.

What customary law requires, however, is not that States guarantee that harm will be prevented but that they exercise due diligence, i.e. take the best measures available taking into account the resources and means available to them and the nature of the activity to be controlled; this allows for flexible standards of behaviour, including reference to internationally agreed codes as well as treaties[29] that set and harmonize minimum standards. The UNCLOS, for example, as expanded upon later, incorporates by reference standards for control of vessel source pollution set in MARPOL and the London Dumping Convention by requiring its parties to give effect to "generally accepted international rules and standards".

"Due diligence" is generally regarded as requiring that such legislation be enacted and such administrative measures adopted to regulate conduct as are necessary effectively to discharge the obligation in issue; it does not require absolute prevention of all harm; rather that the State conducts itself in a manner expected of good government.[30] It must take the measures to prevent conduct which, if it were the actor, would breach its international obligations and invoke international responsibility and liability if harm occurs.[31] In this sense, international law is already based on "the precautionary principle", although the specific measures required and their timing remain unspecified by international law in the absence of treaties or guidelines, which is why treaties are so important in ensuring uniform protection of the global marine environment to at least a minimum standard. International case law does provides some support for the view, however, that measures must be taken to prevent foreseeable harm,[32] although the paucity of decided cases, the broad nature of the principles involved and some ambiguity in their formulation, means that excessive reliance cannot be placed upon them. Thus international bodies have developed guidelines.[33]

28. Article 19 of Pt. I of the ILC's Draft Articles on State Responsibility, II *YBILC* (1980) Vol. II (Pt 2), pp. 30–34; for a good resume of this approach see G. Gilbert, "The Criminal Responsibility of States", 39 *ICLQ* (1990), pp. 345–369. He, like many commentators finds the approach inappropriate in contemporary international law.

29. E.g. the IMDG and MARPOL 73/78; some now require use of best available technology (BAT).

30. B. D. Smith, State Responsibility and the Marine Environment (Oxford, 1988) pp. 36–42.

31. Birnie and Boyle, above n. 1, pp. 92–98.

32. E.g. *Corfu Channel Case* ICJ Rep. (1949), p. 1; *Lac Lanoux* arbitration 24 ILR (1957) pp. 101, 123; I. Brownlie, *State Responsibility* (Oxford: 1983), p. 182.

33. See various UNEP Principles such as Principles of Environmental Impact Assessment, UNEP, Nairobi (1987); ECE Convention on Environmental Impact Assessment in a Transboundary Context (ESPOO), 30 ILM 1991, 802; not in force.

(ii) The precautionary principle

The attempt to give more precise content to the "precautionary principle", follows from the above developments, though this is not yet a binding principle of customary law,[34] so that increasingly, it is not now necessary to wait for conclusive scientific proof of actual or imminent harm in certain cases before taking action to control activities, even in the absence of Conventions positively prohibiting discharges in issue. Certain declarations recommend that where there is a threat of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.[35] This approach forms the basis of such conventions as the Basel Convention on Transboundary Movement of Hazardous Waste and the new Rio Convention on Climate Change, and has been adopted for dumping at sea under the London and Oslo Dumping Conventions,[36] and for land-based discharges under the Paris Convention[37] and has just been included in Article 3(2) of the new Convention on the Protection of the Marine Environment of the Baltic Sea Area, concluded on 9 April 1992 at Helsinki.

(iii) Definitions of "harm" and "pollution"

The requirement that harm be prevented, referred to above, is the basis of the obligation to protect and preserve the marine environment breach of which engages State responsibility. This requires some definition of what is meant by "harm" and of the degree of harm that is regarded as posing such a threat that it becomes impermissible. This level has been variously referred to in terms of "serious injury",[38] "appreciable injury"[39] or "significant harmful effects"[40] and so on; many important instruments avoid the problem by failing to qualify "harm" at all. Some writers regard the relevant level as negotiable, i.e. aimed at by balancing interests equitably but others regard this as an uncertain unsatisfactory and unnecessary approach.[41]

In the early years of the development of the law on this aspect, solutions

34. *Op. cit.*, above n. 14.
35. See Second (1987) and Third (1990) Declarations of the International North Sea Conferences.
36. Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter at Sea, 1972; in force 30 August 1975; text in The London Dumping Convention: The First Decade and Beyond, IMO, London, 1991; Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft (Oslo), 11 ILM 362 (1972); in force 1974.
37. Convention for the Prevention of Marine Pollution from Land-based Sources, 13 ILM 352 (1974).
38. *Trail Smelter* arbitration, above n. 22.
39. UNGA. Res. 2995 XXIII 1972.
40. ILC Draft articles on International Liability, UN Doc. A/CN 4/428 (1990); this is considered to be a lower standard than "serious injury".
41. Quentin Baxter II Yb.ILC. (1981) Pt I; pp. 112–19; S. McCaffrey, II Yb.ILC (1986) Pt I pp. 133–4.

focused on limiting the application of the principle to harm to persons or property, as in the *Trail Smelter Case* or the IMO Civil Liability Convention 1969 which defines "pollution damage" as loss or damage outside the ship (Article I) that occurs to the territory or territorial sea (Article II). This restrictive view has become outdated as awareness of wider environmental damage has grown. The Protocols to the CLC and the IOPC Fund Convention reflect the new approach introduced in the Stockholm Principle 21's reference to harm to the "environment" of other States and international areas and in Article 194(2) and (5) of the UNCLOS 1982 implementing this, which refer not only to the "environment" but to "ecosystems" and "habitat", as explained later. It still remains to formulate the limits of such injury when proof of harm may be impossible to obtain, except over a long term. However, some treaties do provide for payment of costs of cleaning up and restoring the environment, for example, the 1984 CLC Protocol[42] and the 1989 International Convention on Salvage[43]; and the ILC favours their extension.[44] The extreme approach adopted by the courts in Puerto Rico in the *Zoe Colocotroni Case* (and rejected as unreasonable on appeal[45]) has not yet been followed in any Convention, but the Antarctic Mineral Resources Convention may be the forerunner of further developments: it refers to "any impact on the living and non-living component of Antarctica", including marine life, "beyond that which is negligible".[46]

Several Conventions define harm in terms of pollution,[47] or vice versa, using amended forms of GESAMP's limited definition which refers to "harm to living resources, hazards to human health, hindrance to marine activities including fishing, impairment of quality for use of sea water and reduction of amenities". Examples include the Oslo Dumping Convention, the Paris Convention on Land-based Sources, which, in Article 1(1), adds "hazards to marine ecosystems", and the UNCLOS, Article 1(4) of which includes "harm to marine life". All the definitions now also include "introduction by man of substances or energy into the environment whether directly or indirectly"; attention is thus now paid to the close linkage between human activity in the sea and its effect on its natural processes.

42. Protocol of 1984 to amend the International Convention on Civil Liability for Oil Pollution Damage 1969; pub. IMO, 1982 edition, reprinted 1989. Article 6(a) of the Protocol limits compensation for "impairment of the environment", other than loss of profit therefrom, to costs of "reasonable measures of reinstatement actually undertaken or to be undertaken".

43. International Convention on Salvage (London), IMO/LEG/CONF. 7/27 (1989); not in force.

44. ILC, draft Article 2 on "International Liability", above n. 39.

45. *Commonwealth of Puerto Rico* v. *The Zoe Colocotroni*, USCA, 628 F. 2nd 652 (1st Cir. 1980).

46. Convention on the Regulation of Antarctic Mineral Resource Activity (Wellington) 27 ILM 868 (1988); not in force; Article 1(5). The new Protocol on Environmental Protection to the Antarctic Treaty, 30 ILM (1991) 1460, commits its parties to "the comprehensive protection of the Antarctic Environment and dependent and associated ecosystems" (Article 2).

47. I.e., they either require State parties to prevent or control "pollution", which they then define, or require states to take measures to prevent certain activities which are based on GESAMP's definition of marine pollution without referring to the term.

We can conclude that customary law now accepts the concepts of "pollution" and "pollution damage" in general terms and it could be argued from the frequency of its use in pollution treaties that, as a minimum, the definition formulated by GESAMP is accepted, but this leaves many difficult questions of scope and effect unanswered; it is thus left to particular treaties to provide their own definitions, which inevitably vary; there is no one international definition, a problem to be addressed in other chapters.

(iv) The polluter pays principle

The "polluter pays" principle, which is often referred to in the relevant literature, is an economic rather than a legal principle, but is increasingly widely applied, having been developed by the OECD and accepted by the European Community, among others. It provides a means of distributing the costs of pollution and, assuming the polluter in a given case is readily identifiable—which is not always possible in the case of discharges at sea—should act as a deterrent to engaging in the polluting activity concerned. Limitation of liability under certain international Conventions undermines the principle, and that system has begun to attract public criticism among a more environmentally conscious public, particularly in relation to highly visible pollutants such as oil, as the adoption of the US Oil Pollution Act 1990[48] illustrates. It is, however, now being referred to in treaties; the 1986 Single European Act,[49] in Article 25, states that "Action by the Community relating to the environment shall be based upon the principle that . . . the polluter shall pay" and the Preamble to IMO's 1990 Convention on Oil Pollution Preparedness, Response and Co-Operation (OPPRC), which is analysed in another paper, refers to the "polluter pays principle" as a general principle of international law. The new Helsinki Convention's Article 3(4) states "The Contracting Parties shall apply the polluter pays principle." Pursuant to its recommendation by OECD,[50] it has been applied also in several national laws. There is thus now considerable evidence of state practice in implementing it. UNCED stressed the need to take into account both the precautionary and the polluter pays principle. It may be in process of becoming a principle of customary law but its economic basis calls this into question.

48. Pub. L. 101–380, 104 Stat. 484 (1990); amongst the fast growing literature on this see J. B. Ruhl and M. J. Jewell, "The Oil Pollution Act of 1990: Opening up a New Era on Federal and State Regulation of Oil-Spill Prevention, Containment and Clean-up and Liability", 8 *OGLT Rev.* (1990) Part I, pp. 234–252, and Part II 304–308. OPA covers damage to natural resources and the cost of restoring, rehabilitating, replacing or acquiring their equivalent, the diminution in value pending restoration, and the cost of assessing those damages.

49. Single European Act (1986); 25 ILM 506 (1986); in force 1 July 1987.

50. A. Boyle, Making the Polluter Pay: Alternatives to State Responsibility in the Allocation of Transboundary Environmental Costs, in Francioni and Scovazzi (eds.), *International Responsibility* above n. 27, at pp. 363–79.

2. Enforcement of the regulatory regime

(i) The doctrine of State responsibility and liability[51]

(a) DRAWBACKS OF RELIANCE SOLELY ON INTER-STATE CLAIMS

The regulatory regime that is emerging for protection of the marine environment from customary sources is obviously more effective if it is enforced. If left solely to the traditional processes of customary international law, enforcement is likely to be weak since, as we have seen, the main mechanism is the bringing of claims by one state against another for reparation of injury resulting from the alleged violation of an obligation imposed upon them by international law. Though there are many disadvantages to this doctrine, it remains important, not only as the sole means of securing recompense if no relevant treaty exists in any given situation but also if the treaty is inapplicable or insufficient for a given situation.

The problems of relying solely on this principle include the lack of international fora in which to bring claims. In the absence of compulsory jurisdiction established by treaty; the difficulty of identifying the precise nature of the international obligation breached (although as indicated in the previous section the proliferation of regulatory treaties is narrowing the gap); the uncertainties and delays involved in international court proceedings; the evidentiary problems of proving damage, especially to the marine environment; the technical and scientific aspects of the problem; its limitation to claims by States and the additional delays thus involved for injured individuals, local authorities etc., and the uncertain outcome in view of the unsettled nature of much of the customary law, it is not surprising that States have attempted to avoid these problems, at least in the case of vessel source pollution, by resort to treaties, which sidetrack the above problems by channelling some of their liability back to the owners or operators concerned. No international tribunal has been asked to adjudicate an international claim between States arising from any recent major marine or other form of environmental disaster. The *Trail Smelter* and *Lac Lanoux Cases* that raised the question were rare even in their time. Providing for equal access to national tribunals can be useful in the case of transboundary disputes but has disadvantages[52]; however, increasing provision for this reflects the general trend to rely on civil liability rather than State responsibility as the primary remedy.

(b) THE NEED FOR AND PROBLEMS OF ESTABLISHING AD HOC LIABILITY REGIMES

The very weakness of the international law in this field, including the lack of fora for dispute settlement, has been a catalyst for the conclusion of the CMI and IMO Civil Liability Conventions and for resort to the regulatory agreements

51. See generally Brownlie, *International Responsibility*, above n. 31, at pp. 363–79; Smith, *State Responsibility*, above n. 30; Francioni and Scovazzi, *State Responsibility*, above n. 26.
52. Birnie and Boyle, *International Law*, above n. 1, pp. 197–201.

referred to above and below but it has proved very difficult to conclude conventions or add protocols establishing a strict liability regime to other conventions protecting the marine environment. Most Conventions, such as the Oslo and London Dumping Conventions, the UNEP Regional Seas Convention, the 1974 and 1992 Helsinki Conventions on the Protection of the Marine Environment of the Baltic Sea, resort merely to general exhortations to develop rules on responsibility for damage. The LDC stipulates that "In accordance with the principles of international law regarding State responsibility for damage to the environment of other States among other areas of the environment . . . The Contracting Parties undertake to develop procedures for the assessment of liability . . . "; UNEP Convention parties "undertake to co-operate as soon as possible in the formulation and adoption of appropriate procedures for the determination of liability and compensation for damaging resulting from the pollution of the marine environment . . . "; the 1974 Helsinki Convention parties go further, promising "to undertake, as soon as possible, jointly to develop and accept rules concerning responsibility for damage resulting from acts or omissions in contravention of the present Convention, including, *inter alia*, limits of responsibility, criteria and procedures for the determination of liability and available remedies", for example, and thus has been repeated in Article 25 of the new Helsinki Convention (though significantly with the deletion of the phrase "as soon as possible"). But although the parties to all these conventions have eventually opened negotiation or discussion of the issue, they have not yet come to any successful conclusion. "Channelling" is not such an easy option in these cases as in the case of ships or operators of nuclear installations. It is notable that even in the case of offshore platforms, where the operator is identifiable, problems have been encountered in developing liability conventions or protocols, as Professor Gold's paper will illustrate. Even if concluded, they do not necessarily enter into force. Finally, it should be noted that little has been done to implement the requirement of Principle 22 of the UNCHE Declaration that States co-operate to develop the international law on liability and compensation concerning environmental damage to areas beyond national jurisdiction.

It should be emphasized, however, that the State does not discharge its own responsibility for marine environmental damage, by entering into "channelling" conventions on liability; even when the harmful activity is conducted by a private individual or company, the State's international obligation to prevent harm requires that it controls this activity and, if it has not effectively done so by exercising the standard of due diligence required, it retains responsibility for any resultant harm.

(c) LACK OF CLARITY CONCERNING BASIS OF LIABILITY

A further disadvantage of relying solely on State responsibility in the view of some writers is that, at the international level, it has remained unclear whether the liability is based on fault or is strict or absolute. Others regard "fault" as

redundant in the context of establishing breach of an international obligation[53] where the definition of due diligence is the key. The liability conventions resolve the problem by imposing strict liability. Some writers contend that a form of strict liability exists in customary international law in the case of ultra hazardous activities, such as carrying oil or chemicals at sea by tanker, or derives from general principles of international law such as equity, sovereign equality or good neighbourliness.[54] This view has led the ILC to develop controversial draft articles on "International Liability for Injurious Consequences Arising out of Acts not Prohibited by International Law", which would include those causing marine environmental harm.[55] Space does not permit extended analysis of the widespread criticism of this approach; suffice it to say that it is far more logical and acceptable in terms of international legal theory to leave it to States to resolve the complex problems by conclusion of treaties such as the CLC and IOPC and the recent negotiations on the Draft Convention on Hazardous and Noxious Cargoes.

(d) MEANS OF MAKING REPARATION FOR DAMAGE

Were State responsibility to be established in the case of a marine environmental disaster, various forms of reparation other than payment of damages may, however, be sought: discontinuance of the act concerned; application of national remedies; provision of guarantees that the act will not be repeated; or *restitution in integrum*. Payment of compensation arises under international law only if the last is not possible. *The Chorzow Factory Case* indicated that "reparation must, as far as possible, wipe out the consequences of the illegal act and re-establish the situation which would, in all probability, have existed if that act had not been committed".[56] Furthermore, an injured state may exercise a right of reprisal and of suspension of its legal obligations to the offending State.

(e) ALTERNATIVE METHODS OF ENFORCEMENT

It is now perceived to be more advantageous to prevent or control pollution damage since it is virtually impossible if an environmental disaster occurs fully to restore the environment or even to make adequate reparation to victims. The doctrine is also particularly inappropriate for the situation, as in the marine environment, where damage may be subtle and build up only over a long period. Members of international tribunals, who lack the necessary complex scientific and technical knowledge, are not anxious to encourage presentation of

53. On this point see Birnie and Boyle, above n. 1, at pp. 141–251.

54. J. Schneider, *World Public Order of the Environment* (London: 1975) Ch. 6, pp. 141–175.

55. Barboza, 6th Rep. ILC, UN DOC. A/CN, 4/428 (1990) with draft articles 1–33 and Report of the ILC to the UN Gen. Ass., UN DOC A/45/10 (1990) at 242; For critical analysis see A. Boyle, "State Responsibility and International Liability for Injurious Consequences of Acts not Prohibited by International Law: A Necessary Distinction?" 39 *ICLQ* (1990) pp. 1–26; D. B. Magraw, "Transboundary Harm: the International Law Commission's Study of 'International Liability' ", 80 *AJIL* (1986) pp. 305–330.

56. *Chorzow Factory* Case (Indemnity) (Merits) PCIJ Ser. A, No. 17 (1928), pp. 47–48.

such claims. Therefore, States resolve their inter-State disputes by negotiation, sometimes through relevant international organizations or functional commissions, and use them to monitor activities and as a forum for receiving reports and complaints. More sophisticated methods of enforcement of the regulatory regimes are perceived to be required than those relying on the general principles of State responsibility, e.g. monitoring, reporting, inspection; there is thus much delegation of such international obligations by treaty to national means of inspections, e.g. to port State inspection under IMO and ILO Conventions, or to international supervisory bodies, such as the requirement under MARPOL to report oil spills to IMO. To this end, the UNCLOS, as we shall see, increases the scope of coastal and port State enforcement powers.

3. Relevant International Conventions for Protection of the Marine Environment

The deficiencies in the customary law regime for preservation of the marine environment have been countered to a large extent by conclusion of treaties at the global and regional level. These fall into two major categories: (i) comprehensive treaties which endeavour to regulate all polluting activities affecting the seas and oceans, whether at global (as in the case of the UNCLOS) or regional (as in the case of UNEP's Regional Seas Convention and the Helsinki Convention) level, and (ii) Conventions dealing with particular sources, which again can be at global (as in the case of IMO, ILO, UNCTAD, UNCITRAL Conventions, etc.) or regional (as in the case of the Oslo Dumping and Paris Land-Based Pollution Conventions) level. All Conventions are creatures of public international law, deriving their validity from the customary law rule *pacta sunt servanda*, and their interpretation and application is subject to internationally prescribed rules now largely codified in the 1969 Vienna Convention on *Treaties*. Many of the treaties, however, use this vehicle to adopt private law solutions to the problems in issue. As the focus of this paper is public international law, and as others are addressing the "private law" Conventions, the final part of this paper will address only the UNCLOS, the so-called "public law" IMO Intervention Convention and environmental aspects of the 1989 Salvage Convention, though all IMO Conventions are of some relevance to the public law regime for protecting the marine environment in general.

(i) The United Nations Conventions on the Law of the Sea 1958–1982

As is well known, although there was awareness of some of the problems of pollution of the seas in the first half of the twentieth century, it was not until the *Torrey Canyon* disaster that concern became acute. Scientific research by GESAMP and other bodies was increased and action was further stimulated by the adoption of the UNCHE Declaration and Action Plan in 1972.

(a) UNCLOS I

At the time of the first UNCLOS in 1958 no attempt had been made to change the well-established doctrine of freedom of the seas, which most States considered included a right to dispose of waste there from whatever source. The four Conventions adopted at Geneva make little reference to pollution problems.[57] The High Seas Convention, having in Article 2 codified the four freedoms of the seas, in which it included other unspecified freedoms "recognised by general principles of international law", in Articles 24 and 25 merely required States to "draw up regulations" to prevent oil pollution (undefined) from ships, pipelines and seabed activities, "taking account" of the few existing treaty provisions (e.g. OILPOL 1954); to "take measures" (unspecified) to prevent pollution from dumping of radioactive waste taking account of standards formulated by "the competent international organizations" (undesignated), and to co-operate with these bodies in taking measures to prevent pollution of the seas or superadjacent airspace from activities with radioactive materials or "other harmful agents" (unidentified). No definition was given of the term "pollution".

It is important to remember that this Convention remains in force, whereas the 1992 Convention is not yet in force, though much of it represents new or codified customary law. The role of specific pollution control Conventions, both *ad hoc* and developed through IMO and other bodies, is thus of particular importance in establishing a regime to limit the formerly assured freedoms. As the OILPOL did not prohibit all discharges from ships, further action was required. The High Seas Convention had stressed in Article 2 that the freedoms must be exercised with "reasonable regard" to the interests of the States exercising their freedoms and this principle has, it is submitted, been applied in the negotiation of subsequent conventions and has enabled conflicting interests to be accommodated in the IMO's public as well as private law Conventions, namely the IMO Intervention and Oil Pollution Preparedness and Response Conventions and certain aspects of the Salvage Convention, as well as in the later UNCLOS in 1982.

The UNCLOS I Conventions made no reference whatsoever to State responsibility for damage. This was left to the customary doctrine, and as the Geneva Conventions did not lay down any clear obligation to protect the marine environment as such, they did not make it any easier to invoke the doctrine. Though no doubt inter-State complaints of "unreasonable" use could be made, the need to address these gaps began to be widely perceived and accepted and treaties like the LDC, the MARPOL and the Paris, Oslo, Helsinki and UNEP Regional Conventions gradually emerged.

57. The text of these, viz. the Conventions on the Territorial Sea, High Seas, Continental Shelf and Fishing and Conservation of the Living Resources of the Sea respectively, are in I. Brownlie, *Basic Documents in International Law* (3rd ed, Oxford: 1983) pp. 85–121.

(b) UNCLOS III

It was left to the Third UN Conference on the Law of the Sea (UNCLOS III), which adopted the 1982 UNCLOS, to improve the situation by bringing together in one Convention all sources of marine pollution, clearly prescribing the rights and duties of States in protecting the marine environment and committing them to develop the international law on State responsibility. In addition to approving the extension of the coastal State's jurisdiction over protection and preservation of the marine environment by increasing the jurisdictional limits within which it can exercise control (a 12 nautical mile territorial sea, including in international straits; archipelagic waters and archipelagic sealanes; a 200 n.m. Exclusive Economic Zone), it specifies in many cases the precise matters over which such jurisdiction can be exercised. For our purposes, the most important development, however, was that a whole part of the Convention, Part XII, was devoted exclusively to "Protection and Preservation of the Marine Environment", which in Article 192 prescribes the duties and measures necessary to achieve this and clearly states that "States have the obligation to protect and preserve the marine environment"; in Article 194(1) requires the taking of measures to "prevent, reduce and control pollution from any source" and in Articles 194(3) and 207–212 identifies land-based, vessel, seabed (within and beyond national jurisdiction) and atmospheric sources. It is clear that Article 194 covers the marine environment as a whole and that it includes "rare and fragile ecosystems as well as the habitat of depleted, threatened, or endangered species and other forms of marine life" (Article 194(5)).

The regulatory provisions The UNCLOS 1982 is strong in laying down a comprehensive framework for the taking and enforcing of measures on all six sources of pollution and thus in clarifying the obligations breach of which invokes State responsibility, but weak in indicating precisely when a violation occurs and what consequences flow from that so far as liability is concerned. Moreover, the elements of reasonableness introduced in Article 193, which respects States' sovereign right to pursue their own environmental policies (although only in accordance with their duty under Article 192), and also in Article 194(1), which allows States to use "the best practicable means at their disposal and in accordance with their capabilities" to fulfil these UNCLOS objectives, moderates the degree of diligence required, especially for developing countries. The likelihood of a breach of the UNCLOS obligation on their part is further modified in relation to land-based and atmospheric sources, since Article 207 and 212 respectively allow their economic capacity and need for development to be taken into account, as well as features characteristic of their region. Article 196 does, however, prohibit the achievement of the aims of Articles 192–194 by transference of damage or hazards from one area to another or transforming one type of pollution, such as oil, into another e.g. air pollution, by setting fire to spilt oil. The UNCLOS' further requirement that States co-operate on various levels can now

be discharged not only through UNEP and other regional Conventions but also through the IMO's new OPRC Convention.

The obligations concerning prevention of pollution from dumping, seabed operations and ships (Articles 208, 210 and 211 respectively) are much less flexible, however. Here States have to establish international rules and standards. In the case of pollution from vessels, the standard applied must have the same effect as "generally recognised international rules and standards" established through *the* competent international organization or diplomatic conference" (Article 211(2)) whereas Articles 208(5) and 210(5) refer to international organizations in the plural. This implies that only one organization, generally agreed to be IMO, is competent for this purpose.[58] It is the view of most, but not all commentators that this has the effect of incorporating at least the requirements of the 1973/78 MARPOL, the IMO codes and such other relevant international guidelines as have been accepted and applied in practice by most States, even if the State concerned has not ratified these Conventions, into its obligation to prevent marine pollution. This is not to say that non-parties to MARPOL are bound by its standards as customary law. It still remains unclear precisely which rules of these conventions must be applied, but once identified breach thereof resulting in environmental harm could engage State responsibility. The effect of these provisions, which attracted consensus at the UNCLOS, is clearly to emphasize States' obligation to protect the marine environment and restrict their freedom unilaterally to decide how far to regulate the introduction of polluting substances into the sea.

The enforcement provisions The difficulties of enforcing the above regime through application of State responsibility led the UNCLOS, by introduction of other innovatory provisions, to attempt to improve enforcement by other means, which, whilst continuing to recognise the primacy of the flag State's jurisdiction over the ship, recognize also the increasing role of coastal and port States in supervising and ensuring conformity to international law, a trend established in such IMO Conventions as MARPOL and SOLAS and the ILO Minimum Standards Convention, but subject to safeguarding the flag State interests. The powers accorded vary according to in which of the jurisdictional zones recognized in the UNCLOS (ports and internal waters, the 12 mile territorial sea or the 180 n.m. of EEZ beyond it), the violation occur.

Finally, mention must be made of another innovatory provision introduced in Article 218, which is subject to safeguards of flag State interests laid down in Article 228. It allows port States to exercise jurisdiction and even institute proceedings, subject to various conditions, over foreign vessels entering their ports and offshore terminals, which can be shown either to have discharged on the

58. M. Nordquist (ed.), *United Nations Convention on the Law of the Sea, 1982: A Commentary* (Dobbs Ferry: NY 1991), pp. 176–206, at n. 9, p. 184, and n. 10, p. 185.

high seas in violation of "applicable international rules and standards" established through competent international organizations or general diplomatic conference", or to have similarly illegally discharged in waters (including the EEZ) subject to the jurisdiction of another State, but in this case only if requested to act by that State, the flag State or a State damaged or threatened by the discharge. However, although the provision attracted consensus at UNCLOS III, there has been no State practice on it to date and the form of port State inspection undertaken pursuant to MARPOL etc. differs considerably in the degree of port State powers exercisable, nor are the administrative powers exercised under the 1981 Paris Memorandum of Understanding on Port State Control,[59] at all comparable in scope to the UNCLOS provisions which may lead to institution of Court proceedings.

Provisions on State responsibility The regulatory and enforcement powers permitted under the UNCLOS are especially important because the UNCLOS is at its weakest and least innovatory in relation to the issues of responsibility and liability, which are dealt with in Article 235. This makes only general provision for this important aspect merely laying down that "States are responsible for the fulfillment of their international obligations concerning the protection and preservation of the marine environment" though it does at least command that "They *shall* be liable in accordance with international law."[60] The implementation of this prescription is left to national legal systems coupled with an obligation "to co-operate in the implementation of existing international law"—which as we have seen when discussing state responsibility, is weak, except for the IMO and CMI Conventions and Protocols—and in "the further development of international law" in this field. But this is not so surprising, as will no doubt be revealed in other papers, since, as remarked earlier, even the regional Communities, where States might be expected to have some shared interests, have singularly failed to meet the requirements referred to earlier of their founding conventions that they should try to develop the law on this aspect—even the European Community, has made slow progress on its liability directive.

Finally, it should be noted that though the primacy of flag State jurisdiction is respected, it is not only more carefully balanced with the exercise of jurisdiction by other States, as indicated above, but also by imposing, in Article 94, clearly defined duties on the flag State whether within its own or other jurisdictional zones or on the high seas. The IMO and ILO Conventions fulfil an important role here also in detailing the content of this duty not only through the SOLAS Convention but also through those on Standards of Training, Certification and Watchkeeping, the ILO Minimum Standards Convention and the COLREGS (IMO Collision Regulations), all of which have developed the international law in this field.

59. 2 ILM 1 (1982).
60. Emphasis added.

(ii) The Intervention Convention 1969

Special mention needs to be made of the IMO International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969, (extended by Protocol in 1973 to cover other harmful substances[61]) often referred to as The "public law" Convention as it deals with rights between States, to distinguish it from the other IMO 1969 Conventions, the CLC, which adopts a private law solution. Although the right of a coastal State to take action against foreign vessels in the territorial sea has never been disputed, its right to do so beyond that limit remained challengeable in international law. Justification for Britain's action against the *Torrey Canyon* ranged from invocation of the principle of necessity to the right of self-defence under customary law.[62] The conclusion of the Intervention Convention clarified the situation and it is now generally accepted that the right to intervene in cases of polluting maritime casualties involving foreign vessels beyond the territorial sea has become part of customary international law. The inclusion of the right to intervene in the UNCLOS, Article 221, and in Article 9 of the International Convention on Salvage (see below) indicate this, although there are significant differences in the wording of the relevant provisions.[63]

The Intervention Convention, though permitting coastal States to take such action, places important limitations upon it. Article 1(1) allows it to take only "such measures on the high seas as may be necessary to prevent, mitigate or eliminate grave and imminent danger to their coastline or related interests from pollution or threat of pollution of the sea by oil, following upon a maritime casualty or acts related to such a casualty which may reasonably be expected to result in major harmful consequences".

It applies only to maritime casualties, which Article 2(1) limits to collisions, strandings and other *navigational* incidents, or occurrences on board or external to a ship, thus excluding operational discharges or dumping, and it further requires that *material* damage or imminent threat thereof result from the incident. Warships and government ships are excluded from the taking of such measures by Article 1(2). Environmentalists have argued that the definition of "related interests" is too narrow to ensure protection of the ocean ecosystems as such since the definition of this term includes only "fisheries activities, constituting an essential means of livelihood of the persons concerned" and tourist attractions, and though the addition of "the health of the coastal population and the well-being of the area concerned, including conservation of living marine resources and wildlife", is broad enough to protect the coastal State's own immediate interests, the international community interest in preservation of the

61. 9 ILM 25 (1970), in force 1975; 1973 Protocol 68 *AJIL* (1974) p. 577.

62. D. Abecassis and R. Jarashow, *Oil Pollution from Ships*, 116 ff.

63. Churchill and Lowe, *The Law of the Sea*, above n. 1, p. 262, C. J. de Rouw, Emergency Response to Marine Pollution I incidents: Legal Aspects, Proceedings of the Law of the Sea Institute 25th Annual Conference held in Malmo, July 1991, publication forthcoming.

marine environment is not addressed, unlike in the Salvage Convention (see below).

The requirements that there be a danger or threat that is grave and imminent and has "major harmful consequences" is also a limiting factor and, following the *Amoco Cadiz* incident, some States successfully pressed for a less restrictive wording for the concomitant UNCLOS provision.[64] Article 221 of UNCLOS thus requires only "actual or threatened damage" which may *reasonably* be expected to result in "major harmful consequences" to the coastal State's interests. In the absence of sufficient evidence and of widespread State practice, the present position is unclear. The former USSR took the view at UNCLOS that the UNCLOS text on this subject should not accord wider rights than those enjoyed under the IMO Convention.[65] Some States, however, have enacted more liberal interpretations in legislation covering casualties occurring *within* their territorial sea.[66]

A final limitation is that it is left to the discretion of the coastal state to evaluate not only the risk but the nature of the damage and to then decide what measures are "proportionate" to the risk (Article V). The Convention is not specific on any of these aspects. The action taken by the UK in bombing the *Torrey Canyon* and setting fire to the oil was later seen as unsound from the environmental perspective. It is, however, not likely to be repeated nowadays in the light of the better practices generated under the UNEP Regional Seas Protocols and the OPRC Convention. Moreover, the use of salvage services, particularly under the new Salvage Convention, with its more environmentally protective provisions, is likely to be the preferred option. There is also some safeguard in the Intervention Convention's requirement in Article 3 that the coastal State consults and notifies the flag State, and in Articles 6 and 8, that it reports the measures taken to IMO and that compensation must be paid for any excessive measures taken.

Effective intervention, however, requires that the coastal State be speedily informed of the occurrence of a casualty. The Intervention Convention fails to provide for this, and though Article 8 and Protocol I of MARPOL required masters involved in pollution incidents to report them without delay, they do not specify to whom.[67] Some other treaties, however, require States to request or order ships' masters and captains of aircraft to provide reports. These include the 1990 OPRC Convention (see below) and the 1983 Bonn Agreement on Co-operation in Dealing with Oil Spills.[68] Relevant UNEP Regional Seas Co-operation Protocols require reports to the flag States for communication to the

64. Nordquist, *UN Convention Commentary*, p. 313.

65. Nordquist, *UN Convention Commentary*, above n. 303 ff.

66. E.g. The UK Prevention of Oil Pollution Act 1971; ss. 12–16, allow intervention in the territorial sea if "urgently needed" to counter an accident likely to cause pollution "on a large scale".

67. The Protocol was amended in 1986, however, to cover this.

68. The 1969 Agreement for Co-operation in Dealing with Pollution in the North Sea by Oil (Bonn), 9 ILM 359 (1970); in force; a new agreement was signed in 1983 which extends it to harmful substances, and provides for reimbursement of costs of assisting parties.

coastal State. The 1982 UNCLOS requires only that international rules and standards include a requirement of notification to the coastal State. Further State practice is needed to clarify the position; the UNCLOS' recognition, in Article 56, of the coastal State's jurisdiction in the EEZ over matters concerning protection and preservation of the marine environment in Article 211(5) could perhaps lead to such practice, based on MARPOL's Protocol I, but, as far as the writer can ascertain, has not yet done so, nor have any international agreements provided for this.

(iii) The International Convention on Salvage 1989[69]

This Convention has been described as the most significant change in the international law governing salvage for almost 80 years, though it mainly deals with private law matters. It was concluded to safeguard the international community interests in protection of the marine environment when salvage contracts are adjudicated in judicial or arbitral proceedings instituted in a State party. It seeks, *inter alia*, to remedy, in the interests of environmental protection, the lack of incentive to salvors to undertake actions that benefit the coastal State without payment of compensation because of the "no cure, no pay" principle that has traditionally formed the basis of the salvage contract. A coastal State may also exacerbate the problem by actions taken by it under the Intervention Convention, which allows it to overrule the master's discretion in seeking salvage assistance and, though providing for the coastal State to take the necessary measures to protect the environment in such circumstances, offers no inducement to salvors to join in these measures.

The new Salvage Convention, which does not apply to warships or government non-commercial ships entitled to immunity (Article 3) or to offshore installations (Article 4), contains some innovatory elements. First, salvors are entitled under Articles 8 and 14 to be paid "special compensation" for salvage operations related to a vessel or its cargo the situation of which threatens damage to the environment,[70] when these operations have prevented or minimized the damage to the environment, and they are subject to a duty of care to carry out the salvage operations in such a manner as to prevent or minimise this damage. Article 1(d) defines "damage to the environment" as "substantial physical damage to human health or to marine life or resources in coastal or inland waters or areas adjacent thereto caused by pollution, contamination, fire, explosion or similar major incidents". This recognizes that protection of the environment is regarded as a benefit even if the vessel is lost and that the costs incurred can be

69. IMO/LEG/CONF. 7/27 (1989); not in force.

70. But see R. Shaw, "The 1989 Salvage Convention and Lloyd's Open Form 1990: Are They Working?" *Marine Policy* (1992) pp. 127–129, who considers this is not a new principle. He also considers that any merchant ship with bunkers poses a threat of environmental damage and points out that Article 13.2 does not segregate the proportion of salvage reward attributable to the anti-pollution services.

recovered in excess of the limits laid down in Article 13(3), which limits the rewards payable to the salvors to the value of the vessel and other property.

Salvors are thus provided with an incentive to minimize environmental damage occurring both after the vessel sinks or if it is saved and under Article 14(5) correspondingly are penalized by being deprived of all or part of their special compensation if by their negligence or misconduct they fail to achieve this. The salvor however, will still not be rewarded for efforts which do not result in reduction or prevention of environmental damage.

Despite these provisions, one authority has drawn attention to the fact that pollution prevention may well be more crucial and cost effective than salvage.[71]

III. CONCLUSION

The role of public international law in protection and preservation of the marine environment is a leading one, of vital importance to establishing the comprehensive regime that is necessary to protect it as a whole from all sources of pollution. It establishes the obligations and responsibilities of States, as outlined in the first part of this chapter, and provides means for their discharge through development of customary and treaty law, as well as through application of general principles. Having clearly established that States have a duty to preserve and protect the marine environment, the emerging framework of international law, as set out in the UNCLOS 1982, ensures that States cannot escape their obligations by failing to act; they are still responsible. However, the ambiguities in the international concept of State responsibility have led States increasingly to resort to the regulatory role of international law, adopting a large number of conventions, which by clarifying the obligations of States, make invocation of State responsibility for their breach easier, assuming damage can be proved. These Conventions also, as this discussion has illustrated, implement the precautionary principle, the adoption of which is increasingly encouraged in Conventions and declarations. The regulatory role of international law is in the ascendent, as the large number of Conventions governing almost every source and every aspect of marine pollution, adopted under the auspices of IMO, ILO, UNEP and other bodies as well as through *ad hoc* diplomatic conferences, establish. Of the six sources of pollution referred to in the UNCLOS 1982, only air pollution from ships has yet to be regulated internationally; the possibility of adding an Annex to MARPOL 1973/78 on this subject is being discussed in an IMO working group. The processes of customary law making are also helpful in hardening into binding rules, as and when appropriate, the numerous "soft" guidelines and codes that cover many activities. They are currently at work in clarifying the concept of "Special Areas", i.e., areas particularly vulnerable to

71. E. Gold, "Marine Salvage: Towards a New Regime", 20 *JMLC* (1989) pp. 487–503, notes that pollution prevention may be more crucial and cost-effective than salvage. See also views expressed on cost of salvage operations in P & I International, June 1992, at pp. 3–6.

pollution for various reasons, as provided for in EEZ under Article 211(5) of the UNCLOS, which goes further than the MARPOL provisions for this. UNEP Protocols on Specially Sensitive Areas offers another variant; the IMO MEPC has approved Guidelines for Particularly Sensitive Areas (PSA's) adopted by the IMO Assembly earlier this year. Complex problems of responsibility and liability could arise, if the position is not clarified and unified by international law, as controversial exercise of coastal jurisdiction over foreign vessels beyond the territorial sea is involved and such areas may need to cross maritime boundaries to achieve their purpose of protecting sensitive marine environments.

CHAPTER 2

THE INTERNATIONAL CONVENTION ON OIL POLLUTION PREPAREDNESS, RESPONSE AND CO-OPERATION 1990 (OPRC)

W. A. O'NEIL*

The international Convention on Oil Pollution Preparedness, Response and Co-operation, more commonly known as the OPRC Convention, was adopted by a diplomatic conference convened by IMO in November 1990. The conference was attended by over 90 countries and 17 international organizations, including oil, shipping and environmental organizations and represented the culmination of extremely rapid preparatory work which commenced in October 1989. In the year after its adoption, the Convention was signed by 27 States and, at the present time,[1] Australia, Egypt, Seychelles, Sweden, and the United States of America have ratified or accepted the Convention which will enter into force one year after 10 more States have also ratified it.

This Convention fills a gap in the international framework of treaties dealing with marine pollution. Although IMO has promulgated many international rules and regulations on prevention and control of marine pollution from ships and there are numerous regional agreements for responding to marine pollution emergencies, until now there has been no global framework for co-operation and mutual assistance in this field. Also, the effectiveness of many of these regional agreements is dependent on the capacity of the States participating in them. For those regions of the world where such resources and expertise are not readily available, this Convention will play a particularly important role in facilitating international co-operation at the global level, as well as in reinforcing regional arrangements and national oil pollution preparedness and response strategies.

The primary objectives of the Convention are to facilitate international co-operation and mutual assistance in preparing for and responding to a major oil pollution incident and to encourage countries to develop and maintain an adequate capability to deal with oil pollution emergencies.

The salient features of the Convention deal with six major topics which are:

—international co-operation and mutual assistance;
—pollution reporting;
—oil pollution emergency planning;
—national/regional preparedness and response capability;

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1. 21 September 1992.

—technical co-operation; and
—institutional arrangements.

A key element of the Convention is the commitment of the parties to co-operate with each other in responding to oil spills and to provide assistance to others who request help to deal with them. This assistance can take the form of advisory services, technical support and equipment.

The oil spill disaster during the war in the Persian Gulf provided an early and unexpected opportunity to test the provisions of the Convention and the resolve of governments to help a country faced with a major marine pollution problem beyond its capacity to respond to and its neighbours ability to assist.

Shortly after learning of the spill in the Persian Gulf I initiated consultations with the countries affected, donor countries and other organizations such as UNEP. It became clear that IMO, as envisaged in the Convention, could function as a "clearing house" for detailed requests for assistance and offers of help from donor States. I therefore established a co-ordination centre at IMO headquarters in London which was staffed and equipped on a voluntary basis by several of our members. During the incident, donors either channelled their offers through the centre or kept it informed of details of help they were providing directly. Although not specifically envisaged in the Convention but in view of the unique circumstances of the spill and at the request of IMO members, in March 1991 I established a special international trust fund to catalyse efforts to begin the clean-up operation and thereby mitigate the impact on the environment. Cash and in kind contributions to the fund were received from Canada, China, Denmark, the EEC, Germany, Japan, Luxembourg, Netherlands, Switzerland, and the United Kingdom.

The 20 clean-up and restoration projects which were financed from this fund were successfully completed, some of which advanced the state-of-the-art in clean-up techniques.

In view of the very particular circumstances of this spill it would be unwise to use it as a basis for drawing conclusions or making recommendations on how to deal with all major oil pollution disasters in the future. A spill of anything close to the magnitude of this one would severely challenge even the best prepared government or regional arrangements. However, the Persian Gulf emergency proved that the principles contained in the OPRC Convention were sound and could be applied from a practical point of view.

The second key element deals with pollution reporting. It is clear that a rapid and co-ordinated response to an oil spill depends on timely pollution reporting and assessment. The Convention therefore obliges parties to ensure that ships, offshore units, aircraft, seaports, and oil-handling facilities report without delay any event involving a discharge or probable discharge to the nearest coastal State or responsible national authority.

When a party receives a pollution report, it is obliged to assess the nature, extent and possible consequences of the incident and to inform all States, not

just those parties to the Convention, whose interests are affected or likely to be affected, of the actions taken or intended to be taken.

To avoid duplication or overlap with existing IMO requirements and guidelines, the Convention provides that reports shall be made in accordance with the requirements of the International Convention for the Prevention of Pollution from Ships 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78), and the guidelines and general principles adopted by the organization.

A provision that distinguishes the Convention from similar regional agreements is that oil pollution emergency plans for ships, offshore units, seaports, and oil handling facilities must be prepared.

MARPOL 73/78 has been amended so as to require "every oil tanker of 150 grt and above and every ship other than oil tankers of 400 grt and above" to carry a shipboard plan.[2] In addition, in March 1992 the IMO Marine Environment Protection Committee adopted "guidelines for the development of shipboard oil pollution emergency plans".

The OPRC also stipulates that each party shall require operators of offshore units, and those in charge of seaports and oil-handling facilities, to have an approved oil pollution emergency plan which is to be co-ordinated with the national system. The IMO Marine Environment Protection Committee is currently considering the desirability of developing guidelines to assist coastal States in establishing their plans.

There is wide recognition that the first line of defence in the event of a marine pollution emergency is a viable national response strategy. The Convention therefore obliges parties to establish a national system for responding promptly and effectively. It does not spell out in detail what this system should comprise; however, it does stipulate that each party should have, as a basic minimum, a national contingency plan and designated national authorities and operational focal points responsible for oil pollution preparedness and response and for reporting and handling requests for assistance.

In addition, each party either individually or through bilateral or multilateral co-operation, and, in co-operation with the oil and shipping industries, port authorities, and other relevant entities, shall establish:

—a minimum level of prepositioned oil spill response equipment, proportionate to the risk involved, and programmes for its use;
—a programme of exercises for oil pollution response organizations and training of relevant personnel;
—continuously available and detailed plans and communication capabilities for responding to oil pollution incidents;
—a mechanism or arrangement for co-ordinating response to oil pollution incidents with, if appropriate, the capabilities to mobilize the necessary resources.

2. Amendment effective 4 April 1993.

The Convention clearly recognizes that the capacity of parties to implement the Convention and enhance their ability to prepare for and respond to oil pollution incidents can be constrained by lack of adequate resources and technical infrastructure. It therefore stipulates that the parties will undertake to provide support for others requesting technical assistance in training personnel; in ensuring the availability of technology, equipment, and facilities; in facilitating other measures and arrangements to prepare for and respond to oil incidents; and in initiating joint research and development programmes. The parties also undertake to co-operate actively in the transfer of technology for oil pollution preparedness and response.

Under the Convention, the parties agree to co-operate directly or through IMO or regional organizations in the holding of regular symposia on subjects such as technological advances in response techniques and equipment. They also agree to co-operate in promoting and exchanging results of research and development programmes, including technologies and techniques for surveillance, containment, recovery, dispersion, clean-up, and restoration.

A recent example of this was the holding of the IMO/United States Coast Guard International Oil Spill Research and Development Forum last June. During the forum many speakers emphasized the need for international co-operation and exchange of information on on-going and planned research and development in the field of oil spill preparedness and response.

It would appear that IMO could play a useful role by establishing a research and development data base and periodically issuing a global survey of the status of on-going and planned R & D projects.

The OPRC Convention is unique for IMO in two important respects. First, it extends our mandate beyond pollution from ships because the Convention applies to all oil pollution incidents no matter what their source. Secondly, it makes specific provision for a more active role for IMO in implementing the Convention.

Traditionally, the IMO secretariat's functions have been limited to providing support to the various committees with which IMO may be involved, such as the Marine Environment Protection Committee, and to circulating information related to the amendment, implementation, and enforcement of the Convention by the Member States.

The OPRC Convention, however, designates IMO as being responsible for specific functions and activities which are information services, education and training, technical services and technical assistance.

During the negotiations of the Convention many governments felt that it should apply to marine pollution incidents involving hazardous chemicals as well as oil because the primary elements of the Convention dealing with international co-operation, national contingency planning, pollution reporting and technical assistance should also apply to a chemical pollution disaster. Others were of the opinion that in view of the relatively limited experience with chemical spill preparedness and response it would be premature to alter the Convention

text. However, a compromise was reached when the conference adopted a resolution calling on IMO to initiate work to develop an appropriate instrument to expand the scope of the OPRC to these substances. the IMO's sub-committees on bulk chemicals and carriage of dangerous goods are reviewing the implications of expanding the Convention and it is anticipated that the work will be finalized by 1995. I should point out that the resolution adopted by the Conference also called on parties to the Convention to apply its provisions, for example those dealing with mutual assistance and national and regional preparedness, to hazardous and noxious substances pending the introduction of an amendment to expand its scope.

I believe that all of us are aware that the continued discharge into the sea of persistent and toxic substances such as heavy metals through the major river systems represents a far more serious threat to the long-term health of the oceans than the occasional oil spill. However, for many countries, and particularly those heavily reliant on inshore fisheries for food, and pristine beaches as a valuable source of foreign currency through tourism, a major marine pollution disaster can have immediate and far-reaching economic as well as environmental impacts.

In April 1992 the oil tanker *Katina P* broke up in deep water, well off the coast of Mozambique but in the process all the elements for a potential disaster for Mozambique were in place. Mozambique, as we know, is a country haunted by the spectre of famine and its small but important inshore fisheries contribute to the needs of its population. The *Katina P* was laden with 60,000 tons of heavy fuel oil and one does not need a great deal of imagination to realize the impact of such a spill. Here again, although the OPRC Convention was not in force, its principles were implemented through international assistance provided by the United States, United Kingdom and South Africa. IMO fielded a technical adviser with financial support from UNEP, and Norway provided legal advice again through IMO. I believe, therefore, that the OPRC Convention does address a serious problem and provides an effective legal and institutional framework for mobilizing international assistance in such circumstances. But the OPRC Convention was not adopted solely for the purpose of facilitating technical assistance and advice to developing countries. Through its implementation I believe we can look forward to an enhancement of national preparedness and bilateral, regional and international co-operation benefiting all countries. Co-operation in research and development and a wider exchange of information and technology in oil pollution response techniques as well as planning will I believe be stimulated. A greater number of personnel will be trained both by industry and governments acting in concert at the local, national, and regional levels and, finally, the role of IMO will be strengthened. In this respect I have established, on a permanent basis, a co-ordination centre in IMO to assist in carrying out the functions assigned to us under the Convention. The centre, which is currently staffed primarily by personnel seconded from France, Japan and the United States, has as one of its most important functions the establish-

ment and maintenance of an OPRC information system which will be computerized and contain current information on national focal points, personnel and equipment available for spill response, national policies for combating oil pollution and database systems for preparedness and response including means of access. In addition serious consideration is being given to establishing an international oil pollution research and development database providing up-to-date information of the status of on-going and planned R & D projects in the field of marine pollution preparedness and response. This information system will be available for use by all of IMO's members.

Finally, if the objectives of the OPRC Convention are to be achieved, it is absolutely essential that governments forge stronger links with industry to improve national oil spill response capability which is essential in dealing with a major pollution disaster. With this very much in mind, I initiated discussions with the International Petroleum Industry Environmental Conservation Association (IPIECA) and its oil spill working group whose members include: the Oil Companys' International Marine Forum (OCIMF), the Oil Industry International Exploration and Production Forum (E & P Forum) and the International Tankers Owners' Pollution Federation (ITOPF) as well as representatives of major international oil corporations.

As a result of these discussions we have agreed on a programme of joint IMO/Industry seminars focusing on the contingency planning process at the strategic level. Two seminars have been successfully completed, one for ASEAN countries (Jakarta—September 1991) and one for the Mediterranean region (Cairo—April 1992). A similar meeting has been arranged to take place in Caracas in October 1992 for Latin American countries, and seminars are planned for West Africa, the Persian Gulf area, Caribbean Islands, East Africa, North-East Asia, West Asia and Australia/New Zealand/Polynesia.

I trust that this overview of the principal features of the OPRC Convention has provided information about one more step IMO has taken in its continuing quest for cleaner oceans.

CHAPTER 3

THE NORMAL PROCEDURE OF ASSESSMENT OF DAMAGE TO THE MARINE ENVIRONMENT IN CHINESE JUDICIAL PRACTICE

BY WANG MAO SHEN,* LIU SHU JIAN† AND SHEN MAN TANG‡

Oil pollution from ships attracted little attention until 1967, when there was a disastrous case of oil pollution caused by m.v. *Torrey Canyon*. It was only then that people began to realize that pollution could cause very serious damage to the environment. Since then, the transportation of oil and other potentially harmful and poisonous cargoes at sea has been the subject of increasing attention internationally. Many governments have been trying to solve this problem in the maritime sphere legislatively, judicially and administratively.

In order to obtain compensation for marine pollution, the injured party normally has to resort to legal proceedings and to claim damages. When dealing with pollution cases the court is concerned not only with many legal problems but also with problems of evidence—such as whether the ship has actually discharged some harmful substance, or if so, whether such substances have polluted the sea in the surrounding area. Likewise the consequences of pollution must also be considered. As most judges do not have detailed knowledge of environmental matters, and are not able to answer specialized questions pertaining to these matters it is necessary for them to seek the advice of experts on these subjects.

As is the case in many other developing countries, it was only comparatively recently that the subject of damage to the environment by pollution at sea was considered in China. If an assessment and evaluation of the environment is necessary for court proceedings, four phases are usually involved as set out below:

I. THE INITIAL EVALUATION

This involves an authorized survey at the place where the incident occurred. Many items have to be investigated, including the nature and type of the sea area itself; the type of minerals and organisms present; the weather conditions at the time of the occurrence; the content of the initial report of the incident,

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† Secretary General of China Maritime Association and China Maritime Arbitration.
‡ Judge and Chief of Marine Incidents Tribunal of Shanghai Maritime Court, P.R. China.

covering, *inter alia*, the quality and quantity of chemical cargoes loaded aboard; the manner in which the local inhabitants live, what they produce and the environmental standards applicable locally. After all this work, if the surveyor concludes that the oil spill has had an effect on the environment, he must then decide whether he should make a detailed evaluation.

II. FACTORS TO BE TAKEN INTO ACCOUNT

It is necessary to select the parameters within which the degree of damage to the marine environment is to be calculated. This is the key to the assessment as a whole. The main factors taken into account by surveyors are the quantity of polluting substances released, their poisonous qualities and their relative harmfulness.

III. THE DETAILED EVALUATION

This is based on the initial evaluation. Its functions in Chinese judicial practice are (i) to describe the precise nature of the pollution under consideration, in order to distinguish it from other forms of pollution and establish its relative seriousness; and (ii) to suggest appropriate courses of action to minimize the pollution damage or to reinstate that part of the environment which has been damaged.

The detailed evaluation generally covers the following:

A. The establishing of environmental standards: This is a matter in respect of which we have been very cautious and to which we have given careful and comprehensive consideration. There are three standards or categories: (i) the quality of the environment under consideration; (ii) the extent to which the sea area in question is able to absorb pollution (cf. open sea and coastal areas); and (iii) the methods to be employed in environmental protection. In our Court proceedings we have normally concentrated on (i) and (ii) above.

B. Personnel involved: The evaluation of the consequences of environmental pollution is an enormously lengthy process, especially when biological tests are involved which are particularly time consuming. Many people are required to carry out such work as collecting samples, cultivating experimental materials, monitoring conditions on site and investigating the lifestyle, health and general outlook of the people living in the vicinity of the area under study.

C. Environmental model: By carrying out the procedures outlined above, a mass of information is made available in a somewhat disparate and indigestible form. How do we use this information? In two main ways. First, we prepare a summary or "model" and, from this, we decide what particular subjects require further research. Second, we translate

the information into mathematical terms or equations so that, with the aid of computer science and by applying certain principles of physics, we can calculate the effect of the pollution.

D. Analysis of social economy. The purpose of making an assessment and evaluation as described above is to calculate the damage caused by pollution, in order to prevent unreasonable compensation being awarded in civil claims. The work of assessing environmental impact is based on the evaluation of environmental quality, and draws on the experience of foreign countries. The assessment gradually develops from a number of individual items to a comprehensive "package" covering natural, social and economic factors. The evaluation of social economy is based on a number of varying characteristics, i.e. realizable/latent, direct/indirect, long-term/short-term, reversible/irreversible.

IV. THE JUDGMENT REGARDING ENVIRONMENTAL IMPACT

Because the evaluation of environmental impact is a new (or "frontier") science covering a whole host of subjects, we cannot, as yet, clearly predict the conclusions. Such conclusions will certainly be influenced by the particular surveyor's own ideas, notwithstanding that his methodology is based on acknowledged theories and techniques. In order to ensure a fair and objective means of evaluation, it has been recommended that some form of "Review Panel" should be set up, such Panel being empowered to consider each evaluation and either to confirm or reject the findings of such evaluations.

This is just a brief introduction to the working procedures involved in the assessment of environmental impact in Chinese judicial practice. There may be some divergencies among different countries in their ways of procedure, but it may be expected that greater unification will gradually be achieved by regular exchange of information gained in the light of experience. The Chinese maritime courts will make due contributions in the trial of marine pollution cases in the days to come.

CHAPTER 4

SOME NEW TRENDS IN LEGISLATION OF THE RUSSIAN FEDERATION AND ITS ATTITUDE TOWARDS CONVENTIONS WITH REGARD TO MARINE POLLUTION

BY PROF. A. KOLODKIN,* V. KISELEV, N. KOROLEVA†

There is no legislative vacuum in the Russian Federation ("RF") because on 12 December 1991 the Supreme Soviet of the RF issued a Decree that "all norms" which were in force in the USSR are to remain in force in the RF, provided that they are consistent with the Constitution and other legislation of the RF. This means, for example, that the 1968 Merchant Shipping Code of the former USSR is in force in the RF. The same applies to all legislative acts concerning the prevention of pollution from ships, and likewise to the legislation governing the Exclusive Economic Zone (EEZ), the continental shelf, and similar matters.

In accordance with the notification on 13 January 1992 of the Ministry of Foreign Affairs of the RF, the RF continues to apply all treaties to which the USSR was a party. This means, in particular, that the RF is a party to various Conventions concerning marine pollution including the following: the MARPOL Convention 1973/1978; the International Convention relating to Intervention on the High Seas in cases of Oil Pollution Casualties 1969; the International Convention on Civil Liability for Oil Pollution Damage, 1969; the Protocol relating to Intervention on the High Seas in cases of Marine Pollution by Substances other than Oil, 1973; the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971; the Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matters, 1972; and the Convention on the Protection of the Marine Environment of the Baltic Sea Area, 1974 (Helsinki Convention).

On 23 April 1992 the RF signed a new Convention—the Convention on the Protection of the Black Sea against Pollution. The RF also has responsibilities under UNCLOS, notwithstanding the fact that the former USSR signed, but had not ratified, this Convention. By virtue of the 1969 Vienna Convention,[1] in

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1. Vienna Convention on the Law of International Treaties 1969 (Article 18).

such cases a State may not act in manner which defeats the object and purpose of the Treaty concerned.

In general terms, the legislation of the RF accords with the International Treaties to which the RF is a party.

It should also be stressed with regard to the UN Convention on the Law of the Sea (UNCLOS) that the Edict of the Presidium of the Supreme Soviet on 24 November 1984 on the Exclusive Economic Zone (EEZ) fully conforms with the very important provision of UNCLOS (Article 230) to the effect that a coastal State has the right only to impose monetary penalties, and not to pass a sentence of imprisonment (as provided for in the legislation of some other States).[2]

At the same time, however, there are in the legislation of the RF, certain contradictions with UNCLOS. Article 12 of the Edict, dealing with legislative competence, reads:

> The prevention, reduction and control of pollution of the marine environment . . . in the economic zone of the USSR shall be in compliance with the legislation of the USSR and international treaties of the USSR.

However, there is no reference here whatsoever to any international rules and standards. This is in contrast to UNCLOS, which provides that in respect of its EEZ the coastal State may adopt only laws and regulations which conform to "generally accepted international rules and standards". Article 13, which regulates the conditions and procedure for establishing "special areas" in the EEZ, contains no reference to the obligation to apply to a "competent international organisation" (i.e. the IMO) and receive its consent. This omission is manifestly contrary to Article 211(6) of UNCLOS.

This is an important condition limiting the right of the coastal State to adopt final enforcement measures (i.e. imposition and recovery of penalties) with regard to foreign vessels which have violated international law in an EEZ. By virtue of Article 228(1) of UNCLOS, the flag State has the right within six months of the institution of proceedings by the coastal State to institute its own proceedings, in which event the proceedings of the coastal State will be terminated. This means that the coastal State has no right to impose penalties until six months have elapsed.

However, according to Article 19 of the Edict,

> persons guilty of . . . pollution of the marine environment as a consequence of an unlawful discharge in the economic zone of the USSR from ships and other floating objects . . . shall be subject to measures of administrative penalty in the form of a summary fine of up to 10,000 roubles.

A Decree of the Presidium of the USSR Supreme Soviet[3] provides for the

2. As noted by Prof. Erik Franck in "The New USSR Legislation on Pollution Prevention in the Exclusive Economic Zone", *International Journal of Estuarine and Coastal Law*, Vol. 1, No. 2 1986 p. 169.

3. The Decree of the Presidium of the USSR Supreme Soviet "On the Procedure for Applying Articles 19 and 21 of the Edict of the Presidium of the USSR Supreme Soviet 'On the Economic Zone of the USSR' of 12 November 1984 (as amended 17 February 1988)".

possibility of appeal within ten days against decisions imposing fines, and for such appeals to be considered within 10 days. It further provides that "the decision of the higher agency or district (or city) People's Court with respect of the aforementioned appeals shall be final". Thus in Soviet legislation there is no provision for the so-called "preferential right" of the flag State.

There are certain other deviations in the laws of the RF from general practice and international legal instruments. This applies particularly to the Instructions which have been issued regarding the methods for Calculating Losses caused by Pollution. Such Instructions have been issued on a number of occasions, in 1981, 1983, 1987 and subsequently.

It is worth noting that the 1983 Instruction does not clarify the origin of the initial amount for calculating damage. The amount of "damage" is given in the form of tables. For instance, according to Table 9, the "damage" from the leakage of 100 kilograms of oil products is set at 20,700 roubles; from 110 kilograms—21,900 roubles; from 130 kilograms—23,500 roubles, and from one ton—74,000 roubles.

The 1987 Instruction for Calculating Damage Caused by Pollution of the Marine Environment in the EEZ of the USSR was a modified version of the 1983 Instruction. Its only distinctive feature lies in the fact that the basic rule for calculating "damage" is not the cost of measures relating to the cleaning up of the sea, but "the value of the living resources of the marine economic zone" which, according to the calculation of the Ministry of Fisheries, is 0.0211 roubles per square metre.

The calculation of "damage" is made according to a formula whereby this "initial amount" is multiplied by the volume of sea water which is supposedly contaminated through harmful substances entering this water as a result of a pollution incident.

A Temporary Instruction[4] has been confirmed by the Ministry of Fisheries in the absence of any co-ordinated consultation with other departments. Unlike the above-mentioned Instructions, this document deals specifically with the determination of "damage" to bio-resources, and to the marine environment as such. By the terms of this Instruction, "fishery waters" means all waters (rivers, lakes, ponds, and others), including the territorial sea and economic zone which are used or which "might be used" for commercial fishing or for extracting other aquatic flora and fauna which have significance for the regeneration of commercial fish stocks and other aquatic species.

A 1989 Instruction provides two means for determining "damage". First, there is the method of direct calculations, which involves studies to determine the actual number of fish or other aquatic species that have perished; secondly, there is the method of the so-called "control areas", based on a comparison of aquatic species in the polluted area with those in an analogous area which has

4. The Temporary Instruction for Determining the Economic Effectiveness of Nature Protection Measures and Evaluating Economic Damage to Aquatic Bio-resources by the Pollution of Fishery Waters.

not been subjected to such pollution. It is also possible to calculate damage by a formula without conducting any studies of the state of the marine flora and fauna.

The potential significance of so-called "damage" determined in accordance with the 1989 Instruction can be seen from the following example. In August 1990 at a ship repair yard in the city of Kerch there was a leakage of oil of approximately 2,190 kilograms. According to the 1983 Instruction, the damage to the marine environment amounted to 37,000 roubles. On the basis of the 1989 Instruction the fishery protection agencies brought an action claiming the amount of 130,000 roubles for the same leakage.

The first piece of legislation passed by the RF in the field under consideration is the Resolution of the Council of Ministers of the RF No. 13: On the Approval for 1991 of the Standards of Payment for Discharges of Pollutants Into the Natural Environment and the Procedure of their Application (hereinafter referred to as Resolution No. 13).[5]

After 1991 this Resolution continued in effect by virtue of an Instruction of the Government of the Russian Federation.[6] Unlike other Instructions, Resolution No. 13 adheres to the idea of establishing "standards of payment for discharges of pollutants into the natural environment" which had also been dealt with by an earlier joint Resolution of the Communist Party Central Committee and the Council of Ministers of the USSR.[7] This Resolution empowered the former State Committee for Nature to elaborate "standards of payment" which were to take into consideration the compensation necessary to compensate plaintiffs for such discharges. Increased compensation was planned for exceeding the allowable discharges and for pollution causing emergency situations.

The Law of the Russian Federation on the Protection of the Environment was adopted by the Supreme Soviet of the RF on 19 December 1991 and came into force on 3 March 1992. This Law contains a special section regulating in particular the issues of liability for pollution damage—Section XIV: Compensation for damage caused by an ecological offence. The main provisions of the section, relating to liability for damage, are as follows:

—Those guilty of polluting the marine environment must compensate the damage in full (Article 86);

—Compensation for damage is effected "on a voluntary basis or under a decision of a court or arbitration tribunal in accordance with rates confirmed by an established procedure and with the Instructions for calculating the amount of damage; and in their absence, by reference to the actual expenses incurred in reinstating the environment, with due

5. Resolution dated 9 January 1991.

6. Instruction dated 9 January 1992, No. 50–p.

7. Joint Resolution dated 7 January 1988 "on the Radical Restructuring of the Protection of the Environment in the Country".

account taken of losses incurred, including loss of profit" (Article 87, para. I).

Therefore, the effect of Article 87, para. I of the Law is that the application of "Instructions for calculating damage" is not only regarded as lawful, but indeed as having priority over any calculation based on actual expenses of reinstating the natural environment. So long as the Law contains no indications concerning the nature of "Instructions", one can definitely assume that among such Instructions are the mathematical (abstract) models for calculating damage, as well as any others which can be adopted "by an established procedure", no matter how doubtful they may be.

Moreover, the 1991 Law is not limited to the recovery of "damage" determined in such a way. Section III (The economic mechanism for the protection of the environment) provides for the so called "Payment for pollution", which has no connection with compensation for damage from pollution. In similar manner to Resolution No. 13, the "Payment for pollution" is recoverable in respect of: "discharge of pollutants, emplacement of waste and other kinds of pollutants within the established limits" (Article 20, para. 3).

It is noteworthy that Resolution No. 13 "the payment for discharges" is presented as "compensation for economic damage", whilst the 1991 Law treats it rather as payment for the use of natural resources, without any connection with compensation for damage caused. As a result, the polluter will have to pay at least twice for discharges "above the limits": on the one hand, "payment for pollution" will be demanded from him as provided for by Resolution No. 13, and on the other hand compensation for "damage", calculated in accordance with the relevant Instructions.

Accordingly, the following amounts can be simultaneously recovered for the discharge into the sea of one ton of oil: (1) "payment for pollution" under Resolution No. 13—88,700 roubles, (2) for "damage to the marine environment" under the 1983 Instructions—74,000 roubles, (3) for damage to bioresources under the 1988 Instructions—about 400,000 roubles. In addition, Article 84, para. I imposes a fine varying in amount from 50,000 to 500,000 roubles. Therefore the 1991 law, in our opinion, rather lamely formulates the general principles of liability for damage which can be caused to various natural objects (land subsoil, waters, forests, fauna, and the like) without account being taken of their specific features. (Some of them may have their own intrinsic value, while others, such as sea water, not only do not have such value but can hardly be regarded (within territorial boundaries) as objects of State property.)

The international laws on liability for pollution damage to the marine environment, as well as issues relating to compensation of such damage, are regulated by the provisions of the 1969 International Convention on Civil Liability for Oil Pollution Damage and the 1971 International Convention of the

Establishment of an International Fund for Compensation for Oil Pollution Damage. This legislation rejects the concept of applying an abstract theoretical model to assess pollution damage to the marine environment. The USSR was a party to both Conventions, and consequently the RF has become a party also.

The aforementioned pieces of legislation[8] are not in compliance with international law and the obligations of the Russian Federation as a successor to the USSR in matters regarding its participation in International Treaties. This applies particularly to the 1969 International Convention on Civil Liability and to the 1971 International Convention on the Establishment of an International Fund. Accordingly the said legislation should be amended, at least with regard to sea-going vessels.

This deviation of the acts of the RF from international obligations has been noted following the *Antonio Gramsci* incident in 1979, when the International Oil Pollution Compensation Fund adopted a Resolution which stressed that: "the assessment of compensation to be paid by the International Fund . . . is not to be made on the basis of an abstract quantification of damage calculated in accordance with theoretical models". The Fund maintained this position in respect of the second *Antonio Gramsci* incident, which occurred in 1987.

The RF itself and all its authorities must follow the provisions of Article 93 of the 1991 Law: "If an international treaty on environmental protection, concluded by the Russian Federation, establishes regulations other than those contained in legislation of the Russian Federation, the regulations of the international treaty shall apply."

8. The 1983 and the 1987 Instructions, the 1988 Provisional Instruction, the Resolution No. 13 of 9 January 1991.

CHAPTER 5

THE INTERNATIONAL CONVENTIONS ON LIABILITY AND COMPENSATION FOR OIL POLLUTION DAMAGE AND THE ACTIVITIES OF THE INTERNATIONAL OIL POLLUTION COMPENSATION FUND

MÅNS JACOBSSON*

I. INTRODUCTION

At the outset I would like to say how much I feel honoured by having been invited to present this paper on the international system for liability and compensation in respect of oil pollution from tankers. At the same time, I must confess that I feel reluctant and somewhat scared of dealing with this subject at this very moment. There are two main reasons for this.

First, the Comité Maritime International (CMI) was deeply involved in the preparation of the two international Conventions adopted after the *Torrey Canyon* incident, which took place off the coast of England in 1967. The 1969 Civil Liability Convention was based on a draft prepared by CMI. The CMI also played an important role in the preparations for the 1971 Diplomatic Conference which adopted the Fund Convention. Both the 1969 Conference and the 1971 Conference were chaired by the then President of CMI, Monsieur le Ministre Albert Lilar. At both Conferences, the Committee of the Whole dealing with these matters was chaired by Dr Walter Müller (Switzerland) who later became Vice-President of CMI. The previous President of CMI and its present honorary President, Professor F. Berlingieri, played as usual an important role in the elaboration of the Conventions. Several other participants in this seminar also played key roles at the Conferences; with the risk of forgetting some key persons, I would just like to mention Professor H. Tanikawa of Japan and the present President of CMI, Professor A. Philip of Denmark. In view of the expertise in this field that exists within CMI, I doubt that I will be able to add anything to what you already know.

The second reason for my hesitation is the venue of this seminar: the mere fact that it takes place in Genoa after the disaster involving the Cypriot tanker *Haven*. In view of the fact that the *Haven* case is subject to litigation in the Italian courts, I must be very cautious in what I say. Nevertheless, I will do my best to stimulate the debate.

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This discussion is based mainly on my practical experience as Director of the International Oil Pollution Compensation Fund (IOPC Fund) since 1985.

II. THE CIVIL LIABILITY CONVENTION AND THE FUND CONVENTION

Although many of the participants in this Seminar are very familiar with the intricacies of the International Conventions which will be dealt with at this Seminar, the 1969 Civil Liability Convention and the 1971 Fund Convention, it might nevertheless be appropriate to make a short recapitulation of the major elements of these Conventions.

I would first like to recall the very special situation in which these Conventions were drafted. The delegations who came to Brussels in 1969 and 1971 were instructed to solve problems of the kind which had arisen in the context of the *Torrey Canyon* incident. For this reason, they focused their considerations on that kind of incident: a big tanker leaking thousands of tonnes of oil. This was the problem that had to be solved, and I think it is fair to say that this was solved in a very reasonable manner. On the other hand, the deficiencies which undoubtably exist in the system based on the Conventions, especially as regards their scope of application, must be seen against the background of that very particular situation. In view of the large number of ratifications of the Conventions, it seems that States consider that they represent an acceptable balance between the interests involved. The Civil Liability Convention has been ratified by 74 States and the Fund Convention by 49 States.[1]

1. Civil Liability Convention

(i) Major elements

There are three fundamental elements of the Civil Liability Convention: strict liability; higher limits of liability; and compulsory liability insurance. Let us look at these three key features.

(ii) Strict liability

The Civil Liability Convention abandoned the traditional concept of liability based on fault, and instead imposed on shipowners a strict liability for oil pollution damage. The shipowner may be exempted from liability only in a few particular cases namely:

(a) the damage resulted from an act of war or a grave natural disaster,
(b) the damage was wholly caused by sabotage by a third party, or

1. As at 15 September 1992.

(c) the damage was wholly caused by the failure of authorities to maintain navigational aids.

The introduction of strict liability was only agreed after protracted and delicate negotiations at the Diplomatic Conference. Replacing a fault liability by a strict liability may not seem such a revolutionary change today, but in 1969, in the fairly conservative world of maritime law, it represented a major innovation and contributed to a considerable strengthening of the position of victims of oil pollution.

(iii) Limitation of liability

As is traditional in maritime law, the shipowner is also entitled under the Civil Liability Convention, on certain conditions, to limit his liability to an amount which is linked to the tonnage of the vessel. The limits were fixed taking into account the capacity of the insurance market at that time to provide insurance at reasonable costs.

Before the adoption of the Civil Liability Convention, the shipowner's right of limitation was based on either the 1957 Convention relating to the limitation of liability for owners of sea-going ships or the 1924 Convention on the same subject. The limits laid down in these Conventions had been eroded by inflation and were in the first place never intended to cover pollution damage. They had thus become far too low. The Civil Liability Convention in fact doubled the limits laid down in the 1957 Convention, but this result was not achieved without considerable difficulties.

(iv) Compulsory insurance

A third new element of great importance was the introduction of a system of compulsory insurance. Under the Civil Liability Convention the owner of a tanker carrying more than 2,000 tonnes of persistent oil as cargo is obliged to maintain insurance to cover his liability. The victims may thus bring legal action directly against the insurer.

The introduction of compulsory insurance and of a right of direct action against the insurer were also important modifications of traditional maritime law.

(v) Improvement of the position of victims

These three factors, the introduction of strict liability, of higher limits of liability, and of compulsory insurance, coupled with the right of direct action against the insurer, have greatly contributed to the improvement of the position of victims of oil pollution. These factors have also reduced the need for litigation in cases relating to liability for oil pollution damage.

2. Fund Convention

(i) Purpose of the Fund Convention

At the 1969 Diplomatic Conference it was already recognized that the regime of compensation established by the Civil Liability Convention was insufficient. For this reason that Conference adopted a Resolution requesting IMO (or IMCO as it was called at that time) to elaborate a draft for a compensation scheme based on the existence of an international fund. A Convention setting up such a scheme was adopted in 1971, namely the Fund Convention.

The main functions of the Fund Convention are to provide supplementary compensation to those who cannot obtain full compensation for oil pollution damage under the Civil Liability Convention, and to indemnify the shipowner for a portion of his liability under the Civil Liability Convention.

The Fund Convention establishes an intergovernmental organization financed by the oil industry to administer the system of compensation created by that Convention: the International Oil Pollution Compensation Fund (IOPC Fund). A State which becomes Party to the Fund Convention becomes at the same time a Member of the IOPC Fund.

The Fund Convention has four main elements: supplementary compensation for victims, indemnification of the shipowner for part of his liability, establishment of an intergovernmental organization to administer the system of compensation, and a financing system.

(ii) Supplementary compensation

The IOPC Fund pays compensation to any person suffering oil pollution damage in an IOPC Fund Member State if that person is unable to obtain full compensation under the Civil Liability Convention for one of the following reasons:

(a) No liability for pollution damage arises under the Civil Liability Convention, because the owner can invoke one of the exemptions under that Convention.
(b) The owner is financially incapable of meeting his obligations under the Civil Liability Convention and his insurance is insufficient to satisfy the claims for compensation for pollution damage.
(c) The damage exceeds the owner's liability under the Civil Liability Convention.

The experience of the IOPC Fund has shown that most incidents fall within category (c). In fact, of the 61 incidents in which the IOPC Fund has been involved so far, 58 fall entirely within this category.[2]

2. As at 15 September 1992.

(iii) Maximum amount payable under the Conventions

The maximum amount payable under the Civil Liability Convention and the Fund Convention in respect of any one incident is limited to 900 million (gold) francs, which in the IOPC Fund's view corresponds to 60 million Special Drawing Rights or approximately US$85 million, including the sum actually paid by the owner or his insurer under the Civil Liability Convention.

Of the 61 incidents with which the IOPC Fund has dealt so far, only two have given rise to claims in excess of the limit of compensation that applied to the incident, the *Tanio* incident (France, 1980) and the *Haven* incident (Italy, 1991).

The limits of compensation laid down in the Civil Liability Convention and the Fund Convention were originally expressly in a special unit, the (gold) franc, the so-called Poincaré franc. Under the Civil Liability Convention, the amounts expressed in (gold) francs should be converted into the national currency of the State in which the shipowner's limitation fund is constituted on the basis of the *official* value of that currency by reference to the franc on the date of the establishment of the limitation fund. By reference, the unit in the Fund Convention is the same as that in the Civil Liability Convention.

The word *official* was inserted in the text as a result of a proposal made by the Swiss delegate, Dr Walter Müller, during one of the last sessions of the 1969 Diplomatic Conference. The purpose of the inclusion of this word was to rule out the application of the market value of gold.

In 1976, Protocols were adopted to amend both Conventions. Under the Protocols, the (gold) franc was replaced as the monetary unit by the Special Drawing Right of the International Monetary Fund (SDR). One SDR was then considered equal to 15 (gold) francs. The SDR is to be converted into the national currency of the State in which the shipowner's limitation fund is constituted on the basis of the value of that currency by reference to the SDR on the date of the constitution of the limitation fund. The 1976 Protocol to the Civil Liability Convention entered into force in 1981, whereas the 1976 Protocol to the Fund Convention has not yet come into force.

As I have mentioned, the maximum amount of compensation payable pursuant to the Civil Liability Convention and the Fund Convention in respect of any one incident is 900 million (gold) francs. Pursuant to the 1976 Protocol to the Fund Convention, the amount of 900 million (gold) francs was replaced by 60 million SDR.

The IOPC Fund had taken it for granted that the conversion of the (gold) franc into national currency should be made on the basis of the Special Drawing Right of the International Monetary Fund. The reasons were that the word "official" had been included in the text of the Civil Liability Convention to rule out the application of the free market value of gold, and that the unit of account in the two Conventions was the same. In the *Haven* case, however, it was maintained by some claimants that the conversion should be made by using the free

market price of gold, since the 1976 Protocol to the Fund Convention which replaced the (gold) franc with the SDR was not then in force.

The judge of the court of first instance in Genoa in charge of the limitation proceedings gave his decision on this issue on 14 March 1992. He held that the maximum amount payable by the IOPC Fund should be calculated by the application of the free market value of gold which gives an amount of Lit 771,397,947,400 ($630 million) (including the amount paid by the shipowner under the Civil Liability Convention), instead of LIt 102,864,000,000 ($85 million), as maintained by the IOPC Fund, calculated on the basis of the SDR. The IOPC Fund has lodged opposition to this decision. The Court has not yet given its judgment on this issue.

The IOPC Fund will, if necessary, take the question to the Supreme Court of Cassation. If the decision of the Court of First Instance in Genoa were to be confirmed, the maximum amount payable by the IOPC Fund would correspond to over $600 million instead of $85 million. This might, in the IOPC Fund's view, seriously jeopardize the future of the system of compensation established by the Conventions.

This question is not only very important but also very complicated from a legal point of view. For this reason and due to the fact that this issue is subject to legal proceedings in the Court of Genoa, I think it would be unwise of me to discuss this question any further.

(iv) Indemnification of the shipowner

The second main purpose of the Fund Convention is to indemnify the shipowner for part of the total amount of his liability under the Civil Liability Convention.

In the Resolution adopted at the 1969 Diplomatic Conference, it was stated that the "international fund" which was envisaged should in principle relieve the shipowners of the additional financial burden imposed upon them by the Civil Liability Convention. This was part of a political compromise at the 1969 Conference as a *quid pro quo* for shipowning nations accepting strict liability, higher liability limits, and compulsory insurance. As often is the case in this world, promises are not upheld, and in particular not political promises. This was also the case here. The Fund Convention does not indemnify the shipowners for the whole of the increased liability imposed upon them by the Civil Liability Convention, but only relieves them of about half of the increased liability, or 25 per cent. of the total liability under the Civil Liability Convention.

(v) Organization of the IOPC Fund

The Fund Convention set up an international organization, the International Oil Pollution Compensation Fund (IOPC Fund), to administer the system of compensation created by that Convention. The IOPC Fund is not technically a

United Nations specialized agency, but it has most of the features of such an agency. It should be emphasized that the IOPC Fund is not part of IMO but is a totally independent organization.

Like most UN agencies, the IOPC Fund has a organization in three tiers: an Assembly, an Executive Committee and a Secretariat. The Assembly, which is composed of representatives of the Governments of all Member States, is the supreme organ governing the IOPC Fund and holds sessions once a year. The Executive Committee is elected by the Assembly. It is composed of 15 Member States. Its main function is to approve settlements of claims against the IOPC Fund. The Secretariat is headed by a Director. At present it has in all nine staff members at its headquarters in London.

The Fund Convention contains very few provisions relating to the functions of the IOPC Fund in dealing with claims for compensation. The drafters of the Convention fortunately left this to a large extent to be set out in Internal Regulations to be adopted by the Assembly. I think that the wisdom of the drafters of the Convention on this point has greatly contributed to the smooth functioning of the compensation system. The Governments of Member States have been able to adopt the procedures which suit the practical needs of the Organization, and it has been possible to adjust these procedures in the light of experience gained from dealing with a number of incidents in various States. In addition, the Governments have, to a surprisingly large extent, left it to the Director to work out the most practical ways of handling incidents and dealing with claims.

In this context, I must pay tribute to my predecessor, Dr R. Ganten, who as the IOPC Fund's first Director had the difficult task of setting up an organization of a totally new type and of working out the most appropriate procedures to be applied.

(vi) Financing of the IOPC Fund

The IOPC Fund is financed by persons who receive crude oil and heavy fuel oil in Fund Member States by sea transport. A Member State is required to communicate every year to the Director of the IOPC Fund the name and address of any person in that State who is liable to contribute to the Fund, as well as the quantity of oil received by any such person.

The contributions are payable by the individual contributors directly to the IOPC Fund. A State is not responsible for the contributions levied on contributors in that State, unless it has voluntarily assumed such responsibility. The level of contributions varies from one year to another, since the payments of compensation will vary.

In order to give an idea of the financial implications for contributors, the contributions that were levied during the period 1979–1991 are shown in the following table. The table also sets out the amount that would have been paid by a person who received one million tonnes of contributing oil every year (extreme right hand column).

Table 1 Financing of the IOPC Fund

	Total Contribution	*Contribution per Tonne*	*Contribution for 1 million Tonnes*
	£	£	£
Initial Contributions		0.0022479	2 248
Annual Contributions			
1979	750 000	0.0008455	845
1980	10 000 000	0.0126100	12 610
1981	500 000	0.0005690	569
1982	860 000	0.0010357	1 036
1983	24 106 000	0.0260786	26 079
1984	0	0.0000000	0
1985	1 500 000	0.0018306	1 831
1986	1 800 000	0.0023360	2 336
1987	1 200 000	0.0015347	1 535
1988	2 990 000	0.0037599	3 760
1989	4 800 000	0.0060256	6 026
1990	500 000	0.0005563	556
1991	26 700 000	0.0287013	28 701

An important question is whether the contributors actually fulfil their obligation to pay contributions to the IOPC Fund. When the Fund Convention was adopted in 1971, the concept of an international fund was something new. There was no experience of the functioning of a system of this kind. Fears were expressed that the Fund Secretariat would have difficulties in collecting the money required to compensate victims. These fears have proved to be totally unjustified. The contributors, i.e. the oil industry, have generally responded in a remarkable manner. Of the contributions levied in 1990, 99.4 per cent. have been paid, and of the contributions levied in 1991, 97 per cent.

It should be noted that over 90 per cent. of the total contributions for 1991 were payable by contributors in 10 of the 49 Member States. The Japanese oil industry alone pays about 29 per cent. of the total contributions, and the Italian oil industry 16 per cent. The other main contributors are the oil industries in the Netherlands, France, the United Kingdom and Spain.

III. REVISION OF THE CIVIL LIABILITY CONVENTION AND THE FUND CONVENTION

A Diplomatic Conference, held in London in 1984, adopted two Protocols to amend the 1969 Civil Liability Convention and the 1971 Fund Convention. The Protocols provide for higher limits of compensation and a wider scope of application than the Conventions in their original versions. The 1984 Protocols have not come into force since the required number of ratifications have not been obtained.

In 1991, when it was established that the United States was not going to ratify the 1984 Protocols and that it was therefore unlikely that the Protocols would enter into force, the IOPC Fund examined the future development of the intergovernmental oil pollution liability and compensation system based on the

Civil Liability Convention and the Fund Convention. As a result of this examination, an International Conference will be held in November 1992 under the auspices of IMO to consider draft Protocols elaborated within the IOPC Fund which modify these Conventions. The proposed new Protocols would include the substantive provisions of the 1984 Protocols thereto, but with lower entry-into-force conditions, so as to ensure their early entry into force, thereby preserving the viability of the compensation system in the future. This Conference will also consider whether there should be introduced in the Fund Convention a system setting a cap on contributions payable by oil receivers in any given State.[3]

Since the 1984 Protocols and the proposed 1992 Protocols will be discussed by Mr M. Göransson, they will not be dealt with here.[4]

IV. ADMISSIBILITY OF CLAIMS AND THE NOTION OF POLLUTION DAMAGE

1. Claims experience

Since its establishment, the IOPC Fund has, up to 15 September 1992, been involved in the settlement of claims arising out of 61 incidents. Of these incidents 33 have occurred in Japan; 19 incidents, leading in general to much larger claims, took place in European waters; one incident in Indonesia; one in Algeria, one in the Caribbean; four in Canada and two in the Persian Gulf. However, some of these incidents did not result in any payments by the IOPC Fund. The total amount of compensation and indemnification paid by the IOPC Fund to date is £47 million (US$92 million).

The case which involved the largest was the *Tanio* incident (France, 1980), where the IOPC Fund paid FFr222 million (US$40 million) to claimants. In the *Haven* incident, the aggregate amount of the claims greatly exceeds the maximum amount payable under the Civil Liability Convention and the Fund Convention, but so far no payments have been made.

2. Claims settlement

The IOPC Fund can pay compensation to a claimant only to the extent that his claim is justified and meets the criteria laid down in the Fund Convention. To this end, a claimant is required to prove his claim by producing explanatory notes, invoices, receipts and other documents to support his position.

In settling claims for pollution damage the IOPC Fund co-operates closely with the shipowner's pollution liability insurer, which in practically all cases is a Protection and Indemnity Association (P & I Club). The investigation and evaluation of damage is carried out jointly by the IOPC Fund and the P & I

3. Subsequent to the presentation of this paper at the Genoa Seminar, the proposed new Protocols were adopted by the IMO Diplomatic Conference held in November 1992. See further Preface at p. vii.
4. For M. Göransson's paper see Chapter 7.

Club. Surveyors are normally employed jointly by the P & I Club and the IOPC Fund for the survey of the incident and the clean-up operations.

The Director is authorized to settle the claims and pay compensation if the aggregate amount of the claims against the IOPC Fund arising out of an incident does not exceed an amount of about 2.5 million SDR (US$3.4 million). For incidents leading to higher claims, the Director needs the approval of the settlement from the Executive Committee.

Three factors—the use of experienced surveyors and lawyers, the co-operation with the P & I Clubs and the Director's authority to make relatively high payments without prior approval by the Executive Committee—enable the IOPC Fund to make settlements of claims and payments of compensation in most cases in a relatively short period of time. All small and medium sized claims are normally settled within a few months of the claim documents being presented, and agreed claims are normally paid within a month of agreement being reached. Even the larger claims have been settled within reasonable periods of time after the relevant incident.

It must be stressed that the time needed for the settlement of claims is almost entirely dependent on the quality of the documentation submitted in support of the claims. In cases where the claims are well documented, it is often possible to reach a settlement within a few months of the presentation of the documentation. If, however, the documentation is insufficient, it takes a considerable time before a settlement can be reached, since protracted correspondence between the IOPC Fund and the claimants will be necessary.

3. Admissibility of claims

(i) General criteria

In order for a claim to be accepted by the IOPC Fund, it has to be proved that the claim is based on a real expense actually incurred, that there was a link between the expense and the incident and that the expense was made for reasonable purposes.

The definition of "pollution damage" under the Civil Liability Convention and the Fund Convention is not entirely clear. It states generally that "pollution damage" is damage caused by contamination. However, the IOPC Fund has acquired considerable experience with regard to the admissibility of claims for compensation. In connection with the settlement of claims it has developed certain principles as regards the meaning of this definition.

The Assembly and the Executive Committee have taken a number of important decisions in this regard. These principles have also been developed by the Director in his negotiations with claimants. The settlements made by the Director and the principles upon which these settlements have been based have either been explicitly approved by the Executive Committee, or have been reported to and endorsed by the Committee. It should be noted that the Assembly has

expressed the opinion that a uniform interpretation of the definition of "pollution damage" is essential for the functioning of the regime of compensation established by the Civil Liability Convention and the Fund Convention.

The policy developed by the IOPC Fund as regards the admissibility of claims can be summarized as follows. The IOPC Fund pays compensation for expenses incurred for clean-up operations at sea or on the beach, such as cost of personnel, equipment, dispersants and absorbents. It reimburses costs of so-called "preventive measures", i.e. measures to prevent or minimize pollution damage, for example measures taken to prevent oil which has escaped from a ship from reaching the coast, or the cost of dispersants to combat oil at sea. It must be emphasized, however, that the definition of "preventive measures" only covers the cost of *reasonable* measures.

Pollution incidents often result in damage to property: the oil may contaminate fishing boats, fishing gear, yachts, beaches, piers and embankments. The IOPC Fund accepts costs for cleaning polluted property. If the polluted property (e.g. fishing gear) cannot be cleaned, the IOPC Fund compensates the cost of replacement, subject to deductions for wear and tear. Measures taken to combat an oil spill may cause damage to roads, piers and embankments necessitating repairs, and reasonable costs for such repairs are accepted by the IOPC Fund. Economic loss suffered by those who depend directly on earnings from coastal or sea-related activities is also recoverable, e.g. loss of earnings suffered by fishermen, and by hoteliers and restaurateurs at seaside resorts.

The principles for admissibility of claims laid down by the IOPC Fund are of course not sacrosanct. The victims can always bring their claims before the courts in their own country, if they consider that the Director or the Executive Committee has refused to accept a legitimate claim. So far, out of the 61 incidents in which the IOPC Fund has become involved, court actions have become necessary in only three cases. It seems therefore that the claimants generally consider that the position taken by the IOPC Fund is quite reasonable, both as regards matters of principle and as regards the quantum of their claims.

The IOPC Fund does not take a position on abstract questions: it only takes decisions in relation to claims presented to the IOPC Fund.

I have thought it interesting to discuss in more detail certain questions of principle as regards the interpretation of the notion of "pollution damage" which have arisen in the context of various incidents in which the IOPC Fund has been involved. I have chosen to deal with four problems: the cost of certain operations undertaken by public authorities; the relationship between preventive measures and salvage; loss of income suffered by individuals; and damage to the marine environment.

(ii) Cost of operations undertaken by public authorities

In many countries, clean-up operations are carried out mainly by public authorities. In several cases involving the IOPC Fund, the question has arisen as to

the admissibility of claims from a Government or from other public bodies relating to certain costs which would have arisen for the public authorities even if the incident had not occurred—that is "fixed costs"—as opposed to "additional costs", i.e. expenses incurred by the public authorities as a result of the incident and which would not have arisen had the incident and the operations relating thereto not taken place. This question has been discussed in respect of personnel permanently employed by public authorities—costs for overtime allowances, extra allowances for heavy duties and travel costs would be additional costs, whereas the normal salaries of such personnel would be fixed costs. This question has also arisen in respect of certain costs for operating vessels owned by public authorities and used for clean-up operations, such as capital costs and costs for depreciation.

In any system of compensation, the basic principle is that the person who has suffered damage or incurred expenses as a result of a given event should be restored to the same financial situation as if the event had not occurred. If this principle were to be applied by the IOPC Fund, only "additional costs" should be compensated and not "fixed costs", but the IOPC Fund has not adhered to this principle.

The admissibility of claims for fixed and additional costs was discussed within the IOPC Fund in 1981 by an Inter-sessional Working Group set up by the Assembly. The Working Group agreed that additional costs were always recoverable under the Civil Liability Convention and the Fund Convention, but the Group could not reach unanimity on the question of the admissibility of fixed costs. Most delegations agreed that a reasonable proportion of fixed costs should be recoverable, since it was in the interests not only of the particular State but also of the IOPC Fund that a State maintained a response force in order to be able to respond quickly and cheaply in the event of a spill. If the clean-up operations were left entirely to private firms, this would exclude fixed costs from the bill to the IOPC Fund but it would mean, in the Working Group's view, that the additional costs would be much higher, possibly even higher than if the clean-up operations had been carried out by State employees with fixed costs included in the bill. The Working Group agreed that in the calculation of the relevant fixed costs only those expenses which correspond closely to the clean-up period in question and which do not include remote overhead charges should be included. The Assembly took note of the report of the Working Group and generally endorsed the results of the Working Group's discussions.

Since 1981 there have been many claims against the IOPC Fund including items which fall within the concept of fixed costs as defined above. In his negotiations with claimants, the Director has based his approach on the position taken by the Working Group. The Director's decisions in respect of individual claims have been endorsed by the Executive Committee. In particular, the Committee has reiterated the view that only those expenses which relate closely to the

clean-up period in question and which do not include general administrative costs or remote overhead charges should be compensated.

(iii) Salvage operations

In the *Patmos* case (Italy, 1985), the IOPC Fund faced the question as to whether and to what extent salvage operations fall within the definition "pollution damage" laid down in the Civil Liability Convention, i.e. whether such operations could be considered as "preventive measures" as defined in that Convention, viz. any reasonable measures taken to prevent or minimize pollution damage. The Executive Committee took the position that operations could be considered as falling within the definition of preventive measures only if the primary purpose was to prevent pollution damage; if the operations primarily had another purpose, such as salving hull or cargo, the operations would not be covered by this definition.

The position taken by the Executive Committee was endorsed by the Italian Court of first instance in the *Patmos* case. The Court stated that salvage operations could not be considered as preventive measures, since the primary purpose of such operations was that of rescuing ship and cargo; this applied even if the operations had the further effect of preventing pollution. The claimants whose claims had been rejected lodged appeals against this judgment, but the appeals were later withdrawn. In an out-of-court settlement these claimants accepted that no compensation under the Conventions was paid for salvage operations.

In some recent incidents where claims relating to salvage operations have been presented to the IOPC Fund, it has been established that the operations had dual purposes, viz. both to prevent and minimize pollution and to save the vessel and cargo. It was then necessary to consider how the costs for these operations should be distributed between salvage and pollution prevention. The Director has taken the view that such a distribution would have to be made on the basis of an assessment of the facts in the individual case. This position was endorsed by the Executive Committee in the context of the *Rio Orinoco* incident in Canada and the *Portfield* incident in the United Kingdom.

(iv) Loss of earnings

Owners or users of property which has been contaminated as a result of an oil spill may suffer loss of earnings. For instance, a fisherman whose fishing gear has been polluted may lose earnings during the period when he is prevented from fishing, pending the cleaning of the polluted gear or the purchase of new equipment. Most legal systems recognize in principle claims for compensation of this kind, since the claimant has at the same time suffered damage to property. The IOPC Fund also accepts claims for loss of earnings in such cases.

Persons whose property has not been polluted may nevertheless suffer

economic loss as a result of oil pollution incidents (so called "pure economic loss"). If a certain area of the sea is heavily polluted, fishing may be altogether impossible in that area for a certain period of time, which may cause economic loss to fishermen for whom there is no possibility of fishing elsewhere. Hoteliers and restaurateurs whose establishments are located close to a public beach may lose income if tourists do not come to the area because the beach has become polluted. In most jurisdictions there has been a great reluctance to recognize claims in such cases, for fear of the far-reaching consequences that the acceptance of such claims would have. In most countries, a claim for compensation is generally accepted only if it relates to damage to a defined and recognized right (e.g. a right of property or a right of possession). Damage suffered by someone as a result of loss of use of the environment due to pollution is normally not considered as damage to an individual's recognized right in this sense. However, in recent years there has been a development in many countries towards a less restrictive approach. This is particularly so in respect of damage resulting from pollution caused to an established trade or economic activity.

Claims relating to pure economic loss have often been submitted to the IOPC Fund. The Executive Committee has agreed to compensate economic loss suffered by persons who depend directly on earnings from coastal or sea-related activities, e.g. loss of earnings suffered by fishermen or by hoteliers and restaurateurs at seaside resorts, even if the person concerned has not suffered any damage to his property.

The IOPC Fund's experience shows that it is often difficult to establish the amount of the loss sustained in such cases. The loss suffered by the claimant may, for instance, have to be established through comparisons with the claimant's income during a comparable period in the years preceding the incident. It may sometimes be necessary also to make a comparison with his income during an appropriate period after the incident.

(v) Damage to the marine environment

The question of the admissibility of claims for compensation for damage to the marine environment was dealt with by the IOPC Fund for the first time in connection with the first *Antonio Gramsci* incident which occurred in the USSR in 1979. In that case, a claim of an abstract nature for compensation for ecological damage was made by the Government of the USSR in the Soviet Courts. The amount claimed had been calculated according to a mathematical formula laid down in USSR legislation. In view of this claim, the Assembly unanimously adopted in 1980 a Resolution stating that "the assessment of compensation to be paid by the International Oil Pollution Compensation Fund is not to be made on the basis of an abstract quantification of damage calculated in accordance with theoretical models".

Following the adoption of this Resolution, a Working Group set up by the Assembly examined the question as to whether and, if so, to what extent, a

claim for environmental damage was admissible under the Civil Liability Convention and the Fund Convention. The Working Group agreed that compensation could be granted only if a claimant who has a legal right to claim under national law had suffered quantifiable economic loss. The position taken by the Working Group was endorsed by the Assembly in 1981.

Damage to the marine environment cannot be easily assessed in monetary terms, as the marine environment does not have any direct market value. In recent years models have been elaborated in many countries for the assessment of damage to the marine environment. It is submitted that any assessment of ecological damage to the marine environment in monetary terms would require sweeping assumptions regarding relationships between different components of the environment and economic values. Any calculation of the damage suffered in monetary terms will by necessity be arbitrary. For this reason, it is maintained that it would be inappropriate to admit claims for compensation following damage to unexploited natural resources which have no owner.

The same question arose in the *Patmos* case (Italy, 1985), in which the Italian Government made a claim for compensation for damage to the marine environment without specifying the type of damage which had allegedly been caused, nor giving any explanation of the basis on which the amount claimed had been calculated. The Executive Committee took the view that this claim should be opposed by the IOPC Fund, in accordance with the above-mentioned Resolution. The claim was rejected by the Italian Court of first instance. The Italian Government has appealed against this judgment, and the case is pending in the Court of Appeal.

In the appeal proceedings the Italian Government has taken the position that this claim relates to actual damage to the marine environment and to actual economic loss suffered by the tourist industry and fishermen. For this reason the Italian Government has maintained that the claim is not in contravention of the interpretation of the definition of pollution damage adopted by the Assembly in that Resolution.

With regard to the economic loss which had allegedly been suffered by the tourist industry and fishermen, the IOPC Fund holds the view that compensation in respect of such damage could only be claimed by the individual persons having suffered such damage.

The Italian Government's claim was dealt with by the Court of Appeal in a non-final judgment, given in 1989. In that judgment the court stated that the owner of the *Patmos*, the UK Club and the IOPC Fund were liable for the damage covered by the claim made by the Italian Government. By order of the same date, the court appointed three experts with the task of ascertaining the existence, if any, of damage to the marine resources off the coasts of Sicily and Calabria consequent on the oil pollution; if such damage existed, they should determine the amount thereof or, in any case, supply any useful element suitable for the equitable assessment of the damage.

The court experts have submitted two reports. In the first report, the experts

held that, except in respect of fishing activities, there was a lack of data to evaluate the economic impact on other activities and that a precise assessment of the damage to such activities was impossible. In the view of the experts, the evaluation should be carried out by the court. The experts quantified the damage to the fishing activities at not less than Lit 1,000 million (£880,000). In their second report, the court experts stated that their conclusions were only hypothetical and not confirmed by factual evidence. The quantity of water affected by the oil was estimated, and the experts then considered how the oil might affect the plankton and the development and growth of fish. A mathematical formula was used to calculate a quantity of fish which allegedly were not born or did not develop, due to lack of nutrition. The experts stated that only a percentage of the quantity of fish not having come into existence would have been caught. The experts gave a nominal value to the quantity which would have been caught. An allowance was also made for the days when fishing was banned following the incident, to take account of loss of earnings.

In their pleadings, the IOPC Fund, the owner of the *Patmos* and the UK Club pointed out that the court had instructed the experts to deal with damage which would not be assessed in monetary terms. They argued that the court experts had exceeded their mandate, since the damage allegedly suffered by fishermen and the tourist industry was not damage to the marine resources but economic loss. It was pointed out that, in any event, the experts had admitted that the damage to the tourist industry could not be quantified. The owner, the Club and the IOPC Fund referred to the fact that, as regards the damage to the environment properly speaking, the experts had used expressions such as "non-existent", "negligible", "modest", "of short duration" and "reversible".

Large claims relating to damage to the marine environment have been submitted in the *Haven* case. The claim documents do not indicate the kind of "environmental damage" which was allegedly sustained, nor do they give any indication as to the method used to calculate the amount claimed. The Italian Government has informed the Director that it has not been possible to describe the environmental damage because the study of the effects of the incidents on the marine environment has not yet been completed. For obvious reasons, it would be inappropriate for me to discuss these claims here.

It should be noted in this context that the 1984 Protocol to the Civil Liability Convention contains an amended wording of the definition of "pollution damage". A proviso was added to the effect that compensation for impairment of the environment (other than loss of profit from such impairment) should be limited to costs of reasonable measures of reinstatement actually undertaken or to be undertaken. The new wording of the definition was not in any way intended to widen the concept. The 1984 Diplomatic Conference based its deliberations on the policy of the IOPC Fund and the principles developed by the IOPC Fund Assembly and Executive Committee as regards the admissibility of claims and the interpretation of the definition of "pollution damage" as worded in the original text of the Convention. The Diplomatic Conference

adopted the modified wording of this definition in order to codify the interpretation of the definition as developed by the IOPC Fund.

V. CONCLUSIONS

When the Fund Convention was adopted in 1971, the Diplomatic Conference created an innovation in international law. The IOPC Fund is, basically, a mutual insurance company for oil pollution incidents set up by Governments but financed by oil interests. It was impossible to foresee how such a body would function.

In my view it is fair to say, in the light of 14 years of experience, that the system of compensation established by the Civil Liability Convention and the Fund Convention has worked remarkably well. This is due to a large extent to the spirit of co-operation shown by Governments of Member States as well as by shipowners, P & I Clubs and the oil industry.

Looking more particularly at the IOPC Fund itself, it has succeeded in creating procedures for the rapid payment of compensation to victims of oil pollution incidents, and at low costs. It has also contributed to the harmonization of law and legal practice in the field of compensation for oil pollution damage.

Although neither the 1984 Protocols to the Conventions nor any new Protocols will come into force for at least some years, the regime of compensation established by the Civil Liability Convention and the Fund Convention provides a cover for oil pollution damage which is adequate, except in very rare cases. The two Conventions together provide a cover which, in the IOPC Fund's view, totals $85 million per incident. In fact, on a global basis, there have been only a couple of cases where the aggregate amount of pollution damage exceeded this amount. For this reason, it is likely that practically all incidents in States' Members of the IOPC Fund will be dealt with under the Conventions for a number of years to come. On the other hand, in States not party to the Fund Convention, the amount available under the Civil Liability Convention or national law will in many cases not be sufficient to compensate the victims in full.

At the time of the entry into force of the Fund Convention in October 1978, 14 States were parties to the Convention and thus Members of the IOPC Fund. Since then there has been a constant growth in the number of Member States. During the last five years that number has increased from 36 to 49[5] and there are reasons to believe that a number of States will join the IOPC Fund in the near future. This continuing expansion of the membership demonstrates that the international community has found the system of compensation created by the Civil Liability Convention and the Fund Convention a viable one, providing rapid compensation to victims of oil pollution damage.

5. As at 15 September 1992.

CHAPTER 6

THE VOLUNTARY OIL SPILL COMPENSATION AGREEMENTS—TOVALOP AND CRISTAL

DR. I.C. WHITE*

I. INTRODUCTION

The *Torrey Canyon* incident in 1967 provided a major stimulus to the development of four international regimes through which compensation for oil pollution damage and clean-up costs is available following oil spills from tankers. Two of these regimes are voluntary in nature and were set up as a result of the determination of the tanker and oil industries to take constructive action prior to the widespread ratification and acceptance of two International Conventions developed under the auspices of the International Maritime Organization, IMO (or the Inter-Governmental Maritime Consultative Organisation, IMCO, as it was then known). These two Conventions are the International Convention on Civil Liability for Oil Pollution Damage, 1969 (CLC) and the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971 (Fund Convention).

The development and main provisions of the two voluntary oil spill compensation agreements, as well as their relationship with the International Conventions, are described in a booklet entitled "TOVALOP & CRISTAL—A Guide to Oil Spill Compensation", copies of which are available on request.[1] This paper summarizes some of the main features of both voluntary agreements, and discusses some of the factors that will need to be considered in determining their future.

II. TANKER OWNERS VOLUNTARY AGREEMENT CONCERNING LIABILITY FOR OIL POLLUTION (TOVALOP)

1. Background

TOVALOP came into effect on 6 October, 1969 when owners of 50 per cent. of the world's tanker tonnage became parties. Today there are some 6,600 tankers, combined carriers and barges entered in TOVALOP, totalling about 160

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1. From The International Tanker Owners' Pollution Federation Ltd., Staple Hall, Stonehouse Court, 87–90 Houndsditch, London EC3A 7AX, UK.

million gross tons.[2] This represents about 97 per cent. of the world's tank-vessel tonnage and includes many government-owned fleets. Thus it is extremely rare that any internationally trading tanker is not entered in TOVALOP.

TOVALOP has been amended on a number of occasions since 1969. With effect from 20 February 1987, a Supplement was added to the Agreement that was in force prior to that date (now termed the "Standing Agreement"). Many of the provisions of this Supplement, including the limits of financial responsibility, are similar to those contained in the 1984 CLC Protocol and thus anticipated its entry into force. However, it should be noted that the terms of the Supplement apply only when a participating tanker involved in an incident is carrying a cargo owned by a party to CRISTAL. In all other cases the terms and limits of the Standing Agreement alone remain applicable. Thus, whilst TOVALOP remains a single Agreement, as from 20 February 1987 it has consisted of two tiers, with the ownership of the oil cargo being the factor that determines which will apply in any particular incident.

2. Basic concept of TOVALOP

TOVALOP is an agreement entered into by tanker owners and bareboat charterers under which the parties agree to assume certain obligations for which they might not otherwise be legally liable. For TOVALOP to apply it is not necessary to demonstrate that the tanker owner or bareboat charterer was at fault and there are only a very limited number of circumstances in which a party will be totally free of any obligations under the Agreement (e.g. if the incident resulted from an act of war or terrorism). As a result, compensation can be obtained by claimants without recourse to legal proceedings which may prove lengthy, although the TOVALOP party does not thereby waive any rights of recovery from third parties whose fault may have caused, or at least contributed to, the incident. Thus TOVALOP facilitates the payment of compensation without in any way shifting the actual responsibility for the spill or prejudging the issue of ultimate liability.

3. Scope of application

The basis of TOVALOP is that when a participating tanker spills, or threatens to spill, persistent oil[3] (whether it be cargo or fuel), the owner or bareboat charterer will take appropriate action, and will reimburse governments and others who incur reasonable costs in responding to the incident or who suffer pollution damage. Measures taken in response to the incident include attempts to eliminate the threat, and actions to prevent or minimize pollution damage, for example, by using booms, skimmers and other clean-up techniques.

2. Figures applying in September 1992.

3. "Persistent oil" is not strictly defined in TOVALOP or in any of the other compensation regimes. As a guide, it can be taken to include crude oil, fuel oil, heavy diesel oil and lubricating oil.

Pollution damage itself is defined to cover loss or damage which results directly from the escape or discharge of the oil. Thus it can include such things as oiling of fishing boats and gear, and contamination of cultivated stocks of seaweed, shellfish or other marine products. Proven economic loss actually sustained as a direct result of contamination resulting from the escape or discharge of oil, irrespective as to accompanying physical damage, is specifically covered by the definition of pollution damage in the TOVALOP Supplement. In addition, since 20 February 1990, the Supplement provides for the reimbursement of reasonable costs actually incurred in taking reasonable and necessary measures to restore or replace natural resources damaged as a direct result of an incident. Other forms of damage to natural resources that are not commercially exploited, or claims based on theoretical scientific or economic assessments are not covered.

4. Limits of financial responsibility (see Figure 1)

Under the Standing Agreement, the maximum compensation for all claims arising out of any one incident is US$160 per limitation ton or US$16.8 million, whichever is the less. Under the terms of the TOVALOP Supplement (which can only apply when the cargo on board the tanker at the time of the incident is owned by a party to CRISTAL) the maximum limits of financial responsibility are:

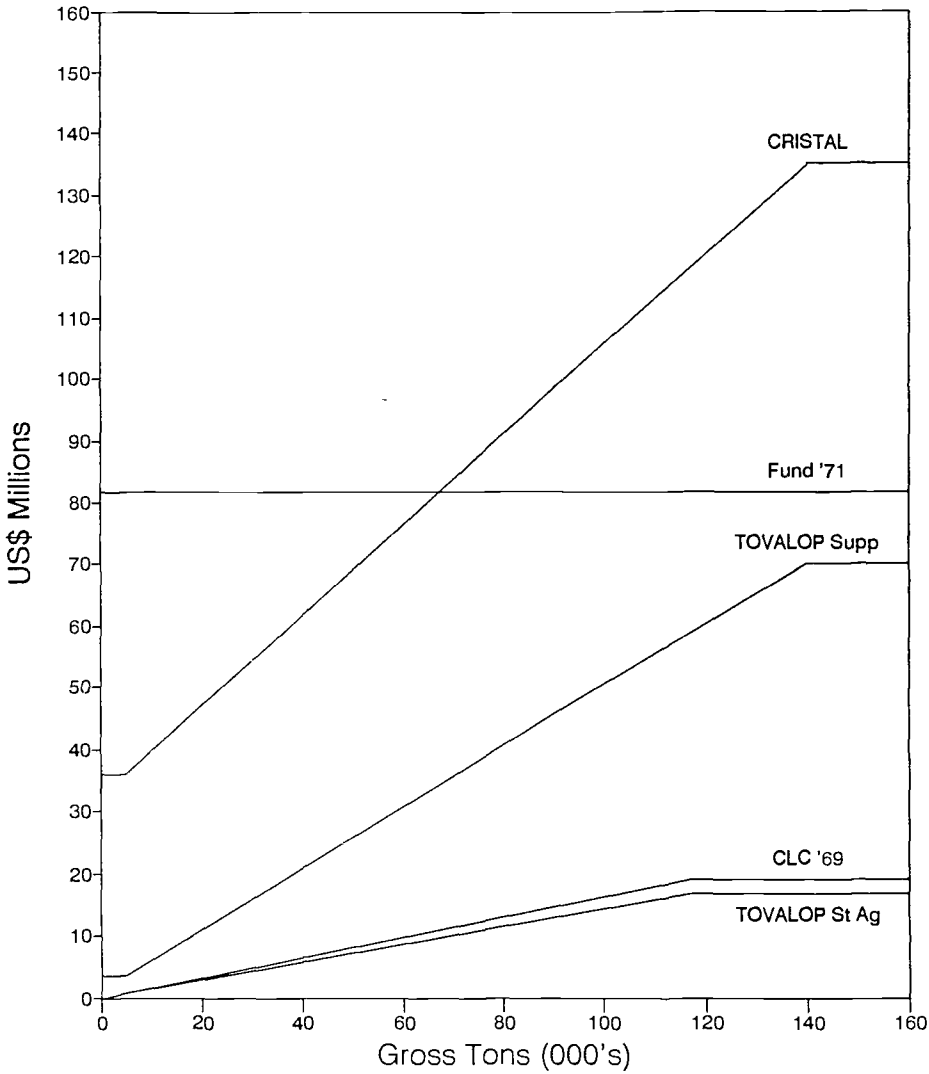
—for all tankers up to 5,000 gross tons, a maximum of US$3.5 million
—for vessels over 5,000 gross tons, US$3.5 million plus US$493 for each gross ton in excess of 5,000 gross tons, up to a maximum of US$70 million.

5. Submission and handling of claims

The responsibility for settling claims under TOVALOP falls to the participating tanker owner or bareboat charterer. No fund of money is maintained by TOVALOP or by the International Tanker Owners' Pollution Federation, which only administers the Agreement.

Anyone who considers that they have a claim under TOVALOP must notify the appropriate participating tanker owner or bareboat charterer in writing within two years of the date of the incident. The owner's/bareboat charterer's third party liability insurer (normally one of the Protection and Indemnity (P & I) Clubs) will usually take an active role in the claims handling and settlement process and claimants will normally be well advised to make contact with the relevant P & I Club or its local correspondent at a very early stage. The P & I Clubs co-operate closely with Cristal Limited, the International Oil Pollution Compensation Fund (IOPC Fund—the administrative body set up pursuant to the coming into force of the Fund Convention) and the Federation, as appropriate, in order to ensure that claims are dealt with in a generally compatible

Figure 1 Limits of Liability under TOVALOP, CRISTAL, CLC and Fund Convention



manner, and that claimants receive the compensation that they are entitled to as promptly as practicable.

The TOVALOP Agreement provides for arbitration in the event of a dispute between the persons making claims under the Agreement and the TOVALOP party. The person making the claim has three years from the date of the incident in which to commence arbitration proceedings.

6. Obligations of a party to TOVALOP

Although TOVALOP is described as a voluntary agreement, this is only in respect of the decision on whether or not to become a party. Having done so, a tanker owner or bareboat charterer is contractually obliged to meet all the terms and conditions imposed on him, without exception. Because of this, the Federation, as the administrator of the TOVALOP Agreement, places particular importance on the requirement that each party should be financially capable of meeting its maximum potential financial responsibility under the Agreement (including the Supplement). Tanker owners and bareboat charterers normally satisfy this requirement by arranging oil pollution insurance with one of the Protection and Indemnity Associations (P & I Clubs) or with the International Tanker Indemnity Association (ITIA), the latter being established solely to provide cover for oil pollution risks.

Having satisfied itself that an applicant's insurance arrangements are satisfactory, the Federation will issue TOVALOP Certificates to the entered vessels. It must be emphasized that a TOVALOP Certificate merely demonstrates that the named owner/bareboat charterer and tanker satisfied the entry requirements at the date of issue; a TOVALOP Certificate is not a certificate of financial security.

III. CONTRACT REGARDING A SUPPLEMENT TO TANKER LIABILITY FOR OIL POLLUTION (CRISTAL)

1. Background

CRISTAL was devised to provide compensation supplementary to that available from tanker owners and bareboat charterers under TOVALOP. For this reason, many of the definitions and provisions, as well as the overall scope of the two voluntary agreements, are complementary. In common with TOVALOP, CRISTAL was amended with effect from 20 February 1987, among other things, to increase substantially the amount of compensation available worldwide to those affected by an oil spill from a tanker carrying a cargo owned by a party to CRISTAL.

2. Scope of application

For CRISTAL to apply to an incident a number of conditions must be satisfied. First, the incident must involve an escape or discharge of persistent oil, or the threat thereof, from a tanker carrying a cargo that is owned or deemed to be owned at the time of the incident by a party to CRISTAL. "Owned" is widely defined and can include situations where a party to CRISTAL does not actually possess legal title to the oil cargo. Thus, the cargo may be the subject of a contract under which a non-CRISTAL party owning the cargo has agreed to sell it

to a party to CRISTAL. For the purposes of CRISTAL, that cargo will be considered owned by a party even if legal title to the oil is still with the non-CRISTAL party.

A CRISTAL party may also elect to be considered the owner of an oil cargo, title to which has been transferred to a non-party. Further, a CRISTAL party or one of its affiliates whose tanker is carrying a cargo owned by a non-party to CRISTAL can elect to be considered the owner of that cargo. In both these instances the election has to be made in writing to Cristal Limited (the administrator of the Contract) prior to any incident. A shipment of oil will also be considered owned by a party, even though actual title to the oil is with a non-party, if the shipment is contracted to go to or from a terminal in which a CRISTAL party has ownership or other interest, and an incident occurs or pollution damage is caused within 250 nautical miles of that terminal.

The other fundamental condition that must be satisfied before compensation can be obtained from CRISTAL is that the tanker owner or bareboat charterer must first pay compensation up to the applicable limit calculated in accordance with the TOVALOP Supplement. The tanker does not, however, have to be actually entered in TOVALOP. As long as these fundamental conditions are met, and as long as none of the limited exemptions apply (e.g. act of war or terrorism), then compensation under the terms of the CRISTAL contract can be sought, up to the applicable limit, for the reimbursement of reasonable costs incurred by a tanker owner or any other person in taking threat removal or preventive measures, or through having sustained pollution damage. In this context it should be noted that the definition of "Pollution Damage" in the CRISTAL Contract is identical to that found in the TOVALOP Supplement.

3. Limits of financial responsibility (see Figure 1)

Under the terms of the CRISTAL contract, the following maximum limits of financial responsibility, determined by the gross tonnage of the tanker, can apply. In all cases, the stated amounts include compensation that would be payable by the tanker owner, as determined by the limits of financial responsibility under the TOVALOP Supplement:

—for all tankers up to 5,000 gross tons, a maximum of US$36 million;
—for tankers over 5,000 gross tons, US$36 million, plus US$733 for each gross ton in excess of 5,000 gross tons up to a maximum of US$135 million.

4. Submission and handling of claims

Any person who believes that they have a valid claim under the terms of the CRISTAL contract should give notice in writing to Cristal Limited as soon as

possible, and not later than two years after the date of the incident. The detailed claims procedure is set out in the Rules of Cristal Limited. Final decisions on the admissibility of claims and the payment of compensation are made by the Directors of Cristal Limited, a Bermudian company in which the parties to CRISTAL are shareholders.

5. Obligations of a party to CRISTAL

Any company engaged in the production, refining, marketing, storing or trading of oil, or which receives oil in bulk for its own consumption or use, can become a party to the CRISTAL contract. Thus major consumers such as power stations are parties, as well as oil companies and traders. Because of this, and the wide definition of "owned" (see earlier), a high proportion of the total volume of oil transported by sea is subject to the terms of the CRISTAL contract.

Whereas a tanker owner's obligations under TOVALOP (and under the CLC) are normally met through individual insurance arrangements, CRISTAL itself maintains a fund of money from which claims are met. Parties to the contract are called upon to make contributions to this fund in proportion to the quantities of crude and fuel oil that each receives by sea. The actual amount and frequency of calls depends upon claims settlements.

IV. OPERATION OF THE VOLUNTARY AGREEMENTS IN STATES PARTY TO THE INTERNATIONAL CONVENTIONS

Whilst the application of the TOVALOP Standing Agreement is strictly limited to incidents where no liability is imposed under the terms of the CLC (in order not to duplicate its similar limits and coverage), the TOVALOP Supplement and CRISTAL contract are designed to apply worldwide whenever a tanker involved in an incident is carrying a cargo owned by a party to CRISTAL. This ensures that claimants in States that have ratified one or both of the international compensation Conventions are also able to avail themselves of any extra compensation that may be available under the terms of the voluntary agreements (see Table 1 and Figure 1).

In the case of tanker owners, this means that they may have to forego their legal right to limit their liability if they suffer a spill in a State that is party to the CLC while carrying a cargo owned by a party to CRISTAL. In such circumstances claimants should, however, first advance their claims according to legal procedures established in accordance with the CLC before seeking any additional compensation that may be available under the terms of the voluntary agreements. This is recognized by the fact that under the terms of the TOVALOP Supplement, a participating tanker owner is required to pay, as a matter of priority, such amounts as may be necessary to fulfil his legal

Table 1 Comparison of maximum amounts of compensation available under the various compensation regimes (expressed in US $ millions)

Tanker's gross tonnage	*CLC, 1969*	*TOVALOP Standing Agreement*	*TOVALOP Supplement*	*Fund Convention 1971*	*CRISTAL*	*OPA 90 Tanker Owner's Liability*	*OPA 90 Trust Fund*
1,000	0.2	0.15	3.5	84.0	36.0	2.0	1,000
5,000	0.8	0.70	3.5	84.0	36.0	10.0	1,000
25,000	4.2	3.60	13.4	84.0	50.7	30.0	1,000
50,000	8.4	7.20	25.7	84.0	69.0	60.0	1,000
100,000	16.8	14.40	50.3	84.0	105.6	120.0	1,000
140,000	19.6	16.80	70.0	84.0	135.0	168.0	1,000

Note:

1. For the purpose of calculating the maximum amounts of compensation potentially available under the CLC and TOVALOP Standing Agreement, the limitation tonnages of the various tanker sizes have been assumed to be 90 per cent of their gross tonnages.
2. The limits of liability under the CLC and Fund Convention are based on specified units of account (Special Drawing Right—SDR), the US $ equivalents of which vary depending upon exchange rates. For the purpose of this example, a rate of conversion of SDR = US $ 1.4 has been used and the results rounded.
3. The maximum amount of compensation shown as potentially available under each of the various regimes is, in many cases, inclusive of amounts that would be payable under another regime(s). For example, the maximum amount of compensation available under the Fund Convention is inclusive of compensation payable by the tanker owner under the CLC. The same principle applies in the case of CRISTAL and the TOVALOP Supplement. The maximum amounts should therefore not be aggregated when determining the total compensation available in a specific incident.

obligations before compensating any other person who would otherwise remain uncompensated, up to the applicable TOVALOP Supplement limit.

It is important to emphasize that any payment of compensation made by a tanker owner to fulfil his legal liabilities under the CLC or national legislation goes towards meeting his financial obligations under the TOVALOP Supplement, and is not additional thereto.

The situation is rather more complicated should a tanker carrying a cargo owned by a party to CRISTAL suffer an oil spill in a State that is a party to both the CLC and Fund Convention, and should compensation be paid to claimants under the terms of that Convention by the International Oil Pollution Compensation Fund (IOPC Fund). In such an event, the oil-company contributors to the IOPC Fund will be required to contribute to the settlement of valid claims that exceed the tanker owner's legal liability under the CLC. These oil-company contributors (many of whom will be parties to CRISTAL) will therefore have relieved the tanker owner of the additional financial responsibility that he has under the terms of the TOVALOP Supplement (see Table 1 and Figure 1).

In order to redress this situation, the TOVALOP Supplement contains a mechanism whereby the TOVALOP party is required, via Cristal Limited, to reimburse the parties to CRISTAL who have contributed to the IOPC Fund's settlement of claims, up to the applicable TOVALOP Supplement limit. Above this limit the CRISTAL parties in Fund States will be reimbursed by the CRISTAL membership as a whole. No such reimbursement would be made to non-CRISTAL contributors to the IOPC Fund settlement.

As a result of the reimbursement mechanism in both the TOVALOP Supplement and CRISTAL Contract the normal functioning of the CLC and Fund Convention is unaffected in those States in which they apply. The reimbursement mechanism is therefore of no direct consequence to claimants in such States. In essence it is an accounting exercise designed to adjust the amounts of compensation paid in any given incident by a tanker owner and CRISTAL members under the CLC and Fund Convention so that ultimately the amounts paid by the respective parties are consistent with their limits of financial responsibility under the TOVALOP Supplement and CRISTAL contract. This ensures that parties to CRISTAL located in States which are party to the Fund Convention do not bear a disproportionate share of the costs of oil pollution incidents worldwide through having to contribute to payments under both the Fund Convention and CRISTAL. Indeed, the reimbursement mechanism results in the oil-company members of CRISTAL resident in Fund States being relieved of a significant proportion of their contributions to the IOPC Fund through substantially increasing the share of compensation paid by tanker owners. However, it should be emphasized that the reimbursement mechanism only applies when the spill originates from a tanker carrying a cargo that is owned by a party to CRISTAL.

V. OPERATION OF THE VOLUNTARY AGREEMENTS IN THE USA

In the same way that the TOVALOP Supplement and CRISTAL can apply in States that have ratified the international compensation Conventions there is nothing within the voluntary agreements to prevent them applying within the USA, as long as the oil cargo on board the tanker at the time of the incident is owned by a party to CRISTAL. However, the terms of the voluntary agreements will arguably be of little interest to claimants in most US oil spill incidents, given the broader scope of damages likely to be considered compensable under the Oil Pollution Act of 1990 (OPA 90). Possibly more important is the fact that the amount of compensation available to claimants under OPA 90 is greater than would be available under the TOVALOP Supplement and CRISTAL (see Table 1 and Figure 2). It should also be emphasized again that under the terms of the TOVALOP Supplement a participating owner will be required to meet his legal liabilities under OPA 90 and individual state laws before compensating any person under the terms of the voluntary agreement, who would otherwise remain uncompensated. As these legal liabilities will exceed an owner's voluntary obligations in all cases except where a very small tank vessel is involved, it is difficult to envisage circumstances in the USA where TOVALOP will be the primary route of compensation.

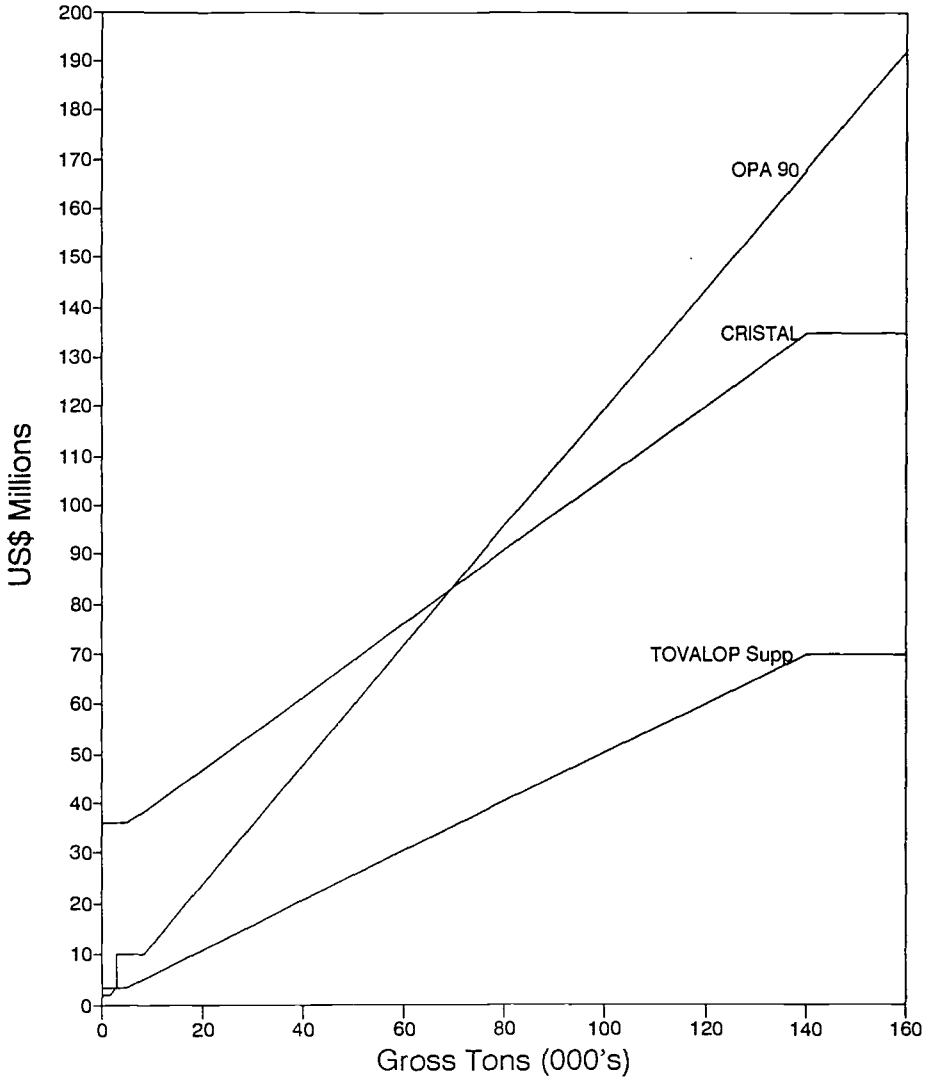
Whilst the voluntary agreements are unlikely to be of much interest to claimants in the USA, this is not the case for tanker owners since, once they have paid compensation under OPA 90 or individual state laws in excess of the applicable TOVALOP Supplement limit, they may well be able to recover some of this excess from CRISTAL (the reverse of the case that can apply in the event of a spill in a State party to the CLC and Fund Convention). This presumes, of course, that the cargo on board the tanker at the time of the incident is owned by a Party to CRISTAL and that all the other conditions laid down in the CRISTAL Contract are satisfied.

The TOVALOP/CRISTAL structure, therefore, viewed on a global basis, can in turn provide benefit to both tanker owners and cargo owners, depending on the geographic location of the incident and the applicable legal regime.

VI. FUTURE OF THE VOLUNTARY AGREEMENTS

It was proposed in 1969 that TOVALOP would last only five years or until the CLC had been ratified by a majority of maritime nations and was therefore widespread in its application. Although this has largely occurred, there remain significant geographical and other gaps in the coverage of the CLC which TOVALOP continues to fill over two decades later. CRISTAL was similarly designed as an interim measure pending the widespread application of the Fund Convention, but, like TOVALOP, it too has been repeatedly revised and extended to meet current needs.

Figure 2 Limits of Liability under TOVALOP, CRISTAL and OPA 90



When the TOVALOP Supplement and revised CRISTAL contract were brought into effect on 20 February 1987 it was for a period of five years. However, the memberships of the respective administering organizations agreed prior to the termination date to extend both voluntary agreements for two years, to 20 February 1994.

This extension will give the representatives of the Boards of Directors of both

the Federation and Cristal Limited the occasion to assess carefully the role of both voluntary agreements beyond 1994. Attention will no doubt be focused on a number of issues, among the most pertinent of which will be recent oil spill experience; legislative and regulatory developments, particularly in the USA; and, the possible entry into force of revised Protocols to the CLC and Fund Convention.[4]

It has been explained above how both TOVALOP and CRISTAL have historically been designed to complement, and to operate in conjunction with, the CLC and Fund Convention. This not only benefits claimants but also helps to ensure that tanker owners and cargo owners face a broadly uniform system of oil spill compensation worldwide. However, there is no doubt that this unique system is currently under threat as a result of an escalation in certain parts of the world in oil spill clean-up costs and damage claims (including for natural resources that lack a true economic value), and the higher expectations that such awards create elsewhere. The failure of the 1984 CLC and Fund Protocols, with their higher levels of compensation and broader scope of coverage, to enter into force is critical in this regard as it could encourage certain States to follow the unilateral approach adopted by the USA. Partly in recognition of this danger, the IMO is convening an international conference in November 1992 to consider amending the minimum ratification requirements of both the CLC and Fund Protocols (which would henceforth be known as the 1992 Protocols) to facilitate their entry into force.[5]

Even if agreement is reached on revised entry into force provisions, there can be no guarantee that the Protocols will be ratified any faster than the original Conventions. It could be argued, therefore, that the voluntary agreements of TOVALOP and CRISTAL will continue to have an important role to play for some years to come, in an attempt to preserve the uniform approach through ensuring that adequate levels of compensation are available to claimants worldwide. Ultimately the decision will rest with the parties to TOVALOP and CRISTAL. Of crucial importance will be each party's assessment of the financial implications of the current inter-relationships between the voluntary agreements and the CLC and Fund Convention on the one hand, and between the voluntary agreements and OPA 90 (and state laws) on the other.

VII. CONCLUSIONS

TOVALOP and CRISTAL, together with the CLC and Fund Convention, have for over 20 years helped ensure that those who are affected by oil spills from tankers receive fair compensation for their clean-up costs and any economic

4. Revised Protocols were adopted at the IMO Diplomatic Conference in London in November 1992, but at the time of publication their likely date of entry-into-force remains uncertain. For further details see Preface p. vii.

5. See footnote 4, above.

losses. The system of compensation provided by the four regimes is unique in the field of environmental pollution and provides a noteworthy example of successful co-operation between industry and governments. The whole system is, however, currently under threat and the next few years will determine whether it survives or whether a fragmented approach to oil spill compensation emerges as governments are attracted to follow the lead of the USA and enact their own legislation. If this occurs, tanker owners and cargo owners will be faced with a patchwork of liability and compensation laws as ships travel the world's oceans. However, the major losers are likely to be genuine claimants who will be forced more and more to engage in lengthy and costly litigation, often alongside (and possibly in competition with) agencies seeking to recover speculative environmental damages based on quasi-scientific and economic theories.

CHAPTER 7

THE 1984 AND 1992 PROTOCOLS TO THE CIVIL LIABILITY CONVENTION, 1969 AND THE FUND CONVENTION, 1971

MAGNUS GÖRANSSON*

INTRODUCTION

Initially, the title of this paper was "The prospects of the 1984 Protocols to the 1969 Civil Liability Convention and the 1971 Fund Convention". Had that title been kept, then this paper would have been not only brief but also without any element of surprise or basis for discussion: there are no prospects for an entry into force of these Protocols. So far the assessment has been with the proviso "in the foreseeable, immediate future" or words to that effect. With the new draft Protocols which are being put forward for adoption at a Diplomatic Conference in November this year, a further step will be taken which will ensure that the 1984 Protocols never enter into force.

My discussion will therefore focus not so much on the prospects for entry into force of the 1984 Protocols as the prospects for the new Protocols to be adopted later this year, the 1992 Protocols. To be able to make such an analysis, it is however necessary to give the background for the revision of the regime created by the Civil Liability Convention, 1969, and the Fund Convention, 1971, which culminated in the adoption of the 1984 Protocols.

I will briefly describe the developments that led to the initiative within the governing bodies of the IOPC Fund to elaborate new Protocols to replace the 1984 instruments and—finally—discuss these Protocols and whether they can be expected to be more attractive than their predecessors.

THE 1984 REVISION

It will be recalled that the Fund Convention entered into force on 16 October 1978 and, as a consequence, the IOPC Fund became operative from that date. The revision of the CLC/Fund system was initiated only four years later, in 1982.

There were two factors which more than others prompted this revision. The

* Director, International Maritime Organization. This paper looks ahead to the IMO Diplomatic Conference held in London in November 1992, when agreement was reached to adopt new Protocols to the Civil Liability and Fund Conventions.

first was inflation. Since 1971, and indeed since the adoption of the CLC in 1969, inflation had led to an erosion of the limitation amounts to such an extent that they were not believed to provide sufficient compensation for damage caused in connection with a major incident.

The other was the *Amoco Cadiz*. On 16 March 1978, exactly seven months before the entry into force of the Fund Convention, the dramatic events which led to the *Amoco Cadiz* disaster had begun. The results of this oil spill were taken as evidence that the assumptions with regard to the inadequacy of the limitation amounts, both in CLC and the Fund Convention, were correct.

Another conclusion that could be drawn in the light of the *Amoco Cadiz* was that it would be desirable to introduce a mechanism for a more speedy up-dating of the limitation amounts than through a full diplomatic conference and a mechanism which made the new amounts applicable to all Parties to the compensation regime. Even if this was not a factor which in itself would have justified the revision, it was certainly seen as a very important element of such a revision.

Then the *Tanio* incident occurred in 1980 and its cargo of crude oil hit the same areas which had been polluted in the *Amoco Cadiz* incident only two years earlier. Needless to say, this unfortunate incident was seen as confirmation that a revision was not only well justified but also of some urgency.

THE 1984 PROTOCOLS

It is not my intention to go into all the details of the deliberations of the 1984 Conference as it is reflected in the two Protocols. Let me, however, hasten to add that this is not to say that I find the many other amendments that were agreed to be unimportant. They are in my view, on the other hand, of less relevance to the topic which I have been asked to address.

The reason for this conclusion is that these amendments, although there were obviously divergent views and considerable discussions prior to their adoption, do not really seem controversial.

For instance, there seems to have been general agreement to include within the Convention unladen tankers and combination carriers for voyages following the carriage of oil.

There was also substantial support for not extending the scope of the system to cover non-persistent oils. And likewise, the definition of "damage" and that of "incident" met with general support. Furthermore, a clear majority favoured the so called phased-in approach for the transition of the 1969–1971 to the 1984 system. It is also my belief that those who in 1984 found the extension of the geographical scope of application to cover damage in the Exclusive Economic Zone (EEZ), would not today see that amendment as any major obstacle for becoming Party to the new Protocols.

I will therefore, at least initially, concentrate on the limitation amounts.

I will try not to make this into an exercise with too many figures. Let me just remind you of some important ones. To begin with, there is the present maximum limit for the shipowner's liability under CLC, 14 million SDR per incident. The Fund's supplementary liability is limited to 46 million SDR, i.e. in total 60 million SDR per incident is available.

The proposals during the 1984 Conference to amend these limitation amounts covered a wide range. A large number of delegations, including Japan, China, Greece, Poland and the USSR, advocated an increase of the shipowner's liability to a maximum of 30 million SDR. Others, and I believe that France represented the extreme, were prepared to accept an increase of this liability which was four times as high, i.e. up to 100 to 120 million SDR.

There were also different positions with regard to the increase of the shipowner's liability per tonnage unit, i.e. how fast the maximum should be reached, and—as a consequence (or vice versa)—the size of the ship where this would happen.

Even though most delegations agreed to the introduction of a minimum liability for ships under a certain tonnage, the views differed considerably on what tonnage would constitute a "small ship" and what minimum limit should apply. The proposals in respect of limitation amounts ranged from 3 to 20 million SDR.

The proposals for the maximum amount available under the CLC and Fund Conventions went from 100–120 million SDR, as suggested by e.g. Japan, China and Greece, to 200–250 million SDR as preferred by the USA, France and Canada.

I know that some of the participants here today took a most active part in the negotiations that resulted in the solutions we find in the 1984 Protocols. They are certainly in a better position to give you a detailed account of what took place in the Contact Group established by the Chairman of the Committee of the Whole, than I who was not a member of this group. I believe, however, that it is obvious that the proposal which was put forward by the Chairman and which was later adopted by the Conference constituted a true compromise, i.e. it left no delegation entirely satisfied.

The proposal contained the following: In CLC a minimum liability of 3 million SDR was introduced for ships with a tonnage below 5,000. For ships above this size, the limit was increased by 420 SDR per unit of tonnage up to a maximum liability of 59.7 million SDR. This limit would be reached at a tonnage of 140,000.

The limit in the Fund Convention was to be established in two steps. The first step would be a limit of 135 million SDR. When the amount of contributing oil which had been received in three Member States during the same year had reached 600 million tons, the liability of the Fund would be increased to 200 million SDR.

This really had all the characteristics of a compromise. It gave something to all but not everything to anyone; many regarded the minimum amount as far too

low while others were of the view that it should apply to ships with a larger tonnage than 5,000. Some considered the increase per tonnage by 420 to be too low, while others found the maximum liability under the CLC to be too high. Against this latter view it was argued that this limit would only be applied with regard to a rather limited number of very large tankers.

The two-step approach in the Fund Convention was an idea introduced by the United States delegation. Its purpose seems to have been twofold. First: the conditions for the application of the higher limit would only be met if the United States became a Party to the regime. Secondly: US accession would inspire such other States to become Parties to the Protocols which could contribute to this condition being met.

From the discussions that took place in the Committee of the Whole following the presentation of the Chairman's proposal, it was evident that the Chairman had struck a fair balance between the various interests and proposals that had been introduced earlier during the Conference. Most delegations which took the floor expressed their lack of enthusiasm for the proposal in view of one or more shortcomings but still found it acceptable as a compromise package. Only one delegation, Japan, spoke against the acceptance of this proposal. When in the Plenary it came to the adoption of the two Protocols, no delegation voted against. There were, however, a number of abstentions; 48–0–16 for the CLC and 44–0–21 for the Fund Protocol.

The Japanese delegations explained that it had abstained from voting since it found the new limits which had been adopted in the two Protocols to be too high and applicable only to pollution damage in a very limited number of regions of the world. However, most other abstentions were probably not related to the new limits of liability but should be seen as expressions of dissatisfaction with the extension of the geographical scope of application to the EEZ.

CONDITIONS FOR ENTRY INTO FORCE

With regard to the provisions on entry into force it is interesting to note that most of the discussion was focused on the conditions for entry into force of the CLC Protocol. There were particularly two issues raised. The first was a proposal to require the acceptance of a certain percentage, ranging from 20 to 50 per cent. of the world (tanker) tonnage. The other was what seems to have been a common understanding that some increase, either in the number of States or in the tonnage, be it percentage or real figures, was well justified.

It is also of interest to observe that the statistics referred to seem to have been somewhat over-optimistic both in respect of the size of the world's tanker fleets and—when it came to the conditions for entry into force of the Fund Protocol—the worldwide shipment of oil.

Let us first look at the Protocol to the CLC. Here followed a rather intensive debate between those who advocated a high number of ratifications for entry

into force to secure a worldwide adherence and those who wanted to see the instrument entering into force without too much delay. It was only after a number of indicative votes where the opinion was evenly split, that the Committee accepted a compromise package put forward by the Chairman of the Committee of the Whole: the entry into force should be dependent on a minimum number of 10 States, including no less than six States with a minimum tonnage of one million tons, having ratified the instrument. This compromise package was adopted by consensus.

The question concerning the conditions for entry into force of the Fund Protocol proved to be less controversial. The first delegation which took the floor on this issue referred to the marked decrease in the carriage of oil by sea. For instance, in 1979 the total level of contributing oil received by Members of the Fund had amounted to 965 million tons; in 1982, despite a significant increase in the membership of the Fund, the equivalent figure was only 842 million tons. It further pointed out that the two limit approach would have the effect of making the limits of the Fund dependent upon the United States joining the Fund, and it would certainly mean that the levels of contributing oil would have to be extremely high for the top level to be reached. Therefore it considered that with only modest levels of contributing oil there was less danger that high risks should arise.

Taking all these considerations into account, this delegation proposed that entry into force of the Fund Protocol should require ratification, etc., of eight States. Furthermore, the Fund Members should have received during the preceding calendar year a total quantity of at least 600 million tons of contributing oil.

Following this intervention only a few delegations took the floor. And all who spoke supported the proposal. One delegation referred specifically to the fact that at that present time with a level of some 850 million tons of contributing oil in total, Japan was responsible for some 30 per cent. thereof, i.e. 250 million tons (and the other Fund Members, in other words, for 600 million). Adoption of a level higher than 600 million tons would therefore in the view of that delegation place the Government of Japan in an awkward position by virtually requiring a Japanese ratification of the Fund Protocol to enable it to enter into force.

Here the Chairman had an easy task; he could sum up by concluding that the Committee endorsed this proposal and decided to adopt it.

1984–1990

Even if there was, as I have mentioned, a considerable number of abstentions in connection with the adoption of the 1984 Protocols, I am quite convinced that most delegations regarded the outcome as fairly successful. Later, verbal expressions of support for not only the 1969–1971 system but also for the substantive provisions in the Protocols confirm this assumption. However, the

limited number of ratifications of the Protocols, in particular the Fund Protocol, seems to point in another direction. At present[1] the status of these two instruments is as follows.

There are eight Contracting States to the CLC Protocol. Of these, one has a fleet with not less than one million units of gross tanker tonnage. The number of Contracting States to the Fund Protocol is three. The quantities of contributing oil received last year in these States were approximately 120 million tons. Even in spite of these not very encouraging figures, I still maintain, however, that many States were prepared to become party to the new regime but were waiting to see what would happen in the United States. After the Conference and after a more careful scrutiny of the statistics and a further analysis of the prospects for entry into force under various scenarios, it must have become obvious that without a United States ratification, there was very limited chances for the Fund Protocol to enter into force.

In this connection one must remember that Japan, or should I say the Japanese oil industry, felt that it already under the present system carried a disproportionally large financial burden for the operation of the IOPC Fund. The new limits in the Fund Convention were in their view not only unnecessarily high in general but "applicable only to pollution damage in a very limited number of regions of the world". If we look at some statistics from the first 12 years of the IOPC Fund we will also find that during these years Japanese oil receivers have paid contributions totalling £20 million while £5 million have been paid out in compensation for damage caused in Japanese territory.

Against this background, I find it quite understandable that Japan was looking to other States, and in particular the United States, to share their burden. It was therefore generally assumed that Japan would not ratify the Protocols before the United States had done so. Moreover the two-level approach might have had the effect of discouraging Japan from accepting the new system, even with a United States accession. If both the United States and Japan were parties, one could expect the conditions of applying the higher fund limit to be met, i.e. receipt in three Contracting Parties of at least 600 million tons of contributing oil during one calendar year. But would this then really lessen the Japanese burden? Now the cake to be shared was much greater; a higher limit, undoubtedly a considerable increase in the number of incidents to be covered and possibly also individually more expensive incidents.

I am quite convinced that other States had analysed the situation and realized that the destiny of the Protocols really was in the hands of the United States, or as it later proved, the United States Congress, and therefore decided to wait and see for a while; why introduce legislation which would never enter into force?

What then happened in the United States is of course modern history, at least in the field of international maritime law. I do not intend to penetrate all the intricacies of the OPA 90, or even to give any specific account of all the efforts

1. September 1992.

which were made to persuade Congress to adopt legislation which would be in conformity with the 1984 Protocols, and which would therefore enable the United States to become Party to these Protocols. Suffice to say that these efforts in the end proved fruitless, and as a consequence it became clear that there were no real prospects for the survival of the 1984 Protocols.

When the matter then was brought up in the IOPC Fund Assembly and further considered by an Inter-sessional Working Group set up by this Assembly, delegations seemed to have reached and agreed on this conclusion fairly quickly. In this connection it should also be borne in mind that transport of seaborne oil had continued to decrease. It is interesting, however, to note the overwhelming and unanimous support which was expressed not only for the present system but also for the substantive parts of the 1984 Protocols. According to the resolution adopted by the Fund Assembly, the entry into force of these Protocols would safeguard the viability of the system.

In general, the IOPC Fund Member States therefore agreed that what needed to be amended were the provisions in the Protocols on entry into force, while the substantive provisions should be kept as they were. Some delegations held the view that there was room for some improvement or refinement. Most delegations, however, were not in favour of initiating what could end up as a complete revision of the 1984 Protocols, with all the obvious consequences of such a procedure.

As background for this discussion the IOPC Fund Secretariat had provided information on tanker tonnage and on worldwide carriage of oil by sea. Without going into any detail, let me just briefly refer to some of this information:

STATISTICS ON TANKER TONNAGE AND CARRIAGE OF OIL

As at 30 June 1990 there were 21 States which had gross tanker tonnage exceeding one million units. Of these, 18 were Party to the CLC and 15 to the Fund Convention. These statistics are still relevant.

The last figure could be compared with the situation at the time of the 1984 Diplomatic Conference. As at 30 June 1983, 13 of the Fund's Member States had a tanker fleet exceeding one million GRT.

With regard to the carriage of contributing oil, the Fund Member States totalled 900 million tons in 1990. Of these, Japan represented 258 million tons and Italy 133 million, i.e. together 381 million tons. In the other Member States were received in total 521 million tons.

Reference was also made to significant receipt of contributing oil in some other States: Brazil, Singapore, Republic of Korea, Australia and Malaysia. The amount of contributing oil received in these five States was estimated at 187 million tons.

It was further noted that the amount of oil received in the United States was approximately 460 million tons. It was, however, obvious that since a United

States ratification of the 1984 Protocols was out of the question, there was no reason to take account of these oil receipts.

The Inter-sessional Working Group tried to assess the possibility of reaching certain quantities of contributing oil. This was done on the basis of information available with regard to individual countries on their positions *vis à vis* ratification of the 1984 Protocol to the Fund Convention. In this connection, States of the following categories were taken into account:

(1) Ratification made or approved by Parliament	(3)	184 million
(2) Ratification under preparation	(4)	149 million
(3) Indicated support of the Protocol	(2)	91 million
		424 million
(4) Indicated interest in the Protocol	(6)	94 million
		518 million

In the light of the problems with regard to the 1984 Protocols expressed by Japan and—during the session of the Working Group—also by Italy, it was agreed that for the purpose of assessing the prospects for entry into force of the Fund Convention, oil receipts in these two States should not be taken into account.

The ensuing discussion revealed that there was widespread agreement that the conditions for entry into force both for the CLC Protocol and for the Fund Protocol should be amended, the CLC Protocol by reducing the requirement as to the number of States each with not less than one million units of gross tanker tonnage from six to five or four, and the Fund Protocol by a reduction of the quantity of contributing oil required for the entry into force from 600 million tons to a lower figure (the one mentioned by most delegations was 400 million tons).

There was agreement, however, that it would be appropriate to amend the conditions in Article 6.4 of the Fund Protocol for the increase from 135 million SDR to 200 million SDR, even if the quantity of contributing oil required for the entry into force of the Protocol were to be reduced.

Likewise, it was found inappropriate to amend the provision in the Fund Protocol (Article 3) governing the compulsory denunciation of the CLC and the Fund Convention by reducing the quantity of contributing oil referred to in this provision (i.e. 750 million tons), even if the quantity of contributing oil required for entry into force of the Fund Protocol were to be reduced.

Technically it has been proposed that new Protocols, containing the same substantive provisions as the 1984 Protocols but with the amended provisions on entry into force, should replace the 1984 Protocols. These new Protocols, the 1992 Protocols if adopted later this year, will thus formally revise CLC 1969 and the 1971 Fund Convention, not the 1984 Protocols. These latter Protocols will hopefully therefore never enter into force. At the same time, there is no mechanism to nullify them. They are there and any State that so desires could become Party to them even after the adoption of the new Protocols intended as their replacement.

Two conference resolutions have therefore been prepared. The first aims at encouraging States to ratify only the new Protocols and requests the Secretary-General of IMO, partly in co-operation with the Director of the IOPC Fund, to provide advice and assistance to States considering becoming Party to the new Protocols and to take all steps, of course in conformity with international law, to ensure that all instruments deposited after the adoption of the new Protocols will contribute only to the entry into force of them and will not also contribute to fulfilling the conditions for the entry into force of the 1984 Protocols.

The second resolution addresses the particular treaty law problems that States which have already expressed their consent to be bound by the 1984 regime would be facing when they wish to become Party to the new, the 1992 regime. In order to avoid the theoretical possibility which would follow upon the entry into force of both the 1984 and the 1992 Protocols that these States would be forced to apply two conflicting regimes, the resolution invites such States to formally withdraw their consent to be bound by the 1984 Protocols prior to or at the time of expressing their consent to be bound by the new Protocols.

CAPPING

I mentioned that there has been general agreement to limit the revision of the entry into force provision. And no proposal to the contrary has met with any substantial support. Nevertheless, at the same time it has been agreed that the diplomatic conference should address one substantive issue concerning what has been referred to as capping, i.e. a limit of the share of contributions payable by oil receivers in any one country.

This issue has been raised by the Japanese delegation which has drawn attention to the fact that Japanese contributors' share of the annual contribution to the IOPC Fund in 1980 was 44 per cent. and in 1990, 27 per cent. It would probably in view of this be difficult for the Japanese Government to ratify the 1984 Protocol to the Fund Convention in the near future—or indeed its replacement—if no guarantee could be given that its oil industry would not be excessively burdened by a large share of the total contributions levied under the Protocol.

A solution to this problem suggested by Japan would be to introduce a cap on contributions payable in respect of a single Member State. This could be applied only as a transitional measure until the aggregate quantity of contributing oil received in all Member States reached a certain level.

This proposal has been opposed by many delegations; contributions are levied on individual contributors, not on Member States. Every contributor should pay the same amount per ton of contributing oil. The introduction of a capping system would in their view therefore introduce an element of discrimination, since contributors in States benefitting from capping would be paying a lower amount per ton of contributing oil than oil receivers in other Member States.

This system could therefore distort competition between the industries in various Member States.

Nevertheless, it has generally been accepted that this is mainly a political question and that a final decision for this reason ought to be taken by a diplomatic conference. With a view to facilitating the forthcoming considerations and to assist the conference, a text containing provisions on capping for introduction into the Fund Protocol has been prepared.

As I mentioned earlier, this revision procedure was initiated in the IOPC Fund, and I think it has to be recognized that the substantive work also was concluded under the auspices of that organization. Formally, however IMO's Assembly gave its blessing to the holding of a diplomatic conference not later than December 1992 and instructed the Legal Committee to consider the various texts prepared in the IOPC Fund and adopted by its Assembly. The Legal Committee approved these texts at its 66th session in March this year and the Diplomatic Conference took place from 23 to 27 November.

PROSPECTS FOR THE 1992 PROTOCOLS

We must now consider the prospects for the 1992 Protocols. As I see it there are two questions we have to ask ourselves: is there any risk that the proposed conditions for entry into force could again form an obstacle for the Protocols to enter into force? Are there any major weaknesses to be found in the substantive provisions which might have a deterrent effect?

I have already referred briefly to my assessment with regard to the prospect for entry into force of the 1984 Protocols; I am quite convinced that with different conditions for entry into force they might already have been in force. You may of course say that there are no signs to support that view. I have, however, tried to explain why I think many States, although firm supporters of the revised system, abstained from taking any action which might have led to the introduction of legislation which would never enter into force. Therefore, I think that one cannot draw any firm conclusions on the basis of the limited number of ratifications of the 1984 Protocols with regard to the prospects for their entry into force, had there been different conditions for entry into force.

It may be argued that even if the conditions for entry into force were amended by reducing the particular qualifying factors, such as Contracting parties having a certain size of tanker fleet or receiving a certain amount of contributing oil, there is still a risk that new, less strict conditions may prove to be hurdles just as difficult to overcome.

I do not agree with this. I believe—and I think I can say this since I am just as responsible as anyone else who took part in the 1984 Conference—that we made an obvious mistake in 1984 by setting the target for entry into force of the Fund Protocol far too high. Furthermore, these conditions were in reality based almost entirely on the participation of the United States: This in fact put just the

kind of pressure on one country, the United States, that the Conference had intended to avoid.

It is true that the United States delegation made what many saw as far-reaching commitments as to their participation in the revised compensation regime as long as most of their objectives were reached—which they were. And it is equally true that these commitments were based on written assurances from Committee Chairmen and other influential Members of Congress.

Nevertheless, it should be pointed out that there were other delegates who already during the conference—although not from the floor—expressed their scepticism. Not that they doubted the sincerity represented both in the US delegation and expressed through the assurances of the Members of Congress. They did, however, draw attention to the fact that the United States had not for decades become party to a Convention containing provisions on limitation of liability. The rather recent experience from the field of air law and the question of US adherence to the Montreal Protocol to the Warsaw Convention—or rather the lack of such adherence—was quoted as just one of many examples which pointed in the same direction.

Of course it is very much to be regretted that the US Congress chose a road of unilateralism. And as I have argued before, the situation with regard to the 1984 Protocols would, I think, have been entirely different if OPA 90 had been in conformity with the international regime. What I wanted to say, however, was that we cannot really say that the development in this respect in the United States was very unexpected—obviously even less so after the *Exxon Valdez*. And of course we cannot raise any criticism against Congress on formal grounds just because it did not accept the result of negotiations by governmental representatives some five, six, or seven years ago. Even if these negotiations took very much into account the views expressed from within Congress—and there were congressional staff represented in the US delegation—this could obviously not have any binding effect on Congress, or indeed on any Parliament where the constitutional powers are divided as in the United States.

To summarize—and I appreciate that I may be criticized for this sudden retrospective wisdom, which of course is based on hindsight: what happened in the United States should not have come as a surprise. Since it could have been foreseen, it ought to have influenced the conditions for entry into force. The mere fact that the Protocols have not entered into force can be entirely attributed to the conditions set up for such entry into force: without the United States, it became in reality impossible.

I do not believe that the conditions for entry into force contemplated during the preparatory work for the Diplomatic Conference would run the same risk. These conditions seem to me to be based on more realistic expectations as to their ability to attract a sufficient number of States with sufficiently large tanker fleets as well as a sufficient amount of contributing oil being received.

But are there no other obstacles for the early entry into force of the new, 1992 Protocols? Yes, of course, I have already touched upon the question raised by

Japan of one country paying a disproportionately large part of the contributions to the IOPC Fund and the measure proposed to remedy this situation. This is on the other hand, as the Japanese delegation has pointed out, only a transitional problem, i.e. as long as the share of one country exceeds a certain percentage of the total contributions levied under the Fund Protocol—and as a consequence the measure will, according to their proposal, only be applied during a transitional period.

The number of abstentions at the adoption of the 1984 Protocols further show that a significant number of States were not entirely satisfied with the result of the Conference. Later developments, and in particular the strong support for the substance of these Protocols and the very clear decision not to open the revision of provisions other than those on entry into force, lead me to believe that there are no such fundamental flaws in 1984 Protocols, or in what we hope will be the 1992 Protocols, which would endanger their future success.

I say this in the full awareness of the concern expressed by Italy with regard to the fact that the notion of damage introduced in the 1984 Protocols does not provide compensation for damage to the environment *per se*. Naturally I am also aware of the impact which the outcome of the court proceedings here in Italy might have in this regard. Today, however, I would venture to say that the prospects for the continued viability and success of a revised IOPC Fund regime are good.

CHAPTER 8

THE FUTURE OF THE COMPENSATION SYSTEM AS ESTABLISHED BY INTERNATIONAL CONVENTION

M. RÉMOND-GOUILLOUD*

There exists in French literature a character in Voltaire named Candide. Confronted with the worst situations, and the most complex problems, he draws a simple analysis and reaches optimistic conclusions. The fate of the Brussels Conventions on compensation for loss arising from marine pollution, as well as the London Protocols of 1984 revising them, is finally less tragic than the Lisbon earthquake or the excesses of Inquisition in the 17th Century. It therefore does not seem inappropriate to adopt Candide's viewpoint and try to consider the future. In fact in spite of the reactions of interested parties, sometimes difficult to understand, as has been explained to us by Mr Goransson, Director of IMO, the problem appears quite simple. It is clear that the system of the Brussels Conventions represents a significant progress for compensation of losses caused by marine pollution. This principle now no longer appears to be in doubt. On the other hand it is also true that the 1984 Protocols were perhaps not agreed at the best of times; experience since then enables the problems to be viewed today in a better light.

I. PRINCIPLE: DO WE NEED AN INTERNATIONAL SYSTEM OF COMPENSATION?

1. Necessity

Anyone in doubt of the benefits of the system instituted by the Brussels Conventions need only recall the situation caused by the *Torrey Canyon* disaster. In order to obtain compensation for their losses and expenses, the victims had to resort to arrest of the owners' other assets, in practice her sister-ship, *Lake*

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Translated by Oliver Weiss, Partner, Ince & Co. Any errors or ambiguities are therefore those of the translator and reference should be made to the French original.

Palourde.[1] The practice of single-ship companies in effect considerably reduces the claimant's security; furthermore numerous jurisdictions have maintained the traditional approach to owners' limitation of liability, namely the abandonment of the vessel and her freight, after the sinking of the vessel, which therefore reduces this security to nil. In contrast the cost of the losses caused by "black tides" only increased; this cost, assessed as considerable at the time of the *Torrey Canyon*, was in fact made up of modest expenses: boots and shovels, a few bombs and the detergent used. However the psychosis of "black tides" would in future lead States to use infinitely more expensive means.[2] Even though the quantities of oil accidently spilt into the sea varies enormously from year to year, over the long term, they do not appear to be reducing.[3] In particular, 1991 saw two major casualties occur in Italy: *Agip Abruzzo* and *Haven*. It is apparent, moreover, that technology often remains powerless, largely due to the persistence of the spilt oil; such was in particular the case with the *Haven* spill.[4] The gap between claims caused by oil spills and the available compensation would have grown even wider if the Brussels Conventions had not been adopted. The public reaction to spills became even stronger, such that this gap would have become unbearable. The Brussels system had to be brought into being.

It is not difficult to imagine what would have happened without such a system. The *Amoco Cadiz* case offers us an illustration. The victim; the owner and the cargo all suffer: the victim, since his compensation is usually uncertain. There is food for thought in the process whereby this case was ultimately transformed in 1992 into a reasonable success, after a striking setback in 1988 in a country recognized as being favourable to victims, and for financial reasons bearing no relation to the merits.[5] Secondly, the absence of a pre-established judicial framework is damaging to the owner. Instead of a system in which the exclusions and limitations of his liability are carefully defined, he finds himself left with the most complete uncertainty. The Convention which determines his liability also encompasses him and finally protects him, in contrast to other responsible parties who are left to the vagaries of the common law. The third effect in the

1. E. Du Pontavice, "A propos de l'affaire du *Torrey Canyon*", *L.G.D.J.* 1968; US$2 billion for *Exxon Valdez*. J. Ballenger, "Pollution in International Law" (Geneva: 1975) p. 214; Trotz N. and Jacobsson M., "The Definition of Pollution Damage in 1984 Protocols to the 1969 Civil Liability Convention and the 1971 Fund Convention", *Journal of Maritime Law and Commerce* Vol. 17 No. 4 Oct. 1986. M. Rémond-Gouilloud, "Pollution of the Seas" *Jurisclasseur* 1989 "Du Prejudice Écologique", *Rec. Dalloz*, 1989, 259.

2. Equivalent to US$16 million for the *Torrey Canyon* in 1967 (Ballenger p. 218); US$272 million for *Amoco Cadiz* (value 1984 cf. Du Pontavice and Cordier p. 499 s.); and more than US$2 billion for *Exxon Valdez* . . . (cf. decision CA 7th Circ. US, 24 January 1992 p. 100, below note 17).

3. 1981: 50,000; 1982: 15,000; 1983: 330,000; 1984: 35,000; 1985: 110,000; 1986: 25,000; 1987: 35,000; 1988: 229,000; 1989: 200,000 (following the ITOPF basis); IMO, MEPC 30/INF 13, 19 September 1990, Petroleum in the Marine Environment, p. 22.

4. This crude was viscous and very difficult to recover, IOPC Fund report p. 63.

5. The rate of interest for damage evaluated at first instance at 7.8 per cent. was raised on appeal to 11.9 per cent. for the French Claimants and to 12.3 per cent. for the British cargo owner cf. below notes 17, 18.

absence of a judicial framework is no less damaging. The reputation of the oil industry finds itself directly and seriously affected.

(i) An international system

The oil trade only exists on an international scale, and its financial transactions occur on a world stage where juridical isolationism can only be considered out-of-date. It should not be forgotten what advantages exist in knowing in advance exactly what obligations the liable parties may have, their limitations, the exemptions from which they may benefit, and the exclusions of liability arising through legal channels. At the same time, obviously, the widest international base is to be welcomed for a system all the more solid as a result, and in which greater compensation is available due to the greater number of contributors. In this respect the new US Legislation, the Oil Pollution Act 1990 (OPA 1990), wrecks the chances of seeing the USA join the Brussels system, and indeed it represents a failure; all the more so since it has jeopardized the chances of the 1984 Protocols coming into force.

(ii) Apportionment among industry interests

The key feature of the Brussels system lies in the manner in which it apportions the financial burden between the oil transport industry on the one hand, and oil refiners and traders on the other. The two risk-creating areas bear the consequences, and the principle of "the polluter pays" is thereby respected. Any other solution would result in a scapegoat being obliged to pay for others.

(iii) A tool of risk management

The remarkable efficiency of the Brussels system has been unanimously welcomed. The rapidity with which claims submitted to the IOPC Fund are dealt with has in particular come as a surprise. In 1971 many were fearful that a system organized on United Nations lines would be administratively cumbersome. Not only have these fears been found to be unjustified – each claim having been promptly considered and settled—but furthermore the IOPC Fund has developed for the cases submitted to it a reasoned and well-known system, which excludes any arbitrariness.[6] The co-operation with marine underwriters, set out in the 1980 Memorandum of Agreement, has further reinforced the efficiency of the whole system. The Brussels system and in particular the IOPC Fund has been found in terms of compensation to be a valuable instrument of risk management for pollution caused by oil transport accidents. It represents in this

6. A manual on compensation is available to Claimants. By December 1991 the IOPC Fund had since its inception in 1978 been involved in the settlement of claims arising from some 60 casualties, and had paid by way of compensation or indemnification a total of £46 million (see Annual Report 1991 p. 25); six remain outstanding.

respect a striking precedent which has in large part contributed to the success of funding efforts in environmental matters.

Without a doubt, the disappearance of such a tool, which has been welcomed as a model for environmental compensation, seems inconceivable. The Brussels system is bound to continue.

2. Perceived risk—real risk

Another argument sometimes advanced against the international system of compensation concerns its supposed ineffectiveness. Here one finds confused and paradoxical arguments, drawing attention on the one hand to the low risk of oil pollution, and on the other to the enormity of the threat which hangs over the players in the game.

The pollution of the seas is a fascinating field of study for psychologists. The considerable importance attached by public opinion to oil pollution bears no relation to its real impact on the marine environment, and is above all a visible media phenomenon, whereas infinitely more hazardous chemical pollution leaves public opinion unmoved. The business word is by no means immune from this form of reaction—the Stock Exchange being a daily example. Questions of liability raised by the Brussels Conventions supply another example. The concept of the operator, the party liable, the claimable damage, and the circumstances in which the compensation limits may be broken, have raised for some months a general panic amongst operators, carriers, charterers as well as their underwriters and bankers. Some "horror stories" are circulating about lenders found liable to due to their polluter clients.

All this is correct. The point is simply that these amazing solutions all have the same starting point: the USA, where two statutes straddled the 1980s. In 1980 the CERCLA (so-called Superfund) statute was aimed at cleaning up the entirety of polluted sites within the country at the expense of industry and site owners; in 1986 a mortgagee bank having taken possession of its insolvent clients' property found itself liable to pay the clean-up invoice; and in 1990 a factoring business was held liable to settle the costs of clean-up of its client by virtue of the influence which it might have exercised on its management.[7] In 1990, in the wake of the *Exxon Valdez* case, a second statute caused legitimate anxieties in financial circles. Not only does the Oil Pollution Act contain Draconian solutions to matters of navigational safety and tanker construction, and not only does this federal text allow freedom for individual States to overrule any limitation of liability, but it is feared that the concept of tanker operator will be extended to underwriters, and bankers financing the building of the ship.

It must be stressed that this uncertainty in the laws of compensation is a

7. *United States* v. *Maryland Bank & Trust Co*, 632 F. Supp. 573 (D 1986); Fleet Factors, 901 F. 2d 1551 (11th Cir. 1990).

wholly American phenomenon, arising from purely American causes,[8] and that the rest of the world should not therefore suffer its infection.

Nevertheless, whether real or imaginary, the risk exists if only from the fact of its perception. The large increase in the cost of pollution has surely been kindled by the volume of litigation in the USA. The fear which has taken hold in financial circles is based on arithmetic: *Amoco Cadiz* US$61 million, Superfund law US$8.5 billion, *Exxon Valdez* US$3.6 billion. Statistically, pollution casualties are certain to occur in the coming years; the ageing of the world tanker fleet is just one factor amongst others. Therefore the need to bring the Brussels Conventions up to date is no longer in doubt; the time for their review has already arrived.

II. THE NEED FOR REVISION OF THE 1984 PROTOCOLS

In 1990 the IOPC Fund Assembly entrusted a working party with the task of considering the future of the 1984 London Protocols. The task of this group was to examine the prospects of bringing the Protocols into force, as well as the changes necessary to bring this about; these changes may affect fundamental clauses such as those governing the entry into force of the Protocols or their funding provisions. This Inter-sessional group reached its conclusions in October 1991 and recommended that the Secretary General of IMO be requested to call an International conference to consider various proposals for the modification of the Protocols. This was due to take place at the end of November 1992. Here let it simply be stressed that the need to amend the Conventions was never in much doubt, but that the time chosen to do so was without doubt premature.

1. Benefits of revision

The system of compensation brought about by the Brussels Conventions can undoubtedly be improved. Since it is an experimental model worked out at a time when experience of spills was very sparse, anything else would have been a miracle. Of course the prototype required some fine tuning. That said, the review of the system calls for two complementary remarks. First one notes that the nature and importance of the proposed amendments are very diverse. Some go to the institution itself, for example the removal of partial indemnification relief of the owner by the IOPC Fund, or the terms for bringing the texts into force, whereas others deal with the substance of the Conventions themselves. Certain inadequacies revealed by specific incidents are no doubt fine tuning; the same applies to removal from the ambit of the conventions of whale oil, which has no relevance to the problem in question.

8. Importance of juries, heavy legal costs, trauma caused by a few dramas along the way, absence of social protection and very strong influence of ecological lobbies.

This might lead to some regret that the Brussels Conventions contain no dual mechanism such as is found in the IMO Technical Conventions—i.e., a simple procedure to allow minor amendments, and a fuller procedure for more difficult changes.

Other difficulties have been settled by simple interpretation.[9] Yet others raise without doubt, questions of greater importance: claimable damage, exclusion of compensation for preventive measures taken in response to a mere threat of pollution, and overlap with questions of salvage. Some others which are not even considered will no doubt be so one day, such as the link between the right to compensation and the existence of a system of response, equipment and a proper organization on the affected coastline[10]; furthermore one might consider introducing into the equation a factor based on the vulnerability of the coastline, which could be measured either by the statistical number of casualties, the fragile nature of ecological systems, or the type of activities occurring there.

The functioning of the IOPC Fund often renders unnecessary the adoption of complex official review procedures. Many difficulties have been solved by Resolutions adopted by the Assembly. An example is the 1980 Resolution concerning the conversion from gold francs into national currency when evaluating recoverable claims for pollution damage. For its part, the Executive Committee has frequently been called upon to determine the appropriate interpretation of the Fund Convention, such as its application to casualties occurring in Canada prior to the Convention's entry into force in that country.[11] Nevertheless it would certainly be helpful to clarify the extent to which a member State can be bound by Resolutions of this sort.[12]

The Inter-sessional Working Group met in 1991 at the request of the IOPC Fund Assembly. It decided that the continuity of the Brussels Conventions, or the workability of the 1984 Protocols drawn up to ensure it, required that the pre-conditions for their coming into force be relaxed[13]; a fewer number of States with tanker fleets of at least 1 million GRT; a lower minimum quantity of oil needed to bring into force the Fund Protocol: 400 million tonnes instead of 600 million; a lower compensation limit for a casualty covered by the IOPC Fund: 135 million SDRs instead of the 200 million envisaged. In contrast one notes the sustained and growing number of States joining the IOPC Fund: 14 in 1978 when the 1971 Convention came into force, 47 at the end of 1992[14]; the State

9. Thus the application of the 1971 Convention to casualties caused by vessels not flying the flag of States parties to that of 1969, which, on reading the text was not self-evident (i.e. *Tanio*).

10. In the absence of which the Member State has no incentive to invest in plant and equipment with which to combat pollution, since compensation will be paid for whatever cost may later be incurred as a result of operations after a casualty.

11. See the *Czantoria* and *Nestucca* incidents, which occurred in 1988, i.e. prior to the Convention's entry into force as regards Canada on 24 April 1989 (IOPC report above pp. 40, 41).

12. As can be seen in the diverging interpretation between the Italian State and the IOPC Fund in relation to claimable damage resulting from the *Patmos* incident in 1985 cf. below; IOPC report p. 29s.

13. Cf. 1991 IOPC report, op. cit., p. 18/7/3(a), (b) and (c).

14. Taking into account the accession of Venezuela.

representatives are agreed in highlighting the benefits of the system and the efficiency of its workings. This contrast sheds light on the causes of the confidence crisis which has struck the Brussels system of compensation; it shows that much more than the Conventions themselves, the 1984 Protocols are at fault; and so is the pessimistic climate created by the recent situation in the USA.

2. Unfortunate timing

In fact 1984 was possibly not the best moment to review the Conventions. The emotion caused by the 1978 *Amoco Cadiz* casualty had of course demonstrated the need to review a system which had failed. At least that is what we thought. The system had not only failed because the trial was taking place in the United States—a country whose judicial isolationism tends to prevent it from ratifying International Conventions. However favourable the system might have been for claimants, it may be doubted whether the Americans would have agreed to it.[15] Secondly the *Amoco Cadiz* trial was at its height. The decision on liability was given the same year. There was a significant concern as to the amount of recoverable damages. The 1984 Protocol represented an attempt to define the relevant limits. One would have to wait eight more years to know if these fears were justified,[16] eight years during which the concept of ecological damage was to take shape and be defined. Finally the 1980s were marked by strong currency instability: inflation was often above 10 per cent. in many countries effected by the crisis.

It is therefore probable the amendments agreed in 1984 were conceived in haste. Eight years later some appear already out-of-date in the light of experience.

III. THE EXPERIENCE GAINED SINCE 1984

Experience should in any event enable improvements to be made to the amendments proposed at the Diplomatic Conference. The 21 cases submitted since 1984 to the IOPC Fund, which have either been settled or are in the course of settlement, offer a range of most varied examples not only in terms of size, but also in terms of the issues raised by those incidents, thereby allowing a great many useful clarifications to be made.

Amongst these casualties seven occurred in Japan, three in Canada, three in Italy, three in Sweden, two in the United Kingdom, one in the United Arab Emirates, one in the Caribbean and one in France.

Two amongst them were particularly noteworthy by virtue of their seriousness and relevance. They both occurred in Italy. On 10 April 1991 *Agip Abruzzo*

15. Up to the *Exxon Valdez* casualty in 1989 the USA was only slightly affected by oil spills and had legislation which was less stringent than the international Conventions.

16. The first instance decision, handed down on 11 January 1988, was modified on appeal in 1992 (cf. following note).

collided off Leghorn with a ro-ro vessel, lost 2,000 tons of light crude part of which burnt, then three days later some bunkers. The claims lodged with the IOPC Fund for this casualty amount to LIT 22,639,970,790 (1991 Annual Report page 61).

On 11 April the *Haven*, a Cypriot tanker of 109,977 GRT, caught fire after having discharged a part cargo of Iranian crude in Genoa. She was at anchor seven miles off shore and still held about 144,000 tons. The two parts of the vessel sank, one off Genoa and the other off Arenzano. A part of the crude continued to leak from the wreck, adding to the pollution from April on the Italian and French coasts, and continued until the autumn. The claims presented by the Italian claimants, central government, local authorities and private claimants amount to Lit 1,541,488,793,305 and by the French claimants, Central Government and Local Authorities at FF 28,284,592 (1991 Annual Report page 62 *et seq*).

Apart from incidents involving the IOPC Fund, account should be taken of two other major casualties which are of particular importance, given the repercussions which they have had throughout the world. The case of *Amoco Cadiz*, which started in 1978 in Brittany (France) with the spill caused by the tanker's grounding, finished with a decision in the Court of Appeal of the Seventh Circuit of the United States on 24 January 1992.[17] In France a decision of the Court of Rouen dated 11 February 1992, on remission of a decision of the Court of Cassation of 10 July 1990, dealt with the fate of the fund constituted by the defendant once the United Kingdom Government was compensated. The grounding of *Exxon Valdez* 11 years later was to show that nothing had changed. On this occasion $2 billion were spent in oil clean up costs in Alaska.[18]

The benefit of experience gained between 1984 and 1992, i.e. between the original Protocols and those to come in November, can be illustrated by a few examples under applicability; ecological damage; liability; interests rates, and procedure.

1. Applicability

The extension of State jurisdiction over a 200 mile zone adjoining its territory is a right of the contemporary law of the sea. The rule now has the value of custom. The extension provided for by the Protocols does not envisage the entry into force of the 1982 Convention where the EEZ is defined.

The Protocols will not surprisingly ensure that the Conventions apply to skills

17. In *Re*: Oil spill by the *Amoco Cadiz* off the coast of France on 16 March 1978—7th Cir. Northern Distr. Court of Illinois East Dir.

18. Besides the extra billion for damages/interest and a fine of US$125 million. In view of these sums, as stressed the Court of Appeal in the case of *Amoco Cadiz* in 1992, a sum of US$61 million for a spill which was not only of greater size, but also occurred in a much more populated area, should not cause any "crocodile tears". (CA 7th Cir. 24 January 1992, above p. 100). On the *Exxon Valdez* casualty see our comments *Rec. Dalloz* 1989 p. 259 and *Revue de Defense Nationale*, August 1989 p. 91.

caused by tankers in ballast. This extension has been awaited since the *Olympic Bravery* casualty in 1976. TOVALOP, the tanker owners' scheme, has long since covered such cases.

In the meantime the exclusion from the Conventions of such cases is all the more inappropriate since bunker fuel is viscous and particularly toxic. An interesting analysis was made of the concept of oil carried by way of retained cargo in the case of the *Tolmiros*, which was suspected of having caused pollution to the Swedish coast from oil remaining in her pumps and lines after discharge of her cargo in Gothenburg.[19] According to the expert advice obtained by the IOPC Fund (1991 Report page 36) the oil residues (or slops) remaining on board after discharge of the cargo could not be considered to be "carried as cargo". This restrictive interpretation, unchallengeable in logic, might well not have applied if the presence of cargo residues on board had been considered as the direct and immediate consequence of the carriage.

In contrast, the application of the Convention system to pollution of trawlers' fish-holds by errors in connecting fuel lines seems to extend beyond the draftsman's intention.[20] The damage covered by the Convention is pollution "outside" the vessel (Convention Article 1/6), not that caused by an agent or employee of the owner, who could not present any claim except for preventive measures. Above all the IOPC Fund has always taken great care to restrict the Conventions, and therefore its own involvement, to cases where an actual discharge or escape of oil has occurred; any other damage being a mere threat and therefore outside the ambit of the Conventions. This problem appeared in 1979 in relation to the *Tarpenbek* case[21] and is one of the first major uncertainties to have appeared in relation to claimable damage.

2. Damage claimable

This fundamental concept largely determines the amount of compensation. When the Brussels Conventions were adopted it was still relatively unknown and had not been specifically defined; the only elaboration was an express provision for compensation of reasonable "preventive measures" taken to avoid or minimise pollution damage.[22] However the cost of such measures was to undergo a spectacular increase during the 1970s, reaching its peak (so it was thought) in the operations carried out after the grounding of *Amoco Cadiz* in 1978. The grounding of *Exxon Valdez* some 11 years later revealed that it was nothing of the kind: $2 billion was to be spent in this instance to clean up the oil spilt.

At the same time the concept of ecological damage was changing shape. Two

19. Due to lack of proof the case was not pursued, see report above p. 35–37.

20. The case of *Tsubame Maru* No. 58, Japan 18 May 1989.

21. The oil which escaped (if indeed it did escape, which is debatable) was in any event non-persistent. See Abecassis and Jarashow, op. cit. No. 10–15 and 10–16 p. 198.

22. Convention Article 1/7; the losses and damages caused by these measures are included (Article 1/6).

questions deserve attention but a different kind of attention must be given to each. In the light of the IOPC Fund's experience we shall firstly look at the change in ecological damage before considering that of "preventive measures".

(i) Ecological damage

Alongside the material or physical damage caused by the event itself a new concept has grown up: that of ecological damage *stricto sensu* affecting the area independently of the economic interests involved. This raises three questions: Should it be compensated? Who is empowered to claim for it? How should it be valued? In practice the natural order of these questions has become inverted. The first to be resolved was that of the environmental protectors with standing to claim. In the USA the theory of the State *parens patriae* as technical owner of natural resources provided a tried and tested basis for the claims. In the 1970s the State (Federal or otherwise) quickly appointed authorities with powers of this sort. In the Eastern Block the same reasoning applied since the Marxist State is considered as the natural owner of all tangible property.

The answer to the second question was then provided. The 1970s saw the development of efforts by economists to quantify non-financial values, either in comparative terms, or in lump sum figures.[23]

In the United States these methods of quantification were therefore presented in court,[24] whereas Soviet law in effect applied them already. The IOPC Fund had experience of this in the 1979 *Antonio Gramsci* case; the Court of Riga, which was competent as the place where the pollution damage occurred, simply invoiced it with a lump sum based on the volume of cubic metres polluted, multiplied by one rouble.[25]

The definition of pollution damage adopted by the 1984 Protocols, and prompted by an American decision in 1980,[26] put a stop to these methods: only measures actually undertaken or to be undertaken may be taken into account. The same year, by Resolution No 3 of its Assembly,[27] the IOPC Fund adopted the same line: the assessment of the amount of compensation could not be made on the basis of an abstract quantification of damage calculated by using theoretical models (1991 Annual Report, page 29).

This concept had an advantage. It avoided paying out compensation "plucked from the air" to so-called victims who would have carried out neither clean-up nor reinstatement. But it did have its draw-backs. Any resource which is

23. See OECD, compensation of damages due to pollution 1981 and the cost of oil spills 1982.

24. See i.e. on the matter STC–101 decided in the USA following an oil spill occurring in 1976 in Virginia, OECD 1982 above report RM Hughes III p. 62; Abecassis and Jarashow *op. cit* 21–54 s.

25. Doc IOPC/A.E.S. 1–1979.

26. *Comm. of Puerto Rico* v. *SS Zoe Colocotroni*, 456 F Supp. 1st Cir. 1980. See OECD 1982 op. cit. report N. Jimenez p. 251. The price of nature, *Rec. Dalloz* 1982, 33, our comments.

27. Including Italy which after having updated its legislation in 1986 is reluctant to accept a conservative interpretation of ecological damage, see doc. Fund/WGR 6/12, .6.2 p. 2 and 8.12 and p. 9.

"priceless", for which there is no market and for which no one would claim, is bound to deteriorate. Merely because it is "unquantifiable" it is paradoxically worthless.

In the 1980s, after ideas had moved on, a series of laws and court decisions in the United States, in Hungary, and in Spain accepted in certain cases a lump sum evaluation for certain resources.[28] In Italy in particular, recent legislation reflects an intellectual willingness to break new ground in environmental matters.

This attitude is to be seen in the claims of the Italian Government to the IOPC Fund in two incidents: *Patmos* in 1985, and *Haven* in 1991. The claim of the Italian Government was initially rejected but the Court of Appeal in 1989 allowed its claim[29] and ordered experts to assess the damage.

The truth, as so often is the case, is probably somewhere in between. It is of course true that the same damage cannot be claimed under different headings and that the absence of quantifiable damage does objectively raise a major problem of proof.

This is not to say, however, that the restrictive definition of the 1984 Protocol cannot be improved upon. The refusal to take into account ecological damage on the sole basis that it cannot materially be compensated means that those causing "unquantifiable" damage by pollution are literally abandoning the environment to its fate. To maintain a residual role for "ecological damage" in the abstract—that is to say in the event that no other method of assessment can be used—would represent an acceptable compromise solution; subject to deciding on reasonable means of assessment.

It is clear that a more precise definition of pollution damage in the Convention has become essential, given the very varied interpretations between national jurisdictions. The experience gained by the USA in relation to the Superfund law will at least have this benefit: the means of valuing natural resources were in this context defined by a law of 22 January 1986 in a rigid and predetermined way, but the courts rapidly went back to the flexibility which must exist in such novel matters. To favour market values is particularly unsuitable for this purpose, since in general the price does not fairly reflect the ecological value of the destroyed environment.[30]

(ii) Preventive measures

The analysis of claims lodged under this heading with the IOPC Fund since 1984 calls for several comments. First of all there is the extreme diversity of the

28. See M. Rémond-Gouilloud, on the *Right of Destruction*, PUF, 1989 p. 229 s.
29. Report above p. 29 and 70, cf. Standing Agreement on Definitions: "Incident means . . . any occurrence . . . which creates the escape or discharge of oil."
30. On the *Right of Destruction* op. cit. p. 230.

claims: loss of equipment, loss of profit, reimbursement of voluntary or on the other hand contracted assistance.

This diversity exists equally in relation to the forcefulness of the claimants and the size of their claims. Whereas some seem unaware of their rights (above, in relation to the *Akani* incident, 1987, Dubai) others, professionals in pollution avoidance, amply justify the steps which are taken to scrutinize closely the reasonableness of the measures taken. The systematic checking carried out by the Secretariat under the control of the Executive Committee, and the ability of the administration to carry out enquiries, is therefore a prudent procedure.

Several recurrent difficulties require attention. Firstly the repayment of expenses incurred in the event of "mere threat", the pollution never having occurred. This head of claim was rejected by the IOPC Fund[31] whereas ITOPF has made it an item expressly subject to compensation under TOVALOP. It is true that the expenses incurred by a participating owner in TOVALOP are therefore covered. A second ambiguity must be removed as to the link between salvage operations and pollution preventive measures. It has been obvious since 1969 that the question had to be addressed.[32] Depending on the purpose of the measure taken, whether for the saving of the vessel and cargo or to protect the coastline, the same person should not pay twice. Experience simply confirms what had previously been foreseen. The casualty of *Agip Abruzzo* in April 1991 offers a recent illustration. Among the operations carried out by the claimant company, one part was clearly performed in order to save ship and cargo, whereas others had a "dual purpose" which made them hard to classify.[33]

The scope of "preventive measures", and damages flowing from them, call for a final comment. The characteristic of oil spills tends to be their uncertainty: depending on the place, time and available resources, the casualty always runs the risk of degenerating into catastrophe. The prospect of a major casualty which is ever present requires an effort in prevention in organization, considerable itself in terms of manpower, training and equipment. It matters little whether this prevention is set up by private enterprise[34] or by the State, provided it has and is given the required resources. There is no place here for improvisation—the wastage of effort deployed following the grounding of *Exxon Valdez* should be remembered.

This assessment, which would alter the conditions on which those taking preventive measures intervene, could also change the terms and conditions of their remuneration; and the spontaneous intervener, of little use, even hindrance, would receive in any event some information as to the terms of his subsequent remuneration and the liability likely to result from his hasty initiatives.

31. Above, p. 11, cf. Jacobsson and Trotz op. cit.
32. Cf. our observations: —"Preventive Measures", *Droit.* Mar. Fr. 1980, 387 *et seq.*
33. IOPC Fund Annual Report 1991 above p. 58.
34. Where a consortium pools equipment and expertise, such as offshore operators in the North Sea.

3. Liable or paying party

(i) CLC: The channelling of liability

The list of persons whose liability is excluded from the draft Protocol (Article III para. 4) is in itself normal. The Brussels Convention of 1969, in so far as it sought to channel the pollution burden on to the owner of the tanker, had left its effort half finished. The channelling of liability does not mean the naming of a liable person; so long as actions remain possible against others, either directly or by means of indemnity claims, the mechanism is of only limited value. The object of channelling is not just to warn potentially liable parties, in order to prompt them to take precautions, and to take out appropriate insurance, but also to reassure all the other players involved in the activity in question; in so doing it avoids an economically wasteful duplication of exposure to claims. However this second part of the exercise had been largely neglected by the draftsman in 1969. Apart from "servants or agents", who are specifically excluded, all other persons remain exposed to the risk that their liability will be involved despite the Convention. The *Amoco Cadiz* casualty clearly showed this. For the shipyard and even other agents more or less directly implicated in the casualty, subcontractors, suppliers of equipment or services, classification, the Brussels Convention provides no relief but, on the contrary, an increased risk: whereas the owner of the vessel knows that his liability is defined and limited, these other parties know only that claimants have every interest in suing them because their liability is not limited.

That said, the list of exceptions suggested by the Protocol no doubt goes too far. It embraces three very different categories of potential defendants, among whom some distinctions ought to be drawn.

(a) The employees, crew or shore-based employees of a shipping company must of course be exempt from any liability. Even assuming that they have the financial standing to deal with the claims, and that a claim against them is not purely vexatious, there appears to be a sufficient sanction for their negligence under the terms of their employment or, as the case may be, under the criminal law. However the involvement of their civil liability—a hang-over from the days when the master put his personal fortune at stake in the event of disaster to the adventure entrusted to him—appears outdated.

The same goes for the pilot since his liability is subsumed in that of the vessel.[35] In the same way the person who carries out acts of salvage "with the agreement of the owner or on the instructions of a competent public authority", and the servants or agents of such persons, should not normally incur any liability in a personal capacity (Article 3 para. 4/b, d, f).

(b) The exclusion *a priori* of the liability of persons taking preventive

35. The Master remaining responsible for the navigation of his vessel whilst he is on board.

measures requires thought. The spontaneous and disinterested initiative of the voluntary salvor obviously needs encouragement and his errors indulgence; on the other hand the intervention of the professional calling for normal remuneration does not *a priori* call for special treatment, so long as he has not given an extraordinary service in exceptional circumstances. The nature and seriousness of the faults capable of depriving him of his remuneration, or even for which he should bear liability, requires definition.

(c) Finally the exclusion of the charterer drafted in the widest possible terms under Article 3/para. 4/c) also required some attention. Indeed "any charterer" is protected under whatever description including a bareboat charterer, beneficial or managing owner of a vessel. At a time when flag of convenience registers and the systematic use of single ship companies are commonplace the owner with title to the vessel no longer has any great meaning, and any potentially liable party can obtain protection against the liability set out in the Convention. This may be going too far: recent judicial experience shows that if legal fictions are presented which are too artificial then the veil tends to be pierced under pressure from claimants.[36]

(ii) The IOPC Fund—payer and collector

The IOPC Fund is the second limb to the Brussels system without which it would have no meaning. Another ambiguity appears this time in the role played by States. The role is two edged. Passively in their capacity as victims they have a role in claiming compensation for damages suffered on their territory. This role has no mystery. Actively, on the other hand, their aim is less clear. In principle this limits itself to collecting funds from oil companies payable on their imports. However, their reactions show that far from contenting themselves to ensure the orderly collection from contributors, States take both sides to suit their interest. For example Japan which is conscious of the particularly heavy burden borne by her industry as a large consumer of oil, gets a preferential position as a contributing State in the choice of compensation.[37] Each accepts that the role of the State is no longer what it was in the past, and that behind each sovereign there lurk inevitably industrial and commercial interests. It does not matter that the mix of interests in this instance is strangely pronounced. Given that the system functions in parallel to the purely commercial arrangements which exist under the TOVALOP and CRISTAL schemes, consideration of a unified system would possibly be of some interest.

36. The French decisions aim to give such an effect to the theory of the corporate veil, in line with Article III/2 of the 1952 Arrest Convention, The *Amoco Cadiz* case is another example.

37. Report above.

4. Interest: financial questions

The wordings are silent and financial questions have long remained uncertain in spite of their importance. As to interest claimable the *Amoco Cadiz* trial has given this question particular newsworthiness. Is it necessary? In the affirmative how is it calculated? The American Court of Appeals on this point reversed the decision of the judge at first instance who had applied a legal rate of 7.22 per cent. If interest is treated simply as another head of compensation, the rate to apply is the market rate which would have applied to a debtor who had had to borrow the funds.[38] The speed with which the IOPC Fund processes claims removes part of its interest in the question. Nevertheless it has the following concern: in the case of the *Haven* it is appealing against the court's decision to accept a bank guarantee as constituting the owner's limitation fund on the ground that a cash deposit would have produced interest for the benefit of claimants and of the IOPC Fund (1991 Annual Report page 66). In maritime matters it is quite customary to put up a bank guarantee, but judicial guidance would be of great benefit on this point.

The case of the *Haven* raises once more the classic difficulty nowadays in matters of international payments, namely the method for converting the Convention unit of account into units of national currency. The unit of account initially envisaged by the Brussels Conventions was the Poincaré gold franc (Article V–9 Com. 1968; Article 1–4 Conv. 1971). Two Protocols agreed in 1976 have substituted the SDR of the International Monetary Fund in relation to its Member States. In 1978 the Assembly devoted its first Resolution to this question, deciding on the systematic conversion of the gold franc into the SDR. Nevertheless only the 1976 Protocol to the 1969 Civil Liability Convention is in force, and not that which affects the 1971 Fund Convention.

It is for this reason that certain claimants before the Court in Genoa claimed conversion of the gold franc on the basis of its open market value for settlements arising under the 1971 Convention. The IOPC Fund opposes this on the grounds that payments under the two Brussels Conventions are indistinguishable, and that the same method of conversion must therefore apply. It also points to the disappearance of the official gold value in the present monetary system (1991 Annual Report page 69). Two underlying questions merge at this point. On the one hand the interpretation of Protocols which are separate from each other, but which jointly form part of an overall system. On the other hand the mandatory nature of the Assembly's Resolution. On one as on the other clarification arising from the review of the Conventions is eagerly awaited.

5. Procedure: disputes

Subject to the instructions given to him by the Assembly and the Executive Committee, the Director of the Fund is permitted a degree of discretion

38. Cf. notes 16–18 above.

enabling him to fulfil with efficiency and common sense the functions envisaged by Article 29 of the Convention. Thus he was sometimes authorized in 1991 to make payments without the owner's limitation fund having been constituted, when such a procedure would have involved disproportionate costs. It has happened that he sometimes takes the initiative to bring potential claimants together. He did this in June 1990 in Dubai through the offices of his lawyers.

According to Article V/3 of the 1969 Convention the constitution by the owner of a limitation fund in respect of his liability under the Convention gives him the right to enjoy the benefit of limitation. This requirement is sound, and it reassures the victims from the start of proceedings that they need have no fear of the owner avoiding his obligations. It also enables a forum to be determined, that is to say the nomination of a court where the judicial operations will be concentrated. This does not prevent the claimants from opposing the limitation proceedings if the fault of the vessel itself appears to bar limitation. That is for example (Report p. 66) the attitude of the IOPC Fund in the *Haven* case. In comparison, the 1976 London Convention on the ordinary limitation of liability of owners does not grant them the benefit of limitation by reason only of the constitution of the Fund.

IV. CONCLUSION

It is not the function of a university academic to pass judgement on economic considerations, such as the amount of the limitation of liability provided for in each of the two Conventions. The trade representatives are in a position to assess the balance required between the Conventions' respective burdens. It would be all the more incongruous to suggest now that the commission appointed by the IOPC Fund, and armed with the best available papers, has thought through this essential feature of the problem at great length. We shall therefore restrict ourselves in summary to a comment of general application.

The main purpose of the 1984 Protocols was to reapportion the burdens of oil spills. In this respect 1992 is surely no better a date than 1984. The present position in the reinsurance market, which bears the third level of risk for marine pollution and which cannot consider increasing its exposure beyond a finite limit, suggests that negotiations will be delicate. A certainty however remains in that the system instituted by the Brussels Conventions appears more necessary today than ever before, and so this adjustment is inevitable. It appears though that, whatever the limits may be, a legislative framework is necessary to avoid unreasonable judicial interpretation and, possibly, unduly bold legislative initiatives on the part of Member States. To this end it would be useful not only to have clarification of the circumstances in which compensation is payable, but also of the means of assessing damages and questions of proof. It would be wrong to impose any rigid methods, which as we have seen are inappropriate, since it is clear that judges and experts need proven models to maintain a harmo-

nious approach in dealing with such novel problems. The experience of the IOPC Fund represents in this respect a valuable tool, and a useful precedent for anyone with concerns about compensation issues in the whole of the environmental area. Once more the maritime field will have taken the lead.

CHAPTER 9

THE FRENCH EXPERIENCE: "TANIO" AND "AMOCO CADIZ" INCIDENTS COMPARED

Advantages for victims under the compensation system established by the International Conventions

EMMANUEL FONTAINE*

Immediately after the *Torrey Canyon* incident, which was the first to affect Brittany and the English coast in 1967, the maritime community decided to establish a strict liability-based compensation mechanism for pollution damage caused by oil spills from tankers. This mechanism included two major restrictions:

—liability lies solely with the registered owner of the vessel, who is required to carry insurance;
—liability is limited to a certain ceiling which may be exceeded only if the owner's actual fault or privity is proved.

This incident prompted the conclusion of both the Convention on Civil Liability (CLC) dated 29 November 1969, which took effect on 19 June 1975, and the Fund Convention of 1971.

On March 1978, bad luck again befell Brittany in the shape of the *Amoco Cadiz* disaster, the largest oil spill ever experienced. The *Amoco Cadiz* experience demonstrates that whatever the advantages of an international compensation system may be, such a system often contains inherent limits, limits arising from the system's very nature as a compromise among competing economic interests. In cases where the public community considers the system's limits unacceptable, the judicial process remains an indispensable *safety valve*, especially in widely publicized cases.

The judicial process enables the victims of a disaster to combat the inertia of the *establishment* concerned. Media impact also helps to stimulate development of the law in this field and forces the international community to react. And yet, experience has shown that putting together a major case like the *Amoco Cadiz* is a risky, lengthy and expensive venture.

Effective resolution of disaster risks necessarily lies in collective, institutionalized compensation mechanisms.

The disaster experienced in the *Tanio* case, which struck Brittany scarcely two years after *Amoco Cadiz*, bears witness to this. Although the pollution released by the *Tanio* was substantially less than in the *Amoco Cadiz* oil spill, the

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cost of the clean-up was almost the same. However, the *Tanio* disaster raised much less of an outcry. This was not because the people of Brittany were indifferent, but simply because the victims were compensated discreetly and adequately, within the framework of a well adapted compensation system. This shows that the international community had reacted and had found a solution reasonably well adapted to pollution disasters of this magnitude.

And yet, an institutionalized mechanism might not have been sufficient to satisfy the victims that justice had been done, had it not been accompanied by judicial recourse which provided the additional compensation necessary to repair the material damage suffered.

I. THE AMOCO CADIZ—THE LESSONS OF A DRAMATIC TRIAL

Undeniably, a major trial can have beneficial effects in promoting collective awareness of the problems and in solving the inadequacies of the existing legal solutions.

It may be helpful briefly to review the facts of the *Amoco Cadiz* case. The *Amoco Cadiz*, flying the Liberian flag was owned by Amoco Transport, a subsidiary of Standard Oil of Indiana, and was sailing on 16 March 1978 from the Persian Gulf to Rotterdam, fully laden with 220,000 tons of heavy crude oil. The hydraulic steering gear failed and the vessel ran aground off the coast of Brittany. Repair attempts by the crew and salvage operations were unsuccessful. The entire cargo was released and polluted 300 kilometres of coastline.

Clean-up efforts by local groups and the French State continued for a full year after the disaster. Claims by the French State and local communes totalled nearly 800 million French francs (at their 1978 value).

The registered owner immediately set up a limitation fund under the 1969 CLC of approximately 77 million francs.

The pollution victims, including the French State in particular, could have followed the path outlined by the CLC and could have attempted to overcome the liability limit of the vessel's registered owner, Amoco Transport, by establishing the owner's *fault or privity* before the French courts, which had exclusive jurisdiction under the terms of the Convention. This would have been a convenient solution and in fact the one dictated by the compromise established by the shipping community under the CLC.

However, another course was taken, no doubt due to the fact that the victims were *land-based*, and therefore neither sensitive nor accustomed to the rules and practices of maritime law. This course ran completely counter to the one which would have been taken under maritime law.

Admittedly, the solutions put forward by the CLC hardly seem adapted to a disaster on such a scale.

At the time of the accident, France had not yet ratified the 1971 Convention

establishing the IOPC Fund. The compensation for what appeared to be a major catastrophe was therefore limited to the ceiling imposed by the CLC:

—the amount of compensation was ridiculously low: 77 million francs or one-tenth of the amount claimed;
—it was difficult to obtain the evidence necessary to persuade a French court to find *fault and privity* and hold the owner liable without limit; the investigatory powers of French judges were clearly inadequate for the magnitude of the problem;
—it was uncertain whether a French judgment could be enforced against a Liberian shell company without any assets, especially as it was unlikely that the parent company, Standard Oil of Indiana, would freely agree to bear the liability.

In any event, it was obvious that Amoco Transport, a corporate shell, had no part at all in running the ship, which was in effect operated by Amoco International, a wholly owned subsidiary responsible for the operation of Amoco's tanker fleet. One could well fear that it would be impossible to comply with the requirement under the CLC to show the owner's actual fault when the major responsible parties were American companies not subject to discovery in France.

In the face of so many obstacles, there was a strong temptation to sue the parent company. Standard Oil of Indiana, which in fact controlled the operations of the *Amoco Cadiz*, in the United States, thereby benefiting from the great advantage offered by the discovery process available in American courts.

This course of action fully complied with France's international commitments under the CLC and was consistent with the spirit of the Convention since neither Amoco International nor Standard Oil was the registered owner of the vessel or even *servants or agents of the owner*. Nothing in the CLC precludes victims from claiming compensation outside the CLC from persons other than the owner, his servants or agents.

This contrasts with the 1984 Protocols which provide that the exclusive remedy lies against the registered owner.[1] The plaintiffs won this battle. Thanks to the *discovery* process of the US legal system, they were the able to obtain the evidence necessary to persuade the American court to hold the parent, Standard Oil, liable for inadequate maintenance of the vessel.

An internal document showed that certain work which should have been done on the vessel's steering gear had been delayed so as not to interrupt the vessel's commercial operation. It was not enough in this case just to show negligence. It was necessary to ascribe the fault to the parent, given its major involvement in the operation of the ship, not to mention the fact that it was the company with the deepest pocket. That is exactly what the Chicago judge did when he

1. The same exclusive remedy is provided for in the 1992 Protocols, which were adopted in place of the 1984 Protocols at the IMO Diplomatic Conference held in London in November 1992: see Preface at p. vii.

departed from the principle of the CLC that holds only the registered owner liable, and instead found the parent liable as well for its own acts.
The judge noted that "Standard exercised such control over its subsidiaries that those entities would be considered to be mere instrumentalities of Standard". Consequently, Standard was held to be "responsible for the tortious acts of its wholly owned subsidiaries and instrumentalities".

Thanks to a well-conceived litigation strategy supported by a favourable factual context, the victims managed to overcome the two obstacles of the CLC:

—the limitation of liability: compensation measured in 1992 francs was five times the amount which could have been obtained from the CLC limitation fund;

—the requirement that all claims must be made against the vessel's registered owner: the Chicago trail shows that the court may look beyond the legal window-dressing to reach the party who is in fact responsible for the pollution.

This result was possible thanks to litigation procedure well suited to obtaining evidence and to the court's willingness to seek out the truly responsible party, i.e. the one at the actual decision-making level and the one who had the financial capacity to ensure that the victims would be adequately compensated.

These are the undeniably positive results of the *Amoco* case, not the least of which was the moral victory in the Federal Court of Appeals, which confirmed and expanded the lower court decision and severely reprimanded Amoco for its conduct.[2]

But a moral victory is not enough. Financial relief must also be obtained. At this level the unquestionable superiority of an institutionalized compensation mechanism, such as that implemented in the *Tanio* case, is evident.

II. THE TANIO—THE ADVANTAGES OF A SYSTEM OF RAPID COMPENSATION

For some of the victims of the *Amoco Cadiz* joy quickly turned to bitterness. The American discovery process, so helpful to plaintiffs in proving fault, also assigns them a formidable task in proving their loss. Five hundred thousand documents were discovered in the case by the French State alone. This meant years of proceedings and evidence from hundreds of witnesses (generating 30,000 pages of trial transcripts). According to the judge, this case was probably one of the longest and most complicated ever tried in an American court.

2. The Court stated "Amoco has little reason to shed crocodile tears, Exxon reportedly spent US$2 billion to clean up the oil of *Exxon Valdez* spilled off Alaska, it has agreed to pay another US$1 billion as damages and to pay a criminal fine of US$125 million. Amoco will be called on to pay only US$61 million plus interest to redress a spill that not only was larger but also occurred in a more densely populated area. Calling the US$61 million the result of inflated or fraudulent claims taxes credulity".

Problems of proof resulted in a substantial reduction of the claim of the State (an average of 35 per cent.) and an overwhelming reduction in the claim of the Communes because it was impossible to present a witness for every expense item incurred and because "Amoco resisted every bill to the last sou".[3]

Perhaps it was also because the State had compensated many of the Communes' out of pocket expenses, and because the bulk of the Communes' claims such as "loss of image" or reduction in tourism were esoteric, calculated on the basis of economic and legal theories which the trial court found speculative and unfounded in law.

This burdensome process consumed 13 years of effort and the energy of hundreds of civil servants, lawyers, witnesses and other skilled professionals, a burden that only the French State, but not small claimants, could sustain.

The French State may have come away basically satisfied, especially as a result of the Court of Appeals' decision which awarded 1.25 billion francs to the French plaintiffs, but the Breton communities which had invested so much in the trial saw barely one tenth of the amount claimed.

The *Tanio* case serves as an example of a less spectacular, but ultimately more effective, solution. On 7 March 1980, two years after the *Amoco* incident, the *Tanio*, a Malagasy tanker, broke amidship in heavy weather conditions just off Brittany, dumping more than 13,500 tons of oil into the sea and polluting more than 200 kilometers of the Brittany coast. The stern section, with about 7,500 tons of cargo aboard, remained afloat and was towed to Le Havre. The bow section with about 5,000 tons of cargo oil on board sank to a depth of 90 meters. The oil contained in the sunken bow section was pumped out in order to prevent further pollution from the wreck.

By that date, the 1971 Convention setting up an Oil Pollution Compensation Fund (IOPC Fund) had taken effect (on 22 August 1978). Its purpose was to fill the gaps left by the CLC and to provide supplementary compensation to those who cannot obtain full and adequate compensation under the CLC.

Although the *Tanio* incident was at the time the most important and also the most complicated case in which the IOPC Fund had been involved since its creation, the Fund's objective from the outset had been particularly constructive: to compensate victims rapidly and with a minimum of formalities. This policy was applied very effectively in the *Tanio* case.

Nearly 100 claimants presented claims to the IOPC Fund totalling 527 million francs. The claims submitted by the French State accounted for more than 90 per cent. of such amount, which was double the amount available under the two Conventions, i.e. 244,000,000 francs of which 22,000,000 francs were represented by the shipowners' limitation fund.

Through negotiation the parties first identified the claims which fulfilled the criteria for recoverable loss. The French State's claim related to expenses for pumping the oil from the sunken bow section, for clean-up operations and

3. US Court of Appeals, 7th Circuit, p. 41.

restoration, and for the amounts paid by the State to private parties to compensate for their lost earnings.

The IOPC Fund took advantage of this occasion to establish its own policy governing recoverable loss. This was done pragmatically but incorporated certain principles: compensation for expenses incurred for clean-up operations and for restoring private property were held to be compensable. Economic loss suffered by claimants who depend directly on earnings from sea-related activities was also deemed recoverable.

It is to be noted that no claim for environmental damage was presented since the claimants strictly adhered to the policy of the IOPC Fund which does not compensate for environmental damage on the basis of abstract criteria or by application of theoretical models (for example: so many francs per cubic metre of polluted water).

After negotiations, agreements were reached on the quantum of each claim, subject to approval by the Executive Committee and sometimes upon the decision of the Director alone with the prior authorization of the committee. The claims were in each case settled by the Director, as authorized.

Although in most cases the amounts claimed from the IOPC Fund exceeded the amounts of the settlements, agreements were reached on a reasonable basis in the interest of a speedy settlement, without prejudice to each claimant's right to pursue the owner of the *Tanio* and other parties for any claim beyond the amount paid by the IOPC Fund.

The fact that an agreement was reached at an early stage as to the quantum of all but a few claims relating to minor amounts made it possible to make substantial partial payments without having to wait for the judicial resolution of the contested claims. Assessed at 348 million francs, the damage resulting from the pollution caused by the *Tanio* was compensated at the rate of 70 per cent. in the three to five years following the disaster.

The balance was largely covered by a compromise settlement reached two years later with the vessel's insurers (P & I Club) and various other parties involved in this incident. The registered owner and other defendants were sued for personal fault or negligence in the French courts under the CLC provisions or general principles of liability. The suit was instigated not only by the French victims but also by the IOPC Fund itself, subrogated to the rights of the victims.

The recovery action by the Fund and the victims against the parties responsible for the damage—i.e. the vessel's owner and other potentially liable parties such as the shipyard which had fully reconditioned the vessel several months prior to the accident, the classification society which had monitored the works, and the bare boat charterer which had determined the scope of the works and had managed the vessel both directly and through a management company (also a defendant) provided the opportunity for resolving a certain number of questions of principle.

The IOPC Fund's right to take over by subrogation the rights of victims

which it has compensated, up to the amount which it has paid them, is expressly set forth in Articles 9.1 and 9.2 of the Fund Convention. It was readily acknowledged that the Fund's compensation of victims must not enable the parties responsible for the damage to evade their obligations. The enforcement of this right did however raise a certain number of problems, which were quickly resolved thanks to excellent co-operation between the Fund and the victims, particularly the French State.

Illustrations of such co-operation include the following:

(1) The Fund provides supplementary compensation to those who cannot obtain full compensation. This principle raised the question as to whether the Fund's compensation of victims should be deferred until after exhaustion of their judicial recourse, at which time a determination could be made as to whether they had received full compensation, thereby rendering unnecessary any compensation from the Fund. Given the essential purpose of the Fund, that is the rapid compensation of victims, in particular by substantial advances, it was decided not to defer compensation until after the completion of litigation. Compensation was paid, subject to adjustment on the basis of the outcome of the recovery actions.

(2) Once it was accepted that the Fund had the right to proceed against the responsible parties, it was necessary to ensure that such an action could be effectively conducted. This was done by having the Fund make a nominal payment very quickly to one of the victims, thereby giving it the standing to sue and enabling it to take an active part in the litigation from the outset. As a result, the Fund's attorneys and experts were able to participate in the legal handling and technical investigations from the beginning, thereby contributing to the highly favourable out-of-court settlement reached four years after the commencement of proceedings in the French courts. The same technique was employed several years later in the *Amazzone* case with particularly effective results.

(3) The excellent co-operation between the IOPC Fund, the French State and the other victims, illustrated by a common strategy carried out by jointly-chosen counsel, continued at the stage of the settlement concerning the distribution of the proceeds. Though large, the settlement was not sufficient to pay off all claims. The French victims nevertheless waived their priority right to compensation, notwithstanding the fact that, under French law, subrogated underwriters are subordinated to their insured when the funds recoverable from responsible third parties are insufficient to cover the overall claim. The Fund was therefore able to recover more than one-half of the amounts it had paid to the victims and was thereby able to make substantial repayments to the Fund contributors.

The same process was followed in another incident, of lesser magnitude,

which occurred in France in early 1988 and involved an Italian ship, the *Amazzone*. The *Amazzone* litigation, and the settlement resulting from it enabled the Fund to recover the entire amount that it had advanced and to avoid having to bear, as provided by Article 5.1 of the Fund Convention, any part of the compensation paid by the owner.

The pursuit of litigation against the owner of the *Tanio* shoes that even in connection with an institutionalized compensation system a negligence suit against the party actually at fault may have a deterrent effect. But in the *Tanio* case, the hazards and uncertainties of litigation were no longer borne solely by the victims, who had themselves already been compensated either totally or in large part.

One can see the remarkable efficiency with which the institutionalized system embodied by the IOPC Fund has been able to achieve its aims: rapid compensation of victims based on well accepted principles, and contribution to the development of compensation rules for ecological disasters.

Is this in fact the ideal solution? It is doubtful whether the conventional system of automatic compensation, even at a very high level, could ever completely do away with the need for recourse to major litigation.

Technological development brings with it ever greater risks—risks which unfortunately remain unpredicatable. An occasion will always arise when institutional mechanisms are inappropriate or inadequate, particularly as they generally represent a compromise solution in which the victims played no part. One of the main objectives of the French State in the *Amoco* litigation was not only to obtain compensation but also to draw sufficient public attention to the need to prevent further accidents of this kind or at least to make polluters more aware of their obligations. Recourse to the courts often provides a means of channelling the legitimate anger of the victims, which is a normal emotional and psychological response. It is impossible to over-emphasize the importance of the Chicago trial in rallying and mobilizing the people of Brittany in the face of the pollution risk. The presence of the elected representatives in Alaska after the *Exxon Valdez* incident is a good illustration of this solidarity among victims, first on a national, then on the international level.

Amoco Cadiz and *Tanio*: two solutions to the same problem. No doubt, it is the interaction for the two approaches—the litigation battle and automatic out-of-court compensation—which will advance the common good: the prevention of accidents by imposing penalties on the parties causing them, and adequate compensation for the victims.

CHAPTER 10

A NORTH AMERICAN PERSPECTIVE ON LIABILITY AND COMPENSATION FOR OIL POLLUTION CAUSED BY SHIPS

A.H.E. POPP, Q.C.*

I. INTRODUCTION

In recent years, Canada and the United States have both extensively revised their laws relating to pollution caused by ships. In both instances these revisions have included significant changes to the rules governing liability and compensation for damages caused by discharges of oil from ships.

Worldwide, liability and compensation for oil spills caused by tankers carrying cargoes of persistent oil is governed by the 1969 Convention on Civil Liability for Oil Pollution Damage (the Civil Liability Convention),[1] adopted in the wake of the *Torrey Canyon* incident. The compensation provided under the terms of that Convention is supplemented by amounts payable under the 1971 Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (the Fund Convention).[2]

Together these two Conventions have provided a very effective means of dealing with compensation for tanker spills involving persistent oil. Yet in North America, the Conventions have failed to become the basis for uniform rules for compensation for these kinds of spills between Canada and the United States, despite the fact that the two countries have large stretches of adjoining waters where the potential for transfrontier pollution caused by ships is high and the adoption of common rules is consequently very desirable.

The purpose of this paper is to describe the development of the differing regimes of liability and compensation in the two countries and to formulate some preliminary conclusions about the consequences of a divided regime in

* Senior General Counsel Admiralty & Maritime Law. The views expressed in this paper are those of the author and do not necessarily reflect those of the Canadian Government or the Department of Justice. The author would like to express his gratitude to P. M. Troop, Q.C., Administrator of the Ship-Source Oil Pollution Fund and his staff, Lieutenant Commander Mark Yost and Mr Fred Presley of the US Coast Guard and Mark Gauthier of Transport Canada, Legal Services for their invaluable comments on drafts of this paper. Finally, a word of special thanks to the author's wife, Alina, who read several drafts of the paper for the purposes of editing it and greatly contributed to its clarity.

1. Canadian Treaty Series (CTS) 1989/46. This Convention has been accepted by 72 States.
2. CTS 1989/47. This Convention has been accepted by 48 States.

North America. The conclusions must be preliminary because neither regime has yet been seriously tested in a major oil pollution disaster.

The first part of this paper outlines the history of the Canadian regime, and describes its principal elements. The second part presents a brief historical overview of the United States regime and outlines the principal differences between the US and Canadian regimes. In the third part of the paper some specific problems that may be anticipated as a result of the existence of a divided regime in North America are identified. In a concluding part some preliminary conclusions are formulated.

II. CANADIAN REGIME

1. Historical sketch

At the time of the *Torrey Canyon* disaster in 1967, the prevalent view in Canada was that national and international laws addressing the problem of ship-source oil pollution were inadequate. In fact, except for some provisions in the Canada Shipping Act implementing the 1954 Convention for the Prevention of Pollution of the Sea by Oil (OILPOL), aimed at controlling operational discharges of oil from ships,[3] there was no statutory law dealing with the legal consequences of discharges.

Victims of oil pollution caused by ships had to rely on general principles of tort law because there were no specific statutory rules addressing the right to recover damages.[4] As an example, the right of public authorities to recover costs and expenses for clean-up operations not associated with their own property was open to considerable doubt.

The whole question of compensation for oil spill damage came sharply into focus in February 1970, just a few months after the Brussels conference that adopted the Civil Liability Convention, when the *Arrow*, a Liberian tanker, carrying 106,000 barrels of bunker oil went aground in Chedobucto Bay, Nova Scotia. Some 82,500 barrels of oil spilled into the surrounding waters.

In response to public alarm, the Canadian Government conducted a formal inquiry into the circumstances of the *Arrow* grounding. Many of the same shortcomings in dealing with the incident and consequent damages that had been identified in the *Torrey Canyon* incident in Britain were evident in this incident. In establishing a statutory regime the question was whether Canada should fol-

3. Part IX, Chap. S–9, Revised Statutes of Canada (R.S.C.), 1970.

4. For a discussion of the common law principles that apply to the recovery of damages for oil pollution caused by ships, see D. W. Abecassis and R. L. Jarashow, *Oil Pollution for Ships* (London, Stevens & Sons: 1985, at 355–400). Basically claims at common law may be based on trespass, public nuisance, private nuisance or negligence.

low and ratify the Civil Liability Convention or develop its own "made in Canada" regime.

At the start of the Brussels Conference, the Canadian delegation had clearly enunciated its expectations of the liability regime that it wanted the conference to adopt. Specifically, Canada had recommended a comprehensive regime dealing with all forms of pollution caused by ships, not just pollution caused by "persistent" oil. Canada also strongly believed in some form of shared liability, that would oblige charterers and oil companies, who share in the profits, to share in the liabilities inherent in the bulk transport of oil.[5]

Canadian expectations however, were not met at the Brussels conference. Canada therefore proceeded with its own legislation resembling the international regime but with significant differences. The Canadian Government's position was outlined by the Minister of Transport, when introducing the bill to amend the Canada Shipping Act, in the following terms:

> the instant the world community comes around to agreeing on the magnitude of this problem and on the potential threat it poses to us all, Canada will not wish to act unilaterally but will be quite prepared to fall in with whatever is achieved through international agreements.[6]

The Bill was passed by the Parliament and proclaimed into force on 30 June 1971. The amendments added a new Part, Part XX, to the Act, which dealt with both public and private law aspects of pollution caused by ships.[7]

With respect to liability, as previously noted, Part XX resembled the Civil Liability Convention, specifically with regard to the basis of liability and the limits of liability. According to the newly adopted Canadian regime and the international regime, liability did not depend on proof of fault or negligence and the defences to such liability were framed in almost identical terms as set out in the Convention.[8]

Similarly, the limits of liability were identical to those set out in the Convention, namely, the lesser of 2,000 gold francs per ton of the ship's tonnage or a maximum of 210,000,000 gold francs.[9] But this is where the similarities between the two regimes ended.

Unlike its international counterpart, the Canadian regime was not restricted to tankers carrying persistent oil in bulk as cargo. In principle the Canadian

5. See the opening statement of the Hon. Donald Jamieson, Minister of Transport and Head of the Canadian delegation to the 1969 Brussels Conference, *Official Records*, International Legal Conference on Marine Pollution Damage, 1969, at 84–85.

6. This citation is reproduced by P. M. Troop, QC and M. S. Greenham, in "Ship-Source Oil Pollution Fund: 20 Years of Canada's Experience", *Proceedings of the International Oil Spill Conference*, 1991, at 683.

7. R.S.C., 1970, 2nd Supplement, Chap. 27.

8. Ibid., subsection 735(2), in particular subparagraphs (b)(i) to (iii), which set out the same defences as those listed in Article III, subparagraphs 2(a) to (c) of the Civil Liability Convention.

9. Subsection 735(4), Article V, paragraph 1, Civil Liability Convention.

scheme applied to all ships carrying pollutants which, in the light of the definition of that term in the legislation, in theory, gave it very broad application.[10]

Moreover, the Canadian scheme did not adopt the strict channelling provisions of the international convention. In the definition of the "owner", the liability provisions applied to any person "having for the time being, either by law or contract, the rights of the owner of the ship as regards the possession and use thereof".[11]

In keeping with Canada's position at the 1969 Brussels Conference, the Canadian regime attempted to make cargo interests directly liable for pollution damage on the same basis as the shipowner. The Canadian legislation set up its own domestic fund, the Maritime Pollution Claims Fund (MPCF), financed initially by a levy per ton of oil imported into or moved by ship in Canada.[12]

There were other differences too. Most notably, the Canadian regime was not specifically restricted to pollution damage "caused on the territory, including the territorial sea" of Canada but included the Canadian fishing zones that stretch out to 200 miles.[13]

As a result of these differences, Canada could not accede to the Convention. This automatically excluded Canadian participation in the IOPC Fund, since Article 37.4 of the Fund Convention restricts membership to those States that are parties to the Civil Liability Convention.

Although in 1971, the Canadian regime was perceived to be in advance of its time, in time it became clear that the new legislation did not work as well as Parliament had intended. For example, because of the minimum tonnage requirement specified in the regulations adopted pursuant to the legislation, the liability regime did not apply to small tanker spills[14], yet these are the most common spills. Furthermore, although the legislation appeared to have broad application, close study of the supporting regulations demonstrated that it was largely confined to oil.[15]

The Canadian regime, like its international counterpart, stipulated that evidence of financial responsibility must be given by the shipowner, in the form of insurance or indemnity bond or other evidence of financial responsibility with the right of claimants to recover for damages directly from the proceeds of such

10. Subsection 727(2), see the definition of "pollutant".

11. Subsection 727(2). By comparison, the definition of the owner in Article I of the Civil Liability Convention basically seeks to restrict the application of the Convention to the registered owner.

12. Subsection 748(1).

13. The restriction to territory, including territorial sea, is set out in Article II, Civil Liability Convention. The scope of application of Part XX is specified in subsection 727(2).

14. Subsection 734(1), which created liability, in identifying the party liable, spoke of "the owner of a ship that carries a pollutant in bulk". The term "in bulk" was left to regulations to define. According to subsection 2(2) of the Maritime Pollution Claims Fund Regulations, Consolidated Regulations of Canada (CRS), 1978, Chap. 1444, this means "a quantity that exceeds 1,000 tons". In essence, therefore Part XX only applied to spills from ships carrying in excess of 1,000 tons of oil.

15. Ibid.

insurance or bond.[16] This feature proved impossible to implement because international insurance interests were unwilling to submit to such a requirement under national legislation that did not comply with the Civil Liability Convention. It proved equally impossible to implement direct cargo owner liability because there was no insurance for this kind of risk.

By the late 1970s and early 1980s, there were serious misgivings about the effectiveness of the Canadian regime. At about the same time informal discussions were beginning to revise the international regime. One of the objectives of such a revision was to increase substantially the amount of compensation available under the international scheme so as to attract important outsiders such as the United States and Canada.

The time seemed ripe for Canada to re-examine its own regime which had clearly fallen behind what was available internationally to protect victims of oil pollution. As a result, extensive amendments to the Canada Shipping Act, including a fundamental rewrite of the liability regime, were introduced and adopted by Parliament in 1987.

2. Current Canadian regime

The centrepiece of the new Canadian regime are the provisions that implement the Civil Liability Convention and the Fund Convention.[17] It is not necessary, therefore to give a detailed account of the provisions of the new regime except to outline briefly its structure. This will provide an interesting contrast to what has been done in the United States.

As a preliminary comment, it should be noted that those provisions of the new Canadian regime designed to implement the international scheme, also apply in the Canadian Arctic.This contrasts with the repealed Part XX which did not apply at all in the Canadian Arctic.

Unlike the preceding legislation, the new legislation, with one exception, is confined to oil pollution. It does not attempt to deal with pollution caused by substances other than oil, except that the Minister of Transport does retain the right to intervene with appropriate measures in any incident even if it does not involve oil.[18]

The basic feature of the new regime is that the liability rules of the Civil Liability Convention apply to all ships that cause oil pollution; but special rules

16. Section 736, Article VII, Civil Liability Convention.

17. The new amendments came into force on 24 April 1989, to coincide with the entry into force of the Civil Liability Convention and the Fund Convention for Canada on the same date. The new liability regime is contained in Part XVI of the Canada Shipping Act, R.S.C. 1985, 3rd Supp., chap. 6, which replaces the former Part XX of the Act. Between the adoption of the amendments and their entry into force the new Revised Statutes of Canada, which deleted several obsolete parts of the Act, came into force. Hence the new numbering.

18. Section 678, which is a redraft of section 729 of the repealed Part XX.

implementing other features of the convention apply only to tankers carrying persistent oil in bulk as cargo, referred to in the legislation as "convention ships".[19]

A special series of provisions deals with the International Oil Pollution Compensation Fund (IOPC Fund), enabling Canada to fulfil its obligations under the Fund Convention.[20]

A Canadian fund is retained under the name of the Ship-source Oil Pollution Fund (SOPF) which, in effect, is the old Maritime Pollution Claims Fund (MPCF) with new functions and liabilities. In contrast to the MPCF which throughout its 17-year life had played a marginal role in the Canadian compensation scheme, the SOPF is a key element in the new scheme.

In addition to paying the Canadian contribution to the IOPC Fund,[21] the SOPF can be directly accessed by non-public authority claimants in respect of claims for oil pollution damage. The Fund is obliged to pay those claims to the extent that the Administrator of the Fund finds them to be established.[22] Where the SOPF pays the claims, it is subrogated to any rights of the claimant and then seeks to recover the amount of the claims from the shipowner, the IOPC Fund, or any other party that may be liable.

In essence, the SOPF represents a third level of compensation in respect of claims for oil pollution damage caused by "convention ships" and a second level of compensation of such claims for all other ships. The SOPF, in effect, adds to the compensation available under the international Conventions.

Briefly, the available compensation under the new Canadian legislation is as follows. Where the shipowner can demonstrate that the incident causing the oil pollution occurs without his fault or privity he may limit his liability to the lesser of 133 special drawing rights (SDRs) for each ton of the ship's tonnage and 14,000,000 SDRs, which translates into approximately $22.8 million (Canadian).[23]

Where the incident is caused by a tanker carrying persistent oil ("convention" ship), there would additionally be access to the IOPC Fund for up to 60,000,000 SDRs which in Canadian currency amounts to approximately $97.8 million. In keeping with the Fund Convention the total amount available from the IOPC Fund would include any amount payable by the shipowner in accordance with his limits of liability.[24]

In the event that uncompensated damages remain after recourse against the shipowner and, where applicable the IOPC Fund, has been exhausted there is

19. See sections 680–695 for the special rules. Section 673 contains the definition of "convention ships" which are basically tankers carrying persistent oil in bulk as cargo.
20. Sections 696–701.
21. Section 701.
22. Section 710.
23. Subsection 679(1). As of 30 March 1992, 1 SDR equals $1.63 (Canadian).
24. Section 699, Article 4, Fund Convention.

access to the Ship-source Oil Pollution Fund (SOPF) up to a limit per incident currently fixed at approximately $116 million (Canadian).[25]

III. UNITED STATES REGIME

A detailed description of the elements of the United States regime of liability and compensation, contained in the Oil Pollution Act of 1990 (OPA 90) is beyond the scope of this discussion.[26]

Much of what is found in OPA 90 has been taken from legislation that it replaces so that a brief review of the history of the American regime is helpful for understanding the new system.

1. Historical Sketch

A convenient starting point is the *Torrey Canyon* disaster. That disaster attracted a lot of attention in the United States, as elsewhere, but, as one American commentator recently noted, "the *Torrey Canyon* was not 'our' disaster". Moreover, at the time of the *Torrey Canyon* spill "the United States already had what it perceived to be a well-defined and effective body of laws which dealt comprehensively with oil pollution".[27]

Nevertheless incidents such as the Santa Barbara blow-out off the coast of California in 1969 did suggest that there was room for improvement. Accordingly, in 1970 Congress adopted the Water Quality Improvement Act which amended the Federal Water Pollution Control Act. Two years later the Federal Water Pollution Control Act was revised in most areas including those portions that had been added by the Water Quality Improvement Act.[28]

Basically, this law prohibited discharges of oil into the navigable waters of the United States; imposed civil penalties for such discharges; and established a strict civil liability regime limited for Federal government removal costs. In 1977 the liability regime in the Act was extended to include costs of restoring and replacing state and Federal natural resources. The Federal Water Pollution Control Act or the "Clean Water Act", as it came to be known, did not however, address the broader question of damages suffered by individuals.

25. In accordance with section 714, the limit of the SOPF is adjusted annually to take account of inflation.

26. Pub. L. 101–380, 204 Stat. 484 (1990); 33 USC 2701 *et seq.* (1990). For a commentary of the new American regime, see, *inter alia*, Thomas G. Wagner "The Oil Pollution Act of 1990: An Analysis", *Journal of Maritime Law and Commerce*, Vol. 21 (1990), 569; Antonio J. Rodriguez and Paul A. C. Jaffe, "Oil Pollution Act of 1990", *Tulane Maritime Law Journal*, Vol. 15 (1990) 1. The author has also had the benefit of reading an as yet unpublished paper given by Mark Yost, Lieutenant Commander, US Coast Guard, to the American Bar Association, August 9, 1992, entitled "The Oil Pollution Act of 1990, IMO, and Unilateral Action".

27. These comments were made in an as yet unpublished paper presented to the Canada/United States Law Institute at its annual seminar in April 1992, in Cleveland, Ohio, by Richard L. Jarashow, "The New Regime for Oil Spill Liability in the United States" at 10 and 11.

28. Pub. L. No. 92–500.

In subsequent years therefore, Congress adopted other legislation designed to address this aspect of damages in specific situations, notably, the Trans-Alaska Pipeline Authorization Act (TAPAA) in 1973 to deal with claims arising from the transport of oil by tanker from the Trans-Alaska Pipeline to ports in other parts of the United States; the Deepwater Port Act (DPA) in 1974 to handle claims for oil spills at offshore terminals; and the Outer Continental Shelf Lands Act (OCSLA) in 1978 to provide for claims from spills caused by offshore exploration and exploitation.[29]

Each of these Acts had different liability regimes. Consequently, it became recognized over time that comprehensive legislation was needed to overcome conflicts and inconsistencies between the various regimes. Among the attempts to adopt such legislation was the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) passed in 1980 which created the "Superfund".[30] Originally, the draft legislation contained provisions covering oil spills but these provisions were specifically excluded in the final wording of CERCLA.[31]

Efforts to consolidate liability regimes were renewed following the adoption of the 1984 Protocols to the Civil Liability Convention and the Fund Convention. These efforts were directed not only at consolidating the existing regimes but also at incorporating the international scheme, as reflected in the protocols, into US domestic legislation to enable the United States to become party to that scheme.

In March 1989, the spectacular *Exxon Valdez* incident occurred in Prince William Sound, Alaska, causing serious damage to what was perceived to be a very sensitive environmental area. The incident has been described as the "Pearl Harbour of the US environmental movement".[32] The *Exxon Valdez* spill together with several other incidents that occurred shortly thereafter, put an end to any efforts to implement the international scheme in the United States. In the light of these spills, which attracted a great deal of public attention over an extended period of time, the international scheme was no longer seen as an adequate response.[33] Instead, the international regime was perceived as placing unreasonable limits on the development of domestic schemes in the United States.[34]

29. These Acts are, respectively, 43 USC, 33 USC and 43 USC sections 1331–1374.

30. 42 USC sections 9601–9675.

31. "Oil Pollution Desk Book", the *Environmental Law Reporter*, Environmental Law Institute, Washington, DC at 3. The Deskbook notes that CERCLA "contained a petroleum exclusion to make clear that oil spills were to be governed by a different statutory scheme. The result has complicated liability issues in Superfund clean-ups".

32. Ibid.

33. Mark Yost in the previously noted paper makes the following observation about debate in Congress following upon these incidents: "The tenor of the Congressional Debates shifted from analysis to outrage", above, n. 26 at 15.

34. To get an impression of the "unacceptable" restraints of the international scheme, as well as other "unacceptable features" of the scheme, as perceived in the United States, see the essay by George G. Mitchell, "Preservation of State and Federal Authority under the Oil Pollution Act of 1990", 21 *Environmental Law* 237 (1991).

The mood of the US Congress at that time is summed up in section 3001 of OPA 90, in the following terms:

> It is the sense of the Congress that it is in the best interests of the United States to participate in an international oil pollution liability and compensation regime that is at least as effective as Federal and State laws in preventing incidents and in guaranteeing full and prompt compensation for damages resulting from incidents.[35]

2. Comparison between United States and Canadian regimes

Some of the key provisions in the new United States legislation which differ significantly from the Canadian scheme and may consequently create complications in transfrontier spills will now be discussed. In making the comparison between the US and Canadian regimes, it is necessary to give some consideration to the international scheme which, as previously noted, is now the foundation of the Canadian regime.

An important feature of the United States regime, which reflects the efforts made to produce a comprehensive scheme, is that the OPA 90 applies to vessels, onshore facilities and offshore facilities. The comments in this paper, however, are confined to its provisions relating to vessels. Specifically, the discussion focuses on seven aspects of the regime—the party made liable; the basis of liability; rules governing limitation of liability; the notion of removal costs and damages; the amount of compensation; evidence of financial responsibility; and finally, certain aspects of the Oil Spill Liability Trust Fund (Trust Fund).

(a) Party liable

In accordance with section 1002 of OPA 90, liability is placed on the "responsible party". That term is defined, in section 1001, to mean in relation to a vessel, "any person owning, operating, or demise chartering the vessel". This definition, then, constitutes the first important difference between the American and the Canadian regimes. The Canada Shipping Act, like the Civil Liability Convention, adopts strict channelling of liability to the registered owner in relation to tankers carrying cargoes of persistent oil. In those instances however, where the convention does not apply, the old definition of owner is retained which could cover the registered owner, the operator or the charterer.[36]

(b) Basis of liability

The basic liability provision of the new US regime is set out in section 1002(a) of OPA 90 in the following terms:

35. For further commentary on the rejection of the 1984 Protocols, see Edgar Gold, "Marine Pollution After *Exxon Valdez*: The U.S. All-or-Nothing Lottery", *Journal of Maritime Law and Commerce*, Vol. 22 (1991) at 423.

36. See the definition in the CSA with respect to ships, other than tankers, in section 673 which defines the owner to mean: "the person having for the time being, either by law or contract, the rights of the owner of the ship as regards the possession and use thereof".

Notwithstanding any other provisions or rule of law, and subject to the provisions of this Act, each responsible party for a vessel . . ., from which oil is discharged, or which poses the substantial threat of a discharge of oil, into or upon the navigable waters or adjoining shorelines or the exclusive economic zone is liable for the removal costs and damages.

First of all, it is worth noting that OPA 90 applies to oil "of any kind" (section 1001(23)). By contrast, the Canada Shipping Act when dealing with "convention ships" follows the international scheme in restricting application to "persistent oil",[37] but keeps a broader definition of oil for all other ships.[38]

OPA 90, however, is more restrictive than the Canadian regime in the defences to liability that it allows the responsible party to assert. According to section 1003(a), only acts of God, acts of war or an act or omission of a third party may be used to avoid liability. This contrasts with the language in subsection 677(3) of the Canada Shipping Act which, following the language of the Civil Liability Convention, provides that the shipowner is not liable if he establishes that the occurrence

(a) resulted from an act of war, hostilities, civil war or insurrection or from a natural phenomenon of an exceptional, inevitable and irresistible character;
(b) was wholly caused by an act or omission of a third party with intent to cause damage; or
(c) was wholly caused by the negligence or other wrongful act of any government or other authority responsible for the maintenance of lights or other navigational aids, in the exercise of that function.

But even the limited defences in OPA 90 will not operate if the responsible party has "failed or refused" to report the incident or to provide reasonable assistance and co-operation in connection with removal activities necessitated by the incident or to comply with certain orders.[39]

It is important to note that OPA 90, unlike the Clean Water Act, does not allow the responsible party to plead negligence of the United States Government as the cause of the spill. An example of this would be if the Coast Guard has been negligent in maintaining an aid to navigation. This contrasts with the Canadian and international schemes, both of which include the defence of government negligence in the maintenance of lights and other aids to navigation.[40]

Both OPA 90 and the Canada Shipping Act allow liability to be avoided where the cause of the incident is the act or omission of a third party. However OPA 90 contains significant qualifications in this regard, not found either in the Canadian legislation or in the international Conventions. Thus an act or omission of a third party that occurs in connection with any contractual relationship with the responsible party will not operate under OPA 90 to relieve that party of liability, unless that party demonstrates that it exercised due care and took

37. See definition of "convention ship" in section 673.
38. See definition of "oil" in section 673.
39. Section 1003(1).
40. Subsection 677(3), CSA, Article III. 2(c), Civil Liability Convention.

precautions against foreseeable acts or omissions of any such third party (section 1003(a)(3)).

To summarize, then, while OPA 90 contains some of the same defences to liability as the Canadian regime and the international conventions, it has added important qualifications (in the case of acts or omissions of third parties), omitted some defences (government negligence) and included additional grounds for making the defences inoperative (failure to report, failure to assist or co-operate or to comply with orders). In this way the defences have been significantly narrowed.

(c) Breach of limits

An important aspect of any limitation regime are the conditions under which limits may be broken. In the case of OPA 90, some of the conditions set out in section 1004(c) for breaching the limits, differ significantly from those in either the international conventions or the Canada Shipping Act.

OPA 90 specifies that the limitation of liability may not be available to the responsible party in the following situations.

First, there is no limitation if "gross negligence or wilful misconduct of the responsible party" is a cause of the incident. This condition is not significantly different from the test set out in Article 6.2 of the 1984 Protocol to the Civil Liability Convention.[41]

Secondly, limitation will be breached if it can be shown that the incident was "proximately" caused by "the violation of an applicable Federal safety, construction, or operating regulation" by the responsible party. There is no equivalent provision in either the Canada Shipping Act or the Civil Liability Convention.[42]

Finally, limitation will be withdrawn if the responsible party fails or refuses to report the incident, to provide reasonable co-operation or assistance in connection with removal activity or to comply with various orders. Again, this provision is unique to the American scheme.

Even if a responsible party succeeds in maintaining the right to limit its liability in the face of such conditions, it must still contend with any regime of liability that may be imposed by individual States since nothing in OPA 90, according to section 1018, preempts the authority of "any State . . . from

41. That provision reads as follows: "The owner shall not be entitled to limit his liability under this Convention if it is proved that the pollution damage, resulted from his personal act or omission, committed with the intent to cause such damage or recklessly and with knowledge that such damage would probably result."

42. Mark Yost in commenting on this ground for breaking limitation makes the following observation: "Although a common lament has been that violation of a safety regulation effectively makes federal liability unlimited, the argument is probably overstated since violation must also be a proximate cause of the spill", above, n. 26 at 12.

imposing any additional liability or requirement with respect to the discharge of oil . . . within such State".[43]

In contrast however, both the Canadian legislation and the international regime are still governed by the "fault and privity" test for breaking limitation.[44] The stricter test, outlined in Article 6.2 of the 1984 protocol to the Civil Liability Convention, is not yet in force.

(d) Removal costs and damages

OPA 90 makes the responsible party liable for the removal costs and damages caused by the spill. Both terms are extensively defined in the legislation. The notion of removal costs, according to section 1001, includes both the costs of removing the consequences of the oil spill, as well as the costs of dealing with a "substantial" threat of a spill. In this respect, the legislation is close to the modifications contained in the 1984 Protocol to the Civil Liability Convention and similar to the approach adopted in the Canadian legislation.[45]

Turning to the notion of damage, it is clear that some of the heads of damage set out in the definition in section 1002(b)(2) would be recoverable both under the Canadian regime and the international scheme. This is true with respect to injury to real and personal property and loss of profits and earning capacity associated with damage to real or personal property.

The right to recover damages for "pure" economic loss not associated with damage to real and personal property is more complex. It had been thought that "pure" economic loss, except in narrowly defined circumstances, was not recoverable under Canadian admiralty law. This still appears to be the case in the general maritime law of the United States.[46] OPA 90 addresses this aspect in section 1002(b)(c) by including the following description of damage as recoverable under the Act, namely:

> Damages for loss of subsistence use of natural resources, which shall be recoverable by any claimant who so uses natural resources which have been injured, destroyed, or lost, without regard to the ownership or management of the resources.

43. The following states have adopted liability regimes that would apply to oil discharges from ships: Alabama, Alaska, California, Connecticut, Delaware, Florida, Georgia, Hawaii, Indiana, Illinois, Louisianna, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oregon, Pennsylvania, Pueto Rico, Rhode Island, South Carolina, Texas, Virgin Islands, Virginia, Washington, Wisconsin. Many of these states do not allow any limitation of liability. For a description of state legislation, see "Transporting U.S. Oil Imports: The Impact of Oil Spill Legislation on the Tanker Market" *Petroleum Industry Research Foundation, Inc.*, June 1992, Appendix II.

44. Subsection 679(1), CSA, Article V.2, Civil Liability Convention.

45. See new definition of "incident" in Article 2.4 of the 1984 Protocol to the Civil Liability Convention. It should be noted however that the new notion of incident is not yet in force. The new Canadian regime makes provision for "measures taken in anticipation of a discharge", see, for example, subsection 677(1) of the Canada Shipping Act. Section 675, defining the application of the legislation, speaks of "expected discharges".

46. *Robins Dry Dock & Repair Co.* v. *Flint*, 275 US 303 (1927).

By comparison, in section 712 of the Canadian Shipping Act, fishermen and others associated with the fishing industry may, under certain circumstances, recover directly from the Ship-Source Oil Pollution Fund for loss of income resulting from a pollution incident. This right was already in place under the repealed Part XX of the Canadian Shipping Act but has been expanded under the new Canadian regime. In both instances this right was inserted in the legislation out of concern that fishermen and others in the fishing industry had no remedy according to ordinary principles for damage or destruction of resources, because they had no proprietary rights in the resource.

A recent decision of the Supreme Court of Canada, however, suggests that there may be a right of recovery for pure economic loss in certain circumstances.[47] The decision contains important qualifications which must be further defined before a definitive assessment of how far Canadian law will go in recognizing pure economic loss, can be made.

In comparison, the international scheme recognizes loss of earnings for fishermen, hoteliers and restaurant owners where a pollution incident has resulted in loss of fishing opportunities or tourism.[48]

There is considerable doubt that the other heads of damage set out in OPA 90 are recoverable under either the international scheme or Canadian legislation. This is particularly true of lost revenues, such as taxes, and costs of providing increased or additional public services.

In comparing the different liability regimes, the notion of natural resource damage in OPA 90 has so far attracted the most attention.

Natural resource damage, according to section 1006(d) of the Act, includes:

(A) the cost of restoring, rehabilitating, replacing, or acquiring the equivalent of, the damaged resources;
(B) the diminution in value of those natural resources pending restoration; plus
(C) the reasonable costs of assessing those damages.

The definition in (A) will be amplified in regulations to be enacted by the President of the United States pursuant to section 1006(e). These regulations will specify how the assessment of natural resource damages is to be made. The scope of the compensation available under this heading depends to a large extent of course, on these regulations which have not yet been promulgated.[49]

For present purposes it is perhaps sufficient to note that the contingent valuation (c.v.) method for measuring resource damage has been the most frequently discussed method. While this method appears to have some support in jurisprudence, it is nevertheless surrounded by much controversy.[50]

47. *Canadian National Railway Co.* v. *Norsk Pacific Steamship Co.* This judgment is not yet reported, but can be found under the Supreme Court file no. 21838.

48. This is clear from the practice of the IOPC Func, See Annual Report, 1988 at 60–61.

49. Provision for natural resource damage was also made under CERCLA. But, as noted by A. J. Rodriguez and P. A. C. Jaffe, in commenting on those provisions, "Under previous law, the methods of calculation were far from settled", above, n. 26 at 14.

50. For an interesting discussion of contingent valuation, see the papers discussed at a Symposium, 2 and 3 April 1992, Washington, DC organized by Cambridge Economics, Inc.

It is important to note that OPA 90 does not give an unrestricted right of recovery for resource damage. The right is limited to the United States Government, any State, to Indian tribes and to governments of foreign countries in respect of natural resources belonging, managed or controlled by those governments or tribes (Section 1006(a)).[51]

The Canada Shipping Act has no similar provisions. In section 673, the Act adopts the definition of pollution damage contained in Article I, paragraph 6, of the Civil Liability Convention. It is clear from the practices established by the IOPC Fund that it gives some recognition to resource damage. To appreciate the difference between the IOPC Fund practice and the objective of OPA 90 under this head, it is necessary to review briefly how the international scheme has dealt with natural resource damage.

The starting point must of course be the definition of pollution damage inserted in the Civil Liability Convention in 1969. That definition also governs the Fund Convention.[52]

The adoption of an acceptable definition at the 1969 Brussels conference had proved difficult because of the different notions of damage in the various States represented at the conference. The matter was finally settled by inserting a general definition in the convention and leaving it to national law of States party to the Convention to give the definition a more precise meaning.

Under Article I of the Convention, the notion of pollution damage includes any "loss or damage caused outside the ship carrying oil by contamination resulting from the escape or discharge of oil from the ship". The lack of precision in this definition presented no difficulty while the Civil Liability Convention was operating on its own and concerned only the liability of the shipowner. After the entry into force of the Fund Convention however, the vagueness of the definition became a problem. It was noted early on in the deliberations of the IOPC Fund Assembly that:

> a uniform interpretation of the definition of "pollution damage" is essential for the functioning of the regime of compensation established by the Conventions.[53]

Contributions are levied on receivers of oil in different States having varying notions of pollution damage, to provide for compensation payments under the Fund Convention. It was essential to have a common understanding of what the term pollution damage would cover so that basically the same compensation would be available regardless of the jurisdiction in which the claim arose.

The need for uniformity in interpretation, especially when environmental damage was involved, became quickly apparent. In 1979 soon after it came into

51. The legislation does not go as far as has been suggested, for example, by a recent report of the Ontario Law Reform Commission or the recommendations of the Public Review Panel on Tanker Safety and Marine Spills Response Capability, Final Report, September 1990, at 99–101.

52. Article 1.2, Fund Convention.

53. IOPC Fund, Annual Report, 1988, at 58.

existence, the IOPC had to deal with the *Antonio Gramsci Case* which involved the application of a somewhat arbitrary mathematical formula contained in the law of the former Soviet Union to calculate environmental damages.[54] One of the first actions of the IOPC Fund Assembly therefore, was to adopt a resolution which attempted to define what claims would be recognized under the heading of environmental damage.[55]

At the Diplomatic Conference in 1984 the essence of that resolution was included in the amended definition of pollution damage in Article 2 of the Protocol to the Civil Liability Convention. The new definition gives explicit recognition to compensation for impairment of the marine environment provided such compensation, other than loss of profit, is "limited to costs of reasonable measures of reinstatement actually undertaken or to be undertaken".[56]

Since the OPA 90 provisions have not yet been tested, no conclusions can be drawn as to what exactly will be recoverable under this heading. As previously noted, much depends on the content of the regulations that will determine the method for measuring resource damage. All that can be said at this time is that potentially, this is the area of greatest divergence between the new American regime and the international regime.

(e) Compensation

The compensation available under OPA 90, at least in terms of money, is greater than what is offered either in the Canada Shipping Act or in the international Conventions, even as amended by the 1984 Protocols.

Similar to the Canadian and the international scheme, compensation under OPA 90 is available from two sources—an initial level of compensation is obtainable from the responsible party (shipowner); and a second level is provided by the Trust Fund.

In the case of the responsible party, a limit of liability has been fixed, in section 1004, at the greater of:

(1) in respect of tank vessels over 3,000 gross tons, $1,200 per gross ton or $10,000,000;
(2) in respect of tank vessels 3,000 gross tons or less, $1,200 per gross ton or $2,000,000; and
(3) in respect of any other vessel, $600 per gross ton or $500,000.

54. See, for details of this incident and the claims, IOPC Fund, Annual Report, 1988, at 61.

55. IOPC Fund Assembly Resolution No. 3, adopted 10 October 1980 (FUND/A/ES.1/13). The history of this subject is succinctly set out in the IOPC Fund, Annual Report, 1988, at 61–62.

56. For discussion of the treatment of the notion of environmental damages in the IOPC Fund and, subsequently, at the 1984 conference, see Mans Jacobsson and Norbert Trotz, "The Definition of Pollution Damage in the 1984 Protocols to the 1969 Civil Liability Convention and 1971 Fund Convention", *J. of Mar. Law and Comm.*, Vol. 17, No. 4 October 1976, at 467.

Any remaining uncompensated removal costs and damages are recoverable from the Trust Fund (section 1012 (a)(4)) up to an amount of $1,000,000,000.[57]

(f) Evidence of financial responsibility

OPA 90 requires, in section 1016, that any vessel over 300 tons, except non-self-propelled vessels that do not carry oil as cargo or fuel, furnishes evidence of financial responsibility. By applying this requirement to all vessels over 300 tons, OPA 90 goes substantially further than the international Convention. In comparison, the Canada Shipping Act, in keeping with the Civil Liability Convention, only requires evidence of financial responsibility for "convention ships" that carry more than a specified quantity of persistent oil as cargo.[58]

Both OPA 90 and the Canada Shipping Act require the financial evidence to be in a form that allows claimants to proceed directly against the guarantor.[59] Anticipating difficulties with the implementation of this feature, OPA 90 makes provision for current insurance arrangements under previous legislation to be maintained pending the adoption of new regulations.[60]

(g) Trust Fund

Finally, brief mention must be made of two functions of the Trust Fund. First, the Trust Fund, broadly speaking, plays a similar role as the Ship-source Oil Pollution Fund with respect to the payment of claims under the Canada Shipping Act. The most notable difference is that, in contrast to the Canadian scheme, claims under OPA 90 in the first instance must be presented to the responsible party. Under the Canadian scheme, as mentioned previously, non-public-authority claims may be presented directly to the SOPF.

But the Trust Fund has another important function that it does not share with the SOPF. In section 1012(a), OPA 90 makes the Trust Fund available to the President for:

> the payment of removal costs, including the costs of monitoring removal actions, determined by the President to be consistent with the National Contingency Plan

These costs may be incurred by Federal authorities, by State authorities and trustees with respect of their functions in relation to natural resource damages. The Trust Fund, thus, is the source of immediate funds to finance response activities by public authorities faced with an oil pollution incident. This is a feature that the SOPF does not have in relation to response activities in Canada.

57. This follows from a reading of section 9001(b), together with sections 6002(b) and 1012, and 26 USC sections 9509(c)(2)(A)(1) and 9509(a)(2)(A)(1).
58. Section 684(1).
59. Section 1016(f).
60. Sections 1016(h) and 6002(b).

IV. CONSEQUENCES OF A DIVIDED REGIME IN CANADA AND THE UNITED STATES

The existence of two separate liability regimes in Canada and the United States for oil pollution caused by ships is nothing new. OPA 90 has merely served to entrench and perhaps enlarge the differences between Canada and the United States in this respect.

For present purposes, three aspects arising out of the existence of a divided regime are identified as cause for concern.

1. No consolidation of claims

Except in certain well defined circumstances, both the Canada Shipping Act and OPA 90 exclude claims arising out of ship-source oil pollution incidents in a foreign jurisdiction. In Canada, this follows from the very specific provisions defining the geographic scope of application of the Canada Shipping Act. Except for "convention ships", which are subject to special rules dictated by the Civil Liability Convention, the remedies in the Act are confined to actual or anticipated pollution damages:

(a) in any place in Canada,
(b) in Canadian waters, and
(c) in any fishing zone of Canada prescribed pursuant to the Territorial Sea and Fishing Zones Act.[61]

A special regime governed by separate legislation applies to Canadian Arctic waters, but because the traffic in those waters is relatively small, the regime will not be discussed here.[62]

In the case of "convention ships", the Civil Liability Convention provides for remedies that are even more restricted and only cover pollution damage:

(a) in any place in Canada,
(b) in Canadian waters, and
(c) on the territory or in the territorial sea of a state other than Canada that is a party to the Civil Liability Convention.[63]

Because the United States is not a party to the Civil Liability Convention, claims for pollution damage in the United States caused by a tanker incident in Canada would not be recoverable in accordance with the remedies provided for under the Canada Shipping Act. The same would seem to apply with respect to incidents caused by other ships.

OPA 90 deals with the matter of foreign claims differently. On the face of it,

61. Subsection 675(1).
62. The regime in Arctic Waters was adopted shortly before Part XX of the Canada Shipping Act in response to the passage through the Canadian Arctic of the American flag tanker, the *Manhatten* in the summer of 1969, see The Arctic Waters Pollution Prevention Act, R.S.C., 1985, Chap. A–12.
63. Subsection 675(2).

section 1007(a)(1) of OPA 90 seems to make provision for foreign claims but adds an important condition, namely, that such a claim is only admissible if:

> recovery is authorized by a treaty or executive agreement between the United States and the claimant's country, or the Secretary of State, in consultation with the Attorney General and the other appropriate officials, has certified that the claimants's country provides a comparable remedy for United States claimants.

The legislation contains one noteworthy exception that already existed under the Trans-Alaska Pipeline Authorization Act. Residents of Canada may make claim for removal costs and damages under the Act (section 1007(b)(4)) in the case of an oil pollution incident involving:

> a tanker that received the oil at the terminal of the pipeline constructed under the Trans-Alaska Pipeline Authorization Act . . . for transportation to a place in the United States, and the discharge or threat occurs prior to delivery of the oil to that place.

Generally speaking, therefore, foreign claimants are excluded from remedies under OPA 90 unless there is a reciprocal agreement for such claims between the United States and the foreign jurisdiction. It is difficult to see how the requirement of "comparability" can be attained between Canada and the United States as long as each country remains committed to its respective liability scheme.

Consequently, if damages from the same oil pollution incident occurred in Canada and the United States, shipowners must respond in both jurisdictions. This requirement defeats an essential purpose of the limitation of liability, namely that all claims in respect of one incident should be consolidated against one limitation fund.

2. Oil spill response

Oil spill response that affects waters on both sides of the border is coordinated in accordance with the Canada-United States Joint Marine Pollution Contingency Plan (Contingency Plan). The current Plan, adopted in 1983, addresses funding response operations on the following basis. Except in the Great Lakes, the governing principle is that the country in whose waters the response operations are carried out, bears all costs including the costs of any assistance it receives from the other country. On the Great Lakes, the costs of both countries is borne by the country in whose waters the pollution incident occurs.[64]

In addition to the claim settlement problems which may arise from the strict division of the two liability regimes, the different methods for calculating costs and expenses under the two systems may cause further difficulties.

Under the Canada Shipping Act, claim settlements for costs and expenses for response activities are governed by the principles developed under that Act, and in the case of incidents caused by "convention" ships are influenced by the prin-

64. The plan is reproduced in a Transport Canada Publication, TP5341, see sections 202.1 and 202.1 of the Plan.

ciples and guidelines of the IOPC Fund. In both instances, the emphasis is that such costs and expenses must be reasonable.[65]

As already noted, OPA 90 removal costs are left to be determined by the President, subject only to the condition that they be consistent with the National Contingency Plan.[66]

This would indicate that the President has discretion in determining the extent of removal costs and they do not appear to be subject to the same test of reasonableness emphasized in the Canadian legislation.

It is significant that OPA 90, in sections 3002 and 3003, directs the Secretary of State to review a number of international agreements with the Government of Canada to identify what amendments or additional agreements are needed to prevent the discharge of oil; to ensure "immediate and effective removal of oil"; and to provide full compensation to any injured persons.

It would be useful if that review would include the Contingency Plan to make the appropriate adjustments to ensure that joint response activities continue to operate smoothly without being adversely affected by the differences in liability regimes and methods of calculating costs in both jurisdictions.

3. Amount and coverage of compensation

While differences in the calculation procedures of costs and expenses for response operations are clearly a matter of some concern, this aspect essentially only affects the Canadian and United States' Governments. Of far greater concern is the difference in the amount of compensation available under the two systems.

As previously noted, both the Canadian and United States' regimes exclude foreign claims, except in limited circumstances. This lack of accessibility would be further emphasized in any transfrontier spill if there is substantially more compensation available in the United States than in Canada for damages arising out of the same spill.

It can be reasonably assumed that such an incident would put enormous pressure on the Canadian Government to come to some arrangement with the United States to satisfy the conditions in OPA 90 for reciprocal treatment of claims. Any such arrangement, however, is likely to be incompatible with continued Canadian membership in the international scheme.

But the level of compensation available under each system is not the only cause for concern. The heads of damage, as noted earlier, seem to be different in a number of significant respects, notably in relation to resource damage.

In Canada there is little jurisprudence to indicate how far the courts would go

65. Subsection 677(1) of the Canada Shipping Act, for example, imposes a double test of reasonableness by providing that costs and expenses are recoverable "in respect of measures to prevent, repair, remedy or minimize oil pollution . . . to the extent that the measures taken and the costs and expenses are reasonable".

66. Section 1012(a)(1).

in recognizing a right of compensation for natural resource damage. Furthermore, legislators in Canada, in contrast to their American colleagues, have been reticent in defining those rights or creating new ones in legislation. Left to their own devices, it is reasonable to speculate that Canadian courts will adopt a conservative approach in awarding natural resource damages. While the directives and guidelines of the IOPC Fund do not have the force of law in Canada, it is possible that Canadian courts might give them some recognition because Canada as participant in the international scheme must abide by certain agreed upon norms.

Mention has already been made of the contingent valuation method for measurement of resource damage, a method which has been widely discussed in the United States. It is beyond the scope of this paper to comment on the debate on this subject in the United States, except to make the observation that clearly Canada will face problems in a transfrontier spill if this methodology is accepted in the United States and is firmly rejected by the IOPC Fund.

The 1990 Public Review Panel on Tanker Safety and Marine Spills Response Capability, set up by the Canadian government in the wake of the *Nestucca* and the *Exxon Valdez* incidents, recommended amendments to the Canada Shipping Act to allow compensation for environmental damage.[67] The Panel specifically endorsed recommendations of the Ontario Law Reform Commission with respect to the methods of assessing such damage, including the contingent valuation method. In the event of a transfrontier spill, where compensation is awarded in the United States for resource damage using that methodology under OPA 90, there will be heavy pressure in Canada to find a way to follow suit.[68]

V. SUMMARY AND CONCLUSIONS

The history of oil pollution legislation in Canada and the United States clearly demonstrates that the two countries are going in different directions with respect to the rules governing liability and compensation for oil pollution damage. After almost 20 years of going it alone, Canada has joined the international scheme; with the adoption of OPA 90, the United States has clearly opted for its own domestic scheme free from any international constraints.

The existence of two separate regimes in Canada and the United States is likely to cause problems in the case of transfrontier spills. In the first place, the costs of litigation will be higher because shipowners and their insurers must

67. See above, n. 51 at 99.

68. In the recent settlement of the *Nestucca* litigation, involving an oil spill that caused pollution damage on the west coast of Vancouver Island, the final settlement figure included sums for the purposes of "restoration of the environment", see United States District Court for the District of Oregon, Transcript of Settlement Proceedings, 20 May 1990, at 3. An important part of the evidence in that case in support of the claim for environmental damages by Canada and British Columbia was a contingent valuation study which, however, since the matter was settled, was never critically tested.

respond to claims in both jurisdictions without the possibility of consolidating claims.

Although Canada and the United States have a joint plan to respond to marine pollution incidents, it will be necessary to revisit this plan to ensure that authorities in both countries are not inhibited in their clean-up efforts because of differences in compensation schemes and accounting procedures between the US and Canada.

More significantly, the greater compensation available under OPA 90 compared with the Canada Shipping Act, as well as the different coverage, could bring pressure to bear on Canada to seek some accommodation with the United States. It is doubtful whether such accommodation would be compatible with continued Canadian participation in the international scheme.

In view of the magnitude of the oil trade to the United States, the absence of that country from the international scheme is preoccupying for all who believe that the most efficient system of liability and compensation is an international one operating under uniform rules. The claims procedure of the IOPC Fund has done much to achieve that uniformity. As long as an important market such as the United States remains outside the current international system, that system can never be truly complete. Furthermore, it encourages other nations to follow their own path—if the United States can do it, why cannot we?

At present, there is no evidence to suggest that attitudes in either Canada or the United States are about to change. Canada remains committed to the international scheme. Initial experience supports the conclusion that Canada's decision to make the international scheme the centerpiece of its domestic scheme was the right one. The *Rio Orinoco* incident, for example, was settled within 18 months of its occurrence in October 1990, at minimum cost because of virtually no court proceedings. This contrasts sharply with the *Nestucca* incident in December 1988 which took three and a half years of contentious court proceedings to settle.

As for the United States, the initial indications are that the dire predictions made by the opponents and critics of OPA 90, two years after its entry into force have not been realized, at least not yet. On the contrary, if anything, the initial findings suggest that the legislation has had some positive results[69] which, no doubt, proponents will use to support the continued unilateral stance of the United States.

Of course the liability provisions of OPA 90 remain largely untested.[70] Moreover, because of the specific protection of state legislation, the much sought after comprehensive legislation has not been achieved.

As the Petroleum Industry Research Foundation notes, it is too early to con-

69. Above, n. 43, at 59 and following.

70. Mark Yost above, n. 26, at 14/15, notes that there has only been one decision under OPA 90 which would not be of much precedential value.

clude that the positive effects of OPA 90 will continue. "Many issues raised by OPA 90 are still to be resolved."[71]

Two of these issues merit mention, namely, the regulations that are still outstanding on resource damage assessment and evidence of financial responsibility. With regard to the former, only when it is known how resource damage is to be evaluated, will it be clear how far the American regime departs from international norms as set out in the IOPC Fund practices and the 1984 Protocol to the Fund Convention.

With respect to evidence of financial responsibility, tanker owners are presently operating under regulations adopted under predecessor legislation. The crunch will come when new regulations, mandating access against insurers, are in force. Foreign tanker owners and their insurers will then have to show to what extent they are prepared to comply with the new regime.

From a Canadian perspective, the gap between the two regimes in terms of amount of compensation and coverage is of particular concern. While Canadian claims experience suggests that existing compensation under the Canada Shipping Act based on the international scheme has so far been adequate, a spill of catastrophic proportions may well change that viewpoint. This, in turn, could lead to a re-evaluation of Canadian participation in the international scheme. It would strengthen the hand of those who would argue that Canada should seek a continental, instead of an international solution to the problem of ship-source oil pollution.

71. Above, n. 43 at 74.

CHAPTER 11

THE UNITED STATES APPROACH

CHRISTOPHER B. KENDE*

I. INTRODUCTION

With the grounding of the *Torrey Canyon* off Seven Stones Reef, UK, in 1967, governmental authorities and the public at large became aware for the first time of the havoc which can be wreaked from a catastrophic marine pollution incident. The *Torrey Canyon* disaster created the impetus for an international compensation scheme for oil pollution liability, which you will hear about at this seminar, under two international conventions which have been ratified by most countries of the world excluding the United States. The *Amoco Cadiz* grounding off the coast of France in 1978 set off a second worldwide wave of protest over the problems of marine pollution and generated litigation, which is just now coming to a long and well deserved end after 14 years of legal wrangling.

Finally, in 1989 and 1990 there occurred a series of accidents in or near US waters which have now generated one of the most comprehensive and onerous Federal laws governing liability and compensation for oil pollution the world has ever known, the Oil Pollution Act of 1990 ("OPA"). Of course, the US had comprehensive legislation before OPA but it only covered cleanup costs incurred by state and Federal authorities. Under OPA, private parties are expressly authorized to bring actions against owners or operators or a special indemnification fund created under OPA for new categories of damages not previously recognized under Federal law. This paper will briefly describe the previous legislation in the area of oil pollution and then focus on the categories of damages created under OPA which may now be asserted by private parties as well as state and Federal authorities and native interests for damages caused by oil pollution.

II. PRE-OPA FEDERAL LEGISLATION

1. Miscellaneous Federal legislation

Prior to OPA, the primary Federal statute governing liability of vessel owners and operators for oil spills and other marine pollution was the Clean Water Act

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(CWA). In addition, there is much case law interpreting the CWA and outlining common law doctrines to establish liability and standards for compensation for damages caused by oil spills outside of any statutory regime. However, prior to discussing the CWA, several Federal statutes dealing with risks of marine pollution in specific circumstances deserve mention.

The Outer Continental Shelf Lands Act (OCSLA), 46 USC §§ 1331–1356, governs the activities of facilities on the outer continental shelf and vessels operating off-shore which transport oil from such facilities. OCSLA imposes strict liability on vessels and operators for clean-up expenses and damages incurred by the United States. Limits of liability are imposed and the limitations are unavailable in the event of willful misconduct or gross negligence or violations of certain safety regulations.

The Deepwater Port Act, 33 USC § 1501 *et seq.*, also imposes strict liability for clean-up costs and damages resulting from discharge of oil from a vessel operating in a safety zone surrounding a designated deep water port facility. Similar limits of liability are imposed which do not apply in the case of gross negligence or willful misconduct.

The Trans-Alaska Pipeline Authorization Act (TAPAA), 43 USC §§ 1651–1655, imposes strict liability of up to $100 million for clean-up costs and other damages sustained as a result of an oil spill from a vessel carrying oil that has been transported through the Trans-Alaska Pipeline. The Trans-Alaska Pipeline Fund, which is strictly liable to pay claims in excess of $14 million (the first $14 million being borne by the owner of the vessel), has now been superseded by the National Fund created by the new Oil Pollution Act, Under TAPAA, claims in excess of $100 million may apparently still be brought under any other available Federal or state law.

The Refuse Act, 33 USC § 407, probably the first marine pollution act the US has ever had, being part of the Rivers and Harbors Act of 1899, prohibits the dumping of refuse, including oil, into the navigable waters of the United States. The Act authorizes recovery by the United States for clean-up costs and damages without limitation and without regard to fault. Although the Federal Government has attempted to use the Refuse Act in order to avoid the Clean Water Act and its liability limits in an effort to recover full clean-up costs and damages, several courts have held that the remedies available against discharging vessels and third parties under the Clean Water Act have superseded all remedies existing under the Refuse Act. See, e.g. *United States* v. *M/V Big Sam*, 681 F.2d 432 (5th Cir. 1982); *United States* v. *Dixie Carriers, Inc.*, 627 F.2d 736 (5th Cir. 1980).

Other relevant Federal statutes include the Ocean Dumping Act, 33 USC § 1401 *et seq.*, which prohibits the dumping of material from a US vessel and the Act to prevent pollution from ships, 33 USC § 1901 *et seq*, enacted to implement the provisions of the International Convention for the Prevention of Pollution from Ships (MARPOL). Particularly, Annex V to MARPOL prohibits the dumping of plastics. Despite these extraordinarily complex and overlapping

Federal laws, until OPA, the Clean Water Act had been the provision most commonly applied to oil spills.

2. The CWA

The Clean Water Act provided for the recovery of damages to public natural resources arising from the release of oil and prohibited any discharge of oil or other hazardous substances into the navigable waters of the United States, adjoining shorelines, or contiguous zones (200 miles) "in such quantities as may be harmful" 33 USC § 1321(b)(3). A harmful discharge was defined by the so-called "sheen test" under which a harmful discharge is one in which a film or sheen upon or discoloration of the surface of the water occurs 40 CFR §§ 110.3–110.6. Although OPA now governs liability for oil spill damage, the CWA, its regulations and the caselaw interpreting it remain highly relevant to determining the extent of marine pollution liability.

Ever since the passage of the Refuse Act, liability for damages arising from marine pollution is based merely on causation, not fault. Thus, even non-negligent action by a discharging vessel will incur liability, at least for clean-up costs under legislation pre-dating OPA. *United States* v. *West of England Shipowners Mutual Protective and Indemnity Association*, 872 F.2d 1192 (5th Cir. 1989). In that case, the vessel was navigating outside the channel but within a navigable waterway in order to avoid down-bound traffic. The vessel struck an unmarked obstruction and as a result discharged oil into the river. Although it was stipulated that the vessel's actions were not negligent, the court determined that, because the choice of navigation was a contributing cause to the oil discharge, the vessel owner was responsible for the clean-up.

Under the CWA, the only defences which were available were that a discharge be caused solely by an act of God, act of war or act or omission of a third party without regard to whether any such act or omission was or was not negligent, or a combination of the foregoing. Further, under the CWA, the negligence of the United States was a defence. That defence is no longer available under OPA. Further, the act of a third party was only a partial defence and, unless the United States determined that the omission was due solely to the act of a third party, the owner or the operator was required to pay the maximum liability due, retaining a claim against the third party. If the negligence of the United States was claimed, the party was required to pay the clean-up in the first instance and sue the US in the Court of Claims for a refund.

Under the CWA, the reasonableness of governmental costs was not in issue. *United States* v. *Beatty, Inc.*, 401 F. Supp. 1040 (WD Ky 1975). Nor could a vessel owner offset its clean-up costs against those of the government. *Steuart Transportation Co.* v. *Allied Towing Corp.*, 596 F.2d 609 (4th Cir. 1979). Further, under relevant regulations, if the vessel owner either failed or refused to undertake the clean-up, the government would be entitled to do it pursuant to the National Contingency Plan and claim over against the owner anyway.

Therefore, common sense dictated that the only way to control costs was to carry out the clean-up oneself.

The CWA limits of liability for tank vessels were the greater of $14 million or $150 per gross ton. Limitation could be broken only if the owner or operator was found guilty of gross negligence or willful misconduct within its privity and knowledge. Several series of merely negligence acts could be held to constitute willful negligence or willful misconduct. *Tug Ocean Prince Inc.* v. *United States*, 584 F.2d 1151, 1163 (2d Cir. 1978), *cert. denied*, 440 US 959 (1979).

Significantly, under the CWA, and its successors, liability was imposed only for the costs of the clean-up and restoration or rehabilitation of natural resources claimed by Federal or state authorities. The measure of damages for replacement of resources was the reasonable costs of replacing them or mediating the damages. If damage resources were irreplaceable, the measure of damages would be the cost of acquiring replacement resources. See *Commonwealth of Puerto Rico* v. *SS. Zoe Colocotroni*, 628 F.2d 652 (1st Cir. 1980), *cert. denied*, 450 US 912 (1980).

It would be impossible to discuss natural resource damage issues without referring to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Although CERCLA does not apply to oil spills, the regulations promulgated thereunder were directly applicable to the CWA. The statute directed the Department of the Interior to promulgate regulations for assessing natural resource damages under both CERCLA and the CWA. Further, CERCLA specified that the damage assessment regulations had to "take into consideration factors including but not limited to replacement value and ability of the ecosystem or resource to recover", 42 USC § 9651(c)(2).

The Department of the Interior promulgated substantial regulations under CERCLA to assist in the assessment of natural resource damages. These regulations were challenged by several states and environmental groups who contended that they undervalued recoverable natural resource damages. In July 1989, four months after the *Exxon Valdez* oil spill, the Court of Appeals for the District of Columbia issued separate opinions in *Ohio* v. *United States Department of the Interior*, 880 F.2d 432 (DC Cir. 1989), and *Colorado* v. *United States* v. *Department of the Interior*, 880 F.2d 481 (DC Cir. 1989). Although extremely complex, the decisions are most significant for their invalidation of the "lessor of" rule governing the proper measure of natural resource damages.

The regulations in question define damages recoverable under CERCLA and the CWA as the "lesser of restoration or replacement cost or diminution of use values," 43 CFR § 1135(b)(2). However, because in most instances the loss use value would be less than the cost of restoration of natural resources, the practical effect of the regulations was a damages award too small to pay for the costs of restoration.

The court manifested the psychological impact which the *Exxon Valdez* oil spill must have had by using the hypothetical example of an oil spill killing a rookery of fur seals and destroying a sea life reserve. If the loss of use value of

the seals and the sea life habitat is measured under the regulations, it would constitute the "market value" of the fur seals pelts (approximately $15 each) and the selling price for land comparable in value to that which was destroyed. Assessing the damages under a restoration of value theory, however, would involve the cost of totally restoring the rookery and sea life habitat, obviously much higher. Under the regulations which were the subject of the litigation described above, although the loss of use value would be much lower than the cost of restoration, it would none the less be the only measure of damages allowable under the rule. The courts in *Ohio* and *Colorado* expressly rejected this cost driven measure of damages and held that Federal law "unambiguously mandates a distinct preference for using restoration costs as a measure of damages", 800 F.2d 844. the net impact of these decisions would be to increase significantly the value of claims for natural resource damages brought under OPA.

The appellate courts in *Ohio* and *Colorado* also considered regulations requiring the trustees under CERCLA to determine loss of use values by market price commanded by the resources on the open market. The court struck down this aspect of the regulations because it tended to establish an improper presumption in favour of market price and appraisal methodologies and against total restoration of the resource. Thus, as a result of these cases, market prices are not normally acceptable as the primary measure of the use of value of natural resources. Instead, the courts held that Congress intended damage assessment processes to capture fully all aspects of the loss including direct and indirect injury (concepts heretofore unknown in the maritime law). Thus, the Department of the Interior was instructed to consider a rule which would permit the taking into account of all reliably calculated use values. Although market valuation remained a factor to be considered, option and existence values, reflecting utilities derived by humans for a natural resource, were also to be included, 880 F.2d at 864.

Several portions of the regulations were remanded to the Department of the Interior which was directed to issue new regulations as expeditiously as possible. Recently the National Oceanographic and Atmospheric Administration published a status report concerning natural resource damages assessment regulations being developed under OPA, inviting written comments. Among the points under consideration by NOAA are trustee co-ordination, co-ordination with response agencies, co-ordination with the public, rules of the responsible party, pre-assessment phases, early resource protection and restoration actions, baseline determination and early sampling, co-ordination with economists and economic issues, ranges of assessment procedures, injury and pathway determination, restoration guidance and costs, co-ordination with legal counsel, co-ordination with state law and use of sums recovered, 57 FR 8964 (13 March 1992). New natural resource damage assessment procedures under CERCLA were promulgated recently at 43 CFR part 11.

Under the CWA, recovery for damage to the environment was limited to claims by government agencies for public resources. A private party was ordinarily not allowed to recover for natural resource damage. *Artesian Water Co.* v.

New Castle County, 659 F. Supp. 1269 (1987). OPA changed all this as discussed below.

Finally, the CWA required that owners and operators carry certificates of financial responsibility (COFRS), evidencing insurance to the maximum limits of liability under the statute and providing for consent to suit by insurers in the US for liabilities created under the CWA. Because the CWA only provided for strict liability for federal and state clean-up costs, the guarantee requirement of the COFRS did not appear to cause a problem to the P & I community.

III. THE OIL POLLUTION ACT OF 1990

1. Introduction

OPA was signed by the President on 18 August 1990. The statute amends many of the laws described above and, most significantly, expressly declines to preempt the states' right to pass laws imposing additional liability or requirements with respect to the discharge of oil or other pollution by oil and removal activities in connection with such discharge. Further, OPA does not affect the authority of any state to establish or continue a fund for compensation for oil pollution damage or to require any person to contribute to such fund.[1] Thus it would appear that the limitation provisions in OPA are not exclusive and that discharges of oil may be subject to unlimited liability to third parties (a concept heretofore unheard of in maritime law) for pollution damage proximately caused by the discharge.

2. General description

OPA contains nine separate titles. Title I contains general provisions regarding liability, defences, restoration of natural resources, recovery by foreign claimants and by responsible parties, contribution and indemnification agreements and establishes an Oil Spill Liability Trust Fund to be used for the payment of removal costs, the assessment of natural resource damages, clean-up costs of state authorities, certain claims by private parties and various other oil spill clean-up activities.

Title II contains amendments to many of the statutes described above including the Intervention on the High Seas Act, the Federal Water Pollution Control Act, the Deepwater Port Act and the Outer Continental Shelf Lands Act Amendments of 1978. With respect with the FWPCA, OPA supersedes § 311[2] which contains the limitation of liability provisions described above.

Title III contains a "sense of Congress" regarding international oil pollution prevention and removal. Essentially, this title is in lieu of ratification of the CLC and Fund Conventions.

1. OPA, 33 USC § 2718.
2. 33 USC § 1321.

The statute also contains numerous provisions regarding safety on board tankers, manning provisions and the requirement of double hulls (Title IV), as well as specific provisions regarding Prince William Sound in Alaska (Title V) and certain retroactive changes to the Trans-Alaska Pipeline Act briefly discussed below (Title VIII). In addition, Titles VI, VII and IX contain provisions relating to appropriations, oil pollution research and development and amendments to the Oil Spill Liability Trust Fund.

3. Highlights of major provisions regarding liability, damages and compensation under OPA

OPA imposes joint and several strict liability upon each "responsible party" with respect to a vessel or facility from which oil is discharged, or which poses a substantial threat of discharge, for removal costs and "damages" as later defined in the statute resulting from such discharge. The term "responsible party" includes owners, operators, and demise (bareboat) charterers of vessels, owners and operators of "facilities" (i.e., on or offshore oil facilities) and pipelines, and licensees of deep water ports. It does not include time charterers or cargo owners. "Removal costs" for which responsible parties are liable include costs incurred by the United States Government, a state or an Indian tribe for "removal actions" or "the restoration of natural resources" not inconsistent with the National Contingency Plan incurred under various subsections of § 311 of the CWA.[3] In addition, responsible parties are liable for removal costs incurred by any other person that are consistent with the National Contingency Plan.[4]

OPA further provides that responsible parties as defined above are liable for "damages" resulting from a discharge or substantial threat of a discharge. Recoverable damages include:

A. Damages occasioned by the loss of natural resources, including the reasonable costs of assessing the damage which shall be recoverable by a United States trustee, a state trustee, an Indian tribe trustee or a foreign trustee.
B. Damages for injury to or economic losses resulting from destruction of real or personal property.
C. Damages for loss of subsistence use of natural resources by a claimant who so uses the natural resources.
D. Damages equivalent to the net loss of taxes, royalties, rents, fees or net profit shares due to the injury, destruction or loss of real property, personal property or natural resources which shall be recoverable by the United States, a state or a political subdivision thereof.
E. Damages resulting from the loss of profits or impairment of earning

3. 33 USC § 1321.
4. OPA, 33 USC § 2702(b)(1).

capacity due to the injury, destruction or loss of real or personal property or natural resources, which shall be recoverable by any private party.

F. Damages for the net cost of providing increased or additional public services during or after removal activities recoverable by a state or political subdivision thereof.[5]

OPA goes into great detail regarding the responsible parties' liability for natural resource damages. In essence, the responsible party is liable to the United States Government, any state, Indian tribe or foreign country for injury to or destruction of all natural resources belonging to or managed by any of these entities. The measure of the damages is defined to include (1) the costs of restoring, rehabilitating or replacing or acquiring the equivalent of the damaged resources, (2) the diminution in value of those natural resources pending restoration plus (3) the reasonable cost of assessing those damages.[6] Thus, in addition to reinforcing the principles of the *Ohio* and the *Colorado* cases, the new legislation allows for recovery for damages suffered prior to restoration. The statute directs governmental agencies to promulgate regulations effectuating this directive within two years. This is what NOAA is attempting to accomplish in the publication referred to above. It is clear that the Federal court decisions in *Ohio* and *Colorado* are likely guide to the agencies in promulgating these regulations.

However, duplicative recovery for natural resource damages is expressly prohibited, thereby, hopefully, encouraging governmental entities and other trustees to consolidate efforts to assess and recover damages.

OPA also provides that a third party is subject to liability where the discharge or threat of discharge and the resulting removal cost and damages were caused solely by the act of such third party. However, the responsible party is still required to pay the United States and other claimants the cost of removal and damages claimed. It is then subrogated as a matter of law to all rights of the United States and claimants to recover such removal costs or damages from the third party. In other words, the owner or operator is required to pay in the first instance and then seek redress from the third party. Further, if the amounts cannot be recovered from the third party, the responsible party will have to bear the loss even if the third party were shown to be the sole cause of the damages. The third party is entitled to invoke the same limitation of liability provisions applicable to the owner or operator of the vessel or the facility.[7]

4. Defences to strict liability

Defences to liability are severely restricted and are limited to act of God, act of war or act or omission of a third party other than an employee, agent or

5. OPA, 33 USC § 2702(b).
6. Ibid. 33 USC § 2706(d).
7. Ibid. 33 USC § 2702(d)(ii).

contractor of the owner or operator of the vessel or facility.[8] However, in order to assert any of these defences, the responsible party must establish by a preponderance of the evidence that he exercised due care with respect to the oil concerned, took precautions against foreseeable acts or omissions of a third party and the foreseeable consequences of those acts or omissions. In addition, there is no liability as to a particular claimant if the claimant's gross negligence or willful misconduct caused the spill. However, none of the above defences apply if the responsible party fails or refuses (1) to report the incident as required by law if the party knows or has reason to know of the incident, (2) to provide all reasonable co-operation and assistance requested by a responsible official in connection with removal or (3) without sufficient cause, to comply with an order issued under the FWPCA § 311, regarding clean-up activities.

Notwithstanding the strict liability provisions of OPA, the statute provides for certain limitations of liability under limited circumstances. With various exceptions set forth below, the total liability of a responsible party for a tank vessel is not to exceed the greater of $1,200 per gross ton or $10 million for tank vessels of over three thousand tons and for tank vessels of less than three thousand tons the greater of $1,200 per ton or $2 million. With respect to vessels other than tank vessels, the limit is $600 per gross ton or $500,000 whichever is greater. Offshore facilities, except for deep water ports, have a liability limit of $75 million plus all removal costs. Onshore facilities and deep water ports have a limit of $350 million.[9] The liability limits described above do not apply if the incident was proximately caused by (1) gross negligence or willful misconduct or (2) the violation of an applicable federal safety, construction or operation regulation by the responsible party, an agent or employee of the responsible party or a person acting pursuant to a contractual relationship with the responsible party. In addition, the limitations will not apply if a responsible party fails or refuses to report an incident, to provide all reasonable co-operation and assistance requested by a responsible official or, without cause, fails to comply with an order issued under § 311 of the CWA.[10] The concept of "privity and knowledge", which previously existed in the CWA, has been eliminated from OPA. It is therefore unclear to what degree the liability limits will apply in many situations.

In addition, notwithstanding the limitations discussed above, all removal costs incurred by the United States or any State or local official or agency in connection with the discharge or threat of discharge from an outer continental shelf facility or a vessel carrying oil as cargo from such facility shall be borne by the owner or operator or vessel without limitation.[11] Finally, the limits of liability for onshore facilities may be adjusted to no more than $350 million and no less than $8 million by the President. The statute provides for a study of the safety of

8. Ibid. 33 USC § 2703(a).
9. Ibid. 33 USC § 2704(a)(4).
10. 33 USC § 1321.
11. OPA, 33 USC § 2704(c)(3).

deep water ports and a rule-making proceeding to lower the limits of liability if deep water ports are found to have less risk of environmental harm from use by oil tankers. The minimum liability for such facility is to be not less than $50 million and all limits of liability may be adjusted by the President every three years to reflect inflation.[12]

5. Jurisdiction and limitations

OPA provides for the promulgation of regulations which are subject to review by the Circuit Court of Appeals for the District of Columbia. Although states are empowered to hear claims for removal costs and damages under the act, the US District Courts have exclusive original jurisdiction for all controversies arising under OPA. Venue is set in the district in which the discharge or injury occurred or where the defendant resides or has his principal place of business.[13]

Under OPA, damage claims must be brought within three years after the date of the loss and discovery of the connection between the loss and the discharge or, for natural resource damages, the completion of the natural resource damages assessment conducted under § 1006.[14] Similarly, any actions for removal costs must be commenced within three years after completion of the removal action. In addition, actions for contribution must be brought within three years of the date of judgment in any action under the act for recovery of such cost or damages or the date of entry of a judicially approved settlement regarding such costs and damages. No action based on a right of subrogation may be brought more than three years after the payment of any claim to which the subrogation relates.[15]

OPA expressly recognizes the right of a state trial court to adjudicate claims for removal costs or damages as described in OPA and any final judgment of such court is deemed to be recognized valid and enforceable for all purposes of OPA.[16]

6. Foreign claimants

Under § 1007 of OPA, foreign claimants are entitled to recover from responsible parties for discharges of oil in or on the territorial sea, internal waters or adjacent shoreline of a foreign country if the discharge is from an onshore or offshore facility, a vessel on the navigable waters of the United States, a vessel carrying oil as cargo between two US ports or a tanker that received oil at a terminal of the Trans-Alaska Pipeline for transportation to a port in the United States. In addition, the foreign claimant must show that it has not otherwise been compensated and that recovery is authorized by a treaty or executive agreement between

12. Ibid. 33 USC § 2704(d).
13. Ibid. 33 USC § 2717(a)-(c).
14. Ibid. 33 USC § 2717(f)(1).
15. Ibid. 33 USC § 2717(f)(4).
16. Ibid. 33 USC § 2717(c).

the US and the claimant's country or that the Secretary of State has certified that the claimant's country provides a comparable remedy for US claimants. The prerequisites do not apply to a Canadian resident in the case of a discharge from a vessel under the Trans-Alaska Pipeline Authorization Act.

7. The Oil Spill Liability Trust Fund ("Fund")

A new special trust fund is established by § 9509 of the Internal Revenue Code of 1986 and, under OPA, is available for the payment of various claims and expenses incurred in connection with discharges of oil, including (1) the payment of removal costs including the costs of monitoring removal actions determined by the President to be consistent with the National Contingency Plan both by Federal and state authorities, (2) the payment of costs incurred by Federal, state or Indian tribe trustees in carrying out their damage assessment functions for the assessing of natural resource damages and the development of plans for restoration, rehabilitation, replacement or acquisition of equivalent damaged resources, (3) the payment of removal costs determined by the President to be consistent with the National Contingency Plan (including costs incurred as a result of a substantial threat of a discharge of oil), (4) the payment of claims in accordance with § 1013 for uncompensated removal costs or uncompensated damages as defined in OPA and (5) the payment of federal administrative operations, personnel costs and expenses reasonably necessary as incidental to the implementations of the Act although such costs are limited to a maximum $25 million for each fiscal year for Coast Guard operating expenses and not more than $30 million through fiscal year 1992 for the establishment of a national response system under the CWA.[17]

Any claim paid under the Fund results in the Fund being subrogated to the rights of the payee to recover from a responsible party.

Any claims for removal costs must be presented within six years of the date of completion of oil removal actions. Any claims for "damages" as defined above must be presented within three years after the date upon which the injury and its connection with the discharge were reasonably discoverable.

Further, OPA provides a limitation to the total amount available from the Fund for one incident of $1 billion and, within that overall limit, restricts damages for injury to natural resources to $500 million per incident.[18]

Section 1013 of OPA sets out claims procedures. Normally, claims must first be presented to the responsible party or his guarantor (i.e. his insurer). Claims may be presented directly to the Fund (a) where the Secretary had advertised or otherwise notified claimants, (b) by a responsible party, (c) by the Governor of a state for removal costs incurred by that state or, (d) by a US claimant for "damages" as defined in the statute if the discharge is from a foreign offshore unit. If a claim is presented to the responsible party or guarantor and each

17. Ibid. USC 33 § 2712(a).
18. Ibid. 26 USC § 9509.

person to whom the claim is presented denies liability or the claim is not settled by any person within 90 days after presentment, the claimant may elect to commence an action in court against the responsible party or the guarantor or to present a claim to the Fund. In other words, the claimant has the option of pursuing the Fund or suing the responsible party in Federal court.[19]

If a claim is presented in accordance with § 1013 and full and adequate compensation is unavailable, a claim for the uncompensated damage may also be presented to the Fund. An interim rule with request for comments regarding procedures for the filing of claims with this Fund was published by the Coast Guard on 12 August 1992. (57 FR 36314.)

8. Financial responsibility

One of the most controversial aspects of the statute is the financial responsibility requirements. Section 1016 of OPA revises the financial responsibility requirements of the CWA. The Act requires evidence of financial responsibility sufficient to meet the new maximum liability limits for each vessel or facility and imposes civil sanctions for non-compliance. The provisions apply to any responsible party for any vessel of over 300 gross tons (except a non self-propelled vessel that does not carry oil as cargo) using any place subject to the jurisdiction of the United States or any vessel using the waters of the exclusive economic zone to trans-ship or lighter oil destined for the United States. The act requires that such party establish and maintain financial responsibility sufficient to meet the maximum amount of liability to which the party could be subject under § 1004 of the Act. If the responsible party owns or operates more than one vessel, evidence of financial responsibility need be established only to meet the amount of the maximum liability applicable to the vessel having the greatest maximum liability.

Sanctions may be imposed for not fulfilling the requirements of this section, including the withholding of clearance, the denying of entry or detaining of a vessel, the seizure of the vessel and certain fines and other penalties.[20] Financial security requirements are also imposed on offshore facilities and deep water ports.

Financial responsibility may be established by a number of methods approved by the Secretary or the President including evidence of insurance, security bonds, guarantee, letter of credit, qualification as a self-insurer or other evidence of financial responsibility.[21] Significantly, OPA provides that any liability established under the Act may be asserted directly against a guarantor or insurer providing evidence of financial responsibility. However, any defences available to the responsible party are also available to the guarantor and the guarantor may also invoke the defence that the incident was caused by the willful

19. Ibid. 33 USC § 2713(c).
20. Ibid. 33 USC § 2716(b).
21. Ibid. 33 USC § 2716(e).

misconduct of the responsible party. The guarantor's liability is limited however to the amount of financial responsibility it has provided. Currently, P & I clubs are refusing to sign new COFRS in protest over these guarantee provisions and based upon the concern of being opened up to suits in the United States by third parties for environmental damages (including natural resource damages) which some may rightly consider speculative at best. A stalemate has developed between the P & I clubs and the United States Coast Guard, acknowledged by the Coast Guard in its proposed regulations on certificates for financial responsibility. This stalemate currently shows no sign or resolution.

9. Non-pre-emption provision

This section, also one of the most controversial, specifically disclaims pre-emption of the authority of any state or political subdivision from imposing additional liability or requirements with respect to (a) the discharge of oil or other pollution by oil within such state and (b) any removal activities in connection with such a discharge. Further, OPA is not to affect or be construed or be interpreted to affect or modify in any way the obligation or liabilities of any person under the Solid Waste Disposal Act[22] or state law, including common law.

In addition, the section provides that the Limitation of Liability Act[23] is inapplicable to liability for oil spills. Owners and operators will therefore be liable not only to Federal standards adopted under OPA but also to state liability standards. For example, the State of Alaska imposes strict unlimited liability on the discharger and the owner of the oil for discharges of oil in the state's waters.[24]

In addition, OPA expressly recognizes the preservation of any state funds, the purpose of which is to pay for costs or damages arising out of a resulting oil pollution or the threat of pollution or to require any person to contribute to such fund.[25]

These provisions may well allow states to regulate vessel pollution equipment or even design, construction, equipment and manning standards for vessels. Certain states, such as California, have already enacted legislation which includes provisions for state enforcement of the Federal Act requirements for double hulls and special navigation equipment. Thus, federal uniformity in the area of regulation of vessels has been seriously eroded by OPA.

Finally, this section states to enforce the financial responsibility requirements imposed under § 1016. Thus, a state may inspect vessels and facilities, require the display of evidence of financial responsibility and impose sanctions for non compliance.

22. 42 USC §§ 6901–6992k.
23. 43 USC §§ 181–195.
24. Alaska Stat. § 46.03.822–828.
25. OPA, 33 USC § 2718(b).

10. Pollution prevention and removal provisions

OPA contains various sections directed to preventing pollution and removing it. The measures set forth by OPA include requiring that individuals applying for licences in the merchant marine provide information regarding their driving records as well as mandatory drug and alcohol testing. It includes requirements for manning, training, qualification and watch-keeping standards both domestically and for a foreign country that issues documentation for tank vessels operating in the Exclusive Economic Zone. Minimum standards for manning a vessel are also provided as well as requirements for double hulls for tank vessels navigating in US waters.

OPA has also changed requirements with respects to Federal authority over removal and response actions making the federalization of removal actions mandatory where a discharge is of the size or a nature to pose a substantial threat to the public health or welfare. It also contains provisions for the promulgation of a new national contingency plan as well as requirements that tank vessels develop specific contingency plans the contents of which have recently been the subject of a proposed regulation discussed further below.

Finally, OPA contains severe civil and criminal penalties for unauthorized discharge, including penalties running as high $25,000 per day or amounts of up to three times the cost incurred by Federal or state authorities in cleaning up and removing oil.

In sum, OPA is an extremely complex and revolutionary piece of legislation. Previous Federal or oil pollution regimes have been drastically altered to provide for increased Federal and state involvement in almost every aspect of oil pollution prevention, removal and liability. For the first time, a fund has been created to compensate private victims of oil spills and ensure that funds are available for removal both on the Federal and state levels. The strict liability of owners and operators of vessels has been increased dramatically and insurance requirements have been revised upward.

IV. IMPACT OF OPA ON THE SETTLED DOCTRINE OF ROBINS DRYDOCK

The significance of the comprehensive list of recoverable damages listed above is that it overrules a 70 year-old doctrine denying recovery for purely economic loss resulting from tortious conduct in maritime cases. In fact, OPA more or less abrogates a basic legal principle which originated in English courts during the 19th century. The previous common law rule had denied a plaintiff recovery for economic loss if that loss did not result from physical damage to property in which he had proprietary or ownership interest. As the US Supreme Court noted in 1927 "no authority need be cited to show that, as a general rule, at least, a tort to the person or property of one man does not make the tortfeasor

liable to another merely because the injured person was under a contract with that other unknown to the doer of the wrong", *Robins Drydock* v. *Flint*, 275 U.S. 303 (1927). This principle and particularly its application to environmental damages was recently affirmed in *State of Louisiana* v. *M/V Testbank*, 752 F.2d 1019 (5th Cir. 1985). Like the US Supreme Court, the *Testbank* court held that imposing liability for the remote, unforeseeable consequences of negligence is excessive. It refused to abrogate the "bright line rule" precluding recovery for economic losses absent physical injury to property either owned by the claimant or in which the claimant has an ownership interest. An exception to this rule has been recognized with regard to claims of commercial fishermen who have been held to have a property interest in the fishing resource. See *Union Oil Company* v. *Oppen*, 501 F.2d 558 (9th Cir. 1974).

Several recent decisions have questioned the applicability of the *Robins Drydock* rule to litigation under TAPAA. In a recent case, *Slaven* v. *BP America*, No. CV 90–0722, C.D. Cal. (11 February 1992), the district court specifically held that the *Robins Drydock* physical injury requirement did not apply to claims brought under TAPAA which, instead, incorporated common law proximate cause principles. The court further held that the *Robins* rule was not merely a feature of the common law but, instead, a "bright line rule" which was not a necessary component of the proximate cause concept. A similar result was reached in two other recent decisions, *In Re Exxon Valdez*, No. 889–095 (D. Alaska 8 February 1991) and *In Re Glacier Bay*, 746 F. Supp. 1379 (D. Alaska), *affirmed*, 944 F.2d 577 (9th Cir. 1981). Ironically, the TAPAA Fund itself is taking the position in connection with the adjudication claims brought before it in the *Exxon Valdez* litigation that the *Robins Drydock* rule does apply, at least in part, to preclude recovery for economic losses to real property interests in the absence of a showing that the property in question was physically impacted by the spill.

Under OPA, however, which, it must be recalled, was passed after the *Exxon Valdez* disaster, it is now safe to assume that remote parties with no direct interest in damaged property may properly recover from vessel owners, operators or other responsible persons for economic losses in the absence of a showing of impact to property. Clearly, under the language of the statute itself, a claimant is now entitled to recover for lost profits or lost wages due to the injury or destruction of natural resources. For example, a resort owner whose beaches have not been spoiled in any way can nonetheless recover for lost profit resulting from an oil spill if causation can be established. Restaurant owners whose source of shellfish have been cut off by an oil spill can also sue for and recover lost profits, again assuming causation can be established. Further, losses for diminution in tourism, loss of business, loss of image of the damaged area may well all result in recoverable losses under OPA, considering the definitions of damages cited above. Losses may include injury to or economic loss resulting from destruction of real or personal property, use of natural resources for subsistence, net losses of taxes, royalties, rents, fees, losses of profits, impairment of earning capacity

as well as the net costs of providing increased or additional or public services by municipalities during and after removal activities.

If the spill involves closure of a congested water way, the delayed vessels, terminals and other users may also have claims for economic losses in direct contravention of the *Robins Drydock* principle. OPA appears also to reduce the effectiveness of the defence of contributory negligence. If a claimant fails to take steps to reduce or mitigate his damage the responsible party must prove the damage was "caused by the gross negligence or willful misconduct of the claimant", § 1003(b). The responsible party must pay for *all* provable damages. A literal interpretation of the legislation therefore appears to allow any party economically affected by an oil spill to seek recovery. All that need be shown is a direct or proximate cause or link between the spill and the loss.

It should also be noted that the limitation of liability provisions of OPA expressly exclude the right to limit for state law claims. The law provides:

> Nothing in this Act or the Act of March 3, 1851 (the Limitation of Liability Act) shall affect or be construed or interpreted as preempting the authority of any state or political subdivision thereof from imposing any additional liability or requirements with respect to the discharge of oil or other pollution by oil within such state.

Under § 1018(a), a vessel owner may no longer rely on the Limitation of Liability Act, 46 USC § 183 *et seq*, where an owner could otherwise limit his liability to the value of his interest in the vessel plus pending freight. Not only is an owner now exposed to potentially unlimited liability for any damage which has a direct causative link between the spill and the loss, but the statute provides that state liability schemes, which may be in addition to the Federal scheme, may not be subject to limitation either under OPA or the Limitation Act of 1851. Almost every coastal state has its own pollution law and many are stricter than Federal law. With no Federal preemption, it may well be that the state and Federal statutory schemes will create more liability than the resources to meet it.

V. GENERAL CONCLUSION

It is clear from the above that the United States continues to buck the international trend toward a unified, coherent and comprehensive international compensation scheme for oil pollution damages. In addition to the ongoing controversy regarding COFRS, OPA has spawned several other major immediate problems for the shipping industry. For example, the proposed regulation on vessel contingency plans itself recognizes that these plans will cost the industry in the range of $1.7 billion between 1993 and 2015. Many industry sources consider that the cost of vessel contingency plans will be significantly higher.

As concerns the continuing controversy regarding natural resource damage assessment regulations, NOAA has recently named a panel to study contingency valuation methodologies (CVM) which can frequently lead to astronomically high damage assessments. The status report promulgated by NOAA and described

above expressly refrains from rejecting *any* methodology for the assessment of natural damages, including CVM. Such a position will not simplify the current standoff between the P & I clubs and the Coast Guard regarding COFRS.

Although still in its infancy, OPA has dramatically affected the cost of carrying petroleum products and created tremendous problems, particularly for foreign carriers who may be unable to obtain insurance given the current position of the P & I clubs. There has been much talk in the United States of the so called "Trainwreck Scenario" whereby foreign imports of oil to the United States would grind to a halt the day the Coast Guard issued its final regulation regarding COFRS and foreign owners were either unable or unwilling to comply. There is some talk of legislative change. However, at present, the Coast Guard is of the view that the statute mandates the requirement of COFRS providing for guarantees by insurers as described above. As a result OPA is likely to have a severely detrimental effect on the ability of foreign carriers to obtain insurance.

Further, a comparable experience under TAPAA in the *Exxon Valdez* litigation suggests that rapid and fair compensation may not be forthcoming under OPA, given the complexity of the claims procedures, intricacy of the regulations and inevitable litigiousness of claimants. Whether legislated or regulatory changes may be forthcoming given the significant impact the statute has had on the transportation of petroleum products remains to be seen.

Clearly, complex, *Amoco Cadiz* type litigation is not a solution either. It was the hope of many in the US maritime community that Congress would adopt comprehensive exclusive Federal legislation in the marine pollution area. OPA has proved to be a disappointment both domestically and internationally by at the same time failing to pre-empt state laws and expressly declining to ratify the international compensation scheme. International problems require international solutions. Thus far, the United States has chosen to take its own path.

CHAPTER 12

THE UNDERWRITING OF OIL POLLUTION RISKS

N. J. COLTON*

This paper addresses the underwriting of oil pollution in the current world market. As will have been seen from newspaper coverage in recent years, Lloyd's, which is traditionally the epi-centre of the world marine insurance market, has been having some difficulties of its own and the difficulties of London may well reflect on the difficulties of underwriting oil pollution.

My brief is to provide sufficient information about the position in the market in respect of cover available for pollution damage; the handling of US liabilities (if any); the further developments in the light of new liabilities (HNS); and the relation between the various sectors of the market by way of the distribution of the financial risk between the various parties.

I. THE ACCEPTANCE OF RISK

Let us first consider the nature of current tanker tonnage in particular. I should point out that obviously, underwriting oil pollution primarily focuses on tankers because they represent the greatest risk.

According to the latest available records concerning tanker tonnage/over 10,000 dwt, there are approximately 266 million dead weight tons of tanker tonnage in the world of which about nine million is currently laid-up. So far as new building orders are concerned there were 20 million dwt contracted for delivery during 1992, 16 million during 1993 and 10 million during 1994. These simple figures alone demonstrate the ageing of tanker tonnage and the lack of future shipbuilding. In the tanker market at the moment, freight rates have dropped by 65 per cent. since 1991, secondhand prices have fallen by nearly 20 per cent. and new building prices have remained static. Those three reasons alone prevent any serious newbuilding programmes for tankers at the moment.

Thus, the first consideration in the acceptance of a risk is that the risk itself, in terms of the carrying vessels, is getting more hazardous as the vessels get older. The principal avenue for Market Underwriters to insure oil pollution risks is by way of reinsurance via the P & I Clubs. The Clubs have survey policies. Hull underwriters also have surveys on older vessels. However,

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underwriters who underwrite oil pollution risks have no direct control once a vessel is accepted in a P & I Club (and most are); the risk is on the reinsurance contract. No doubt there are a number of managements which as hull underwriters we would not accept, but where as oil pollution underwriters we do not really have a choice.

As I mentioned above, cargoes themselves are less of a risk and dry cargoes even less however a collision caused by a dry cargo vessel with a tanker could result in a major oil pollution incident.

Having dealt with the major areas one ought also to touch upon the other areas from which oil pollution risks are routinely insured.

(i) American inland craft where the scope of the Water Quality Improvement Act applies. Underwriters principally there reinsure the WQIS (the Water Quality Improve Syndicate) or write in excess of the cover given by that syndicate.

(ii) Inland craft in Europe. These vessels are commonly insured either through P & I Club specialist classes or sometimes in package polices in the market.

II. THE ACCUMULATION OF RISK

I am sure many, if not most of you, are aware of the structure of the P & I Clubs' reinsurances. However, for the purposes of what I want to say to you it is sufficient to say that at present there is a primary US$500 million limit for oil pollution excess of the P & I Clubs' individual retentions and pool. In addition to the $500 million layer which the markets write by way of a reinsurance of the P & I Clubs, there is a separate layer for US$200 million excess of US$500 million which is offered to all club members, but in principle it is only taken up by those reflecting the highest risk, namely tankers and specifically tankers trading to the United States.

These P & I Club reinsurances and the specific layer which sits excess of that provide unlimited free reinstatements of the policy thus there is no limit to the number of US$700 million claims that could theoretically be collected from Underwriters.

In excess of US$700 million there is a certain amount of capacity available, normally on a facultative basis. I believe, although it is never entirely clear, that some major US fleets have US$1 billion of pollution cover available to them.

Further accumulating with those risks are the mortgagees' "interest additional perils" pollution policies. These are policies taken out by banks to protect their mortgaged assets. The fear is that the mortgaged vessel might be confiscated following a pollution incident. Pure pollution acts specifically provide for this. The banks now routinely insure this risk. However, in underwriting terms it is simply an accumulating risk with the underlying oil pollution. The same incident is likely to cause a claim on both policies.

More sophisticated passive investors also buy similar insurance where they have a shareholding in a particular vessel.

It has not yet been tested who might be a responsible party under the Oil Pollution Act, but tanker charterers are routinely purchasing cover in case they might be found to be so.

III. THE SPREAD OF RISK

1. Who writes it?

I think I can answer this question in these very simple terms. If it was not for the London insurance market, worldwide oil pollution could not be insured on a commercial basis. That is not to say that the American Government might not themselves decide to "pick up the tab". However in normal commercial terms the London market overwhelms the rest of the world, indeed the figures set out the situation far more eloquently than I could do. The P & I Club Reinsurance Contract—that is to say the International Group of P & I Clubs—on which some 90 per cent. of the world's tankers are insured is placed worldwide. I think it would not be flattering the brokers if I suggested that they approached in 1992 every known marine insurer in the world whose security was acceptable. The first 500 million dollar placement which I referred to earlier was not completed. The total placement was 94.1517 per cent. In other words that percentage of 500 million was placed. The actual split of insurers is as follows:

67.545%	Lloyd's of London,
21.135%	the Institute of London Underwriters,
2.4317%	in the United States Market,
1.3%	in France, Belgium and Switzerland,
1.19%	in Germany,
0.3%	in Japan, and bearing in mind where we are, finally
0.25%	in Italy.

I do not know whether it is foolhardy or not but as I prepare this paper I realize that my own syndicate's participation is greater than that of all the insurance companies in the United States of America.

On the excess layer US$200 million excess US$500 million, which I have already spoken about there is 100 per cent. placement. Of this, 78.4261 per cent. is placed in Lloyd's, 7.3489 per cent. in the Institute of London Underwriters and 14.225 per cent. in the United States. As I said before if you remove the Lloyd's or London involvement, what would be left of world shipping? The oil companies, in particular, in an attempt to increase capacity and the amount of insurance that they have available for this risk—you remember that I said that a number of them have placed up to a billion dollars—have placed cover in every

available market principally in the industry mutuals, for example ACE, EXCEL, OCIL, and further into the Lloyd's non-marine market where this is a $100 million cover which is part of the ACE placement. Thus you can see that the world's underwriters are not very keen on writing oil pollution business.

2. Who reinsures it?

The answer to that question is almost as short as the question. More and more is run net of reinsurance. Most companies and Lloyd's syndicates who specialize in reinsurance rather than direct insurance are prepared to offer some measure of reinsurance. However because of the involvement of the industry mutuals, the reinsurances which those mutuals have themselves taken out in Lloyd's this year has excluded any cover for the oil pollution risks.

It is extremely important to note that reinsurance that is available is limited in amount and in reinstatement. Thus the reinsurance might pay for the first and possibly the second oil pollution loss, but thereafter a company or syndicate writing the insurance would almost certainly be unprotected.

IV. IS IT INSURANCE?

The way that oil pollution claims seem to have developed and certainly in view of the Oil Pollution Act in the United States it will now appear that there are virtually no defences to an oil pollution claim. The policy may nominally be a policy of indemnity, but there is absolute liability and really if it is insurance it is insurance on a open cheque book basis and once there has been an incident we are almost bound to pay up. The potential provisions of the HNS Convention would not appear dramatically to differ from those terms or certainly to make it any easier for insurers to defend a claim.

On the question of limitation of liability, as state liability laws are not pre-empted by the Oil Pollution Act, there seems to be something of a free-for-all going on between the various States as to who can have the most stringent terms. In other more enlightened regimes where limitation does apply the potential has already been examined for some form of social responsibility insurance coming in excess of such limitation figures. This is routinely done for gas carriers going into Japan; approaches have been made to the Market in a effort to place "social responsibility" cover in the event of a major oil pollution incident where limitation applied.

"Social responsibility" is a phrase designed in effect to offer cover where the owner would like to pay more than his limitation figure in order to keep the port authorities or whoever content simply so as to assist his future trading operations. I believe there has been some resistance to this form of cover but it is always impossible to know precisely who has written what risk in the market.

V. WHAT IS THE COST?

The basic cost of the oil pollution content in the first layer of the P & I Clubs' reinsurances is not broken out. However, suffice it to say that the contract price in 1992 was approximately three times that which was paid during 1991. The reasons for this are the perceived increase in risk and the known lack of available reinsurance. It is worth repeating that even at this price even the first layer of the contract could not be finished.

Excess of $500 million there is a complicated scale of charges principally depending on the number of calls which a vessel may make to the USA. The cumulative cost is probably a 30 per cent. increase of the price paid in 1991. Tankers worldwide who buy this contract probably pay altogether about $75 million for the cover. This is against unlimited cover of $200 million for any one loss. It looks cheap.

Excess of $700 million as I have already explained though is very limited capacity. It tends to be placed on a facultative basis and is extremely expensive. This is simply because at this level everyone is writing a net account, that is to say net of any reinsurance, and therefore will only do so against a lot of premium. The general rules of insurance do not apply in these cases. The higher layers tend to pay more than the lower layers because the risk is perceived as being much the same and the capacity gets shorter and shorter the higher you go.

VI. WHAT IS THE AVAILABLE CAPACITY?

The present capacity is artificial. There is not US$1 billion of cover available in real terms. The true measure of what can be placed is how much can be placed, for example, on a risk where there is no reinsurance—nuclear risks are the best possible example. I believe that some $300 million of cover can be placed there on a worldwide basis, but peculiarly Underwriters perceive unclear risks as being rather less hazardous because they are certainly better regulated than is the risk of oil pollution from tankers. The matter becomes quite close to home because if you remove Lloyd's from the equation what is the result? Either trade is completely stifled or the governments pay for their own clean-ups.

VII. IS THERE A FUTURE FOR THESE CLASSES OF UNDERWRITING?

I believe that the short answer is yes, there is, it is entirely a function of price. There will always be underwriters who are prepared to take a view on a particular risk provided the price is adequate. As I have already explained selectivity is not really available at the lowest levels, however on the upper levels it is entirely

possible for an underwriter to pick and choose between managements when he is providing oil pollution cover. And on that basis I believe that the oil pollution risks that are presently being covered will continue to be covered in the London market and elsewhere. The capacity of the London market is bound to shrink in 1993 and thus I believe that any placement of this sort will be even more difficult than it has been during 1992.

CHAPTER 13

CHARTERER'S POINT OF VIEW

ROBERT O. PHILLIPS*

I. INTRODUCTION

1. Shipowners and charterers

A brief review of exactly what entities are being referred to by the terms shipowner and, particularly, charterer, and what kinds of chartering activity are prevalent today should serve as a useful point of departure in considering the subject of marine pollution liability from the charterers' point of view.

On the shipowning side, independent shipowners have historically been the major owners of tanker tonnage, with oil companies also owning a significant amount of tonnage. The same is true today except that since the latter part of the 1970s the proportion of tonnage owned by major oil companies has dropped from 20 per cent. to about 13 per cent. and oil producing nations have increased their percentage of ownership from three per cent. in the late 1970s to approximately 15 per cent. today. While the independent tanker fleet has proportionally reduced in size over the past 15 years it still constitutes more than 50 per cent. of tanker tonnage.[1]

At the end of the 1970s oil companies were the predominant charterers of tankers and engaged in a mix of bareboat, time and voyage charters such that voyage chartering accounted for about 25 per cent. of all ocean-borne oil movements. By the end of the 1980s more than 50 per cent. of ocean-borne oil movements were made under voyage charters. During the 1980s, while oil companies remained predominant as charterers, the volume of oil shipped by oil traders as spot charterers increased from two per cent. to a peack of approximately 30 per cent. In the past few years trading activity has declined and oil companies, along with oil producing nations which ship their own oil, predominate as charterers.[2]

For purposes of this paper, the term shipowner refers to independent owners. Likewise, the term charterer will essentially refer to oil company charterers but it should be recognized that the view of a particular charterer may be impacted

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1. Petroleum Industry Research Foundation, Inc., *Transporting U.S. Oil Imports: The Impact of Oil Spill Legislation on the Tanker Market*, p. 3, June 1992.

2. Ibid.

more or less by the extent of its shipowning interests and other factors. It follows that a truly uniform charterers' view would probably be impossible to put forward and the views set out below range from consensus to representative. For ease of reference the term charterer as used herein is intended to encompass owners of cargo carried aboard a vessel where the vessel is not chartered by the cargo owner.

2. Background

While there is sharp disagreement between owners and charterers on certain issues relating to marine pollution liability, there is also a broad commonality of interest on both sides to ensure that:

(1) the possibility of oil spills resulting from vessel operation is minimized;
(2) victims of oil pollution are adequately compensated for their losses; and
(3) oil spilled from a vessel is removed from the water and shorelines in a prompt and efficient fashion.

Shipowners and charterers both recognized soon after the *Torrey Canyon* casualty of some 25 years ago that liablity and operational safety issues should be dealt with uniformly, on an international basis and not be left for determination by nations and national sub-divisions which could set varying and potentially unreasonable standards with which owners and charterers alike would have to contend on a voyage-by-voyage basis.

With respect to liability for marine pollution, owners and charterers both came to recognize that implementation of the CLC/Fund Convention regime[3] would establish a viable standard for oil spill removal and compensation of victims. Owners and charterers worked to develop the TOVALOP/CRISTAL plans[4] which by making monies voluntarily available for oil-spill removal and compensation of victims were to serve as a bridge until the two Conventions were in force throughout the world.

During the 1970s and into the 1980s, while the CLC and to a lesser extent the Fund Convention were being ratified by most of the world's major trading and shipping nations, the United States declined ratification principally because of concern regarding adequacy of compensation. By the early 1980s, owners and charterers, both continuing to support ratification of the Conventions, generally favoured an increase of total compensation to be provided by the Conventions but began to clearly diverge with respect to the relative burden each party should bear. During this time another central issue was under debate in the United States: What should be the role each of the individual states of the

3. International Convention on Civil Liability for Oil Pollution Damage, 1969 (CLC 1969). International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971 (FC 1971).

4. Tanker Owners Voluntary Agreement Concerning Liability for Oil Pollution, 1969 (TOVALOP 1969). Contract Regarding a Supplement to Tanker Liability for Oil Pollution, 1971 (CRISTAL 1971).

United States with respect to marine pollution liability? Should there be a single, national, comprehensive compensation system in which individual states of the United States would be pre-empted from having any role or should there be a national law which would allow individual states to act freely in the marine pollution arena? Favouring an international approach, owners and charterers together strongly supported a strong pre-emption provision which would create a single compensation system in the United States, one which would fit well with the CLC/Fund Conventions when ratified by the United States. After signing of the 1984 Protocols[5] (which increase available compensation) at the Diplomatic Conference held that year, the United States continued to refrain from becoming a party to the international regime because of continuing reservations regarding adequacy of total compensation and an impasse with respect to the pre-emption issue.

In 1987 TOVALOP and CRISTAL[6] were modified to reflect the Protocols and what governments had not yet put in place by Convention shipowners and charterers effectively implemented commercially. While there were continuing reservations among charterers that the amount of shipowner liability was inadequate, there was also a sense that the voluntary plans were working well and could be the basis upon which marine pollution liabilities would be borne for the foreseeable future without the necessity of government involvement. This situation changed dramatically with the grounding of the *Exxon Valdez* in Prince William Sound, Alaska in March 1989. The following year the United States' Oil Pollution Act of 1990 (OPA 90),[7] which rejects pre-emption of an individual state's role in marine pollution and which increases dramatically both shipowner liability and cargo owner supplemental funding obligations, was enacted.

As a result of post-*Exxon Valdez* developments, charterers as well as most other observers, view the prospects for a unified worldwide approach to marine pollution liability as essentially gone. At present, OPA 90 and the original CLC/Fund regime with its low limits of liability co-exist with efforts being undertaken through a Diplomatic Conference to revise the Protocols entry into force provisions, now unavailable because of US non-participation, to enable them to come into force at least in present CLC/Fund countries within the next few years.[8]

Charterers view reduction of the possiblity of operational spills as an integral part of the marine pollution liability issue. Much of the effort designed to reduce the possibility of operational spills can be said to have been directed toward raising standards of vessel operation and removing from trade what has become

5. International Convention on Civil Liability for Oil Pollution, 1984 (CLC 1984). International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1984 (FC 1984).

6. Supplement to Tanker Owners Voluntary Agreement Concerning Liability for Oil Pollution, 1987 (TOVALOP 1987). Contract Regarding a Supplement to Tanker Liability for Oil Pollution, 1987 (CRISTAL 1987).

7. The Oil Pollution Act of 1990, 33 USC § 2701, *et seq.*

8. See preface, p. vii.

known as the substandard ship. Protracted periods of low freight rates and oversupply of tankers have led some owners to utilize economies of operation which render their vessels from a practical point of view not of a standard suitable for chartering. More needs to be done, however, and charterers have formed some clear views as to exactly what is required. A number of conventions[9] intended to improve operational safety have come into force and these provide a useful basis for reducing trading by sub-standard ships.

Given this gackground, there follows an examination of charterers' views towards liability for marine pollution, limitation of shipowners' liability, scope of damages, and financial responsibility in the light of both the CLC/Fund Conventions and OPA 90. Scope of damages and financial responsibility are two areas where in the United States there is much current active debate over implementation of OPA legislative mandates. The financial responsibility issue also offers a good example of how, in charterers' view, OPA's failure to pre-empt state pollution laws has permitted state intervention which effectively interferes with otherwise economically supportable commercial opportunities. Also to be addressed is charterers' view concerning what charterers, owners and others engaged in oil tanker activities are or should be doing regarding tanker standards.

II. LIABILITY AND LIMITATION OF LIABILITY

With respect to liability for oil pollution damage, charterers support the two-tier system such as embodied in the CLC/Fund regime, TOVALOP/CRISTAL and OPA 90. Charterers believe that imposition of strict liability on the shipowner under a marine pollution liability regime is appropriate given that once an oil cargo is loaded aboard a vessel physical control of the cargo wholly passes to the shipowner. Whether the cargo is then safely carried or spilled is, with very limited exceptions, a matter completely within the control of the shipowner. It seems reasonable, therefore, that owners, bearing front-line responsibility for the safe carriage of oil, bear liability up to reasonable, specified limits. Above the shipowners' liability limits, charterers agree it is fair that cargo interests provide, through a per barrel assessment on oil received at terminals, a fund to be available to pay claims which exceed the shipowners' limits. Ideally there would be a single worldwide system but, as indicated, such seems a lost goal for the foreseeable future.

With respect to what constitutes reasonable shipowner limits, there is substantial disagreement among owners and charterers. Charterers, recognizing

9. International Convention for the Safety of Life at Sea, 1974 (SOLAS 1974). International Convention for the Prevention of Pollution from Ships (MARPOL 1973/1978). International Convention on Load Lines, 1966. International Convention on Tonnage Measurement of Ships, 1969. International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978.

that shipowners are able to obtain pollution insurance currently at a minimum of $500 million, tend to see no reason why owners' liability should not approximate the amount of available insurance coverage. Viewed in this light, charterers generally consider the limits set forth in the 1984 CLC Protocol to be unreasonably low. One of the very few features of OPA 90 which generally find favour with the chartering community is the level of shipowner liability limits for tank vessels—$1,200 per ton subject to a $10 million minimum for vessels of 3,000 grt or greater.[10] While such limits are approximately double those of the CLC Protocol, they are nevertheless well within available pollution insurance coverage.

With respect to limitation of liability, charterers generally take the view that, provided limits of liability are reasonable, owners should be entitled to limit their liability in most cases. Under the CLC Protocol, an owner is entitled to limit its liability unless "the pollution damage resulted from [the] personal act or omission [of the owner], committed with the intent to cause such damage, recklessly and with knowledge that such damage would probably result".[11] Charterers would support the virtually unbreakable limits provided for in the CLC Protocol were it tied to higher limits, such as those of OPA 90. Charterers recognize that the limitation provision of OPA 90 is so weak as to be near meaningless, denying an owner the right to limit where an oil spill incident is "proximately caused by (a) gross negligence or wilful misconduct of or (b) the violation of an applicable Federal safety, construction or operating regulation by" the owner, operator or demise charterer of a vessel or its agent, employee or contractor.[12] Failure to report an incident, to provide reasonable co-operation in removal activities or to comply with an order of an authorized official, also results in loss of the right to limit which, under OPA 90, is effectively non-existent.

In the development of OPA 90, serious consideration was given to imposing liability directly upon owners of oil cargoes transported by water. From the viewpoint of charterer, cargo-owner liability is a misguided concept, essentially punitive in nature. It punishes the innocent cargo owner which has passed control of oil to the shipowner and retains no means of ensuring oil will not be discharged during carriage. The cargo under CLC/Fund and OPA 90 is already required to contribute to a fund based upon per barrel fee formulas and hence the cargo owner, if also held liable individually for a loss on a particular voyage, is effectively being assessed twice for one incident. The concept of cargo owner liability had not received wide, serious consideration prior to the *Exxon Valdez* grounding and the public anger which it created. In charterers' view legislators, in contemplating inclusion of cargo owner liability in OPA 90, sought to impose indirectly a form of punitive damages on cargo owners.

Unfortunately for charterers, while OPA 90 lawmakers ultimately resisted the

10. 46 USC § 2704(a).
11. CLC, 1984, Article V 2.
12. 46 USC § 2704(c).

temptation to hold cargo owners directly liable, by also declining to pre-empt state marine pollution laws, the legislators effectively invited individual states of the United States to do so on their own. Consequently, cargo owners are liable for pollution damage in several of the states of the United States, notably Alaska, California, Florida, Hawaii, Maryland, New Jersey, North Carolina, Oregon, Washington and possibly Texas whose statutory language is ambiguous. The laws of California, Delaware, Hawaii, North Carolina, and possibly Virginia whose statutory language is also ambiguous hold charterers liable for pollution damage. From a charterer's viewpoint this is a very unhappy situation but one not likely to change in charterers' favour.

III. POLLUTION DAMAGE

Shipowners and charterers generally agree on what should constitute pollution damage with respect to an oil spill incident. Although pollution damage is defined somewhat differently in TOVALOP and CRISTAL, owners and charterers agree through these plans that compensation should be paid for "physical loss or damage caused outside a tanker by contamination resulting from an escape or discharge of oil from the tanker wherever such escape or discharge may occur, including loss or damage caused by any measures taken to prevent or minimize damage, including such loss or damage caused by preventive measures."[13] Owners and charterers also agree that "proven economic loss actually sustained, irrespective as to accompanying physical damage, as a direct result of contamination including the costs of preventive measures",[14] should be compensated for as pollution damage. Further "(c)osts actually incurred in taking reasonable and necessary measures to restore or replace natural resources damaged as a direct result of an . . . incident" are compensable but "any other damage to the environment" is excluded.

The 1984 CLC/Fund Protocols define pollution damage similarly, but remove the requirement that loss or damage be physical in nature. Consequently, economic loss is included within "loss or damage" and not separately stated. The Protocols provide, in the case of impairment of the environment that "costs of reasonable measures of reinstatement actually undertaken or to be undertaken"[15] are compensable.

OPA 90 (Section 1002)[16] sets out in detail the types of damages claimants are entitled to recover, in effect specifying categories of loss/damage rather than retaining reference only to the broad categories of physical loss or damage (TOVALOP/CRISTAL) or simply loss or damage (CLC/Fund Protocols). Most of the categories set out in section 1002 relate to economic loss sustained by a

13. TOVALOP 1987, Clause 1. (G).
14. Ibid.
15. CLC, 1984, Article I 6.(a); Fund Convention, 1984, Article I 2.
16. 33 USC § 2702.

claimant but one, damage to natural resources, has the potential of promoting wildly speculative claims. Under OPA 90 natural resource damages are not limited to costs of reinstatement of the environment actually undertaken or to be undertaken but rather appear to cover loss of so-called "non-use values", i.e., loss of the public's benefit deriving from the mere existence of a natural resource, separate from any actual uses (recreational, resource extraction, etc.) of the resource. The most well-known method of valuing non-use losses is contingent value methodology (CVM) by which a "relevant population" is surveyed and responds to hypothetical questions intended to measure the respondents' estimate of the monetary value of lost or damaged natural resources even though the respondents will not be expected to make any payment and will probably never use or even see the resource in question. Determining what is a "relevant population" (the population of an entire country perhaps?), and allowing individuals to state what they are willing to pay for a lost resource with full knowledge that they will not have to pay, render contingent value methodology virtually meaningless as a measure of actual damages. Charterers join shipowners in strongly opposing the concept of non-use value and its associated determinant, contingent value methodology, as speculative and calculated to create grossly inflated claims for pollution damage.

IV. CERTIFICATES OF FINANCIAL RESPONSIBILITY

1. OPA 90

Charterers have been actively advancing their views in the debate being waged in the United States under OPA 90 with respect to Certificates of Financial Responsibility. It is mentioned here in part because of its potential for disruption of trade between the United States and its foreign trading partners. Charterers believe that the relevant agency of the US Government, the US Coast Guard, should act reasonably with respect to this subject and to date does not appear to have been doing so. OPA 90, as do the CLC and the CLC Protocol, requires that shipowners establish and maintain evidence of financial responsibility up to applicable liability limits. OA 90 (section 1016)[17] and an Executive Order[18] issued pursuant to it contemplate issuance of a certificate by the US Coast Guard evidencing compliance with the financial responsibility requirements. Six specific means by which a shipowner's financial responsibility can be evidenced (evidence of insurance, surety bond, guarantee, letter of credit, qualification as a self-insurer, or other evidence of financial responsibility) are stipulated in section 1016.

OPA 90 envisions that its financial responsibility requirements will not become effective until regulations detailing procedures for establishing financial

17. 33 USC § 2716.
18. Exec. Order No. 12777, 54 FR 54757.

responsibility have been issued. The US Coast Guard on 26 September 1991 issued proposed regulations[19] stipulating these procedures. It currently would appear that if these regulations are to become effective in their present form, shipowners will simply be unable to comply—the self-insurance requirements with respect to working capital and new worth are so stringent as to preclude virtually all companies, including major oil companies, from complying. The surety bond, letter of credit and guaranty alternatives are extremely expensive and subject to limitations of market capacity. Insurance, the traditional basis upon which financial responsibility is evidenced, is clearly in place for the appropriate amounts and available to be used as evidence of financial responsibility. However, the proposed regulations require that claimants be entitled to sue insurers directly for pollution damage. While P & I Clubs, insurers of marine pollution risks, had accepted a direct action provision in the predecessor law to OPA 90, they had done so for much lower levels of liability and a much narrower scope of damages. The Clubs have flatly declined to accept direct action in connection with evidencing financial responsibility under OPA 90. Currently a serious impasse exists which potentially could halt ship-borne trade to the US.

How do charterers view the COFR debate and how are they affected by it? Charterers believe that the proposed US Coast Guard regulations are not a viable approach to fulfilling the objectives of OPA 90 and that there is in the language of the law a reflection of the US Congress' recognition that some administrative discretion may be needed to develop arrangements consistent with commercial realities.

Charterers have made three arguments in connection with changing the proposed regulations:

(1) OPA 90 allows regulators to "specify policy or other contractual terms, conditions or defences which are necessary in establishing evidence of financial responsibility to effectuate the purposes of [the] Act".[20] While the US Coast Guard views direct action as a principal feature of the Act, the legislative history of OPA 90 supports "adequacy of funds immediately available" in the aftermath of a pollution incident[21] as being the paramount purpose. To further this purpose the US Coast Guard should recognize, as a legitimate "term" or "condition" P & I Clubs' coverage, the "policy defence" of the Clubs against direct action by unknown claimants.

(2) By clearly distinguishing "insurers" and "guarantors" as two separate categories of providers of financial responsibility and by stipulating that claims may be asserted directly against a guarantor (omitting any reference to direct action against an insurer), the drafters of OPA 90 did not intend for direct action to be available against insurers but

19. Proposed Financial Responsibility for Water Pollution (Vessels) Reg., 56 Fed. Reg. 49006.
20. 33 USC § 2716(e).
21. H. Cong. Rep. No. 653, 101st Cong., 2d Sess., p. 118 (1 August 1990).

rather only against those persons, although they may be limited in number, who provide evidence of financial responsibility for a shipowner by guaranteeing payment of, as opposed to insuring, the owners' liabilities. A review of the legislative history of OPA 90, and its predecessor law, gives credence to this view.

(3) The US Coast Guard has the regulatory discretion to recognize P & I coverage as an asset held by a responsible party seeking to qualify as a self-insurer. The Coast Guard has wide latitude to establish the financial criteria for satisfactory evidence of self-insurance. There is no statutory restriction with respect to what may be considered a corporation's asset. P & I basic coverage for pollution damage is currently $500 million which is effectively a very valuable asset for a Club member. In essence, the asset is a contractual entitlement of a Club's member to a large sum of money which entitlement materializes when oil spill liabilities are incurred. The asset is not susceptible of being manipulated or hidden as its existence is inextricably tied to satisfying an owner's oil spill liabilites. Charterers have urged the Coast Guard to accept the P & I policy as an asset for self-insurance purposes.

The foregoing arguments of charterers notwithstanding, there is not widespread optimism that the Coast Guard will deviate from its present position which makes establishment of financial responsibility very problematic. One matter of considerable concern to charterers arises from a Questionnaire[22] included in the proposed rulemaking for purposes of allowing an assessment of the economic impact of the financial responsibility regulations. Two questions deal with issue of whether cargo owners have the financial resources to provide a guaranty of a shipowner's obligations to pay damages under OPA. In effect, the Coast Guard seems to be thinking aloud that cargo owners might be in a position to take over the role previously performed by P & I Clubs. Charterers have responded that since a guarantor, under present proposed requirements, must meet the working capital/net worth requirements as a self-insurer and since no charterers/cargo owners are presently able to qualify as self-insurers, charterers would be unable to qualify as guarantors. Even if a charterer could qualify as a guarantor there would be substantial resistance by charterers to guaranteeing the financial obligations of third party shipowners. It is one matter for a charterer to self-insure and in effect guarantee financial performance of its own vessels over which it has substantial operational control and quite another to undertake such a guaranty with respect to time and voyage chartered vessels over which the charterer has no operational control. Charterers are hopeful and cautiously optimistic that the final regulations will not contain provisions for charterers to guarantee owners' obligations.

22. Proposed Financial Responsibility for Water Pollution (Vessels) Reg., 56 Fed. Reg. 49008–49009.

2. State of Alaska

The evidence of financial responsibility issue, while of much concern to owners and charterers under OPA 90, has, in the case of some states of the United States which have enacted their own financial responsibility laws, because OPA does not pre-empt them from doing so, acted as a true commercial disincentive to charterers contemplating chartering a vessel for trade to a particular state. The State of Alaska is a good example.

Alaskan law[23] requires vessels transitting Prince William Sound to and from the state's crude oil port, Valdez, to maintain contingency plans which, among other things, provide, in the case of vessels having a cargo capacity of 500,000 barrels or greater, for the clean-up of 300,000 barrels of oil in 72 hours. Only Alyeska Pipeline Service Corp. presently has this capability. The contract between a ship and Alyeska requires that the "minimum amount of financial responsibility that the Contracting Vessel shall provide to cover (its) obligations shall be in an amount equal to $1 billion". This level of financial responsibility exceeds the capability of shipowners, and charterers of vessels trading to Alaska are routinely required by a charterparty clause to assume the $1 billion spill response financial responsibility obligation. While some major oil companies have met the Alyeska financial responsibility requirement by submitting letters of undertaking, this is obviously a very large commitment even for those companies capable of making it.

Apart from and in addition to the contractual spill response obligations, charterers in the Alaska trade, not the vessel owner, find themselves in the position of having to establish financial responsibility, in the case of crude oil carriers, of $300 per incident per barrel of cargo carrying capacity or $100 million, whichever is greater.[24] The OPA 90 financial responsibility problems exist with respect to Alaska as well: (1) P & I Clubs have refused to permit vessel owners to use insurance as evidence of financial responsibility because of a direct action requirement and a determination to prevent a multiplicity of duplicative filing requirements from state to state; and (2) extremely restrictive self-insurance requirements preventing all but a few companies from complying.

Because independent shipowners in fact have adequate insurance but are unable to use it to satisfy Alaskan financial responsibility requirements and since those major oil companies with substantial equity interests in Alaskan crude oil have qualified as self-insurers for financial responsibility purposes, a practice has arisen in Alaska whereby an oil company charterer will provide certification of financial responsibility in return for a pledge by the owner to reimburse the charterer from insurance recoveries the owner effects from its P & I Club any monies charterer may pay pursuant to its financial responsibility obligations. A problem could arise if the P & I Club asserted defences available to it under the P & I policy (oil spill incident resulted from willful misconduct of the owner,

23. AS 46.04.030 (K)(3).
24. AS 46.04.040 (c)(1).

non-payment of insurance premiums by an owner, etc.) but generally owner's insurance would be available to reimburse the charterer. While a limited few charterers are able to charter vessels for Alaskan trading and willing to accept the risk of so doing, the Alaskan financial responsibility requirements are sufficiently onerous to make many charterers re-evaluate the economic attractiveness of proposed shipments and often otherwise commercially viable transactions. Charterers view that reasonableness is a feature which must be incorporated into financial responsibility requirements is buttressed by the Alaskan experience.

V. OIL TANKER STANDARDS

Two trends, causing charterers to be increasingly concerned regarding the quality of vessels they charter, have converged over the past three or so years. First, the world tanker fleet is ageing—40 per cent. of the fleet is currrently 17 years old and by the year 2000 over 75 per cent. of tankers are projected to be over 20 years old, the vast majority of these being larger than 80,000 dwt.[25] Secondly, there has been increasing concern among charterers in the wake of the *Exxon Valdez* that whatever risks exist in the carriage of oil by ship should not be increased by use of a vessel which does not in fact meet high standards with respect to hull and machinery, equipment, crewing and management.

Charterers' general approach to these trends, based in part over anxiety about the role and performance of classification societies as discussed below, has been the introduction and expansion of vessel inspection programmes. These programmes normally contemplate establishment and maintenance of a list of vessels approved for use in carrying a company's cargo. The list will generally be comprised of vessels to be term or spot chartered by the company but will also include vessels not under charter carrying cargoes to be delivered at a company's facility. The Oil Companies International Marine Forum has published a detailed checklist for vessel inspections and many companies have adopted it for their use. OCIMF is also exploring how best to implement a programme for exchange of vessel inspection reports among members to maximize the availability to charterers of information regarding vessels proposed for charter.

In viewing the ownership and management of vessels charterers are acutely aware of the toll taken by over-tonnaging and depressed market conditions since the mid-1970s. Many traditional shipowners have gone out of business. Financial ownership, ship management and crew employment, roles normally performed by the shipowner, have tended to become split in recent times as a means of lowering costs. Ownership responsibilities have become correspondingly blurred. Many charterers, as part of vessel inspection programmes, visit vessel owners and managers to evaluate the management effectiveness and level

25. Petroleum Industry Research Foundation, Inc., *Transporting U.S. Oil Imports: The Impact of Oil Spill Legislation on the Tanker Market*, p. 2, June, 1992.

of assistance provided vessels by shore staff. Quality of ship management is considered a very important standard by which charterers measure expected performance of a vessel.

Charterers are also very concerned with respect to the role classification societies play in enforcement of tanker standards and the accountability of these societies. Classification societies are intended to be an independent service for setting and applying standards for hull structure, propulsion, steerage, auxiliary, ballast handling, and other essential shipboard systems during the construction and life of a ship.

Charterers have expressed concern about several developments regarding class inspections:

—surveyors cannot conduct unannounced inspections or surveys without the owner's agreement nor, when invited aboard to inspect a specific defect or repair, can they inspect other parts of the ship without agreement and co-operation;
—shipowners have a responsibility to disclose defects which may affect class, and when such defects have been rectified; but increasingly owners find it convenient to delay or even omit complying with this traditional and explicit responsibility because they fear their ship will be delayed;
—shipbuilders and shipowners sometimes use the threat of changing to another Society when surveyors insist on repairs or renewals which involve "excessive" cost or ship delay;
—owners sometimes exploit Class Rules by negotiating one or more "extensions" of prescribed intervals between periodical surveys;
—survey reports are confidential between owner and his Society but are made available to Flag States on request and, with the owner's consent, to other parties.[26]

Charterers believe the Societies' effectiveness would be improved if individual classification Societies and the International Association of Classification Societies to which the 11 largest class societies belong were to take the following action:

—enforce the requirement for shipowners to report significant defects promptly;
—amend Society Rules to increase the stringency of Intermediate Surveys, especially with respect to ballast tank inspections;
—amend Society Rules to allow surveyors the right of unannounced inspection;
—agree much tighter rules controlling "extensions" for Intermediate and Special Surveys.[27]

26. Shell International Marine Limited, *A Study of Standards in the Oil Tanker Industry*, May 1992, pp. 10–11.
27. Ibid., p. 12.

Charterers also encourage action by hull underwriters to make insurance coverage contingent on warranties made by a vessel owner. In particular, charterers support adoption and inclusion in hull policies of the UK Joint Hull Committee's proposed express warranties by which owners warrant to their hull insurers that the vessel will remain in class during the period of insurance and during that period owners will:

—comply with Class requirements concerning disclosure;
—comply with any Society recommendations/restrictions;
—report to underwriters any such recommendations, and any change of Classification Society.[28]

Under the warranties, underwriters have the right to sight Classification Society records and the vessel is entitled to only a single extension of Docking and Special Surveys.

Charterers would also urge P & I Clubs to accelerate their efforts to analyze further owner/ship records, seeking greater access to Classification Society records, increase the number of Condition Surveys, update their rating policies to take greater account of owners' efforts to improve standards, and resist claims by members failing to achieve basic maintenance standards.[29]

28. Ibid., p. 13.
29. Ibid., p. 14.

CHAPTER 14

THE OIL POLLUTION ACT OF 1990 (OPA 90) AND THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT (CERCLA)

CAPT. MICHAEL MURTAGH*

It is one of the responsibilities of the National Pollution Funds Center to carry out the vessel financial responsibility provisions of the Oil Pollution Act of 1990 (OPA 90) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

The Coast Guard published a notice of proposed rulemaking in the Federal Register on 26 September 1991 (CGD 91–005). This notice allows a period for the public to submit comments. After the comment period closes, we plan to publish a final rule which will incorporate any changes made. We look forward to receiving the public's input to help us craft the best regulatory package.

In addition to the usual regulatory evaluation, the Coast Guard will prepare a regulatory impact analysis. This analysis will assess the potential effects arising from difficulties ocean-going operators may encounter in obtaining the usual guaranties of insurance from their insurance entities once the rule comes into effect. To assist in preparing this analysis, the notice of proposed rulemaking contains a list of questions soliciting specific information regarding some of the subjects that may be addressed in the analysis. Upon consideration of the comments and other information received, the analysis will be completed and notice of its availability will be placed in the Federal Register. Based on the comments received in response to the notice of proposed rulemaking, if additional opportunity for public comment on the analysis is indicated, the Coast Guard will provide an opportunity for such comment before publishing a final rule.

Currently, pending promulgation of a final rule, for purposes of certification (as contrasted with liability), we are using vessel financial responsibility numbers that are provided in pre-OPA 90 laws, such as the Clean Water Act. Today, to obtain a certificate and operate in the US, a vessel operator need only provide evidence of financial responsibility which is a fraction of that prescribed in OPA 90. That owner or operator may be liable up to much higher amounts, but absent updated rules, there is no requirement to produce evidence of financial responsibility commensurate with such higher amounts. The proposed rule

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seeks to blend the specific requirements of the Act, including its increased limits of liability with basic procedural steps that have been in effect for many years.

The requirements for vessel financial responsibility have been in effect in the US since 1971. OPA 90 has not changed the mechanics of this system. Although the statutory limits and scope of liability have increased throughout the years, the system for establishing financial responsibility has remained the same. Historically, four workable methods for establishing financial responsibility have been identified by industry and government: (1) insurance guaranties, (2) surety bond guaranties, (3) self-insurance and (4) financial guaranties, which are similar to self-insurance. Of these methods, insurance guaranties are, by far, the most frequently used, particularly in the international vessel operating community.

The Coast Guard certification process is simple: once the owner/operator and the vessels are identified on an application form, and the guarantor or self-insurer has provided the Coast Guard with sufficient evidence of financial responsibility, the affected vessels are issued certificates of financial responsibility (COFRs). Application and certification fees must be paid. In general terms, vessels lacking valid COFRs are prohibited by the Coast Guard, as well as the US Customs Service, from operating in US waters, or entering or leaving US ports. OPA 90 and CERCLA continue to mandate such enforcement.

The National Pollution Funds Center has been notified of several concerns of the maritime community. I will identify the principal issues raised thus far.

One concerns the limits of liability. Under OPA 90, the limits of liability for tank vessels generally are several times higher than under the previous statutes. But, even with this increase, the limits of liability are well below the coverage that we understand is routinely provided by the international shipping community's insurance entities, called Protection and Indemnity (P & I) Clubs. Also, the limits of liability are specified in the statute and there are no new procedural concepts in the proposed rule. Virtually all ocean-going operators who use US waters already would have more than the necessary insurance coverage for federal purposes from their P & I Clubs. All that is required by OPA 90 and CERCLA, and therefore by the proposed rule, is that the coverage be submitted in a form acceptable to establish evidence of financial responsibility, but only up to the limits of OPA 90 and CERCLA. I should add here that for the great majority of ocean-going vessels, the P & I Clubs have always been the guarantors for US financial responsibility purposes. The Clubs also provide financial security for the oil pollution damage liability of shipowners who trade in, or fly the flags of, 69 other countries party to the 1969 Convention on Civil Liability for Oil Pollution Damage. We understand that insurance guaranties for the non-ocean-going or "brown water" vessel operators are readily available from the commercial marine insurance industry in the United States. I am told that they will remain available.

A second issue raised is that of direct action against a guarantor by private claimants. OPA 90 requires that claimants, including private claimants, be able

to present a claim for removal costs or damages directly against an insurer or other guarantor should a vessel be involved in a pollution incident. Direct action by private claimants is not a new concept. Although only the Federal Government could take direct action against the guarantor under the Clean Water Act, direct action by private claimants was a feature of the financial responsibility requirements under the Trans-Alaska Pipeline Authorization Act of 1973 and the Outer Continental Shelf Lands Act Amendments of 1978. Direct action by private claimants against an insurer or other person providing financial security is also an underpinning of the scheme under the 1969 Civil Liability Convention. While neither the 1969 Convention nor the 1984 Protocols to that Convention have been ratified by the United States, the 1969 Convention has been in effect since as early as 1975 in the nations party to the Convention (currently 69 in number).[1] Therefore, coverage of oil pollution risk under both OPA 90 and the current primary international regime requires direct action against insurers by private claimants.

A third issue concerns the matter of Federal pre-emption. OPA 90 does not pre-empt states from imposing additional liability or other requirements with regard to oil pollution. We understand that some operators have expressed concern that, in the aftermath of the *Exxon Valdez* incident, some states may legislate prohibitively in this area. State liability requirements do not affect OPA 90 financial responsibility requirements. State and Federal regulations on the subject of financial responsibility are separate and distinct.

A fourth issue is that of unlimited Federal liability. OPA 90 expressly provides limits of Federal liability for responsible parties involved in an oil pollution incident. The proposed rule reflects those limits, however, if an incident was caused by gross negligence, wilful misconduct or a violation of certain Federal regulations, the limits of liability would not apply. In a case where a responsible party's limit of liability is broken, the guarantor would still only be liable up to the limits of its guarantee. In the event of the responsible party's wilful misconduct, the guarantor is not liable at all. It is the responsible party—namely the owner and/or operator of the vessel—who would be responsible for any unlimited liability.

A fifth issue concerns defences. Insurance guaranties, to have any practical meaning, cannot contain policy defences, which are a host of exclusions in the underlying insurance contract, as well as in case law, between the insurer and insured. These defences or exclusions void the underlying insurance for a variety of reasons. While OPA 90 allows the secretary to specify necessary policy defences in promulgating financial responsibility requirements, we have found none, other than those permitted by statute, that would "effectuate the purposes of this Act". It appears to us that congress intended direct action to be a principal feature of the law, and policy defences appear to run counter to the concept of direct action.

1. As at mid-September 1992. Subsequently there have been several further accessions.

The final issue concerns self-insurance. Self-insurance is one of the statutorily-permitted methods of establishing financial responsibility. The means of establishing self-insurance in the proposed rule have not changed from current regulations. To summarize their requirements: a self-insurer must have assets in the US that can be attached by claimants (including the Oil-Spill Liability Trust Fund), if necessary to satisfy a judgment. In addition, US assets must be balanced against international liabilities. That is, a self-insurer's worldwide liabilities must be less than its US assets. This is to help ensure that the US assets remain available to US claimants and are not depleted in meeting foreign liabilities.

I have recently heard of a proposal to allow the use of P & I Club membership or insurance as an "asset" for self-insurance purposes. There are several points I would like to make concerning this proposal. First, as between the insured and the insurer, insurance is subject to policy defences, some of which may not be explicit in insurance contracts. For a host of reasons, an insured may end up without any coverage. That, by itself, seems to eliminate availability of membership or insurance as an asset for self-insurance purposes. Secondly, typically, P & I Club insurance specifically prohibits attachment or direct action by claimants. If something can not be attached, it probably should not be used as an asset for purposes of self-insurance. Thirdly, we understand that P & I insurance normally can be cancelled without the consent of the shipowner and without the knowledge of the Coast Guard. Fourthly, P & I insurance is typically characterized as indemnity insurance. That means that if a vessel covered by a P & I Club has an oil spill, the insured must first pay for the removal cost and damages out of its own pocket. Then, and only then, would the shipowner have legal standing to demand that the P & I Club pay up; provided, of course, that the Club did not have the right to assert a policy defence. As an example, the sub-committee recently wrote to the commandant concerning a case involving the *Cibro Savannah* spill in which a policy defence was employed against the insured. While this did not affect the guarantee of financial responsibility to the Coast Guard, it demonstrates one of the shortcomings of using insurance as an asset.

In short, our analysis to date indicates that use of typical membership or insurance as an "asset" for self-insurance purposes would not ensure financial responsibility. Moreover, OPA 90 defines any person, other than the responsible party, who provides evidence of financial responsibility as a "guarantor". It further provides for direct action against any "guarantor". If regulations permitted an insurance policy to be counted as an asset, thereby allowing the insurer to avoid the direct action requirements of OPA 90, the regulations would appear to be contrary to the spirit of the law.

CHAPTER 15

LIABILITY AND COMPENSATION FOR MARITIME CARRIAGE OF HAZARDOUS AND NOXIOUS SUBSTANCES (HNS)

ROBERT CLETON*

I. INTRODUCTION

In this paper the outline of a scheme for liability and compensation relating to damage occurring during the carriage by sea of hazardous and noxious substances (HNS) will be discussed.[1] This subject has already been on the working programme of the IMO Legal Committee for more than 20 years. A draft for a so-called HNS Convention was submitted in 1984 to an IMO Conference which also had to discuss the two draft Protocols to amend the 1969 CLC and 1971 Fund Convention on Oil Pollution Damage. Due to lack of time (the Conference had only one week to discuss HNS) and also because of lack of agreement among the delegations on the principles of liability and compensation for HNS damage, the Conference failed to agree on the draft Convention. The Conference adopted a resolution requesting IMO to continue its efforts for the preparation of a new draft Convention as a matter of priority. This paper has been based on the draft text which is at present under consideration by the IMO Legal Committee.

The increasing transportation by sea since the second World War, of oil, chemicals and other hazardous products has created a new and ever greater risk of injury to persons, of damage to property but in particular also of damage to the marine environment. During recent decades public opinion has become aware of the need to protect the marine environment and it has also become concerned about the risk of damage which could occur on a massive scale as a consequence of an accident with a vessel transporting HNS substances. Notwithstanding improved safety standards for the design, construction and equipment of ships carrying HNS, sometimes in large quantities, accidents of a catastrophic nature cannot be totally prevented. Therefore, an international liability and compensation scheme is called for. This conclusion has been more easily accepted with respect to the carriage of oil than with respect to the transport of other HNS. Public attention to this matter was first raised on an international scale after the incident of the *Torrey Canyon* in 1967. Action was then

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1. The Legal Committee of the International Maritime Organization has decided to use the term HNS rather than dangerous good as used in the CRTD Convention relating to inland transport.

taken by several governments within the framework of IMO and this action resulted in the adoption in 1969 of the International Convention on Liability for Oil Pollution Damage (CLC 1969), followed in 1971 by the adoption of the supplementary International Convention on the Establishment of an International Fund for the Compensation for Oil Pollution Damage (FC 1971).

Governments participating in the 1969 International Conference on Marine Pollution Damage have of course been aware of the fact that pollution may be caused also by agents other than oil. They decided, however, to tackle the problem of oil pollution as a first priority, because after the *Torrey Canyon* incident had occurred public attention was focused on oil pollution. To take up as well the subject of compensation for damage caused by other pollutants would have complicated the work of the Legal Committee of IMO[2] considerably. This decision has proven to be a very wise one; the elaboration of an HNS Convention is a very complex and often cumbersome operation.[3]

In the following paragraphs I will briefly discuss the most important items relating to the draft HNS Convention. The 1969 and 1971 Oil Pollution Conventions, as amended by the 1984 Protocols, have served as an example for the draft HNS Convention. Another Convention which has had some influence on the elaboration of an HNS Convention is CRTD Convention in the field of inland transport.[4] I will refer to this Convention in so far as its provisions are relevant to the various items discussed.

II. THE DRAFT HNS CONVENTION

1. General background

Pursuant to the resolution adopted by the 1969 Conference the matter of pollution by agents other than oil was referred to the seventh session of the IMO Legal Committee as an item of priority. A questionnaire was sent out to the Member States of IMO to collect more information about the transportation of HNS by sea and the accidents caused by such transportation. However, the results of this fact finding were not very satisfactory because there was at that time not sufficient expertise available on the extent of possible risks involved. Also many governments showed a lack of interest in the matter, mainly because they failed to see a special need for a new Convention. Perhaps this was also due to the fact that there were no records of many serious HNS incidents. The industries involved (shipowners, chemical industry and insurers) were very much opposed to the idea of a new HNS Convention. Meanwhile the Legal

2. The Organization was at that time still called IMCO (International Maritime Consultative Organization).

3. The International Conference of 1969 adopted a resolution recommending that IMO should intensify its work on all aspects of polluting by agents other than oil.

4. Convention on civil liability for damage caused during carriage of dangerous goods by road, rail and inland navigation vessels (CRTD), elaborated in 1989 under the auspices of the Economic Commission for Europe of the United Nations in Geneva.

Committee was concerned with the preparation of other Conventions such as the Athens Convention of 1974 on maritime transport of passengers and the 1976 London Limitation Convention. This caused a considerable delay. The work on the HNS Convention was actually resumed only after the 1976 Conference.

One of the most controversial issues has been the question of who should be liable to pay compensation under the new HNS Convention. It is not surprising that none of the industries involved in the transportation of HNS (shipowners and their P & I Clubs on the one hand and the chemical and gas industries on the other hand) has been eager to accept new liabilities and the resulting financial burdens. Shipowners and P & I Clubs have argued that any special risks created by the transport of HNS are not caused by the movement of these substances but by their inherent dangerous qualities. According to these industries there is no reason to impose on a shipowner a liability which would go beyond his traditional liability for negligence. The chemical industry has pointed out that shipowners are well aware of the special risks involved with the transportation of HNS and that they should know which precautions must be taken to avoid HNS accidents and that, once the cargo has passed into the custody of the carrier, it is out of control of the shipper and other interested parties in the cargo. When the matter has to be considered from the point of view of victims, it could be maintained that it does not so much matter who will be liable to pay compensation, provided that a new liability and compensation scheme will guarantee efficient and adequate compensation. The person on whom the liability will be imposed must be easy to identify. In general the shipowner will fulfil such a condition since he can be traced by consultation of the ship's register. Also the P & I Clubs would be in a better position to provide suitable insurance cover than cargo insurers since environmental liability insurance does not exist at present for cargo owners. This consideration has been the main reason why in the CRTD Convention the liability has been imposed exclusively on the carrier.

During the past decades several options have been examined:

(a) channelling of all liability to the shipowner;
(b) channelling of all liability to one of the parties having a direct interest in the cargo (owner, shipper or producer of the HNS);
(c) shared liability by shipowner and cargo-owner or shipper;
(d) an international compensation fund.

Before the 1984 Conference the Legal Committee has discussed mainly option (c), a shared liability. Under this option there are two alternative sub-options: (1) joint and several liability of the shipowner and the shipper, and (2) a two-tier system comprising a first tier of strict shipowner's liability up to a certain limit, and a second tier of supplementary shipper's liability also to a certain limit. Both the owner's and shipper's liability would have to be covered by compulsory insurance. The first sub-option has been rejected because it would require full insurance cover from both owner and shipper for the full amount of liability and would require double insurance. The Legal Committee has elaborated a draft

Convention on the basis of the second sub-option and this sub-option was submitted to the 1984 IMO Conference. However, the draft text submitted was not adopted by the Conference.[5]

After the matter returned to the Legal Committee there still proved to be a consensus about the principle that any new compensation scheme should guarantee an adequate and speedy compensation to victims of damage caused during the carriage of HNS by sea. The liability to be imposed on the shipowner should be strict and should be limited to a certain amount per incident. The shipowner should be obliged to take out insurance to cover his liability. These principles have also been accepted in CLC with respect to oil pollution and the consensus on this matter is therefore not surprising. So far there seemed to be common ground. A number of delegations in the Legal Committee have argued that a future HNS Convention should not go any further because any second tier for the compensation of HNS damage would create serious complications and could become a barrier to the establishment of a new international instrument. Other delegations, however, proposed a second tier in the form of an international compensation fund (the "Scheme"). These delegations have questioned whether any limit to be fixed for shipowner's liability will be sufficient to guarantee an adequate compensation and they have maintained that a second tier will be necessary to make supplementary compensation available in case of major accidents. In this respect a number of issues have arisen, such as:

1. shipowners are not willing to take the full share of the financial responsibility for HNS damage, but maintain that this responsibility must be shared equitably between ship and cargo;
2. there is some uncertainty about the present capacity of the international insurance market to accept cover for any new liability risks to be imposed on shipowners; the market capacity seems at present to be declining; the new limits have not yet been subject to an extensive discussion within the Legal Committee;[6]
3. there is also very little experience with respect to accidents and the actual amount of compensation needed to cover major incidents;
4. if a second tier is needed for supplementary funding, how should it be modelled?

I intend to discuss in the following paragraphs the main issues regarding the present Convention under consideration by the Committee. The coming sessions will be decisive for the final outcome of the draft to be submitted to the diplomatic conference envisaged in 1994. The Committee has in particular to

5. The outcome of the relatively short discussion on the main articles of the draft Convention was not very satisfactory. Most of the time of this one week session was spent on an elaborate discussion of definitions in Article 1.

6. An amount of 100 million SDR per incident has been mentioned as the maximum which could be covered but it is not clear whether this amount would be available for HNS accidents only or for all risks involved.

argee on the question of the second tier. Unlike the 1969 and 1971 Conventions on Oil Pollution Damage, the present draft contains a two-tier system in one international instrument.[7] The first tier, providing for a strict shipowner's liability, is modelled on the CLC 1984. The second tier provides for an international compensation scheme, which will be financed by contributions to be levied with respect to individual shipments of HNS.

2. Scope of application: Definition of HNS

One of the main questions under discussion relates to the definition of hazardous and noxious substances. There seems to be an understanding within the Legal Committee that the new Convention should in principle be applicable to a relatively large range of HNS, including not only HNS carried by sea in bulk but also in packaged form. However this decision is no more than a starting point which has to be elaborated further. A working group of technical experts assists the Legal Committee by providing technical advice with respect to a definition of HNS which would be subject to the application of the HNS Convention and the identification of those HNS substances on which a levy should be imposed to finance the second tier. The system contained in Art. 1, para. 5, of the draft does not provide for a specific list of substances, but refers to existing lists in other Conventions.[8] The definition of HNS is, however, not a typical technical matter but it depends largely on decisions of a more political nature. There are several questions to be answered:

1. To what extent will the HNS Convention fill the gap left by CLC and FC, which do not cover for instance pollution caused by bunker fuel oil carried by ships other than oil tankers and caused by oils other than those defined in CLC Art. I?
2. Should the HNS Convention cover HNS carried in bulk and in packaged form as well, and what will be the consequences of the inclusion of HNS in packaged form?
3. Should ships carrying only residues of HNS or oil be covered (the "empty tanker problem")?
4. Should the compulsory insurance requirements be applied to all ships carrying HNS or should a threshold or minimum quantity be introduced?
5. Should there be a separate definition of "contributing cargo"?[9]

7. If the second tier remains the controversial part of the draft Convention, it may be advisable to decide to separate the two parts and to follow the CLC/Fund system of two separate international instruments, although I am fully aware of the possible political implications of such a decision.

8. Such as the IMGD Code, Annex II of Marpol 1973/78, the Intern. Bulk Chemicals Code and the Intern. Liquefied Gas Code. The delegation of Mexico has expressed its preference for a specific list. The CRTD Convention also refers to an existing Convention (ADR).

9. The FC contains a separate definition of "contributing oil". The purpose of this definition is to restrict the number of contributors to the IOPC Fund in order to simplify the contribution system. The same applies, perhaps in a even more pregnant way, with respect to the second HNS tier.

Bunker-oil. As has been pointed out, CLC and FC do not apply to pollution caused by every type of oil. Both Conventions are only applicable to persistent oils carried by ships in bulk as cargo. CLC 1984 is applicable to tankers and to combination carriers when such ships are actually carrying oil in bulk as cargo or during any voyage following such carriage, unless it is proved that there are no residues of the cargo previously carried on board. Only if CLC is applicable to the ship, any pollution damage caused by its bunker fuel oil will be regulated by the provisions of CLC and FC. However, the volume of bunker-oil carried by large ships other than oil tankers can be considerable and several accidents have occurred caused by bunker-oil which has escaped from such ships. These accidents have been responsible for considerable pollution damage.[10] Although there is strong support for the view that pollution damage caused by bunker-oil should fall under a strict liability regime, there is no consensus within the Legal Committee as to whether bunker-oil should be included into the CLC/FC regime or into the new HNS Convention or even into a separate bunker-oil convention. Most delegations seem to favour the inclusion of bunker-oil in the HNS Convention but this opinion is based more on pragmatic and political grounds than on a dogmatic view.[11] P & I insurance provides cover to most ships for damages arising from bunker spills and the inclusion of bunker-oil would probably not have any major implications for the present insurance practice. The major burden would be imposed on the authorities responsible for the enforcement of the compulsory insurance system. It would not be possible to check every vessel and it is believed that it would be necessary to introduce a threshold, based for instance on the bunker capacity or gross tonnage of the ship. Another question is whether bunker-oil should contribute to the second tier. The preliminary view of the majority of the Legal Committee tends to exclude bunker-oil from contributions to the second tier.[12]

Many general cargo ships carry HNS in packaged form (in drums, containers or portable tanks) and several serious pollution and other incidents have been caused by such cargoes. However, the inclusion of HNS carried in packaged form raises a number of questions and complicates the entire compensation

10. One more recent example is the accident which occurred in January 1988 off the Dutch coast. The bulkcarrier *Borcea* spilled about 75 m^3 of its bunker-oil causing an extensive oil pollution damage to the shoreline and killing many seabirds. Other accidents reports are: *Texaco Caribbean* in 1971 (600 tons spilled), "*Esso Bernicia*" in 1978 (about 1,200 tons) and *Olympic Bravery* in 1976.

11. Any new amendments to the CLC and FC should be avoided. At the end of this year (1992) a one week diplomatic conference will be held with the sole purpose to amend the final provisions of the 1984 Protocols in order to facilitate the entry into force of the amendments brought about by the these Protocols without the ratification of the United States. The only other matter to be discussed during that Conference will be the possible introduction of a capping of the contributions to the IOPC Fund. It would not be possible to discuss other amendments during the Conference. (For the outcome of the Conference see Preface at p. vii).

12. An argument advanced against the contribution of bunker-oil to the second tier is that the oil industry is already contributing to the IOPC Fund. This argument does not convince me, because the levy in respect of the HNS Scheme will be paid by shipowners and not by receivers of oil. Moreover the bunker-oil is not carried as cargo but as fuel for the ship and thus creates a new pollution risk.

system, in particular with respect to compulsory insurance and contributions to the second tier. Also the list of HNS to be considered would be much longer and more complex. The draft Convention submitted to the 1984 Conference only applied to shipments of HNS in bulk, but there was at that time a strong minority of delegations which expressed the view that a Convention restricted to bulk transport would not be an adequate answer to the problem caused by the maritime transport of HNS. This matter was discussed again after the HNS item returned on the Committee's working programme and it was decided to make the Convention applicable to HNS in packaged form as well. This decision makes it necessary to consider the implications with respect to the compulsory insurance of the shipowner and the contribution system of the second tier. No decisions have been taken so far. In my view an HNS contribution system could only be implemented if the number of contributions is kept within reasonable limits. This may imply that not all HNS cargoes should be submitted to levies for the second tier.

The "empty tanker problem". Because CLC deals with pollution damage only, accidents caused by fire or explosion of residues of oil remaining in tankers after discharge of their cargo would have to fall under the scope of the HNS Convention.[13] The same applies to residues of other HNS substances. Levies for the second tier would have to be imposed on the ship containing such residues, but the definition of "contributing ship" in Art. 1, para. 11 remains between brackets because several delegations have expressed the view that it would be inequitable to impose levies on such ships and that it would also be difficult to provide for a proper assessment of such contributions. This matter has to be settled during one of the next sessions of the Legal Committee.

3. Territorial scope of application

Article 2 of the draft HNS Convention contains provisions with respect to the territorial scope of application of the Convention. The text of paragraphs (a) and (b) have been taken from CLC 1984 and FC 1984. The Convention will apply to any damage caused in the territory, including the territorial sea, of a State Party and to damage by contamination of the environment caused in the EEZ of a State Party and to preventive measures, wherever taken, to prevent such damage (para. (d)). Para. (c) contains an important extention of the scope of the Convention: it will also apply to damage, other than damage by contamination of the environment, caused outside the territory of a State Party (i.e. on the high seas), if this damage has been caused by a ship registered in a State Party or, in the case of an unregistered ship, by a ship entitled to fly the flag of a State Party and to preventive measures to prevent such damage.

If an empty oiltanker registered in an HNS State collides on the high seas with a passenger ship from a non-HNS State and causes casualties among the

13. In 1979, 51 persons were killed and huge property damage was caused by the explosion of the tanker *Betelgueuse* in Bantry Bay (Ireland).

passengers because of fire and explosion on board the tanker, the passengers and/or their dependants will have a claim under the HNS Convention against the owner of the tanker and possibly also against the HNS Scheme. The present text does not take into account the possibility that the tanker may be registered in a bareboat register of a non-HNS State and will fly the flag of that State. It is not clear which registration should be decisive: the owner or the bareboat registration.

4. Miscellaneous provisions relating to the scope of application of the Convention (Art. 3)

Article 3 contains several provisions which determine the scope of application of the Convention. Para. 1 provides that the Convention shall apply to non-contractual claims only (see also Art. 3, para. 1 CRTD). The main purposes of this provision is to avoid an overlap and a possible conflict with existing maritime law Conventions, such as the Hague-Visby Rules, the Hamburg Rules and the Athens Convention. The effect of the provision goes further and affects also contractual relations which are not regulated by any international Convention. The delegation of Finland has drawn the attention of the Legal Committee to the fact that some ships carry both HNS and passengers and that in such a situation passengers who have become the victim of an HNS accident could only base their claims on the Athens Convention and would be deprived of the benefits of the HNS Convention.[14] No solution has yet been found for this problem but there is much sympathy for the point made by Finland.

Paragraph 3 of the draft HNS Convention relates to the carriage of radioactive substances and materials. Those substances have been included in the list of HNS proposed by the technical working group, but para. 3 of Art. 3 excludes the application to damage caused by a nuclear substance if the operator of a nuclear installation is liable for such damage either under the Paris or Vienna Convention on third party liability in the field of nuclear energy or under a national law which provides the same favourable protection to victims.[15] Paragraph 3(a) excludes the application of the HNS Convention to damage caused by oil pollution covered by CLC 1969, or any amendments of that Convention.

5. Definition of "damage"

Article 1, para. 6 of the draft Convention contains a definition of "damage" and the wording of this provision is based on CLC 1984. The definition is meant to restrict to a certain extent the nature of damage for which compensation can be

14. The Athens Convention provides for a liability of the carrier based on fault and a limitation of his liability per passenger. Moreover Art. 7 of the London Convention relating to limitation of liability for maritime claims, 1976 entitles the owner, charterer or operator of a passenger ship to invoke the global limitation of his liability for claims made by passengers carried on his ship.

15. See also Art. 4(b) CRTD.

claimed under the Convention, in particular with respect to loss or damage by contamination of the environment. Sub-paragraph (c) provides that loss or damage by contamination of the environment caused by HNS will be compensated, provided that compensation for impairment of the environment other than loss of profit from such impairment shall be limited to costs of *reasonable measures of reinstatement actually undertaken or to be undertaken*. The intention is to avoid as much as possible speculative claims based on an abstract calculation of damage caused by the impairment of the environment. The wording is the result of a compromise which was agreed upon at the 1984 Diplomatic Conference after a long debate on this issue.

The definition of "pollution damage" in CLC 1969 and FC 1971 is not very clear. In 1980 the IOPC Fund Assembly has adopted unanimously a Resolution stating that "the assessment of compensation to be paid by the IOPC Fund is not to be made on the basis of an abstract quantification of damage calculated in accordance with theoretical models". The IOPC Fund was for the first time confronted with this problem in the case of the *Antonio Gramsci*, a USSR tanker which grounded in 1979 in the Baltic Sea causing among other oil pollution damage to the coasts of Estonia and Latvia. The USSR authorities claimed damage for environmental damage to an amount calculated, in accordance with a USSR statute, at a rate of two Roubles per cubic metre of polluted water. The same issue was raised with respect to a claim submitted by the Italian Government in the *Patmos* incident which occurred in 1985 in the Straits of Messina and may again arise in the *Haven* case. The *Haven* was a Cypriot tanker which caught fire on 11 April 1991 whilst at anchor seven miles off Genoa.

Paragraph 6 of Article 1 further provides for compensation of damage caused by loss of life or personal injury *on board or outside* the ship carrying the HNS (sub-para. (a)), of loss of or damage to property *outside the ship* only (sub-para. (b)) and of the costs of preventive measures and further loss or damage caused by such measures.

III. SHIPOWNER'S LIABILITY (THE FIRST TIER)

1. Basis of liability (Art. 4)

The basis of liability imposed on the shipowner is strict. His liability extends to any damage caused by any HNS substance in connection with their transportation by sea. Not all damage caused by the cargo in question will be compensated on the basis of Art. 4, but only damage caused by the specific hazardous or noxious qualities of the substance. The defences available to the shipowner have been limited to those enumerated in paras. 2 and 3:

(a) the damage resulted from an act of war, hostilities, civil war, insurrection or a grave natural phenomenon of an exceptional, inevitable and irresistible nature; or

(b) the damage was wholly caused by act or omission done with the intent to cause damage by third party; or
(c) the damage was wholly caused by the negligence or other wrongful act of any government or other public authority responsible for the maintenance of lights or other navigational aids in the exercise of that function[16]; or
(d) the consignor or other person responsible to inform the owner of the hazardous or noxious nature of the substances failed to do so, provided that neither the owner not his servants and agents either knew or ought to have known of their nature.

If the owner proves that the damage resulted wholly or partially from the negligence or intentional act or omission of the person who suffered the damage, he may be wholly or partially exonerated from his liability to such person.

With the exception of the defence mentioned under (c), these defences have been taken from CLC (Art. III). The defence mentioned under (d) is also included in Art. 5, para. 4(c) of the CRTD Convention. This provision constitutes an innovation in the field of international civil liability Conventions and it is still very much criticized because it would unfairly shift this risk wholly to the second tier. Shipowners have argued that the information provided by shippers about the dangerous nature of cargo delivered by them for the transportation is often incorrect and that carriers are not always in a position to check the contents of the shipments. Shipowners should only be liable if they are aware of the risks posed by the cargo accepted by them. This provision will remain between brackets and the issue will have to be decided during the diplomatic conference.

2. Channelling of liability (Art. 4, paras. 4–6)

Paragraphs 4–6 of the draft HNS Convention deal with the channelling of liability to the shipowner. These provisions are similar to those contained in CLC 1984 and CRTD. Paragraph 5 provides that no claim for compensation for damage under the Convention *or otherwise* may be made against the persons mentioned in that paragraph, unless they have caused the damage by their personal intentional or reckless act. The main purpose of the channelling provisions is to avoid overlapping insurance against the liability risks for HNS damage by shipowners, charterers and other persons engaged in the operation of the vessel, such as servants and agents, crew members, the pilot, and other persons performing services for the ship. Moreover the protection of persons performing salvage operations or taking preventive measures can be justified by pointing out that such persons should not be discouraged by imposing on them additional liability which may arise from operations carried out by them to save an HNS casualty ship or to prevent or minimize any further damage caused by the

16. See decision of Swedish Supreme Court rendered in 1983 in the case of the Soviet tanker *Tsesis*, cited by Hugo Tiberg, Oil pollution of the Sea and the Swedish Tsesis decision; *Lloyd's Maritime and Commercial Law Quarterly* [1984] 2, p. 218.

accident. However, para. 6 allows a right of recourse of the shipowner against the consignor or the consignee of the substance causing the damage or against any third party. Any "third party" would include a person mentioned in para. 5.

3. Limitation of liability

The draft text contains two alternative systems of limitation of shipowner's liability. The main system is provided for in Article 6: a so-called "free standing" limitation fund with respect to HNS damage. The structure of Article 6 is similar to that of CLC 1984 Article 5. Article 7 allows a State Party to the Convention to opt for an alternative system.[17] If a State has applied for the optional system of Art. 7, the general rules relating to limitation of shipowners' liability applicable in such State will be applied to HNS damage as well,[18] and such claims will have to compete with other possible claims against the shipowner arising from the same incident.[19] If, however, the general limits applied are insufficient to pay all claimants for HNS damage in full, the shipowner must constitute a supplementary fund in a sum of such unpaid balance but *not exceeding the difference between the limits established in accordance with Article 6 and those established by applying the general limits.* The so-called "linkage-system" of Article 7 has been objected to by several delegations, among others with the argument that it could reduce the total amount available for HNS claimants. This objection could perhaps be met by requiring the shipowner to constitute a somewhat higher supplementary fund. The main advantage of the "linkage-system" is that it avoids a proliferation of funds and the corresponding increase in the cost of insurance. Article 7 will probably go as an important issue to the diplomatic conference and might form part of a negotiated package deal on the limitation issue.

4. Period of liability

The period of liability under the Convention has been defined in Art. 1, para. 9. According to this definition "carriage by sea" means the period from the time when the HNS enter any part of the ship's equipment, on loading, to the time they cease to be present in any part of the ship's equipment, on discharge. If no ship's equipment is used, the period begins and ends respectively when the HNS cross the ship's rail. The present wording would cover a period which could be designated by using the notion of "tackle to tackle", used in the Hague Rules and Hague-Visby Rules: the shipowner will be liable during the time the HNS substances are on board. However, some delegations have argued that

17. This article has been placed between brackets and has not yet been agreed upon.

18. In such State the 1976 London Convention, the 1957 Brussels Convention, the 1924 Brussels Convention or any other national system may be applicable.

19. For instance claims for damage to the hull of and cargo aboard the other ship involved in a collision with the HNS carrying ship, provided that the HNS ship is wholly or partially to blame for the collision.

many accidents with HNS occur during loading and unloading operations and that such operations should therefore be included.[20]

5. Compulsory insurance

Article 10 of the draft HNS Convention contains provisions relating to compulsory insurance to be taken out by the shipowner. The provisions of this article have been copied from CLC 1984 (Art. 5). The owner has to maintain insurance or other financial security in the sums fixed by applying the limits of Article 6. A certificate attesting that insurance or other financial security is in force must be issued to each ship to which the compulsory insurance is applicable. As has been mentioned, the main problem to be solved is the question—which ships should be covered by mandatory insurance? This question is relevant in particular with respect to the carriage of packaged cargo and bunker fuel oil.

IV. COMPENSATION BY AN INTERNATIONAL HAZARDOUS AND NOXIOUS SUBSTANCES SCHEME (THE SECOND TIER)

1. Introduction

Chapter III (Articles 11–31) of the draft HNS Convention contains provisions relating to a second tier of compensation supplementary to the compensation payable by the shipowner. The idea of creating an international compensation scheme stems from the actual operations of the IOPC Fund, and the provisions of FC 1984 have served as a model for many of the provisions in the draft HNS Convention. The IOPC Fund is financed by contributions made by companies having received crude oil and fuel oil in the territories of Member States of the IOPC Fund. The Fund operates on the basis of two types of oil which are being transported in large quantities to a limited number of companies. The number of contributors is restricted as a consequence of which the administration of the Fund is relatively simple and the costs of levying low. The situation with respect to the transport of chemicals is completely different.[21] There are a large number of HNS substances, posing different risks, and many persons are involved in the chemical trade so that the list of potential contributors would be very long. Certain products are being carried in bulk in relatively large quantities, other products in packaged form, sometimes in a small number of packages. The new Scheme could therefore become very burdensome and expensive to administer.

2. Compensation by the Scheme

The Scheme would provide compensation for damage in connection with the carriage of HNS by sea, to the extent that the protection afforded by the

20. See also Art. 6 CRTD.
21. If bunker-oil and empty oil tankers were included the situation would be even more complex.

shipowner is inadequate or not available. The Scheme would not have any "relief function" *vis-à-vis* the shipowner. The Scheme would in each State Party be recognized as a legal person capable under the laws of that State of assuming rights and obligations and of being a party in legal proceedings before the courts of that State. The Director of the Scheme would be recognized as the legal representative of the Scheme.

The Scheme would have to pay compensation in the following cases, under Art. 12, para. 1:

(a) because no liability arises for the shipowner under the HNS Convention;
(b) because the owner is not, or not sufficiently, insured and is not otherwise able to meet his financial obligations in full;
(c) because the damage exceeds the owner's liability under the terms of the HNS Convention, or under the terms of any other international Convention in force or open for signature, ratification or accession at the date of the HNS Convention.

According to Art. 12, para. 3, the Scheme will not be liable if:

(a) it proves that the damage resulted from an act of war, hostilities, civil war or insurrection or was caused by HNS which have escaped or discharged from a warship or other ship owned or operated by a State and used at the time of the incident only on Government non-commercial service;
(b) it proves that the damage did not result from an incident involving a ship.

If the Scheme proves that the damage resulted wholly or partially from an intentional act or omission or from the negligence of the person who suffered the damage, it may be wholly or partially exonerated from its obligation to pay compensation.

Sub-paragraph (b) of para. 3 of Art. 12 is significantly different from Art. 4 FC. Under FC the victim must prove that the damage resulted from an incident involving one or more ships, but under the draft HNS Convention the burden of proof rests with the Scheme. In cases where the pollution cannot be traced to a specific source, the Scheme would be liable to compensate the full amount of the damage and this provision could impose a heavy financial burden on the Scheme.[22]

The aggregate amount of compensation to be paid *by the shipowner and by the Scheme* in respect of any one incident will be limited to a certain amount. A ceiling is also placed on the compensation payable solely by the Scheme for damage resulting from a natural phenomenon of an exceptional, inevitable and

22. In particular if bunker-oil is included the number of cases of oil pollution to be compensated by the Scheme could be considerable.

irresistible character.[23] These limitation amounts have not yet been discussed. Some delegations have mentioned amounts up to 200 million SDR per incident but this important issue will have to be negotiated in relation to the shipowner's limitation of liability at the forthcoming diplomatic conference.

3. The contributions to the Scheme

The most difficult issue in connection with the setting up of a compensation scheme is the question of how to finance such a scheme. The first question to be answered is from which cargoes and ships contributions should be levied. The answer to this question will to a large extent determine the mechanism for the levying of contributions. There is a dilemma, because the system must be both practicable and equitable. If contributions will only be levied from a relatively small number of cargoes (for instance bulk cargoes of chemicals, LNG and LPG only) the contribution system will be practicable but it may not be equitable. Certain chemicals which are only in packaged form would not contribute to the Scheme at all. Only bulk cargoes would share in the compensation of major incidents which could be caused by HNS carried in packaged form. On the other hand one should not levy contributions from small shipments of HNS. The amounts of such contributions would be small and the collection costs could be a multiple of the amount necessary for the actual operation of the Scheme. With respect to the definition of "contributing cargo" the view has been expressed that contributions should be levied only from bulk cargoes and large quantities of HNS in packaged form (for instance carried in large portable containers) and perhaps also from smaller quantities of ultra-hazardous substances (the so-called "bulk plus" concept).[24]

The draft text under consideration contains the following system. The levying system will operate through so-called "issuing agents" to be appointed by the Scheme or by the State Parties. These issuing agents would be responsible for the collection of levies from the contributing cargoes (and contributing ships). To this end the issuing agents would have to obtain HNS certificates from the Scheme and sell them to shippers of contributing cargoes (and owners of contributing ships).[25] It has not been decided whether an individual issuing agent would be authorized to determine the price of such certificate. The contributions to the Scheme to be paid by the issuing agents would be fixed by the

23. Under Art. 4, para. 1(a), the shipowner is exonerated from liability for such damage.

24. The working group of technical experts has proposed to include in the list of contributing cargoes not only certain bulk cargoes but also HNS in packaged form covered by the IMDG Code, as amended.

25. The exact definition of "contributing cargo" has yet to be decided. The present Art. 1, para. 10 reads as follows:

"Contributing cargo means any substance included in Annexe I to this convention which is:

(a) to be carried by sea as cargo [from] [or to] [a port within] [the territory of] a Contracting State; and

(b) to be loaded on a vehicle to be carried by sea as cargo [from] [or to] [a port within] [the territory of] a Contracting State."

Scheme according an "HNS points system". In order to assign HNS points to contributing cargoes the working group of technical experts has proposed to consider the following factors: (1) *hazard factor (HF)* which should take into account the inherent hazards of substances and the risk of damage arising from the carriage of such substances; (2) *quantity factor (QF)*: the quantity to be carried; and (3) *sector factor (SF)* which should strike a reasonable balance between the levies from major contributing groups (e.g. packaged goods, bulk liquids, gases and solids) and anticipated outflows from the second tier fund for each of these groups. For the assessment of the sector factor it would be necessary to obtain statistics and other information about accidents with respect to the groups concerned.[26] For each factor a numerical value would have to be assigned. The HNS points for a consignment of HNS would be calculated by using one of the following alternative formulas: HNS point = HF × QF, or SF × QF or HF × QF × SF. The Scheme would have to calculate annually or quarterly the value of HNS certificates based on HNS points, having regard to the budgetary requirements and the statistical information received from issuing agents or from other sources. Issuing agents would have to make quarterly contributions to the Scheme being the sum of the HNS certificates sold by them in the preceding quarter, multiplied by the value of each HNS certificate as set by the Scheme.

I have tried to explain the basis of the proposed collecting mechanism as simply as possible. It cannot be denied that the mechanism is very complex and there is a risk that it will be very difficult to implement. The calculation depends in my view too much on the availability of reliable statistics which are perhaps not readily available. It would be necessary to make each year an estimate of the amount of compensation to be paid in the coming year with respect to HNS damage which may occur in the territories of State Parties and of the total volume of contributing HNS carried to or from ports or installations of such States.[27] If the estimated amount is not correct, the price determined for an HNS certificate could be too high or too low compared with the financial

26. For instance it has been pointed out by the delegation of Indonesia that the transport of LNG by ship has an excellent safety record.

27. The method of calculation of the annual contributions to be paid to the IOPC Fund is different from the system proposed in the present draft text of the HNS Convention. For the calculation of contributions to the IOPC Fund an estimate has to be made of the amounts to be paid in the relevant year for the satisfaction of claims against the Fund under Art. 4 FC. These claims will arise from accidents occurred in preceding years. The IOPC Fund receives each year reports from Member States specifying the names of all persons who have received contributing oil in the preceding year and details of the quantity of oil received by such persons. These persons will then be invoiced by the IOPC Fund. Under the proposed HNS system, however, the HNS Scheme does not receive contributions from the actual contributors but from the issuing agents who act as intermediaries. The issuing agents will have to sell HNS certificates to shippers or consignees of HNS upon shipment or arrival of their HNS shipments. At that time the exact value of an HNS point cannot be fixed, because the monetary value can only be determined by the Assembly of the Scheme after the conclusion of the budget year in respect of which the contributions are levied. The issuing agent has therefore to set a price for his certificate which includes a premium for the commercial risk he may run in respect of the difference between the price set by the agent and his financial obligations towards the Scheme.

obligations to the Scheme incurred by the issuing agent. After he has sold the certificate the issuing agent is not in a position to charge a supplementary fee to the shipper for any difference between the sale price and the amount charged by the Scheme. It is also possible that the issuing agent will make a profit. The position of an issuing agent does show a certain resemblance to the position of an insurer. If the contributions to be made to the Scheme do not vary from one year to another, there does not seem to be a problem. The experience with the IOPC Fund, however, shows that there can be considerable variations per year.[28]

In my view the best solution would be to limit in first instance the HNS Convention to the first tier (shipowner's liability). A second tier could be considered at a later stage. There is a risk that the Convention would become not acceptable to many States because of its complexity. The result would be that no international compensation regime would enter into force within a reasonable time. If a second tier must be established, it would be advisable to simplify the contribution system considerably by restricting the number of potential contributing cargoes to the Compensation Scheme radically. This might open the possibility to do away with the very complex system of issuing agents and to adopt a contribution mechanism similar to the IOPC Fund. If that option would not be feasible, an alternative would be to charge the shipowner or carrier with the task of collecting, the contributions as a supplementary charge to the freight. In that case a system should be devised which avoids the problem of different contributions each year. It is important that the future Convention should provide for a system which can be implemented without too many complications, even if perhaps it would be less equitable.

V. CONCLUSION

The setting up of a new compensation scheme relating to the transport by sea of HNS proves to be a very complex operation. Nevertheless, the industries concerned should realize that their co-operation in finding an acceptable international solution is absolutely necessary. Otherwise international shipping and trade will be faced with a variety of national regulations which may impose much more severe financial obligations than are being envisaged at present within the framework of international consultations. It may be necessary to restrict the entire operation initially to the first tier, even if that would lead in some cases to a lower ceiling of compensation. The alternative might be that there will be no HNS Convention and no protection of victims after all.

28. See annual report IOPC Fund 1991, p. 24: the total levy over 1989–1991 amounted to respectively £4,800,000, £500,000 and £26,700,000.

CHAPTER 16

HAZARDOUS WASTE, DUMPING CONVENTION, AND LIABILITY

F. L. WISWALL, JR.*

I. "HAZARDOUS WASTE": WHAT IS IT?

1. The Stockholm Declaration, etc

In discussing any one of the topics considered in this Seminar, one can trace back all intergovernmental action over the past twenty years either to or through the 1972 Stockholm Declaration.[1] While in form only a non-binding resolution adopted by a diplomatic conference, the effect of "Stockholm" has been profound with regard to all aspects of environmental pollution—and has been greatest by far with regard to marine pollution.

It is important to recall that at the time of Stockholm the London Dumping Conference had not yet taken place, and both the Third United Nations Conference on the Law of the Sea and IMCO's International Conference on the Prevention of Pollution from Ships lay more than a year in the future. While preparatory work for the Stockholm, London and New York meetings had overlapped, Stockholm was the first, broadest and consequently the essentially formative statement of principles upon which the structures of the Dumping Convention, UNCLOS and MARPOL were framed.

Indeed, the substantive portion of Stockholm was broken down into 26 articles called "Principles". For our purposes the most relevant are Principles 6 and 7, from which we understand the view at Stockholm to be that waste should be considered hazardous if it contains (i) "substances that are liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea", or (ii) substances which are discharged "in such quantities or concentrations as to exceed the capacity of the [marine] environment to render them harmless".[2]

This original and globally-agreed understanding of what constituted "hazardous waste" was, however, not binding upon the subsequent diplomatic conferences dealing with marine pollution, and it has not been assumed *in haec verba*

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1. Declaration of the United Nations Conference on the Human Environment, Stockholm, 16 June 1972.

2. Principles 7 and 6, respectively. See also Recommendation 92 of the "Stockholm Action Plan" ("SAP") annexed to the Declaration.

in the definitions adopted for the successive instruments. The degree to which it was assumed into the substantive portions of the successive instruments has varied.

2. The London Dumping Convention

At the moment of Stockholm, the preparatory work for the London Inter-Governmental Conference on the Convention on Dumping of Wastes at Sea had been completed. Acknowledging this, Stockholm enjoined governments to continue to work towards adoption and entry into force as soon as possible of "an over-all instrument for the control of ocean dumping".[3]

When the London Dumping Conference convened some four-and-a-half months later, it adopted an extremely general definition of "wastes",[4] but used the "list approach" to define which wastes are to be considered "hazardous". Thus under the regime of the London Dumping Convention (LDC)[5] there is no "neat" definition and reference must be had to the "Black List" (and its exceptions) and the "Grey List" in order to determine (i) what wastes are hazardous and (ii) whether they may be dumped at all and, if so, under what conditions.[6]

3. The Basel Convention

The transfer to and disposal of hazardous waste in non-generating countries became headline news in the late 1980s, with the disposal of municipal garbage from the United States upon beaches in Haiti and the delivery (not properly disposal) of toxic waste from southern Europe to African nations. Well before those events, however, drafting was in progress for what would become the 1989 Basel Convention.[7]

The definition of hazardous wastes under Basel is bifurcated. Under Article 1, whether a waste is hazardous is determined either (i) by reference to specific characteristics set forth in Annexes to the Convention or, if not thereby determined to be hazardous, then (ii) by reference to the national law of the importing, exporting or transit State Party.[8] This means that Basel is not positively pre-emptive, and obviously that fact has consequences running beyond the mere difficulty of determining which wastes fall within the scope of the Convention.

3. Recommendation 86(c) of the SAP (*emphasis supplied*).

4. "'Wastes or other matter' means material and substance of any kind, form or description." LDC Article III (4).

5. Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, London, 29 December 1972.

6. See LDC Article IV (1) and Annexes I, II and III (as amended). See also the general categories of wastes listed in Article XII.

7. Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Basel, 22 March 1989.

8. Radioactive materials and "wastes deriving from the normal operation of ships" are excluded from Basel if covered by other regimes.

4. The Draft HNS Convention

The IMO draft HNS Convention,[9] now in preparation for well over a decade (rivalling only UNCLOS in this respect), has been extensively treated in other papers at this Seminar; I will try to avoid ploughing over the same ground. As to its origin I will say only that nothing of the sort seems to have been in contemplation at Stockholm, and that the HNS Convention was originally envisaged as limited in scope to the "super-catastrophe" which no other regime (including the 1976 London Limitation Convention) could possibly cover.[10] How far from this original concept the draft Convention now lies you may determine for yourself. My purpose in referring to the HNS Convention is to compare and contrast its regime with and to show its relationship to the London Dumping and Basel Conventions.

Under draft HNS, there is no definition of "hazardous waste", but of "hazardous and noxious substances" determined by reference to lists annexed or referred to by the Convention and certain flammable and explosive substances directly defined in the Convention by reference to flashpoint.[11] The definitive issue to be ultimately determined by the second diplomatic conference on HNS is whether substances other than those carried as cargo will fall within the scope of the Convention, but for our purpose I will limit consideration to hazardous substances contained in waste and carried as cargo for the purpose of ocean dumping or transboundary disposal.

The draft HNS Convention is therefore directly relevant in any instance in which hazardous waste carried by sea enroute to the dumping or disposal site is, by whatever cause, released to the marine environment before it reaches its intended destination.

5. Agenda 21

The definitions of "hazardous waste" to be found in the LDC, Basel and draft HNS Conventions can at least be finally determined with some clarity, whether or not one agrees with the method and/or the result of those determinations. It is interesting, therefore, to contrast these with the most recent definition.

In terms of volume of carriage by sea, the most significant wastes are garbage and processed sewage sludge—and because of the inability to reduce production of the dry weight of sewage sludge without reducing the number of human beings (and other animals), sludge makes an interesting example when examining the conflict between the environmental purists, the public health officials

9. Draft Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea. The version used in preparing this paper is IMO Document LEG 66/4, 3 December 1991.

10. The hypothetical case referred to in the original stages of consideration prior to the abortive 1984 Diplomatic Conference was the total simultaneous ignition of the containment vessels of a fully-laden liquefied gas carrier while discharging in an enclosed harbour. Comparisons were made to the *White Oak* (Halifax), *Fort Steckin* (Calcutta) and *Grandcamp* (Texas City) disasters.

11. See draft HNS Article 1 (5).

and the sanitation engineers which is now exerting so much pressure upon the States parties to and the secretariats of the three (LDC, Basel and HNS) Conventions. *Apropos* of this, the final definition to be considered here was adopted on 14 June 1992 in Rio by the United Nations Conference on Environment and Development, as part of *"Agenda 21"*, the Rio Conference's environmental agenda for the 21st Century:

> 21.3. Solid wastes, as defined in this chapter, include . . . sludge from sewage treatment plants. *If these wastes manifest hazardous characteristics* they should be treated as hazardous wastes.[12]

This is "passing the hot potato" with a vengeance, and if the Rio-type definition finds wide usage in future conventions it will be a very good thing indeed for the maritime legal profession.

II. THE LONDON DUMPING CONVENTION

1. What is covered

The original concept developed 20 years ago at Stockholm, it will be recalled, was that there should be an instrument to "control" ocean dumping so as to limit it to the dumping of waste in quantities or concentrations which are within the capacity of the marine environment to render the dumped waste harmless.[13] The LDC diplomatic conference in 1972 appears to have accepted this criterion, and even certain substances on the "Black List" (Annex I) may be dumped at sea "if they are contained in wastes as trace amounts or are rapidly rendered harmless at sea".[14] Actions by the LDC Consultative Meetings of Contracting Parties ("CMCP") subsequent to 1972 have further defined the phrase "rapidly rendered harmless", but the basic concept is still reflected in the LDC.[15]

2. What is prohibited

What is absolutely prohibited under the terms of LDC itself is the dumping at sea of wastes on the Black List, i.e., hazardous wastes.[16]

3. What is permitted

What is clearly permitted under the terms of the LDC itself is the dumping or other disposal at sea of all wastes not covered under the Black or Grey lists, or dealt with by specific exceptions thereto, subject only to the issuance of a

12. *Agenda 21*, Chapter 21 (*emphasis supplied*).
13. Above, nn. 2 and 3.
14. UN General Assembly UNCED Preparatory Committee paper A/CONF.151/PC/31, p. 2, paragraph 8 (a), 28 January 1991.
15. LDC Annex I (Black List), paragraphs 8 and 9. See also Annex II (Grey List), paragraph F.
16. Ibid., Article IV (a).

"General Permit" by the appropriate authority of a State Party to LDC. What is also permitted is the dumping or other disposal at sea of wastes on the Grey List and (under the terms of LDC itself) the incineration at sea of wastes on the Black List which meet the criteria set forth in the Incineration Addendum to Annex I, subject to the issuance of a "Special Permit".[17]

4. What is both permitted and prohibited

What has happened over the past decade is that the dumping, incineration or other disposal of wastes which in its own terms the LDC would permit, subject to "special care" provisions, is being effectively prohibited by extra-conventional actions taken by successive CMCPs.

Thus the insertion into the deep seabed of low-level radioactive wastes proposed pursuant to paragraph D of the Grey List has, since the 7th CMCP in 1983, been "voluntarily suspended" (in accordance with resolutions of the 7th and 9th CMCPs): "pending the completion of additional scientific and technical studies and assessments, as well as studies on the wider *political*, legal, economic and social aspects of radioactive waste dumping".[18] The studies referred to have never been completed, and therefore the suspension continues.

Incineration of hazardous waste at sea under the terms of the LDC, which from 1976 to 1987 was about 100,000 tons annually, thereafter dwindled rapidly owing to a CMCP agreement in 1988 to proceed toward elimination by 1994 of incineration at sea of all liquid chemical wastes. Effective prohibition of ocean incineration of hazardous waste came very quickly—no permits for incineration have been issued since 1990, and in early 1991 the last incinerator ship was decommissioned.[19] The plans for construction of a new generation of minimal impact incinerator ships have been shelved, and incineration of hazardous waste at sea is now a dead concept.

5. The type of liability contemplated by the LDC Parties—then and now

There is no liability regime in the LDC itself, nor is the development of an international liability regime for ocean dumping likely until a diplomatic conference adopts a widely-agreed HNS Convention. At the time of adoption of the LDC the only maritime liability and compensation regime available as a model was that of the 1969 CLC and the 1971 Fund, and one may fairly suppose that thinking on the question of dumping liability ran along similar lines 20 years ago. At present, there seems to be a dawning realization that the oil pollution model is inappropriate, because (i) dumping, unlike oil transport, is an activity which

17. Ibid., Article IV (b) and (c), and Annex I, paragraph 10 plus Addendum of the 3rd CMCP (1978), effective 11 March 1979.

18. A/CONF/.15/PC/31, page 4, paragraph 13 (*emphasis supplied*). And see document A/CONF.15/PC/31/Add.1, page 4, paragraph 2.6.9, 23 January 1992.

19. See A/CONF/.15/PC/31, page 8, paragraph 12 (d) and see A/CONF.15/PC/31/Add.1, page 3, paragraph 2.6.6.

can only take place under conditions and on voyages with cargoes which are specifically permitted by the government of an LDC State Party in compliance with all of the specific requirements of LDC, and (ii) the effects of dumping, unlike oil transport, may not be observed or realized for a very long time after the dump is made, and which dumps have caused the damage may, in certain cases, be a very difficult question to answer. Clearly some mechanism is required which is non-specific as to cargoes, voyages or individual enterprises, and which imposes an arbitrary time bar to liability after some period of years. One could make a full legal career out of the preparatory work for the ocean dumping liability conference.

While Stockholm encouraged the future "development of international law regarding liability and compensation for the victims of pollution and other environmental damage", it gave no indication of intent as to the nature of that liability or the extent of or mechanism for compensation. It did, however, indicate that it is essential for all developments of law and regulation regarding the environment to take into account: "the systems of values prevailing in each country, and the extent of the applicability of standards which are valid for the most advanced countries but which may be inappropriate and of unwarranted social cost for the developing countries."[20] This reminder from Stockholm is appropriate to consideration of liability in the context of the LDC, whose annual CMCPs are attended by only 30 to 45 of the 65 States Parties and whose working groups are attended by only 15 to 20 delegations.[21] Invariably, the developing States Parties are under-represented at LDC meetings.

III. THE BASEL CONVENTION

1. What is relevant

Basel defines as "illegal traffic" any transboundary movement of hazardous wastes which does not conform to the Convention's requirements of notification or consent, which is procured by misrepresentation, or which results in a deliberate unauthorized dumping.[22] It is illegal traffic by sea which is the feature of Basel most relevant to our subject.

2. What movement by sea is prohibited

Of course the short answer is that any illegal traffic by sea is prohibited by Basel. But to give an adequate picture for our purpose one must make clear that Basel employs a rather complicated "list approach", involving not only specific substances but also general hazard characteristics and different types of disposal

20. Stockholm Principles 22 and 23.
21. A/CONF.151/PC/31, page 10, paragraph 33.
22. Basel Articles 2 (21) and 9 (1).

operations.[23] In addition, as previously noted, any State Party to Basel may impose more stringent national criteria than those set out in the Convention, and such national criteria will invoke the provisions of Basel if the State in question is a party of export, import or transit.[24] Once a waste cargo is identified as hazardous under either Basel or more stringent national criteria, then it may be moved by sea if the further requirements of Basel (and any other applicable convention or more stringent national provision) are met, except that Basel prohibits absolutely the export of wastes of any character (i) to a non-party State, (ii) from a non-party State, (iii) to a State Party which has not consented to the import, (iv) for disposal within the area south of 60 degrees South, or (v) across the boundary of any State which has not consented to the movement.[25]

3. What movement by sea is permitted

Under Basel what is not prohibited is permitted—*conditionally*. Assuming the consents of the States Parties concerned, the movement of hazardous waste may be permitted under conditions which are simply too numerous to list in a paper of this scope, but which always include (i) notification to each of the States directly involved, containing information required by the Convention,[26] (ii) a response in writing from the States of import and transit, verified by the State of export,[27] (iii) accurate packaging, labelling and transportation of the waste under internationally-accepted standards,[28] (iv) issuance of a movement document containing information required by the Convention, which must accompany the shipment from the point of origin to the point of disposal,[29] and (v) virtually any other condition which any of the States concerned chooses to impose upon the movement.[30] No agreement between the States concerned may derogate from the provisions of the Convention.[31]

4. The types of liability under Basel

The severity of the Basel regime is emphasized at the outset by the requirement that the States Parties treat illegal traffic as a *criminal* offence, and that "conduct in contravention of the Convention"—even if not criminal—must be punished.[32] In addition to criminal and punitive liability, the exporter of

23. Ibid., Article 1 (1) (a) and Annexes I–IV.
24. Basel Article 1 (1) (b). States Parties must inform the Basel Secretariat (UNEP) of national criteria more stringent than the provisions of the Convention, pursuant to Article 3.
25. Basel Article 4 (1), (5) and (6), Article 6 (2) and Article 7.
26. Ibid., Article 6 (1) and Annex V A.
27. Ibid., Article 6 (2), (3) and (4).
28. Ibid., Article 4 (7) (b).
29. Ibid., Article 4 (7) (c) and Annex V B.
30. Ibid., Article 4 (9) (c) and (11), Article 6 (7) and (11).
31. Ibid., Article 11.
32. Basel Article 4 (3) and (4). The nature and extent of criminal and other punitive liability is left to the national law of the States Parties.

hazardous waste in conformity with the requirements of the convention must re-import any waste the movement of which cannot be completed in accordance with the terms of the contract.[33]

Finally, in addition to the liabilities mandated by the Convention, the Basel States Parties are obligated to negotiate and adopt: "as soon as practicable, a protocol setting out appropriate rules and procedures in the field of liability and compensation for damage resulting from the transboundary movement and disposal of hazardous wastes and other wastes".[34]

Completion of preparatory work on the Basel protocol will probably await the outcome of the diplomatic conference on HNS.

IV. THE DRAFT HNS CONVENTION

Again, because other papers have dealt with HNS, consideration of the draft Convention here is limited.

1. What is "permitted"

Of course the draft HNS Convention really "permits" nothing and "prohibits" nothing in the sense of LDC and Basel. But it does place certain requirements upon the shipment of hazardous waste as cargo, and it may be said to "permit" the vessel in question to proceed if those requirements are met. These are best described in the negative.

2. What is "prohibited"

It is prohibited for a vessel subject to the HNS Convention to trade without a compulsory insurance certificate having been issued, in force for, and displayed on board that vessel.[35] The certificate must set forth certain information as required by the Convention and it may not be terminated save in accordance with the provisions of the Convention.[36] The amount of insurance or other financial security must cover liability up to the amount calculated in accordance with the Convention.[37] "Hazardous and noxious substances certificates" must be purchased and presented in respect of the vessel and cargo on a per voyage basis.[38] In default of these conditions a port State Party shall impliedly prohibit the vessel from entering or leaving with a hazardous waste cargo on board.[39]

33. Basel Article 8.
34. Ibid., Article 12.
35. Draft HNS Article 10 (2), (4) and (10).
36. Ibid., Article 10 (2), (3) and (5).
37. Ibid., Article 10 (1).
38. Ibid., Article 17 and Article 18 (6).
39. Ibid., Article 10 (11) and Article 18 (6).

3. Liability under the draft HNS Convention

The draft Convention places upon the shipowner the burden of proof that he is not liable in whole or in part by reason of certain wrongful acts or omissions of others; in default of such proof the owner is wholly liable.[40] Additionally, the effect of the draft Convention is to make the owner vicariously liable for the acts of his servants or agents, the vessel's servants or agents, the charterer, manager or operator of the vessel, salvors, those acting in mitigation of damage, and the servants or agents of those other than the owner, unless the owner or a third party proves that such person wilfully caused the damage in whole or in part.[41] In return, the owner enjoys the rights of recourse to which the law would normally entitle him.[42] The draft Convention does not address the issue of liability upon the part of producers or shippers who misdescribe, mislabel, mishandle or improperly package hazardous waste or other HNS.

V. THE RELATIONSHIP BETWEEN THE CONVENTIONS

1. Overlapping provisions

In the quite common case of a cargo of hazardous waste loaded for dumping at sea on a voyage which passes across the maritime boundaries of two or more States, provisions of LDC, Basel and HNS would all be applicable. LDC and HNS would apply to loading, HNS and Basel would apply to the voyage, and Basel and LDC would apply to the dumping. For any given dumping voyage, it might be possible for the requirements of LDC and HNS to be met, but the requirements of Basel might well be too stringent to permit the voyage.

Various permutations may be imagined. Suffice it to say that there are many overlapping provisions, and that the combined application of these Conventions to the dumping of hazardous waste is going to provide the highest possible ratio of sustenance to the maritime legal profession as against the number of voyages successfully undertaken.

2. Missed connections

There are places where—it is difficult to believe—the widely cast nets of these Conventions do not meet at all. Thus the actual generator of hazardous waste carried by sea for dumping is not directly dealt with in any way by the combined regimes, and at present liability and limitation are dealt with only in respect of carriers and their insurers. The issue of State liability is dealt with only indirectly by HNS, only partially by Basel, and not at all by LDC.

40. Ibid., Article 4 (1), (2) and (3).
41. Ibid., Article 4 (5).
42. Ibid., Article 4 (6).

These gaps exist, for the most part, not because they have been invisible but because political forces have kept them open.

3. Multiple Liability

Application of national law enforcing Basel or LDC, or of the provisions of draft HNS, might give rise to liability in a given hazardous waste dumping case.

It is easily seen that national law may prescribe liability under LDC and Basel which could apply to the same incident, and in different States not necessarily Party to both Conventions. There are no exclusivity of remedy provisions under either Convention: *ergo*, double liability.

The draft HNS Convention does have an exclusivity provision,[43] but HNS prescribes only civil liability and therefore cannot affect the imposition of additional punitive liability as *required* by Basel.[44] Nor is there any reason why States Parties should not also provide criminal penalties in national law for violation of LDC: *ergo*, triple liability.

Finally, if the punitive liability which might be imposed by national law for violation of LDC and which is mandated for violation of Basel should take the form of excess or punitive damages, the possibility of quadruple or quintuple liability arising out of a single hazardous waste dumping incident cannot be denied.

4. The measures of liability

None of the Conventions considered in this paper touches upon the measure of liability. Setting aside criminal or other punitive liability under national law pursuant to Basel and possibly for LDC violations, the measures of civil liability may vary.

One may reasonably suppose that civil liability under the Basel protocol will eventually resemble liability under the HNS Convention as it is finally adopted. But civil liability in connection with the dumping at sea of hazardous waste in contravention of LDC will surely raise issues beyond mere economic loss because of the likely inability of the affected area to recover in the span of a few years, and the almost impossibly high cost of any corrective action. It is in the context of waste dumping that liability for damage to the environment based upon "replacement cost" is almost certain to become a central issue of tremendous force. One sees this in the declared objective of *Agenda 21* that there should be an "internalization of environmental costs, such as the polluter pays principle, so as to avoid degradation of the marine environment".[45]

43. Ibid., Article 4 (4).
44. See note 32, supra.
45. Agenda 21, Chapter 17, paragraph 17.22. (d) (*emphasis supplied*).

5. The availability of limitation

Limitation under the draft HNS Convention is easily determinable by its own terms,[46] and this may also prove an acceptable model for the Basel Protocol. Limitation of civil liability arising out of the dumping of hazardous waste covered by LDC will most likely be sought under the 1976 London Convention where applicable.[47] But limitation of criminal liability is not available under any circumstances, and limitation of punitive liability is a very doubtful prospect given the wilful misconduct which is usually a condition precedent.

6. The availability of insurance

Criminal liability is probably not insurable at all in the context of hazardous waste dumping, and punitive liability would be insurable only if civil and resulting from ordinary negligence.

The first "big one" has not yet occurred—we have not had the *Amoco Cadiz* of hazardous waste dumping. The availability of cover for civil liability in such cases is likely to continue at or near present levels until that case comes along. But meanwhile underwriters and clubs will probably begin to realize that the complexity of the developing regimes in this area creates as many pitfalls as it gives protections.

7. The availability of sea transport

The availability of transport for hazardous waste for dumping or disposal will grow more restricted for two reasons. The first is that the difficulty and expense of complying with the requirements of the Conventions is enormously burdensome and will become more so, driving all but the most specialized and financially secure operators away from the business. The "rogue operator" is unlikely to continue as a player in the hazardous waste game, given the high level of both government and general public attention.

The second reason is that the business itself is being increasingly pressured to go out of existence. We are moving quickly, since the latter 1970s, from a philosophy of "control" to one of "ban" where ocean dumping is concerned. The Rio Conference's *Agenda 21* very bluntly states its aims to "encourage the London Dumping Convention to expedite work to complete studies on replacing the current voluntary moratorium on disposal of low-level radioactive wastes at sea by a *ban*",[48] and to encourage the LDC Parties "to take appropriate steps to *stop* ocean dumping and incineration of hazardous substances".[49] Indeed, Greenpeace has recently proposed that the name "London Dumping

46. HNS Articles 6, 7 and 8.
47. Convention on Limitation of Liability for Maritime Claims, London, 19 November 1976.
48. Agenda 21, Chapter 22, paragraph 22.5. (b) (*emphasis supplied*).
49. Ibid., Chapter 17, paragraph 17.30. (b) (ii) (*emphasis supplied*).

Convention" be abandoned in favour of a new name indicating opposition to dumping; presumably the name "London No-dumping Convention" will be in the running.

These may be seen as noble objectives, but at the conclusion of this paper I would like to bring the subject down to earth (or a little below) by reverting to the problem of sewage sludge.

This residue of treated sewage is generally considered to be a non-hazardous waste. It is capable of safe disposal by dumping in landfills, incineration, spreading out on land, processing into fertilizer, and is even manufactured into building bricks as well as tourist curiosities (including jewellery). But the sheer volume of sewage sludge—which must grow even if the world population were to stabilize at its present level overnight (as more treatment plants for the present level of sewage generation come on line)—mandates that for the foreseeable future its principal means of disposal must be by ocean dumping.[50] "Sludge is a suspended solid that disperses completely in seawater." "Sludge can be disposed innocuously in deep waters." "These facts cannot be ignored by substituting the pursuit of some mythical no-impact solution."[51]

Certainly the LDC as drafted contemplated the continued disposal at sea of sewage sludge, and even though it may contain trace contaminants of Black List substances it is specifically exempted from the application of Annex I.[52] Sludge has been routinely considered an Annex II waste, dumped under a General Permit.

Now, it seems, an attempt will be made to end the ocean dumping of sewage sludge. This will presumably be grounded upon paragraph F of the Grey List, added by the 5th CMCP in 1980, which requires restriction of dumping of "substances which, though of a non-toxic nature, may become harmful due to the quantities in which they are dumped". The intent of the 14th CMCP is clearly seen in comments it adopted concerning the then proposed Rio *Agenda 21:* "The Contracting Parties note the proposals to construct appropriate sewage treatment facilities, but stress that longer term environmentally sound solutions are needed, *with a view to ultimately alleviate the need for sewage sludge disposal at sea.*"[53]

The challenge for the future with regard to hazardous waste of many kinds is likely to be met by new technologies, but as to sewage sludge—the possible sole

50. New York City alone in 1988, with 14 sewage treatment plants generated 350,000 cubic feet of sludge daily—about 350 dry tons. There are presently 15 plants, with three being upgraded in capacity and new interceptor sewers under construction to capture and treat more of the presently-generated sewage. And the population of New York City is shrinking! In 1987 New York moved its dumpsite further offshore, from 12 miles to deep waters about 150 miles southeast of New York Harbor.

51. See H. W. Schultz, Municipal Sewage Sludge: Where Next? 1 Marine Policy Report 261–68 (1989).

52. LDC Annex I, paragraph 9.

53. Document LDC 15/3, page 2, paragraph 3.3.

survivor of an ocean dumping "slump"—technology is not likely to stop, let alone reduce its production.

Critics of ocean disposal have used the words *ban* and *stop*, but have not raised the question, "Where else can we put it?"[54]

54. Schultz, n. 51, supra.

CHAPTER 17

POLLUTION FROM OFFSHORE ACTIVITIES AN OVERVIEW OF THE OPERATIONAL, LEGAL AND ENVIRONMENTAL ASPECTS

EDGAR GOLD* WITH CHRISTOPHER PETRIE†

I. GENERAL INTRODUCTION

Although the Comité Maritime International (CMI) has been involved in developing the legal aspects of offshore energy activities since 1976 and is, at the moment, once again, assisting the International Maritime Organization (IMO) in this area, the subject area has, in general, not been of prime CMI concern. This reflects the general problem of offshore operations which, despite their importance, have not so far developed any discernible legal regime, global or otherwise. In fact the regime which does exist has been basically private-sector industry-driven and "public law" involvement has been relatively peripheral. However, there has also been relatively little uniform private law development in the area which has been permitted to proceed in a bilateral or multilateral contractual manner.

It is only the growing environmental concern about offshore operations which has raised questions about the need for broadly accepted public and private law principles in this area. It is, however, suggested that there may well be a need for a widely accepted global legal regime for *all* aspects of offshore operations and that, furthermore, such a regime ought to be developed by the IMO with the assistance of the CMI and the international energy industry. Although, there are significant differences between the offshore and shipping industries, there are also very important similarities and it is the latter which could provide a very useful basis for the development of a needed offshore legal regime. Yet it is suggested also that offshore activities require their own specially-designed regime which should, ideally, be widely accepted at the global level.

This paper serves as an introductory overview to the operational, legal and environmental aspects of the offshore industry. It will show that offshore operations are very different from shipping, that extraordinary technological

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developments are ongoing, that high costs and higher risks are part of everyday operations, that international and, to a great extent, national legal responses, have been *ad hoc* at best, and that the potential of serious environmental disaster is ever present. As a result, a considerable part of the paper will examine the actual operational sector in order to illustrate the very real differences between offshore operations and the shipping sector.

Offshore operations have, nevertheless, developed a relatively effective liability and insurance regime which will be covered in the next paper.‡ However, as already indicated, this regime has been very much developed in response to actual industrial and commercial requirements rather than public sector interests. Accordingly, the private and public sectors are now provided with an opportunity to develop a new regime before a major disaster will provide the necessary international public incentive to impose a new system which may well not be satisfactory for anyone.

II. OFFSHORE OPERATIONS: AN OVERVIEW

While modern oil production dates back to the 1850s, oil exploration from offshore activities did not begin until 1896 when the first well was sunk off the coast of California.[1] Since then offshore oil production has expanded both geographically and technologically. The first wells were built on wooden jetties extending from the shoreline and utilized recovery systems similar to those on dry land. Today, many different types of oil rigs operate in the harshest environments and extremely deep water, and the technological frontiers continue to expand. As the price of and demand for oil have increased, offshore operations have developed to the point where they now account for approximately one-quarter of total world oil production.[2]

As Table 1 indicates, offshore operations seem to have levelled off at one-quarter of total production. However there is potential for a substantial expansion of the industry in years to come. The seabed remains largely unexploited, and exploratory research indicates that total offshore oil reserves may account for the majority of the world's potentially proliferous zones.[3] Moreover, some studies have noted the recent expansion of the industry to an increased production level greater than the usual one-quarter of total production.[4] Therefore as numerous States continue the search for and production of offshore oil, total

‡ Liability and P & I Insurance Aspects by Sven-Henrik Svensen at Chapter 18 at p. 232 below.

1. A. D. Couper, *The Times Atlas and Encyclopedia of the Sea* (London: Times Books Ltd., 1989), p. 102.

2. E. M. Borgese, N. Ginsburg and J. Morgan (eds.), *Ocean Yearbook 9* (Chicago: University of Chicago Press, 1991), p. 504.

3. P. Odell and K. Rosing, *The Future of Oil: World Oil Resources and Use* (New York: Nichols Publishing Co., 1983), p. 27.

4. Figures for 1990 show offshore oil production accounting for almost 30 per cent. of total production. See *Basic Petroleum Data Book* (Washington: American Petroleum Institute, 1992), Vol. XII, No. 1, Section XI, Table 1, 1992.

Table 1 World Production of Crude Oil, Total and Offshore (Barrels per Day, in Thousands)

Year	*World Production*	*Offshore Production*	*Offshore as % of World*
1975	53,850.00	8,278.36	15.4
1976	57,210.00	9,431.91	16.5
1977	56,567.00	11,436.75	20.2
1978	60,337.00	11,480.75	19.0
1979	62,768.00	12,491.93	19.9
1980	59,812.00	13,587.49	22.7
1981	55,886.20	13,664.61	24.5
1982	53,191.00	13,541.25	25.5
1983	53,259.00	13,791.04	26.7
1984	54,090.00	15,311.50	28.3
1985	53,391.00	15,128.33	28.0
1986	55,864.00	13,923.39	24.9
1987	56,070.00	14,741.55	26.3
1988	58,009.00	14,402.61	24.8
1989	59,661.00	14,833.91	24.9

Sources: *Offshore* and *Oil and Gas* Journal.

production is expected increase.[5] However much will depend on the future price of oil in the world market. If the price remains sufficiently high, the offshore industry could experience a substantial increase in production and exploration,[6] while lower prices could effectively inhibit future growth.

Exploration is expanding and technological advances will further reinforce the strong role that the offshore industry plays in future energy as well as mineral resource development. Thus it is important to understand the technical nature of offshore operations and this section will therefore provide an overview of present offshore technology.

1. Energy development

Energy production is, without doubt, one of the most important issues facing the international community. The infrastructures of both the developed and developing States will continue to depend upon an abundant supply of relatively inexpensive energy. Offshore oil and gas production is simply another attempt at meeting this demand. However successful offshore oil and gas production also pays large dividends to States and corporations which have invested in offshore development. Major successes in the offshore energy area, such as off Norway and the UK in the North Sea, off Mexico and the US in the Gulf of Mexico, off Indonesia in its archipelagic waters, off Indonesia and Australia in the Arafura Sea, off Australia in Bass Strait, off New Zealand, Venezuela, Nigeria and the Gulf States, account for most of the global oil production today.

5. M. McConnell, "The Other Uses of the Sea and the Seabed", in E. Gold (ed.), *Maritime Affairs: A World Handbook* (2nd ed.), (Harlow: Longman Group UK, 1991), p. 204.

6. A. Reinsch and M. O'Reilly, *World Oil Market Projections 1990–2005*, (Calgary: Canadian Energy Research Institute, 1990).

In a number of other offshore areas States such as China, Canada, Vietnam, Thailand, Malaysia and Myanmar are close to significant production. Furthermore, vigorous exploration continues in all ocean areas of the world.

Yet the costs of extracting offshore hydrocarbon resources are significantly higher than those onshore and this cost difference affects the offshore option. Accordingly, there must be a sufficient demand for the product on the world market in order for offshore oil projects to commence. In the early 1970s when the demand for oil outreached the supply, the scarcity provided the incentive for major marine sector development and it became economically attractive to expand the oil business into the world's oceans. However since that time the world has not only experienced slower economic growth but a large number of these new sources of oil and gas become available. The results were apparent as early as 1987:

> Not surprisingly, the impetus for exotic and expensive marine alternatives has been reduced . . . As the threat of economic collapse caused by limitations in energy and material supply has receded in the past decade, so too has the single most powerful argument in favour of the development of alternative resources of marine origin.[7]

Canada provides a good current example of this problem, In June 1992, Canada began its first commercial production of offshore oil near the eastern coast of Nova Scotia. By industry standards the project is small: two wells will produce approximately 49 million barrels of high quality oil over the next six years.[8] Yet by keeping the project relatively small the overall costs of production do not affect the price of the final product and a market was readily found.

However to the north-east, in the Canadian province of Newfoundland, the Hibernia Oil Project has not had the same success. Hibernia is a massive undertaking, with almost $2 billion (Canadian) already expended in view of the very large amounts of oil expected to be recovered. Yet given the current low global price of oil, these expenditures are increasingly difficult to justify. As a result, the Hibernia project loses $1.5 million (Canadian) per day and the entire project is dangerously close to being indefinitely stalled.[9]

Many other States involved in the offshore have also discovered that the development of this complex industry is by no means a simple undertaking. As offshore operations have evolved from wooden jetties to a highly complex billion dollar industry, involving multinational corporations and governments, the setting has become truly international. Indeed the production of oil and gas and other minerals from the seabed, by its very nature, tends to be an international undertaking. If a State wishes to tackle the offshore it simply cannot avoid co-operating with a number of foreign interests in order to finance the project and acquire the necessary experience and technology. Even States which may not

7. G. Ford, C. Niblett and L. Walker, *The Future of Ocean Technology*, (London: Frances Printer Publishers, 1987), p. 126.

8. "The Panuke Cohasset Oil Project", Information Circular No. 26, (Halifax: Nova Scotia Department of Natural Resources, 1992).

9. *Offshore Oil International* (Aberdeen: Yorkshire Web, Barnsley) Spring 1992.

readily invite foreign involvement, must follow this route if they wish to succeed. As one study of the former Soviet Union's oil industry concluded:

> One of the most important points stressed in this study is the nearly complete lack of domestic technology to meet any of these [offshore] requirements. The Soviet Union, therefore, has enlisted a number of foreign firms to assist in the acquisition and operation of the required technology.[10]

China has also learned many of the same lessons and has become aware of the importance of international assistance in the development of offshore oil fields. In other words, energy development in the offshore is principally technology driven. Policy decisions, financial support and the legal issues, which dominate the operation of an oil field, are all based on the ability of a State to acquire the sophisticated technology required to begin even the exploration of offshore oil. In this way, the offshore regime is significantly different from the shipping industry. Ships have been sailing the oceans for centuries and the industry's international rules have thus developed accordingly. Oil rigs, on the other hand, have existed for mere decades and the international rules regarding their use have yet to be established.[11] Although there has been a tendency to apply the principles of traditional shipping, this has not proven to be the most effective manner to administer the new industry. Offshore systems are significantly different, and require a different approach. It may, therefore, be helpful to illustrate this idea a little further.

2. Offshore energy technology

There are almost as many different types of "oil rigs" as there are ships. These "rigs" are often called mobile offshore drilling units (MODUs), and range from structures driven directly into the seabed to actual sea-going vessels, known as drill ships. Not only are there a number of different types of MODUs, but within each classification, the craft may be treated differently according to its operational mode. As a result, the legal regime may vary depending on the stage of operations.

These differences also affect the manner in which international maritime law must treat these "vessels". Should they be classified, operated and insured as ships, or should they operate under a regime of their own? This is the focus of this paper and one of the most important questions facing the development of the offshore industry in the future.

First, each of the different categories covers a variety of structural accomplishments. For example, "floating structures with propulsion" (Table 2, item 12) covers an assortment of ships: ships for deep-water drilling, ships for laying underwater pipelines, barges for industrial plan installation, offshore platform

10. S. Lewarne, *Soviet Oil: The Move Offshore* (Boulder: Westview Press, 1988), p. 143. The chapter also lists the large number of "foreign firms" which have been involved in the Soviet offshore effort.

11. See Section 3 on the legal status of offshore operations.

salvage boats, and so on.[12] There is a multiplicity of ocean structures. Globally, they could be grouped as follows:

Table 2

1. chambers for high internal pressure
2. high-pressure hulls
3. low-pressure hulls
4. underwater habitats
5. ocean reservoirs
6. underwater cables and pipelines
7. offshore platforms
8. offshore towers
9. offshore structures for berthing and mooring
10. floating horizontal structures without propulsion
11. floating vertical structures without propulsion
12. floating structures with propulsion
13. underwater bridges and tunnels
14. underwater industrial systems
15. ocean dams and dikes
16. floating cranes
17. artificial islands
18. highly specialized structures.

Secondly, as shown in Table 3, compared to the other marine sectors, the oil and gas industry involves a large and diverse number of ocean structures. From fixed platforms to laying pipelines to iceberg protection systems, the scope of offshore operations includes an enormous amount of resources applied to the marine sector in an unique manner. Moreover these structures tend to be highly sophisticated and complex, requiring considerable expertise for their operation.

However, once on station, the actual operations have little to do with shipping. Instead, it becomes an industrial process which happens to take place in the ocean and which cannot be accommodated by the traditional shipping regime. Therefore, if an international regime is to be established, then the traditional shipping rules will have to be changed in order to adapt to the different environment of offshore exploration and production.

The actual offshore exploration process begins with Seismic research vessels sounding the ocean floor and its geological formations beneath with energy waves.

Seismologists then record the pattern of the reflected waves to create a physical map of the geological structure.[13] From this information scientists and oil experts will decide whether or not to begin exploratory drilling. If preliminary results are favourable and if the economics of the project are acceptable, and exploratory drilling vessel may be called in to actually drill into the seabed. At this stage there are a number of different options available, depending on the

12. A. Lara, "Ocean Structures: New Possibilities for Industrial Development", in J. Vandermeulen and S. Walker (eds.), *Ocean Technology, Development, Training and Transfer: Proceedings of Pacem in Maribus XVI*, (Toronto: Pergamon Press, 1991), p. 96.
13. Ibid., p. 121.

Table 3. Relationships of ocean resources and structures

		Structures	
Sector	*Resource*	*Function*	*Type*
Energy	Oil and gas	Exploration drilling	Semi-submersible platforms
		Exploitation (drilling, storing, conveying and loading oil, processing, etc.)	Fixed platforms • Steel jacket • Concrete gravity • Hybrid Floating platforms • Semi-submersible (anchored) • Vertical mooring Towers • Guyed • Articulated Oil storage tanks Underwater facilities
		Transport and installation of platforms	*Ad hoc* barges for launching Large floating cranes Tugboats with special towing equipment
		Pipeline installation	Ships (or barges) for laying out pipelines
		Iceberg protection	Tugboats and strong towing wire ropes
	Macrocystis Algae	Ocean farming (with artificial upwelling)	Large manned buoys with long vertical pipelines
	Tidal energy	Damming	Ocean dam
	Wave energy	Wave-energy converter	Long ocean concrete spine with eccentric pieces (Salter ducks) Kaimer system Cookerell's rafts Bristol cylinder
Industry	Sea transport	Industrial plant Installation	Large *ad hoc* barges
Food	Fishery	Catching and processing	Large factory ships
		Coastal fishing (small scale)	Fishing boats • steel construction • reinforced plastic hull • ferro-cement hull

depth of water and seabed conditions. In shallow waters (up to 25 metres deep) a submersible barge can be used.[14]

Submersible barges are towed out to drill sites and then ballasted or "sunk" to the ocean floor where they sit while drilling. However, due to the shallow

14. See S. Zwicker et al., "Oil and Gas Industry Activity: Interaction with the Physical Environment", in J. Gilbert (ed.), *Technical Environmental Guidelines for Offshore Oil and Gas Development*, (Tulsa: Pennwell Publishing Co., 1983), p. 51.

water conditions, these rigs are often subject to high pressure wave zones and currents, making the vessel susceptible to movement. It is imperative, therefore, that proper environmental and technical data be studied and applied before a submersible rig is placed on the seabed. In any case, these rigs have become somewhat obsolete as more sophisticated equipment has been developed to respond to environmental obstacles such as wind and wave action.

A widely utilized MODU, known as the jackup rig, operates in water depths of 20–125 metres. These rigs are either towed or self propelled to the drill site where the legs are "jacked" down to the ocean floor. However, whilst moving, the jackup rigs are dangerously prone to accident from large wave activity and there have been a number of losses of jack-up rigs in transit. As a result, the heavy lift shipping industry has developed technology which is now capable of carrying such rigs as heavy lift cargo.

Once in place, this type of rig is basically a permanent structure on which the operational aspects of drilling become the primary concern. When the legs reach the seabed the jacking continues until the rig is actually raised above the surface of the water. At this stage the rig is no longer susceptible to normal wave action.[15] Yet violent wave action and rig structure problems have combined in causing the loss of at least two jack-up rigs in recent years.

Should these "fixed platforms" be considered ships and should the traditional rules of maritime law apply? Should the "master" remain in command even once drilling has begun, or should the "drilling master" or "tool-pusher" be in charge? These are the major questions which have stalled the development of national and international law in this field for decades.

The same important questions are also posed with regard to semisubmersibles. Of all offshore activity, semisubmersible operations are the most common, due to their ability to drill in deeper waters (70–1,000 metres). Yet semisubmersibles do not become fixed platforms once on station; they remain floating at all times, thus making them more susceptible to adverse weather conditions.

Semisubmersibles float on very large pontoons which provide the necessary buoyancy during transit and act as ballast tanks when the rig is in place. By flooding the pontoons the centre of gravity of the rig is lowered, making it more stable. Anchors are then placed around the rig to hold it in position during operations. However semisubmersible rigs are susceptible to large waves in severe storms. Although the rig may be deballasted to raise the platform clear of the waves, there must be sufficient advance warning time to complete the process, something not always guaranteed at sea. At such a time, the rig's stability and integrity becomes more important than drilling operations and it would seem that the "master" of the rig ought to be in command. Yet because the rig is in a drilling mode it is also crucial that the tool-pusher (drilling manager) be in

15. G. Seymour, "The Mechanics of Offshore Oil Exploration", a paper presented for the seminar: *Ocean Use and Resource Development and Management in the Eastern Caribbean*, St. Kitts, 7–9 June 1983, (Halifax: Dalhousie Ocean Studies Programme, 1984), p. 126.

charge at the same time. This "two captains" dilemma has plagued the industry for years and was cited as one of the leading problems with semisubmersibles following the sinking of the *Ocean Ranger* off Newfoundland in 1982.[16]

Another mobile offshore drilling unit used in the exploration of offshore oil and gas is known as the drill ship. The drill ship is often considered to be as close to a ship as is possible in the offshore sector. Yet it is also designed and built specifically for drilling wells in very deep water, beyond 1,000 metres. The bottom of the vessel is open to the sea, which enables the drilling pipe to pass from the deck through the well to the ocean floor.[17] In order to maintain position and stability while drilling, the ship must employ specially designed propellers—like thrusters; anchors are not normally used.

As a result, drill ships tend to have distinct characteristics: while they may drill at almost any depth of water, they also suffer from a large amount of "downtime" due to their susceptibility to heavy seas.[18]

Indeed adverse weather conditions play a central role in the design and operation of all offshore rigs. With hundreds of crew members working on the large rigs, along with the potential for devastating environmental consequences should an accident occur, the power of the oceans must be respected and constantly monitored.

In the North Sea, where conditions may quickly become adverse, gravity platforms are now being used to extract oil and store it in underwater tanks. These platforms are designed to be extremely stable. They operate in water depths of 30–125 metres and may withstand 35 metre maximum wave heights.[19] Yet they can only be used where there is a stable, even and unobstructed seabed. In a typical example the base consists of 24 cells in a honeycomb configuration. Each cell is 20 metres across. The walls are 1 metre thick for good reason, as these cells serve as storage units for crude oil and diesel fuel.[20]

Depending on the size of the field, its depth and location, the offshore industry may, therefore, use these and other structures to explore for and extract oil and gas. As indicated above, there are numerous types of rigs which fall into each of the main catagories shown here. There are, in addition, many different types of offshore support vessels which service the main rigs. Also, vessels designed to lay oil pipelines and actual artificial islands serving as accommodation for staff are but two more examples of the growing list of engineering accomplishments in recent years. In short, the industry is expanding and the realities of drilling offshore continue to steer the industry into areas unknown to the shipping sector. It may be said that the offshore has become more a distant acquaintance than a close relative of shipping!

16. *The Royal Commission on the Ocean Ranger Marine Disaster Report One: The Loss of the Semi-submersible Drill Rig Ocean Ranger and its Crew*, (Ottawa: Minister of Supply and Services Canada, 1984), pp. 150–151.
17. Seymour, above n. 15, p. 126.
18. Ibid., p. 130.
19. Zwicker et al., above n. 14, p. 58.
20. H. Poulos, *Marine Geotechnics*, (London: Unwin Hyman, 1988), p. 11.

Under these circumstances traditional maritime law may not be appropriate. However, the industry cannot operate in a vacuum; there must be at least some semblance of an internationally accepted legal code. Offshore drilling units continue to operate in the oceans in increasing numbers and their safety must be addressed if the oceans are to be properly managed and protected. In order to provide a starting point for international co-operation it is first necessary to answer the following question: Is offshore drilling an industrial activity that takes place in the marine environment, or a marine activity undertaken for industrial purposes?

Following the *Ocean Ranger* disaster the Canadian Government chose the former option.[21] In fact, Canada was persuaded by the Norwegian Government's example which has clearly split the offshore sector from the shipping industry.[22] If this decision is to be seen as a precedent, then it might be advisable for the international community to negotiate a set of rules for the safe management of the offshore as an industry and not as a component part of the other maritime sector. There may be many who do not agree with this classification and prefer to apply existing laws and conventions to the offshore. However, one side must prevail over the other if international standards are to be realized in the future. This is especially important when addressing questions related to the protection of the marine environment. Perhaps this conference specifically and the CMI generally can assist in resolving this difficulty.

3. Offshore Mining Operations

On a final introductory note, it is worth mentioning the current state of seabed mining law. Since the conclusion of the United Nations Convention on the Law of the Sea 1982, the difficult issue of rights to deep seabed minerals has yet to be resolved. According to the Convention, minerals beyond national jurisdiction are to be the common property of all nations, with the wealth therefrom to be distributed according to need rather than ability to possess.[23] Yet, as may be expected, some of those with the ability to retrieve the minerals from the deep seabed floor are not supportive of the Convention's provisions. The result is a stalemate at the United Nations.

Furthermore, there is also a wide spectrum of opinions on the feasibility of

21. Royal Commission Report, above, n. 13, p. viii.

22. E. Gold, N. Letalik and T. McDorman, *Safety in the Design, Construction and Operation of Offshore Oil and Gas Installations: A Comparative Analysis of the Regulatory Structures of Norway, Canada, United States and the United Kingdom* (Halifax: Dalhousie Ocean Studies Programme, 1983). The study was undertaken for the Royal Commission on the *Ocean Ranger* Marine Disaster. See pp. 17–56.

23. The literature on this subject is vast. Many in the developed world agree with the provisions of the Convention and work for its global ratification. See, for instance, J. Vandermeulen and S. Walker (eds.) *Ocean Technology, Development, Training and Transfer: Proceedings of Pacem in Maribus XVI* (Toronto: Pergamon Press, 1991). However many governments in the developed North do not agree and have refused to sign and/or ratify the Convention.

deep seabed mining. Some argue that it is currently feasible and should begin.[24] Others concede that while it is physically possible to recover the minerals, it may be politically unreasonable or economically unsound to do so.[25] Still others argue that there is still no realistic prospect of any net yield from the resource.[26]

Thus the issue of technology and the price of its application, once again, becomes central to the future development of this industry. Moreover, like the offshore, this industry may also require a comprehensive international legal regime to administer its safe operation. While the 1982 Law of the Sea Convention provides a legal direction its provisions may require further and extensive modification before significant production is achieved.[27]

III. OFFSHORE OPERATIONS: THE CURRENT INTERNATIONAL LEGAL STATUS

The current legal status of offshore operations tends to be national and not international in nature. This can be traced back to 1958 when the Geneva Convention on the Continental Shelf was concluded. The Convention provided its State members with sovereign rights for exploring and exploiting the natural resources of their continental shelves. The only impediment to coastal State rights, at the time, was found in Article 3 of the 1958 Convention: "The rights of the coastal State over the continental shelf do not affect the legal status of the superjacent waters as high seas, or that of the airspace above those waters".[28] In 1958 this was a large caveat to complete coastal State jurisdiction since there was no 200 mile Exclusive Economic Zone (EEZ) at that time. Therefore, much of the remainder of the Convention set out to strike a reasonable balance between the two competing interests. Offshore oil installations were to be provided with safety zones, yet the rigs were not to interfere with fishing and scientific research. Coastal States were given exclusive rights to continental shelf resources, yet the installations could not interfere with international shipping routes. In effect, coastal States were given control over the offshore industry as long as this did not conflict with the traditional uses of the sea.

The precedent was generally accepted and subsequent conferences on the law of the sea remained committed to the principle that offshore oil exploration and

24. A. Marvasti, "Conceptual Model for the Management of International Resources: The Case of Seabed Minerals", *Ocean Development and International Law*, 1989, Vol. 20, pp. 273–284.

25. "The Law of the Sea and the Prospects for Deep Seabed Mining: The Position of the European Community", *Ocean Development and International Law*, 1985, Vol. 17, No. 4, p. 309.

26. G. Pontecorvo, "Musing About Seabed Mining, or Why What We Don't Know Can Hurt Us", *Ocean Development and International Law*, 1990, Vol. 21, p. 117.

27. For a detailed description of seabed mining instruments see *Marine Minerals: Exploring Our New Ocean Frontier*, (Washington: U.S. Government Printing Office, 1987) and A. M. Post, *Deep-sea Mining and the Law of the Sea*, (Boston: Martinus Nijhoff Publishers, 1983).

28. For a detailed examination of this topic see E. D. Brown, *Seabed Energy and Mineral Resources and the Law of the Sea, Volume I: The Areas Within National Jurisdiction*, (London: Graham & Trotman Ltd., 1984).

exploitation was within the complete jurisdiction of the coastal State. Yet there was always the implicit understanding that contemporary principles of the high seas could not be limited.

As already indicated, the United Nations Convention on the Law of the Sea was finally completed and opened for ratification in 1982. It was to enter into effect 12 months after the 60th ratification. Although this position has not yet been reached, parts of the Convention are treated as if they were customary international law,[29] and are accepted even by States which have refused to sign the Convention. This is quite significant due to the fact that the Convention has reinforced coastal State control over offshore activity. Article 81 of the Convention states: "The coastal State shall have the exclusive right to authorize and regulate drilling on the continental shelf for all purposes".

When combined with other provisions in Part VI, and the creation of the 200 mile Exclusive Economic Zone in Part V of the Convention, we find a fundamental shift in the law. Under the Geneva regime the sovereign rights of the coastal State over the continental shelf are an exception to the basic principle of freedom on the high seas.

Under the new system the high seas regime is no longer applicable over any part of the continental shelf extending 200 miles from the shoreline of a State. The high seas now begin at the outer edge of a declared EEZ. Therefore, any use of the continental shelf, which lies beneath the EEZ, is no longer subject to the freedom of the high seas.[30]

While the above discussion is a simplified version of the current legal status of offshore operations, it demonstrates a trend in the law away from any sort of international management of the offshore oil industry (as is envisaged for the deep seabed). There is no argument being made that the freedom of the high seas should be reinstated over the waters above the continental shelf. It is simply being pointed out that this international "regime" has not been replaced by any other. Instead coastal State jurisdiction has grown both geographically and jurisdictionally, leaving a patchwork of national laws addressing offshore development. If modern principles of the new law of the sea, regarding co-operation and environmental action, are to be realized, then the current lack of enforceable international law in the offshore sector can only be seen as unsatisfactory.

For instance, international law presently has little to say about the decommissioning and removal of offshore installations by operators.[31] Both the 1958 and 1982 Conventions contain provisions regarding this issue, however they are not entirely similar and many States have simply gone ahead to create their own regulations in this area.

29. The scope of this issue goes beyond the current discussion. Yet the Convention is fast approaching its 60th ratification. When this occurs Part VI of the Convention will replace, for the parties to it, the 1958 Convention on the Continental Shelf. It will therefore have an even greater "force of law" for the rest of the world.

30. E. D. Brown, above n. 28, p.I.11 5.

31. Ibid., p.I.11 12.

Article 5(5) of the 1958 Convention calls on States to remove entirely any installations that are abandoned or disused. Article 60(3) of the 1982 Convention, on the other hand, creates obligations which are far more lenient than the initial "total removal obligation".[32] Since 1982 the status of these laws has remained unsettled. For instance, Germany, the Netherlands, and the United States have adopted formal removal obligations. France, Ireland, Belgium, Denmark and Sweden have adopted a system of licences.[33] Norway and the UK have passed legislation relying on the partial removal obligations of the 1982 Convention. Which of these States may be seen as following international law, be it customary or otherwise?

With no enforceable international code of conduct it becomes very difficult to answer this question. Due to the intricacies of international law *vis-à-vis* treaty obligations and State practice, it is possible that none of the States have violated what little international law there is on this subject![34]

Seeing the important issue of navigational safety in these matters, the International Maritime Organization (IMO) set out to create Guidelines concerning Article 60(3) of the 1982 Convention. In doing so the IMO became the first international organization to be given the official capacity to implement Convention provisions. In short, the Guidelines indicate that partial removal of offshore structures is the exception and complete removal the rule.[35] Yet the matter is far from settled. Subsequent meetings of the IMO and related organizations have failed to decide whether and how the London Dumping Convention (LDC),[36] the Oslo Convention[37] and the Regional Seas Programme[38] can be applied to the removal of offshore installations.

As one study on the IMO's work comments:

> It was stated that the legal status of the Guidelines was not clear, given the fact that the LOS Convention had not yet entered into force and that states that have ratified the 1958 Convention are still bound by that instrument. Finally, the submission [by the IMO] pointed to the fact that states that are neither parties to the LOS Convention nor to the

32. T. Ijlstra, "Removal and disposal of Offshore Installations", *Marine Policy Reports*, (1989), Vol. 1, p. 269.

33. P. Peters, A. H. A. Soons and L. A. Zima, "Removal of Installations in the Exclusive Economic Zone: A Report of the Netherlands Branch of the ILA", *Netherlands Yearbook of International Law*, (1984), Vol. 15, pp. 167–207.

34. P. V. McDade, "The Removal of Offshore Installations and Conflicting Treaty Obligations as a Result of the New Law of the Sea", *San Diego Law Review*, (1987), Vol. 24, p. 645.

35. T. Ijlstra, above, n. 32, p. 274. A copy of *Guidelines and Standards for the Removal of Offshore Installations and Structures on the Continental Shelf and in the Exclusive Economic Zone* may be found in *Marine Policy*, (1989), Vol. 12, pp. 263–265.

36. "Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter", 11 I.L.M. 1291 (1972).

37. "Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft", 11 I.L.M. 262 (1972).

38. The United Nations Environment Programme (UNEP) oversees 11 Regional Seas Programmes. The texts of the instruments can be found in P. H. Sand (ed.) *Marine Environmental Law in the United States Nations Environment Programme (London: Tycooly Publishing, 1988).*

1958 Geneva Convention on the Continental Shelf are bound by the rules of customary international law, the status of which is claimed to be highly controversial.[39]

Furthermore, the work of the IMO has been criticized for limiting its inquiry to navigational issues and not taking into consideration the fisheries interests in this area. Article 60(3) of the 1982 Convention refers specifically to navigational safety; yet is also refers to fishing rights and the protection of the marine environment. Therefore, if the IMO is to act as the "administrator" of this Law of the Sea Convention provision, then it needs to address all the elements of the 1982 Convention for which it is responsible.

There is much work to be done in this area. For example, it is well documented that the States operating in the North Sea and off North America have a diverse set of legal tools which attempt to address the fishing industry's interests.[40] Yet little or no co-operation is evident despite the fact that these states have similar coastlines and fishing practices. As a result, if these States have yet to co-operate in addressing such a common problem, then the process of creating a regional, if not global, response to oil rigs and fishing remains as elusive as it is necessary. Nevertheless the work of the IMO, with its emphasis on co-operation and the setting of international standards, is an important step in the right direction.

Another important issue which has failed to be addressed at the international level is that of crew safety. There has been a number offshore disasters in past years and there appears to be a disproportionate amount of death and injury, which has resulted in comprehensive legislation nationally but not internationally.[41] The example of the United Kingdom and Norway provides an excellent indication of the relatively slow pace and *ad hoc* manner in which states have learned from and co-operated with one another.

The United Kingdom enacted the Mineral Workings (Offshore Installations) Act in 1971 as a result of the *Sea Gem* sinking six years earlier. Norway and the UK then continued to work side by side in the North Sea with little co-operation in safety matters until 1982. In that year 123 lives were lost in the Norwegian sector of the North Sea when the accommodation rig *Alexander Kielland* capsized. The UK responded with the Offshore Safety Provisions of the Oil and Gas (Enterprise) Act. Since 1982 these provisions have provided civil law remedies for tortious conduct on the offshore rigs. It is also noteworthy that many British drilling units from that time on have been regarded as marine vessels when in motion, and as "installations" when on station.[42] In July 1988 another

39. Ibid., p. 273.

40. I. Townsend Gault, "The Impact of Offshore Petroleum Regimes on Other Sea Users: The North Sea and North America", In D. Johnston and N. Letalik (eds.), *The Law of the Sea and Ocean Industry: New Opportunities and Restraints*, (Halifax: Dalhousie Ocean Studies Programme, 1983), pp. 411–419.

41. As well, it often seems that safety legislation in the offshore evolves only in response to a tragic incident in which lives are lost.

42. J. Woodliffe, "The Offshore Safety Provisions of the Oil and Gas (Enterprise) Act 1982", *Journal of Energy & Natural Resources Law*, (1983), Vol. 1, p. 45.

disaster occurred in the North Sea offshore with the explosion and destruction of the *Piper Alpha* rig. This, in turn, led to the creation of the Offshore Installations (Safety Representatives and Safety Committees) Regulations of 1989.

It has been argued that the trend in all of this British legislation has developed toward the Norwegian model of safety regulation.[43] The British industry is presently being given greater freedom to design and enforce their own safety procedures instead of following detailed government regulations. A similar process has proven successful (though not perfect) in the Norwegian offshore. But why has it taken this long for two States operating in the same area to even begin to harmonize safety codes? Would it not be wise to empower an international body to look for the most effective safety procedures for oil rigs and push for their universal application?

Clearly if we are to attempt to reduce (if not eliminate) future offshore tragedies, as well as common environmental disasters, then some form of international co-operation must begin to develop at least a set of minimum standards in the industry.

IV. OFFSHORE OPERATIONS: ENVIRONMENTAL LAW ASPECTS

There appears to be a consensus among the National Associations which have expressed a view that there is a need of formulating international rules for the maritime aspects of [offshore drilling units]. However there are differing views on the urgency of the matter and with what speed the work should progress.[44]

Such was the conclusion of the Commité Maritime International (CMI), following an extensive conference which discussed this matter in 1977. The CMI and delegates from the large offshore States had attempted to reach an agreement on some of the "basic issues" concerning international law and the offshore. In the end the CMI produced a Draft International Convention on Offshore Mobile Craft. For a number of reasons, States have instead proceeded on their own, paying little attention to international developments. Accordingly, this section of the paper will examine past attempts to secure international co-operation from the point of view of environmental liability, in order to determine why international law has failed to develop. Once again, much of the controversy centres on whether an offshore drilling unit is to be considered a ship or a separate legal entity in maritime law.

The question of environmental liability is one of today's most important issues. Yet liability for an environmental disaster was a concern in past decades as well; the stakes have simply been raised since the 1970s. What may have been an "important consideration" to delegates at the 1977 CMI Conference may now be

43. K. Kaasen, "Post *Piper Alpha*: Some Reflections on Offshore Safety Regimes from a Norwegian Perspective", *Journal of Energy & Natural Resources Law* (1991), Vol. 9, No. 4, pp. 281–289.

44. CMI Draft Convention on Offshore Mobile Craft, XXXIst International Conference of the Comité Maritime International, Rio De Janeiro (1977), *CMI Yearbook.*, 1977, p. 29.

one of the most significant aspects of a future agreement. For instance, liability for an offshore blow-out, or some other type of major catastrophe on the scale of the *Exxon Valdez*, is now a much greater political, social and legal issue than it was in 1977.

A blow-out consists of a sudden and uncontrolled release from a well of large amounts of high pressure gas or oil. It may cause an explosion, fire, loss of life and equipment, and massive pollution.[45] The largest oil spill due to a drilling accident was the *Ixtoc I* blow-out in 1979, on the Mexican continental shelf in the Gulf of Mexico. The response to the incident was swift and relatively effective; much of the Mexican shoreline was spared. However the Texan shore was heavily polluted until prevailing currents changed the direction of the tides some months later.[46] Scientists are still studying the long-term effects of the incident and their findings could have important implications for the liability side of offshore operations. The *Ixtoc I* blow-out occurred in a region where oil reserves are found in relatively small pools. Thus if a blow-out cannot be stopped by an emergency response team, it will eventually put itself out by draining the reserve. Other offshore regions, such as the North Sea and the Middle East, are not so blessed, and a large uncontrolled blow-out could cause an enormous environmental disaster.

Today the technology exists to limit these accidents and they have, fortunately, proved to be a rare occurrence. Yet the threat persists, and as we have learned from the *Exxon Valdez*, the legal liability from a major environmental disaster is only the beginning of a company's responsibility. Public perception of and response to an environmental disaster can quickly change government policy in the industry. The new absolute liability provisions regarding shipping incidents in the United States are a good example. If the offshore industry wishes to avoid a similar fate of constantly reacting to government initiatives, then it must anticipate such developments by co-ordinating (or at least strongly supporting) an international regime which addresses environmental liabilities. As far as pollution is concerned, "only a very partial knowledge of the law can be derived from a study of the relevant rules of international law alone".[47]

1. Customary International Law

A brief note should be made concerning a well accepted principle in international law. Following the now famous case of *Trail Smelter*[48] in 1941, the "neighbourhood principle" emerged. Much of the international community has since accepted the concept that a State must refrain from acts which may

45. For a detailed examination of blow-outs see: D. W. Fischer (ed.), *Managing Technological Accidents: Two Blowouts in the North Sea* (Oxford: Pergamon Press, 1982).

46. B. S. Middleditch (ed.), *Environmental Effects of Offshore Production*, (London: Plenum Press, 1981), p. 3.

47. E. D. Brown, above, n. 28, p.I.12 1.

48. *United Nations Reports of International Arbitral Awards*, (1941), Vol. 3, p. 1905.

infringe on the rights of surrounding States.[49] In most offshore regions there is the potential for trans-border pollution following a blow-out or other major incident. Indeed even the operational discharge of oil, gas, diesel fuel and drilling chemicals can harm neighbouring environments.

Consequently, an argument may be made that unilateral exploration and exploitation (especially in areas where other States are in close proximity) may infringe on the *Trail Smelter* standard. This is based on the principle that neighbouring States have a *duty* to co-operate with each other in the creation of offshore safety and pollution laws. If this is accepted, then such regional agreements should, in the end, lead to a more universal agreement.

However, States do not always act according to legal theory! Instead, international legal developments (or the lack, thereof) in the offshore provide a good example of how States can intentionally or unintentionally avoid committing themselves to agreements which they may otherwise be obligated to pursue. Political and the "oil lobby" pressures play an important role, but so does interpretation of the current state of the law:

> There would seem to be no evidence for the contention that, under international customary law, the coastal state is strictly liable (that is, liable even in the absence of negligence or want of reasonable care) for such oil pollution on the ground that the exploration of the continental shelf and the exploitation of its natural resources constitute an ultra-hazardous activity.[50]

However, if States accepted that they were strictly liable in this area would they then be more likely to set up a regime to improve pollution and safety standards and administer the consequences of liability? This is an interesting question which, at this stage, is perhaps unanswerable. As a result, at present the most a State may expect from its neighbours is the exercise of reasonable care in the prevention of oil pollution damage.[51]

2. The 1958 Geneva Conventions

As noted earlier, Article 5 of the 1958 Continental Shelf Convention contains a number of vague provisions related to the prevention of oil pollution. Paragraph (1) precludes offshore activities which cause an unjustifiable interference with navigation, fishing, conservation efforts and scientific research. Paragraph (2) calls on Member States to establish 500 metre safety zones around all drilling units, and paragraph (3) proclaims that all states should respect such safety zones. The list continues until paragraph (7), which requires Member States to undertake all appropriate measures for the protection of the living resources of the sea from all harmful agents. Finally, under Article 24 of the 1958 High Seas

49. It has been argued that this customary law should be applied to offshore operations. See E. Brown, above n. 28, and S. Evans, "Control of marine pollution generated by offshore oil and gas exploration and exploitation", *Marine Policy*, October (1986), p. 266.

50. E. D. Brown, above, n. 28, p.I.12 9.

51. Ibid., p.I.12 16.

Convention, every State is required to draw up regulations to prevent pollution of the seas by the discharge of oil from pipelines or resulting from oil exploration and exploitation.[52]

All of these provisions remain in force for the States which have so far accepted the 1958 Conventions. For instance, the 500 metre safety zones are used in many parts of the world, often causing controversy with local navigation and fishing rights.[53] While the navigational issues have begun to be addressed at the international level through the IMO,[54] the same cannot be said for the fishing interests. As one study of both the 1958 and 1982 Conventions concludes:

> It is to be expected that interference with fishing in connection with safety and removal of installations will be national rather than international issues. Where states have established mutual fishing rights in each other's EEZs, the problem may, however, be solved on a bilateral basis.[55]

The implications of the 1982 Law of the Sea Convention will be discussed below. However before that agreement was reached there were a small number of attempts to bring certain aspects of the offshore industry within the framework of international law.

3. MARPOL 1973/1978

It is clear from the 1958 Conventions that much substantial work was left to be done. One Convention which rose to the challenge (in a limited way) was the International Convention for the Prevention of Pollution from Ships 1973 and its 1978 Protocol (MARPOL 73/78). MARPOL is a significant Convention in the shipping industry. However, it specifically excludes jurisdiction over pollution caused by a blow-out, structural failure of an oil installation, collision with an installation, or malfunctioning of a pipeline. In effect, Article 2(3) defines the word "discharge" to exclude "release of harmful substances directly arising from the exploration, exploitation and associated offshore processing of seabed mineral resources".[56]

Notwithstanding, Regulation 21 of MARPOL Annex I states that fixed and floating rigs, when engaged in the exploration and exploitation of seabed resources, must apply the rules applicable to ships of 400 tons and above (other than oil tankers). Application of these rules prohibits the discharging of oil and oily mixtures into the sea (with some specific exceptions).[57] However, the regulation applies to only one of the many facets of the offshore, and does not begin

52. Ibid. p.I.12 2.
53. G. Ulfstein, "The Conflict Between Petroleum Production, Navigation and Fisheries in International Law", *Ocean Development and International Law*, (1988), Vol. 19, pp. 229–262.
54. See previous section.
55. G. Ulfstein, above n. 53, p. 251.
56. The text of MARPOL 1973 may be found in 12 I.L.M., 1319 (1973).
57. It should be noted that in Brown, above, n. 28, p.1.12.7 the author notes a drafting error in MARPOL which, if followed, would permit an offshore rig to discharge oil while proceeding en route to station.

to deal with larger environmental concerns such as blow-outs. Hence the agreement as a whole is a useful precedent, but of limited relevance to the prevention of oil pollution from continental shelf operations.

4. The Offshore Pollution Liability Agreement (OPOL), 1974

An interesting "private" development occurred in the mid-1970s when a number of international oil companies agreed on a compensation package for oil pollution caused by their offshore installations. The territorial scope of OPOL covers member companies operating in Denmark, Germany, France, Ireland, the Netherlands, Norway and the UK. The financial scope of liability began with a ceiling of $60 million, to be divided between damage claims and clean-up costs. The agreement has since been amended a number of times, most recently in 1986.[58]

It is also worth noting that in 1973, related to OPOL, a number of European States created the Conference on Safety and Pollution Safeguards in the Development of Northwest European Offshore Mineral Resources. Reportedly there was wide agreement on safety and pollution standards, "but the work has not led to the adoption of any international agreement".[59]

5. Convention on Civil Liability for Oil Pollution Damage Resulting from Exploration for and Exploitation of Seabed Mineral Resources (CLEE), 1977

Another attempt to establish some rules of environmental liability was the CLEE agreement of 1977. This Convention set out to provide detailed rules on the standards of liability ("strict" or "fault"), limitations of liability ("limited" or "unlimited"), and jurisdiction. Nine European States were involved in the agreement and it remains open for ratification or accession. However this now seems unlikely considering the Convention's age and limited scope.

On the other hand, CLEE does provide future offshore conferences with a useful model to study. The most important aspect of CLEE is its jurisdictional scope. The convention refers to "installations", which are defined so as to cover all fixed or mobile drilling units, storage installations and most pipelines. In other words, the Convention refers to the industry as a whole and not as a subsection of the shipping industry. Liability for pollution is both strict (no need to prove negligence) and limited (a ceiling is placed on amounts payable).

The latter issue created much controversy during the conference and proved to be an impediment to the Convention's adoption. The ceiling of liability was not only permitted to vary from State to State, but there was also an option to provide for unlimited liability in some circumstances. Issues such as these will

58. See E. Gold (ed.), *Maritime Affairs: A World Handbook*, (Essex: Longman Group UK, 1991). See also R. Churchill et al. (eds.), *New Directions in the Law of the Sea* (1977),Vol. VI, p. 507.
59. E. D. Brown, above, n. 28, p.I.12 7.

have to be resolved in future negotiations if similar new agreements are ever to be ratified. However, for the purposes of this paper, there was something more fundamental being addressed in the CLEE agreement. When considering the definition of "installation" in the agreement, it can be interpreted that an underlying assumption of the treaty rested on the idea that offshore rigs were considered legal entities unto themselves, requiring a separate international regime. It is this idea which may well have to be a starting point for future successful Conventions on offshore pollution. Unfortunately, the 1977 Rio Draft Convention, concluded by the CMI, failed to adopt this position.

6. CMI Draft Convention on Offshore Mobile Craft, 1977

In 1976 an ambitious decision was made by the Executive Council of the Comité Maritime International (CMI) to hold a conference in Rio de Janeiro and draft a Convention on Offshore Mobil Craft. Unlike the CLEE agreement, this Convention was to apply beyond the borders of Northwestern Europe and had the potential of becoming a global agreement. The intent was to establish a legal regime for the offshore sector, including environmental liability. However there was a significant flaw in the approach to the Rio meeting. It could not be decided whether to treat "offshore mobile craft" as ships *per se* or to create and apply a distinct legal regime.

While it was felt desirable to have a total unification of the rules for vessels and offshore mobile craft, the majority of the CMI's national associations felt that in certain areas such as limitation of liability, pollution liability and maritime liens, special treatment for these craft was required.[60]

In a sense a separate legal regime was created for these "craft", yet the underlying purpose remained, namely: to conceptualize offshore rigs as closely as possible with ships.

> The particular features of drilling rigs and other offshore craft . . . are their floating and mobile capacities. In that they can move through the sea from one location to another, they have the typical characteristics of vessels and they are in fact, considered to be vessels in some countries. Thus it is the maritime aspects which these installations share with vessels that it is felt desirable and necessary to regulate in the contemplated convention. It follows that the industrial aspects of offshore activities, such as drilling operations and the oil production processes, should not be dealt with by the CMI, nor should the liabilities or rights of the drilling operator or concessionaire. Only the problems confronting the rig owner, demise charterer or other maritime manager responsible for the maritime and nautical running of the craft should be covered by the convention. Furthermore, stationary and permanent installations such as the production platforms fall outside the scope of the work".[61]

In the end the CMI chose not to attempt to consolidate or restate all existing maritime rules in terms of MODUs, but rather to produce a definition of

60. "CMI Draft International Convention on Offshore Mobile Craft", in D. Munro, *Third Interim Report*, International Law Association, Montreal Conference (1982), p. 2.

61. CMI Draft Convention on Offshore Mobile Craft, above n. 44, p. 30.

offshore mobile craft which would satisfy everyone. Existing maritime conventions would be applied where it was felt appropriate and new rules were proposed in areas considered to require special treatment, such as pollution liability.[62] It was intentionally left to national courts and legislatures to determine whether a given installation is a ship. Moreover, the Draft provided that the relevant international Conventions (which are specifically listed) are to apply to craft to which they would not otherwise apply, i.e. MODUs![63] Finally, "this general statement of application is followed by a statement of exception with respect to certain aspects related to MODUs. In this painstaking way, installations are effectively accommodated within the traditional maritime law regime".[64]

However, the CMI Draft applies to "craft", defined under Article 1 to mean mobile structures, whether during operation they are floating or fixed to the seabed, for use in offshore operations. This encompasses most of the drilling units mentioned in previous sections, but excludes permanent installations such as production platforms. This thinking appears to be flawed. Is there really a significant legal difference between a jackup rig that has been on station for a number of years and a "permanent" production platform? Moreover, if the reasoning contends that these craft are to be treated as ships because they must occasionally move through the ocean to get on station, then by the same token, they should be considered "permanent structures" when drilling because they must then remain motionless. Yet as noted above, the CMI chose to ignore this line of reasoning.

Clearly the distinction here is artificial. The ties that bind all offshore installations; namely their presence in the oceans, the work they perform and the manner in which they perform it, outweighs the insignificant fact that some offshore units are more mobile than others. The matter is further removed from reality when it is argued that because such "craft" are *capable* of movement, they must have traditional international maritime law applied to them. This begs the question: what percentage of an offshore rig's time is spent moving into position compared to its operational time? Furthermore, when considering the purpose of these structures (the search for and production of oil) it would seem that this is far enough removed from the purpose(s) of shipping to justify separate international law.

The CMI Draft was never widely accepted. While it purports to establish a legal regime for offshore drilling units, it specifically excludes a number of crucial structures in the operation of a field. While it attempts to apply international maritime Conventions to these craft, it concedes special treatment for some of the most important aspects of operations. For instance, it excludes liability for all blow-outs, the most important environmental aspect of the offshore industry. Indeed the CMI Draft attempts to disassociate itself from operations entirely.

62. Ibid., p. 3.
63. C. Yoder, "The Canadian Regulation of Offshore Installations", Working Paper No. 9, (Calgary: Canadian Institute of Resources Law, 1985), p. 34.
64. Ibid., p. 35.

Yet it is the operation of drilling rigs which make these "craft" so different from ships in the first place.

7. UN Law of the Sea Convention, 1982

The work of the United Nations in this area comes from two directions. As mentioned earlier, the UN Convention on the Law of the Sea 1982, has adopted many of the relevant principles of the 1958 Geneva Conventions. However, the 1982 Convention, with its umbrella-like provisions, provides a significant framework for future development rather than an operational/working treaty. It calls upon Member States to take measures for preventing accidents, dealing with emergencies, ensuring safety, and regulating the design, construction, equipment, operation and manning of such installations (Article 194(3)). Co-operation on a global and regional basis is encouraged and special emphasis is placed on the protection of the marine environment (Article 208). All of these goals are highly commendable and it is significant that they are embodied in a global Convention which will soon have the force of international law. Nevertheless, the actual application of a complementary set of offshore rules is sorely needed and the substance of and manner in which such rules are to be applied has yet to be determined.

8. The UNEP Regional Seas Programme

Secondly, the United Nations Environment Programme (UNEP) is addressing this area through its Regional Seas Programme. Based on a series of international agreements (covering many of the world's regional seas), progress has been made through additional protocols which change an otherwise broad treaty into an effective pollution control instrument. One such agreement is the Barcelona Convention for the Protection of the Mediterranean Sea against Pollution, 1976. Since its conclusion a number of Protocols have been added, including the Protocol for the Protection of the Mediterranean Sea against Pollution Resulting from Offshore Activities.[65] Issues addressed include an authorization system for drilling applicants, environmental impact assessment, safety measures, monitoring and surveillance, contingency planning, harmful and noxious substances, liability and compensation.

If progress continues in this manner, then there may eventually develop an international regime for the offshore. Nevertheless, there are important differences among the regions and in their ability to conclude similar protocols. For instance, it would not be helpful to have offshore installations considered "ships" in one part of the world and "independent drilling units" in another. This fundamental question of uniformity of law must be addressed *before* the various regions of the world develop incompatible legal and liability regimes.

65. M. Sersic, "Draft Protocol for the Mediterranean Sea against Pollution from Offshore Activities", *Marine Policy Reports*, (1989), Vol. 1, pp. 161–165.

V. OFFSHORE OPERATIONS: THE PRECEDENT OF MARITIME LAW?

That there is an overlap between offshore operations and traditional maritime law is not in question. These "mobile installations" (not a contradiction in terms) operate in the oceans, and thus become part of the marine system. While it has been argued that MODUs are not ships in the traditional sense, certain principles of maritime law may be applied to distinct aspects of offshore operations. This section will discuss some of the areas which this may be applicable at the international level. Unfortunately, this may be more difficult at the national level, where there are many different types of national legislation to administer the offshore. Each State may have a different approach of how MODUs fit within its overall legislative system and how closely MODU regulations are to be connected with traditional maritime law. As one study summarizes:

> There is a body of traditional maritime law which may apply incidentally to the operation of installations on [a coastal state's] continental margin. This law is applicable to ships whether they are operating within or beyond national boundaries of their state or registration and existed long before coastal state resource development rights were recognized internationally. Unlike coastal state law, the basis of its applicability is not geography, but nationality, i.e. the nationality of a given vessel. This traditional regime is already in place before a coastal state decides to fill the offshore vacuum with explicit legislation. The hybrid nature of installations—the fact that they can in certain respects be thought of as either islands or ships—necessitates the accommodation of maritime law to coastal state law.[66]

Due to the existence of few international guidelines, States have acted unilaterally, creating a wide variety of offshore regimes. However, given the truly international character of the industry, the current situation can only lead to inefficient management and lower safety and pollution standards in the offshore sector. In fact this lack of uniformity is not without precedent in the maritime field. The CMI was founded over 90 years ago in order to develop uniformity in the area of maritime law, which had evolved, for the most part, unilaterally since early times. The CMI has been responsible for all the uniformity which presently exists in international maritime law. Perhaps the development of an effective offshore regime will not take as long! Hopefully, the CMI can continue to provide the valuable leadership already commenced in 1976.

Maritime States and the shipping industry did not develop international maritime law by chance. There was a practical reason, and the same reason now applies to the offshore: reality dictates such a response. Oil companies hardly operate solely within the confines of one State alone, especially if they are involved in offshore exploration. It is an international business and, if companies wishing to explore and exploit energy resources, must constantly change the structure, function and insurance regime of their MODUs to accommodate

66. C. Yoder, above n. 63, p. 4.

each State's regulatory laws, the result will be neither productive nor efficient. These problems are most apparent when offshore regulatory law and traditional maritime law conflict. It is then that the uncertainties of conflict could seriously impede the safe and responsible development of the offshore. As already noted, the problems begin (and end) with the legal status of MODUs. If considered ships, then most if not all traditional maritime law should be applied to offshore installations.[67] If, however, they are not considered ships (perhaps artificial islands), then none of the maritime law may apply. Both extremes are unacceptable. A MODU must first *navigate* to its drill site, whereupon it must remain *stationary* in order to drill. Therefore, a "legal hybrid" has been created; one which requires its own set of rules, some of which overlap with traditional maritime law!

Matters are further complicated by the fact that domestic laws of a coastal State do not apply beyond national boundaries except by explicit legislative enactment for the discrete purpose of natural resources legislation.[68]

> A coastal state's jurisdiction to regulate operations on its continental margin is not synonymous with territorial annexation of the offshore region. Coastal state law in its entirety does not automatically extend to the offshore. A coastal state has an internationally recognized right to extend whatever law it decides is necessary for the regulation of the exploration and exploitation of natural resources. And, in the absence of legislative action, the offshore area cannot be developed by other nations. However, unless coastal state law is explicitly extended to the region by appropriate legislation it remains, with the limited exception of certain aspects of maritime law, a legal vacuum.[69]

This may help to explain why coastal states have moved ahead of international efforts. But is also creates a number of problems *vis-à-vis* already existing maritime law. For instance, if a major blow-out were to occur in a coastal State's waters on a MODU owned by a company from State A, registered in State B, and operated by an enterprise from State C, who is liable for the pollution damage and clean-up costs? Although this liability may be set out in the contractual drilling arrangements, a private agreement may hardly be sufficient protection for a vulnerable coastal State. Again, the precedent of ship-source oil pollution liability and compensation, effective under IMO auspices for over 20 years, should provide the offshore sector with some directional incentive.

Coastal States, such as Canada, have enacted regulations which envision the offshore operator as being liable for pollution damage. Yet under traditional maritime law the owners of "vessels" (which may or may not include MODUs) are liable for such damage.[70] Finally, coastal States may also apply their safety

67. For a Canadian perspective see, W. Spicer, "Canadian Maritime Law and the Offshore: A Primer", *Working Paper 6*, (Calgary: The Canadian Institute of Resources Law, 1984). The author argues that MODUs should be considered ships because they have the ability to navigate.

68. C. Yoder, above, n. 63, p. 3. See I. Townsend-Gault, *Petroleum Operations on the Canadian Continental Margin: The Legal Issues in a Modern Perspective*, Working Paper 2, Canadian Continental Shelf Law, (Calgary: Canadian Institute of Resources Law, 1983).

69. C. Yoder, above, n. 63, p. 3.

70. Ibid., pp. 84–85.

legislation (and therefore the possibility of liability) to include all foreign registered MODUs operating within their waters—a direct violation of the flag State rule, one of the most fundamental principles of traditional maritime law.[71]

At first glance this intrusion into the domain of traditional maritime law may seem to be inappropriate. However, if environmental protection objectives demand it, then a changing of the traditional rules is not only appropriate but probably inevitable. This is precisely the point: offshore installations are sufficiently different from ships to justify such an alteration of the traditional rules. For certain areas the changes required need not be great. For instance: crew safety regulations, labour standards, navigational rules when in motion, and other nautical issues could easily adopt traditional legal regimes. In contrast, certain aspects of MODUs carry distinctive characteristics which will require significant changes to be made: pollution liability, operational safety, including safety zones, platform decommissioning, financing, maritime liens, and salvage. However, the best example of how traditional maritime rules cannot be applied to the offshore is in the operational command structure of MODUs.

As noted earlier, once on station an oil rig becomes a permanent structure in the ocean which cannot be moved easily. Drills are sent down through the crust of the earth as the search for and extraction of oil begins. During this time the chief of drilling operations is in charge. It is imperative that this person oversee all aspects of safety and proper drilling procedure. As has often been the case, the "tool-pusher" takes command of the installation when drilling, while the master remains incidental to operations. However in the seafaring tradition there is an implicit understanding that only one person should be in charge of a "vessel" (in this case a MODU) at all times. Traditional maritime law would, therefore, force a decision on the command issue: either the master mariner or the tool-pusher. In this respect, drilling practice meets traditional maritime law head on. The answer, however, is not to choose one option or the other. Instead a solution is required which addresses both sides of the issue and creates a new and unique legal response to a new and unique problem. This may well require the oil drilling and nautical professions to create a distinctive type of "rig commander"—one who is conversant with the oil business as well as navigation safety and operation. A similar conclusion was reached by the Royal Commission Inquiry into the sinking of the *Ocean Ranger* off Newfoundland.

> The inadequacy of the practice of characterizing installations as either ships or non-ships for the purpose of determining how they should be operated is particularly evident. As the Royal Commission stated, a choice between the two options of master mariner or toolpusher is simply an inadequate response. Language and logic rebel at the concept of an entity being simultaneously what it is and what it is not. Yet, legal characterization thrives on solving such problems by creating fine distinctions.[72]

In place of such "fine distinctions", an international offshore regime requires

71. Ibid., p. 93. For an example see § 3(d) and (e), *Standards Respecting Mobile Offshore Drilling Units*, Canadian Coast Guard: Ship Safety, (Ottawa: Transport Canada, 1992).

72. C. Yoder, above, n. 63, pp. 91–92.

a formal acknowledgement that a new legal entity has developed and that conflicts now exist at the interface between traditional maritime law and drilling practice. The solution is not to have one side prevail over the other, but rather to have new rules created which encompass the entire offshore sector and all aspects of its operations.

Nevertheless, the similarities between offshore operations and the shipping industry appear to point towards a number of common directions and maritime law, particularly, could be quite useful as a precedent for a new offshore legal regime. This is especially so in the marine pollution area. The relatively successful precedents of the CLC and Fund regimes for ship-source oil pollution could easily be used as a basis for an international offshore pollution regime. Furthermore, given the close interrelationship between oil company developer, offshore contractor, the various sub-contractors and the transportation sector, all involved in a single offshore operation, it might even be a little easier to find a commonly acceptable liability ceiling for such a regime.

Maritime law could also be a useful precedent in a number of other operational sectors of offshore activities. Ownership, chartering, management, licensing, limitation of liability, labour matters including qualifications, chain of command, etc., salvage operations, safety of life, emergency systems, watertight integrity, equipment standards etc. for offshore operations, could all benefit from the maritime law precedent. In fact, there is probably an analogy to aviation law's relationship with maritime law when it was first developed. Although the air transport mode was very different from sea transport there were sufficient similarities to provide a very good basic precedent for the development of the air law regime. Of course, the rapid development of aviation required that it would then go its own way, develop its own international legal regime, under the Chicago Convention of 1944, and even have its own UN specialized agency. For offshore operations there is probably a closer relationship with the shipping sector. Nevertheless, it does deserve its own regime.

VI. TOWARDS AN INTERNATIONAL LEGAL REGIME FOR OFFSHORE OPERATIONS

In the late 1800s the legal community in North America was having a difficult time trying to figure out what to do with an invention known as the automobile. While similar in mechanics to the locomotive, it also possessed the freedom of directional movement like that of a horse and carriage. It was, so to speak, a hybrid of the two existing forms of transportation. Therefore the immediate response was to apply existing forms of legal regimes to this new entity. The automobile was classified as a locomotive, a light locomotive, a carriage and even a wild animal, before it came to acquire a legal regime of its own.[73]

73. C. Yoder, above, n. 63.

A similar phenomenon has occurred in the offshore industry, only this time there is a much more diverse assortment of new legal entities. From jackup rigs to semisubmersibles to the new Floating Production Storage and Offloading (FPSO) systems, the offshore has produced a wide variety of unique installations and the work continues to expand. Therefore, the first step towards an international legal regime requires a global acknowledgement that a new and distinct legal entity has been created. It is unproductive to debate whether a semisubmersible or a jackup rig is a "ship" or not. Each MODU, installation, permanent structure, etc. is a part of a much larger industry which requires its own legal regime, developed at the international level and applied domestically. Such an acknowledgement could be formalized in order to lay to rest any misconceptions concerning the new legal status of offshore operations.

The importance of this first step should not be understated. Without agreement on this issue, further steps cannot be taken at the international level. All States should produce a formal declaration (perhaps signed as a treaty) that they agree to begin at the same reference point. Negotiations concerning liability, safety, the role of traditional maritime law and the many other issues can then proceed from this reference point. The legal vacuum which currently exists would at least be opened for the creation of more substantive provisions and the current patchwork of national legislation could begin to be streamlined.

Secondly, an international legal framework should be established which commits the Member States to an inclusive regime. That is, the legal regime should include all aspects of the offshore industry, not simply the mobile drilling rigs. A comprehensive regime would include everything from artificial islands and gravity platforms to support vessels to scuba diving repair teams. It would also remain open to include new aspects of offshore operations as they come on stream. It is conceded that the work required to complete such an international undertaking is substantial. The work would have to be divided into functional areas, with a co-ordinating body overseeing the entire effort. Yet the fundamental principle underlying this step is the commitment to the idea that the offshore industry is unique; that it requires a distinct and holistic response from the international community.

An example of how the work may be functionally divided is that of the IMO's Code for the Construction and Equipment of Mobile Offshore Drilling Units (1989 MODU Code) and its amendments.[74] This code sets out to "recommend design criteria, construction standards and other safety measures for MODUs so as to minimize the risk to such units, to the personnel on board and to the environment".[75] The 1989 MODU Code covers four different types of offshore rigs representing a substantial portion of all offshore operations: Mobile drilling units (e.g. semisubmersibles), Self-elevating units (e.g. jackup rigs), Surface units (e.g. drill ships) and Column-stabilized units. The Code also

74. *Code for the Construction and Equipment of Mobile Offshore Drilling Units, 1989* (London: International Maritime Organization, 1990).

75. Ibid., p. 9.

acknowledges the inevitable expansion of technology and does not consider that it has achieved a final agreement for the industry:

> [I]t was further recognized that design technology of mobile offshore drilling units is not only a complex technology but is rapidly evolving and that the Code should not remain static but be re-evaluated and revised as necessary. To this end the [IMO] will periodically review the Code, taking into account both experience and future development.[76]

In this way, the Code may be considered an important part of a more comprehensive offshore package which can and should be developed over time. Subsequent codes for pipelines, artificial islands, floating production systems and other offshore enterprises can then follow the route taken by the IMO's work with MODUs. A co-ordinating body could then ensure that similar standards are attained for the different aspects of operations and that Member States are properly applying these standards in their domestic legislation.

Application and implementation of such international standards would be a logical step towards a successful legal regime. The international co-ordinating body should play an active part in ensuring that the domestic legislation is properly enacted. But it should also play a role in overseeing the enforcement of these new rules through the use of inspection teams and expert advisors to Member States. Currently, with the 1989 MODU Code, the IMO has created the framework but it has been left to individual States to enact and enforce their own legislation. With greater involvement in the future, perhaps the IMO or another international body could encourage even higher levels of consistent application of these safety rules.

Finally, careful analysis must be made of the interface between offshore operations and traditional shipping practices before any application of existing maritime law is recommended. The recent work of the IMO with MODUs has recognized this issue:

> [The IMO recognizes] that the design criteria for such units are often quite different from those of conventional ships and that, by virtue of this, the application of international conventions, such as the International Convention for the Safety of Life at Sea, 1974, and the International Convention on Load Lines, 1966, is inappropriate in respect of mobile offshore drilling units.[77]

Instead, detailed provisions regarding the workings of an offshore rig must be formulated at the international level, as was done for the 1989 MODU Code. The Code contains 14 chapters relating to, *inter alia*, construction materials and strength; subdivision, stability and freeboard; machinery and electrical equipment; fire safety; life-saving equipment, radio communication equipment; lifting devices; helicopter facilities and operating requirements. Unfortunately, many of these provisions are, in fact, a reaction to offshore incidents which occurred during the 1970s and 1980s involving loss of life and environmental damage. The IMO acknowledges this *ad hoc* approach and has begun to address

76. Ibid., p. 9.
77. Ibid., p. 3.

the problem by instituting safety measures which are specific to the offshore industry.

VII. CONCLUSIONS

This paper has provided a rapid overview of the offshore operations sector, concentrating on its technical, operational, environmental and legal aspects. It has shown that almost one quarter of global energy needs are now supplied from the offshore and that the prognosis for further development is very positive. Furthermore, although the extraction of non-hydrocarbon resources from the deep seabed may still be some years away, this offshore sector has also a healthy economic prognosis for the future. Nevertheless, the offshore sector has so far not had the benefit of a wide-ranging international legal regime covering, *inter alia*, possible environmental matters. This is despite the fact that the UN Convention on the Law of the Sea, 1982, which is expected to enter into force shortly, has provided the highest-level international legal directive for all ocean uses and, thus, has cleared the way for global regimes in the offshore and other areas.

A number of other global and regional attempts to provide a regulatory and liability framework for the offshore have either failed or have received insufficient support. On the other hand, a fairly effective "private" legal contractual industry framework has already quietly evolved. For example, P & I liability insurers regularly provide up to US$500 million coverage for offshore pollution claims on a regular, routine basis. Drilling contracts negotiated bilaterally between coastal states and international oil companies, often provide for even more extensive liability coverage. Nevertheless, even this development has been *ad hoc* at best on a basic contract-by-contract basis and does not provide the necessary protection for the marine environment generally and the interests of coastal States specifically.

It is argued that the problem, which has been at the heart of these difficulties, has been the inability of the international community to identify the status of the offshore structure which performs the actual offshore operations. The argument of "if it is not a ship then what is it?" has thus effectively sidelined much more important factors related to the need for an effective offshore regime. It is suggested that the CMI, working in conjunction with the IMO, could provide the necessary expertise to resolve this problem. As a matter of fact, it is suggested that the CMI is probably the only suitable non-governmental body to do this. In this connection, it is also suggested that the CMI's present work in updating the 1977 Offshore Mobile Craft Draft on behalf of the IMO only addresses a part of the problem. Offshore pollution liability cannot be totally resolved in isolation and whilst the offshore industry continues to operate in a relative international legal vacuum, i.e. depending almost solely on national case law, liability matters will be very hard to resolve.

As a result, it is recommended that the CMI consider this whole subject at its next international conference in 1994, that the present CMI international working group be expanded to not only deal with the IMO terms of reference but also with the development of an international regime for offshore operations, which is designed to be incorporated into a widely accepted IMO or other global convention. This will, of course, require very close co-ordination between the CMI, the IMO, the international oil and gas industry, the marine insurance sectors, as well as some of the most important States involved in offshore development and operations. It is not suggested that this will be an easy task but it is suggested that if anyone could do it, it would be the CMI.

CHAPTER 18

POLLUTION FROM OFFSHORE ACTIVITIES—LIABILITY AND P & I INSURANCE ASPECTS

SVEN-HENRIK SVENSEN*

I. INTRODUCTION

In the period of almost 20 years during which Gard has provided liability insurance to mobile offshore units there have been extremely few pollution incidents and none of significance. While we constantly battle with oil pollution claims from ships, our experience in handling pollution claims related to rigs and ancillary craft servicing the offshore industry fortunately remains limited.

The infrequent incidence of offshore pollution claims perhaps explains why no uniform international scheme exists pertaining to pollution from offshore mobile units. As yet, no large claim has attracted public environmental attention, and consequently little political pressure exists to create an international scheme. Hence, this perhaps is one reason why the Draft Convention on Offshore Mobile Craft approved by the CMI Conference in Rio de Janeiro in 1977 still remains a draft. Therefore, to determine the extent of liabilities arising out of pollution from mobile offshore units and ancillary craft one must untangle a web of national legislation.

In 1990, 24.1 per cent. of global offshore oil production took place in the North Sea. Production in the Norwegian sector averaged 1.789 million barrels per day, which represent 11.8 per cent. of world offshore production. The UK daily average was 1.68 million barrels, or 11.1 per cent. of world offshore production.

In relation to other offshore production areas, Norway and the UK were first and second in the world. Mexico was third, then Saudi Arabia and Venezuela, with 10.4 per cent., 9.8 per cent. and 6.0 per cent. of the global offshore production respectively.

Space does not permit analysis of the legislation of all these States where offshore oil and gas activities take place. An example of how a particular country has legislated in this area is however warranted. This paper is thus restricted to the relevant Norwegian legislation. For comparative purposes, the paper briefly discusses liabilities in the UK sector of the North Sea. The United States sector of the Gulf of Mexico produced 5.5 per cent. of offshore production. However,

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because of the special liability schemes of the US, this selected summary of national laws includes a glance of the US legal regime.

Following a brief review of the history of offshore P & I Insurance, this paper will explain to what extent legal and contractual liabilities for pollution will be indemnified under P & I cover.

Lastly, some commentary will be offered about the extent to which the commonly used offshore contracts have been adapted to conform with the insurance provided to these units.

II. LEGISLATION RELEVANT TO OFFSHORE ACTIVITIES

1. The North Sea

(i) The Norwegian sector

Three statutes record Norway's primary laws governing pollution from offshore energy production:

(a) The Petroleum Act: Norway's core offshore oil production legislation, which contains some pollution references;
(b) The Maritime Act of 1893; Norway's general shipping code covering all ships and pollution; and
(c) The Pollution Control Act of 1981: catch-all legislation covering land or sea pollution if no other law specifically applies.

Like other countries, Norway may also invoke its criminal code. A 1991 amendment exposes companies to fines where a criminal act has been committed by someone acting on behalf of the company. This amendment may substantially increase the level of fines, especially in the event of a pollution incident. The main statutes, listed above, warrant review:

(a) THE PETROLEUM ACT

General: The Petroleum Act—the common name for The Act Pertaining to Petroleum Activities—was enacted in Norway in 1985. The Act was intended to control the various companies to which the government licensed North Sea exploration and production rights. Though only a portion of the Petroleum Act addresses pollution, the Act is the primary pollution legislation in the Norwegian sector of the North Sea.

Strict liability: Chapter V of the Petroleum Act imposes strict pollution liability on any licensee. No exceptions exist. Not even an act of God will serve as a defence.

Unlimited liability: The Petroleum Act itself offers no right to limit liability. Courts, however, are granted discretionary power to reduce damages or fines in whole or in part, if this would be fair and reasonable under the circumstances.

Pollution covered: Pollution damage, under the narrow definition of the Petroleum Act, is "damage or loss caused by pollution following from a leakage or discharge of petroleum from an installation, including a well". Petroleum is defined as "all liquid and gas forming hydrocarbons which are naturally found below ground, as well as other materials produced in connection with such hydrocarbons". Thus, the Petroleum Act will not cover pollution caused, for example, by bunker spills or mud (though the catch-all Pollution Control Act will apply).

Operations covered: The Act covers, as quoted above, pollution from installations. By definition the term installation covers not only fixed platforms, but also mobile units and ships utilised for stationary drilling. The definition also encompasses wells, which means that liabilities for a blow-out from a well during production fall within the ambit of the Petroleum Act.

The definition of installation also covers ships used for storage of petroleum in conjunction with production facilities and ships used for transporting petroleum while loading at the installation.

Parties covered: The licensee is responsible under the Petroleum Act. When there are several licensees under one licence, as is common in the Norwegian sector, a sole operator will be responsible in the first instance. However, among multiple licensees, joint and several liability exists.

Non-licensee participants are shielded from liability under the Petroleum Act, if they are performing work for, or delivering goods or services to, or undertaking rescue operations for the licensee. The broad protection even shields the participant from direct actions form an injured party and from indemnity actions commenced by the licensee. It must be noted, however, that where the participant or someone in its organization has acted wilfully or with gross negligence, the statutory liability shield may be pierced, subject to judicial discretion. In such a case the non-licensee participants may be able to limit their liability under the general maritime code, discussed below.

(b) THE MARITIME ACT

General: The Maritime Act of 1893 codifies Norwegian shipping legislation applicable to all vessels. This includes mobile installations, though fixed platforms are outside the Act. Part of the Act addresses pollution, particularly sections codifying the Norwegian adoption of the CLC Convention. Like the Petroleum Act, the Maritime Act imposes strict liability for oil pollution damage, with few exceptions. Defences in the CLC Convention are limited to war, natural phenomena of an exceptional nature, wrongful acts and negligence of the victim, as well as the failure of authorities in maintaining navigational aids.

Strict liability: The liability for oil pollution is strict, but subject to important limitations. According to Chapter 12 of the Act, which contains the provisions regarding oil pollution liability, the owner of a ship, a mobile installation or any

other floating structure, is liable irrespective of actual fault or neglect, for loss or damage arising outside the ship by reason of pollution caused by the escape or discharge of oil. The liability also covers loss, damage or expense resulting from reasonable measures taken after the incident has occurred to prevent or minimize such pollution.

Applicability to mobile installations: According to section 371 of the Act, "drilling platforms and similar floating installations for exploration, exploitation, storage, or transport of subsea natural resources, or for the assistance of such activities" are as a general rule to be considered as ships for the purposes of the Maritime Act. Thus, both mobile drilling platforms and other mobile installations, but not fixed installations, will be subject to the liability provisions in Chapter 12, including the limitation provisions.

The CLC Convention: The liability for oil pollution in Chapter 12 of the Maritime Act, is based on the International Convention on Civil Liability for Oil Pollution Damage (CLC Convention), though with a wider scope of application than the Convention. Analysing the CLC Convention is beyond the scope of this paper, however, one can summarise the following situations to which CLC applies, or to which it is extended by the Maritime Act:

(1) Where the pollution is caused by persistent oil from a ship which is carrying oil in bulk as cargo, and the damage or loss arises in Norway or any other Convention State. The maximum liability in such case is limited to 14 million SDR (Special Drawing Rights) or about US $17,500,000. In addition, the provisions of the Fund-Convention (International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage), may apply where the requirements in the Maritime Act, section 271, are fulfilled.

(2) The second situation is similar to the first, except that the loss or damage arises outside Norway or any other country adhering to the CLC Convention. In such a situation, liability is subject once again to a maximum liability of 14 million SDR.

(3) The third situation arises where either (i) pollution is from a ship or a structure which does not carry oil as bulk cargo, or (ii) the pollution is caused by non-stable oils and oily mixture, irrespective of whether the ship or structure carries the oil as bulk cargo, so long as the damage arises in Norway or in the Norwegian Sector of the Continental Shelf. Liability in such cases will depend upon whether the pollution is caused by an orthodox vessel (including supply vessels), where the maximum liability will depend on the vessel's size, or by a mobile installation, in which case the maximum liability is 20 million SDR.

The Maritime Act specifically provides that if the licensee under the Petroleum Act is liable for the pollution damage, it shall not be possible to claim for damages under the Maritime Act. There is an exception where the liability shield of the non-licensees in the Petroleum Act may be pierced. In such a case,

however, the non-licensees may limit their liability under the Maritime Act (where applicable).

(c) THE POLLUTION CONTROL ACT

General: One could justly label the Pollution Control Act a catch-all piece of legislation. By its own terms, if either the Petroleum Act or the Maritime Act applies, then the Pollution Control Act remains inoperative. If, though, some form of offshore or shipping pollution escapes the impact of all other laws, the Pollution Control Act is triggered.

Application: Bearing in mind the law's catch-all function, it is no surprise that the application of the law is nearly without boundaries. Under the Act pollution is defined as follows: "the introduction to air, water or ground of solid matter, fluid or gas . . . which causes or may cause damage or loss of amenity to the environment". Presumably any party—licensee, operator, sub-contractor, etc.—could be guilty of introducing a pollutant, within the law's ambit. The Act does, however, offer some comfort in that a party, such as a rig operator, cannot be liable unless it was "operating, using or in possession" of the polluting object.

Suffice it for purposes of this paper, that the Pollution Control Act blocks any legal safe haven an offshore polluter might seek.

Standard of liability: Liability exists under the Pollution Control Act without regard to fault and without exceptions. As with the Petroleum Act, liability is strict.

Unlimited liability: Again, as with the Petroleum Act, no rights to limit liability exist under the Pollution Control Act. Moreover, liability is not restricted to financial loss but extends to "compensation for damage, loss, loss of amenity or expenses arising from reasonable measures to prevent, restrict, remove or alleviate pollution damage".

A further liability provision opens the pollutor to claims for compensation for damage caused if the pollution obstructs or impedes the exercising of commercial or non-commercial common rights. Collection of damages for impairing "common rights" is a new principle in Norwegian law which has not been tested, though the provision may significantly affect recovery levels.

(ii) The British sector

The situation in the British sector of the North Sea is rather different from that in the Norwegian sector, since there is no specific legislation in the UK addressing offshore pollution liability. Instead, there exists a voluntary strict liability agreement called the "Offshore Pollution Liability Agreement" (OPOL). Additionally, the UK has ratified the CLC Convention which establishes liability for oil pollution under specific circumstances as described above in connection with the Norwegian Maritime Act. This paper, however, concentrates on the OPOL agreement.

"Voluntary" agreement: OPOL carries no statutory force of law. It is only a voluntary agreement among the oil companies who are operators of offshore facilities within the territorial waters of designated states. In practice, however, as far as the UK is concerned, an operator would not be given a licence by the British Government without agreeing to become a party to OPOL.

Liability standard: OPOL imposes strict liability upon an operator for damage caused by an escape or discharge of oil from offshore facilities. In the context of OPOL, an offshore facility means any well and any installation or portion thereof of any kind, fixed or mobile, used for the purpose of exploring for, producing, treating, storing or transporting crude oil from the seabed or its subsoil; and any well used for the purpose of exploring for or recovering gas or natural gas liquids from the seabed or its subsoil during the period that any such well is being drilled, recompleted or worked upon. Any abandoned well or any ship not being used for the storage of crude oil, commencing at the loading manifold thereof, does not, however, fall under the definition.

Channelling of liability: Under OPOL the operator assumes the obligations for all parties involved. Thus, the liability is channelled to the operator. The operator also undertakes to provide evidence of sufficient financial responsibility. Should any party to the agreement fail to meet its financial obligations, then the shortfall will be pro-rated among the remaining parties to the OPOL agreement, in effect providing a guarantee behind the strict liability agreement.

Liability limits: Liability under OPOL is limited to US$100 million per incident, made up of US$50 million to cover pollution damage claims and US$50 million for remedial measures. However, when all claims in one category have been met, any surplus may be used to meet unsatisfied claims in the other category.

Financial responsibility: In addition, the parties to OPOL undertake to establish and maintain their financial responsibility for their obligations, for an amount of not less than US$100 million for any one incident and US$200 million in an annual aggregate. Primarily this is to protect the party concerned and any claimants, by ensuring that the party has made adequate provisions to meet the obligations it has assumed under OPOL, but is also protects the other parties to the extent that they have jointly agreed to guarantee one another.

In order to administer OPOL, the Offshore Pollution Liability Association Ltd. was formed in England. All the parties to OPOL are members. The Association is primarily concerned with the administration of OPOL and relations among the parties, but in addition it provides guarantees referred to above. At the request of any State to which OPOL applies—which as of January 1992 meant the UK, Germany, France, Ireland, the Netherlands, Norway, Belgium, Greece, Italy, Portugal, Spain—the Association will confirm to that State that a party has accepted OPOL and established satisfactory evidence of financial responsibility.

(Although OPOL applies to Norway as well, the agreement will not be applicable where liability is established under Norwegian law. OPOL will, however,

regulate the situation where an offshore installation in the Norwegian sector causes pollution damage which is sustained in another OPOL State.)

Summary: Like drilling units in the Norwegian sector of the North Sea, units in the UK sector face strict liability for pollution. UK operators have, however, voluntarily assumed liability under OPOL. The overall liability limit of US $100,000,000 seems favourable in relation to the unlimited liability under Norwegian law, and as seen below, US law.

2. The US sector of the Gulf of Mexico

To analyse the legislation relating to liability for pollution damage from offshore activities in the US sector of the Gulf of Mexico, one must consider the laws of three jurisdictions: the Federal Government and the States of Texas and Louisiana. Federal law is most important because the licensing of offshore facilities on the Outer Continental Shelf is subject to the jurisdiction and control of the Federal Government. The Oil Pollution Act of 1990 (OPA 1990) is of special interest.

(i) The Oil Pollution Act of 1990

Any review of OPA 1990 takes place against the background that the regulations—the detailed rules which implement OPA 90's broad dictates—remain in their infancy. No full set of regulations has been promulgated. As a consequence, the full impact of this Act cannot be ascertained.

Jurisdiction: The scope of application of OPA 1990 is wide. The Act affects not only traditional ships, but also offshore facilities. OPA 1990's broad provisions encompass mobile offshore drilling units and vessels or units capable of use as offshore vessels. Such units are treated as vessels for the purposes of establishing the responsible party and as offshore facilities for the purposes of liability. The Act also applies to offshore facilities located in the navigable waters of the US and which are subject to the jurisdiction of the US. OPA 90 particularly deals with Outer Continental Shelf facilities, defined as facilities located on the Outer Continental Shelf and conducting activities related to petroleum products, including drilling, producing, starting, handling, transferring, processing or transporting. Thus, both fixed and mobile installations will be covered by OPA 90's Outer Continental Shelf Facility definition.

Strict liability: OPA 1990 imposes strict liability for the removal costs and damages that result from any discharge or substantial threat of discharge of oil from any vessel or facility. In the context of the Act, oil means oil of any kind or in any form, excluding any substance which is specifically listed or designed as a hazardous substance under CERCLA (the Comprehensive Environmental Response Compensation and Liability Act) and subject to CERCLA.

Parties responsible: Under OPA 1990 the person responsible for fixed installations is the lessee or permittee of the area in which the facility is located, or the

relevant holder of a right of use and easement granted under the applicable State law under the Outer Continental Shelf Lands Act. For vessels, including mobile installations, the responsible parties are defined as owners, operators or demise charterers. OPA 90 holds responsible parties jointly and severally liable.

Limit of liability: The extent of the liability will depend on whether the polluter is an Outer Continental Facility (OCF), as defined above, or a vessel. Liability of an OCF for pollution removal costs is unlimited. In addition, OPA 90 imposes a further exposure of up to US$75 million for damages as a result of the pollution incident. Moreover, the responsible party for a fixed installation must establish and maintain evidence of financial responsibility of US$150 million. A responsible party connected with more than one offshore facility need, however, only establish evidence of financial responsibility to meet the maximum liability for one facility.

Limits of liability—mobile installations: Mobile offshore drilling units used as an offshore facility are treated as vessels with respect to any pollution incident, involving oil on or above the surface of the water, and are treated as Offshore Continental Facilities to the extent that removal costs and damages exceed the liability limits available to a tank vessel in respect of such an incident. Thus, a mobile installation is treated as a tank vessel, except where removal costs and damages exceed tank vessel limits; thereafter the liability is that of an offshore facility (US$75 million plus unlimited removal costs).

Loss of limitation rights: Finally, it should be mentioned that the liability limits will not apply where *inter alia* the proximate cause of the incident was gross negligence or wilful misconduct of, or a violation of an applicable Federal safety, construction or operating regulation by, any responsible party or an agent or employee of a responsible party or any person acting in "a contractual relationship" with a responsible party; or the responsible party fails to report the incident or co-operate with the authorities.

(ii) State laws

OPA 1990 expressly permits states to enact laws parallel to or different from Federal law. The States of Texas and Louisiana have taken the opportunity to do so. There have been activities also off other southern states, but at the present time there is a ban on offshore drilling in these other areas.

Texas: The Oil Spill Prevention and Response Act was enacted in 1991. This law applies also to the coastal waters of Texas, and offshore facilities are treated the same way as onshore facilities. Texas law tracks Federal law in many respects. In short, if one complies with Federal law, one will normally be in compliance with Texas law. One important difference, however, is that liability under the law of Texas is unlimited with respect to natural resource damages, response costs and third party damages. In addition, Texas law could be even more hazardous for the offshore operator due to the fact that its application could be subject to many legal interpretations and conflicts *vis-à-vis* Federal law.

Thus, the scenario of a spill in Texan territorial water sets up the possibility of an extremely complex interplay of State and Federal law, with the operator being the potential loser.

Louisiana: The Louisiana statute, signed into law on 23 April 1991, effectively mirrors the Federal Oil Pollution Act of 1990, as well as the provisions of the Texas statute, the Oil Spill Prevention and Response Act of 1991. As with the Texas Act, oil production, handling and drilling facilities located on the Outer Continental Shelf are within the jurisdiction of the Federal Government, but as the law is drafted, if the facility's discharge threatens or enters Louisiana waters, an argument for applicability of state law could be made.

Summary: Taking into account the laws of Texas and Louisiana, plus the burdensome provisions of OPA 1990, a fair conclusion is that offshore operators must assume they face unlimited liability for pollution incidents in the US sector of the Gulf of Mexico. In theory Federal damage limits of offshore operations exist but the unpredictable interplay of unlimited state liability and unlimited Federal removal costs prevents any clear predictions about what would happen if a major offshore spill occurred in the US Gulf of Mexico.

III. COMPARISON OF POLLUTION COVER FOR THE UNITS EMPLOYED IN OFFSHORE ACTIVITIES

Insurance against pollution liability incurred by offshore activities is placed under quite different types of insurance.

1. Fixed platforms

The insurance concept for fixed platforms is developed from that of insurance for shore based industry. An oil company having interests in different platforms will therefore usually obtain an individually designed insurance package policy which also will include its platform interests. As the different owners of a specific platform will have individually designed covers, the pollution insurance cover available for a fixed installation will thus vary, not only from platform to platform, but also among the different interests sharing ownership in a single platform. As an example, I can mention that of the four interested owners of the *Piper Alpha* platform which exploded in 1988, only one had a business interruption cover.

It is therefore difficult to give a more specific description of how a fixed platform is insured. The cover is however always limited to a specific sum insured.

2. Mobile offshore units

When we move from fixed platforms to mobile units, we also move from the land based concepts of insurance to the area of marine insurance.

Shipowners have traditionally placed insurances against liabilities incurred in connection with the operation of their ships with Protection and Indemnity (P & I) Clubs such as Gard. The Clubs are mutual entities which provide unlimited liability insurance, save in respect of oil pollution.

When Norwegian shipowners started to take delivery of drilling rigs in the early seventies, it was natural for them to turn to their Norwegian P & I Clubs Skuld and Gard to obtain insurance against the risk of incurring liabilities. The Clubs sought to insure the rigs as part of their mutual empires. However, we were met by resistance from our reinsurers—the London Group of P & I Clubs—who were unwilling to insure drilling vessels which differed so much from the risks inherent to traditional ships. Hence, one could not expect the P & I mutuality to pick them up. Thus, a new cover for this type of risks had to be arranged. The clubs were the first to offer insurance to rigs on conditions tailor-made to this special type of operation. Presently, the P & I Clubs in the International Group apply the following exclusion in the Pooling Agreement relating to the insurance of traditional seagoing vessels:

The following losses shall be Excluded Losses . . . .

18. Drilling vessels

(a) Liabilities, costs and expenses incurred in respect of a drilling vessel or barge or any other vessel or barge employed to carry out drilling or production operations in connection with oil or gas exploration or production, including any accommodation unit moored or positioned on site as an integral part of any such operations, to the extent that such liabilities, costs or expenses arise out of or during drilling or production operations.

Hence, vessels or barges performing operations described in the above clause are ineligible for unlimited P & I cover. In the case of Skuld and Gard such vessels or barges are insured on our "Rules for P & I Cover of Mobile Offshore Units". Today the two Clubs between them insure 150 of a total number of approximately 500 larger mobile offshore units on a worldwide basis, making them by far the largest liability insurers of such units.

3. Ancillary craft, etc

Supply vessels etc. which form part of offshore activities and which are not caught by the Pooling Agreement exclusion referred to above, will be insured under the terms of a regular P & I cover.

IV. CLOSER EXAMINATION OF P & I COVER

1. Mobile offshore units

The P & I insurance offered to the mobile units, unlike the ordinary P & I cover, contains a maximum sum insured. Currently Skuld and Gard offer an

insurance up to a maximum of US$400 million. Within this upper maximum the rig owner can opt for any sum which he finds adequate. The sum opted for applies on a per incident basis and is the same for all types of liabilities recoverable under the policy, including oil pollution liabilities. Amongst the 150 rigs currently insured by Skuld and Gard, only a few have opted for the maximum cover. Most commonly rig owners take out cover up to US$150 million.

In respect of pollution risks, Gard's Rules 7 and 14(a) are relevant. The cover is set out in the former, whereas the latter contains the restriction.

Rule 7—Pollution

Subject always to the provisions of Rule 14, the Association shall cover liability, fines and loss arising in consequence of oil or any other pollution or the threat thereof.

The Rule gives broad coverage against liability resulting from any type of pollution, whether the pollutant comes from the rig itself or from any other source. However, in the latter case Rule 14(a) is of particular interest as it sets out an important restriction on the cover.

Rule 14—Pollution from well and damage to property caused by blow-out etc.

The Association shall not cover:

(a) Liability or loss arising out of pollution from well and measures taken to avert or minimize such liability or loss.

This exclusion is understood to apply only to pollution from the well which is being drilled or worked over or serviced by the insured rig itself. If for example an accommodation rig were to drift and collide with a drilling rig and the collision results in pollution from the well which is being drilled, the liability of the accommodation rig would not be exempted from cover through the above exclusion. Its liability would be recoverable under Rule 7, within the sum insured.

2. Ancillary craft

As mentioned above these vessels are insured under the ordinary P & I rules. The main cover for pollution follows from:

Rule 14—Pollution

The Association shall cover liability, fines and loss arising in consequence of the discharge or escape from the ship of oil or any other substance or the threat of such discharge or escape.

As will be seen this rule only covers pollution emanating from the vessel itself. However, the vessel could cause an oil spill through a collision with another ship or through a striking by dragging its anchor across a pipe line. If this was the case, the oil spill would be a consequence of the collision or the striking, and covered under the rules relevant to such incidents.

In all three cases the cover is subject to the limitation set out in Rule 27 with a upper limit of currently US$500 million per incident.

V. THE OFFSHORE CONTRACT: DISTRIBUTION OF LIABILITY FOR POLLUTION DAMAGE BETWEEN THE OPERATOR AND THE CONTRACTOR

The offshore contractor—whether the owner of a drilling rig or the owner of an ancillary craft—is exposed to legal liabilities for oil pollution. P & I insurance is available to these two types of contractors. However, it is not much comfort to an owner to have liability insurance which reflects his legal liabilities if the contracts into which he enters distribute liabilities between the parties in a way which conflicts with the insurance cover. Through a few examples from commonly used contracts one can determine to what extent distributions of liabilities for pollution adapt to the legal and insurance regimes.

1. Mobile rigs

We see a great variety of contracts, ranging from those which distribute liabilities which from a P & I point of view are well within the cover all the way to those which expose the contractor to contractual liabilities which are outside his insurance cover. The following examples are taken from standard contracts applied by different oil companies.

Example A

16.6 OPERATOR shall defend, indemnify hold CONTRACTOR and its sub-contractors harmless from and against all losses, expenses and claims from any third party or governmental authority caused by pollution or contamination resulting from fire, blowout, cratering, seepage or any other uncontrolled flow from underground of oil, gas, water, or other substance arising in connection with the performance of the Drilling Operations and services, and regardless of whether or not contributed to by the negligence in any form of CONTRACTOR or its subcontractors.

This clause distributes liability for oil pollution in a way that should be fully acceptable to both parties. The Contractor is exempted from liability for pollution from the well which accords with the restrictions contained in his P & I policy. The Operator has absorbed this liability and it must be assumed that this contractual acceptance of liability accords with the cover he has under his insurance.

Example B

3.1 COMPANY shall be solely responsible for and shall indemnify CONTRACTOR against all risks of loss, damage, liability or costs (to include any fine, penalty or demand of any governmental authority) arising from reservoir seepage or pollution; from fire explosion or blow-out of any well or reservoir; from damage to any reservoir; from damage to or destruction of any well or other structure or facility existing or being constructed; from loss or profits or loss of production or product; from damage to or escape of product or production from any existing pipeline, or other should be sub-surface facility; from loss

or use, loss of rights from untimely completion, and/or from other remote or consequential damage from any cause whatsoever, including CONTRACTOR's negligence, provided however that CONTRACTOR shall be liable for, and shall defend, indemnify and hold COMPANY harmless from and against all claims, proceedings, damages, costs, losses and expenses (including any fine, penalty or demand of any governmental or other authority having jurisdiction) resulting from CONTRACTOR's negligence or otherwise by any failure by CONTRACTOR to comply with its obligations under this Agreement subject to CONTRACTOR's liability not exceeding five million pound sterling (£5,000,000).

Under this clause the "Company" (the Operator) is responsible for pollution from the well, save that contractor shall bear the first £5 million when the liability results from his negligence or failure to comply with the obligations set out in the contract. The liability which is levied on the contractor through this clause falls outside his P & I cover. To the extent he is unable to have the clause modified, he will have to try to insure the risk in the market. It is not uncommon that the operators try to pass such part of the pollution liability which he cannot recover under his own policy, because of a deduction, on to the contractor. It is rare, however, to see a well pollution liability of this magnitude levied on the contractor. Gard has developed a facility in the market for insuring such liabilities which are passed on to the contractor under a contract up to US$5 million. However, I believe that a contractor would find it difficult to insure a liability of £5 million, and, if at all possible, the price will be exorbitant.

Example C

9.6 *Pollution*
Without prejudice to its rights under Clause 6 hereof, OPERATOR will protect, indemnify and save CONTRACTOR harmless from all liability for pollution resulting from a blow-out or uncontrolled well flow arising out of the Work, except and to the extent that if such pollution results from the negligent act or omission of CONTRACTOR, his employees, agents, or sub-contractors, then, in each instance, CONTRACTOR shall reimburse OPERATOR for any amount paid out by OPERATOR in control of the pollutant, in respect of clean-up costs or as damages to a third party.

This is an example of a contractual term which a Contractor should not accept. The liability he accepts falls outside the scope of his P & I cover and is such that it cannot be fully insured separately in the market. Hence, if the contract cannot be modified, the contractor will have to live with the risk of incurring an uninsured liability.

2. Ancillary craft

As explained above there are no specific exclusions relating to oil pollution under the regular P & I cover for ships. For that reason one would perhaps have thought that the supply boat contracts do not address the distribution of liability for oil pollution between the owner and the charterer. However, this is not the case, and again there is a great variety of contracts in use.

Example A

15.6 Notwithstanding Article 15.5, Charterer shall defend, indemnify and hold Owner and its Subcontractors harmless from and against all losses, expenses and claims in respect of or in connection with damage to or loss of the property of and/or death of or personal injury to any third party resulting from:
—reservoir seepage or pollution from an oil- or gas-field operated by Den Norske Stats Oljeselskap AS,
—fire, explosion or blow-out of any well or reservoir of such fields,
arising out of or in any way connected with the performance under this Charter, and regardless of whether or not contributed to by the negligence in any form of Owner or its Subcontractors.

Owner shall defend, indemnify and hold Charterer, its Affiliated companies and its other contractors harmless from and against all losses, expenses and claims for any liquid or nonliquid or nonliquid pollutant or waste material that is discharged, seeped, spilled or blown out from the Vessel up to the limit specified in article 16(b) hereof for each accident, for any claim or series of claims arising in connection with the performance under this Charter and regardless of whether or not contributed to by the negligence in any form of Charterer, its Affiliated companies or its other contractors.

This contract contains a favourable and sensible distribution of liability for oil pollution between the owner and the charterer. It must be assumed that the apportionment of liability and that which has been absorbed by the charterer reflects the scope of his insurance cover.

Example B

15.6 OIL POLLUTION: When an escape or discharge of oil occurs from the Vessel and threatens to cause pollution damage to coastlines, Charterer may, at its option, and upon notice to Owner or Master, mitigate such damage, unless Owner promptly undertakes same. Charterer shall keep Owner advised of the nature of the measures intended to be taken by it. Any of the aforementioned measures actually taken by Charterer shall be at Owner's expense (except to the extent that such escape or discharge was caused or contributed to by Charterer), provided that if Owner considers said measures should be discontinued, Owner may so notify Charterer and thereafter Charterer shall have no right to continue said measures under the provisions of this Subsection and all further liability to Charterer thereunder shall thereupon cease.

If any dispute shall arise between Owner and Charterer as to the reasonableness of the measures undertaken and/or the expenditures incurred by Charterer hereunder, such dispute shall be referred to arbitration as herein provided.

The provisions of this Subsection are not in derogation of such other rights as Charterer or Owner may have under this Charter, or may otherwise have or acquire by law or any International Convention.

This is an example of a clause that contains no distribution of liability for oil pollution and where the parties as between them are therefore liable under applicable law. The contract is acceptable from an insurance point of view. However, it leaves the owner of a relatively small craft with a large potential liability for oil spill resulting from a pipe line, reservoir, etc. It could be asked whether this exposure more naturally should rest with the Operator of the field. It can probably be insured under the Operator's insurances at no extra cost to him.

This brief discussion of terms of contracts for mobile units and ancillary craft demonstrates that particularly in case of the former it is important to ensure that liabilities are distributed in such a way that they accord with the insurance covers provided to the parties.

VI. CONCLUSION

In this paper the intention has been to give a general view of the legislation, commercial contracts and insurance concepts relevant to offshore pollution risks.

As will have been seen, liabilities incurred in connection with offshore activities differ significantly. Although mobile offshore units do not move around nearly as much as ships, it would still be of great assistance to the parties involved if a uniform international scheme could now at long last be adopted.

CHAPTER 19

CMI COLLOQUIUM ON ENVIRONMENTAL DAMAGE ASSESSMENT: DISCUSSION PAPER[1]

I. INTRODUCTION

Towards the end of 1991 a Questionnaire was circulated to National Associations in which numerous issues were canvassed on the subject of liability for pollution damage.

The importance of this subject had been brought into focus by the decision of the US Congress, in August 1990, to introduce its own legislation in preference to the legal framework widely accepted elsewhere. The Civil Liability Convention of 1969 (CLC), which governs the liability of shipowners for oil pollution damage, has been ratified to date in some 74 countries, 49 of which have also adopted the complementary Fund Convention of 1971 (FC).[2] This provides for additional compensation to be paid by the International Oil Pollution Compensation Fund (IOPC Fund). Amendments to the two Conventions were agreed at a diplomatic conference in 1984, but the resulting Protocols have not yet entered into force.[3] Proposals are currently under discussion for possible amendment of the entry into force provisions, despite the ultimate rejection of the Protocols by America when introducing its own Oil Pollution Act 1990 (OPA).

Since its enactment in August 1990 much has been said and written about various controversial features of OPA. These include of course the readiness with which it is feared that shipowners may lose the right to limit liability for spills in American waters, whether by virtue of Federal or state laws. For present purposes greatest interest focuses on the comprehensive framework set out in OPA for compensating a much wider range of loss or damage than that usually accepted under CLC or the Fund Convention. Over this framework are laid the Natural Resource Damage Assessment (NRDA) Regulations,

1. Prepared by the CMI's Working Group on Environmental Damage Assessment: Prof. N. Trotz (chairman), Prof. E. Gold, A.F. Bessemer Clark, D. J. L. Watkins, and C. M. de la Rue.

2. As at 15 September 1992. Subsequently there have been several further accessions to both conventions.

3. The 1984 Protocols have since been replaced by the 1992 Protocols, with amendments intended to facilitate their entry into force. Their substantive provisions are identical in relation to the matters addressed in this paper. See further Preface, at p. vii.

promulgated by the US Interior Department under the Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA). These regulations permit claims to be made for damage to the environment, assessed by intricate and theoretical methods. In relation to pollution by oil these regulations are due to be replaced by similar rules currently being prepared under the auspices of the National Oceanic and Atmospheric Administration.

In contrast to this comprehensive regime, the international conventions define "pollution damage" only in very general terms. A modified definition agreed in 1984 is more specific in its treatment of environmental damage, but still leaves scope for courts to decide for themselves how the wording should be interpreted and applied in practice. The scope is even wider so long as the Protocols remain on the shelf, and the original definition continues in force. In practice there have been relatively few difficulties in deciding questions of liability, but often there has been argument on issues of quantum, and as to the type of damage which may be recovered.

This is a field in which the importance is obvious of striving to maintain a uniform application of the Conventions in contracting States. However the risk is considerable that diversities may develop around the world. In the event of dispute, the question what claims should be compensated is ultimately a matter for decision by the competent national court. Issues of this nature may involve difficult questions of legal theory, for which often no clear precedent exists in the law of the national court deciding the issue. There is also only limited scope for guidance in decisions of the courts in other countries: the number of decisions is relatively small, largely because the claims-handling policies of the P & I Clubs and of the IOPC Fund have in practice resulted in most claims being amicably settled; where judicial decisions have been given, difficulties may be involved in applying them in other countries, particularly where there is a difference of jurisprudential tradition.

The framework of international law in this field lacks any centralized system for avoiding such divergencies at national level. There is, for example, no equivalent to the European Court of Justice, to which appeals or references may be made for rulings on matters of common interest to contracting States in the European Community. The nearest equivalent to any central authority is the IOPC Fund, which has developed various practices and policies governing the admissibility of claims. These undoubtedly carry considerable persuasive weight, bearing in mind that decisions on this subject by the IOPC Fund Assembly and Executive Committee are taken by delegates from member governments, representing the numerous contracting parties to the Conventions. However, these practices and policies are not legally binding, and there have been instances of national courts preferring a different approach. At the same time it remains to be seen how widely the American courts will interpret recent legislation on this subject in the United States.

The issues canvassed in the CMI Questionnaire were not confined to damage caused by oil, as distinct from other hazardous substances, but inevitably the

greater experience of oil pollution cases has in large measure shaped both the questions and answers. The replies to the Questionnaire reveal three general themes:

(1) There is widespread agreement that the Protocols represent an improvement on the original text of the Civil Liability and Fund Conventions, and that it would be desirable for the Protocols to be brought into force;
(2) Difficult problems are involved in compensating certain types of claim which fall outside the conventions, but for which remedies are now being developed in the USA; and
(3) Scope exists for clarification of the types of claim which qualify for compensation under the various statutory regimes, including not only CLC and the Fund Convention (both in their original text and as modified by the Protocols), but also the governing legislation in the United States.

The specific problems which appear to merit consideration are grouped below under three main heads, namely (1) preventive measures, clean-up and restoration, (2) financial loss and (3) claims for non-pecuniary losses.

II. PREVENTIVE MEASURES, CLEAN-UP AND RESTORATION

The Questionnaire raised a number of detailed issues under this head, most of which involve practical applications of the principle that any measures taken by a claimant must be *reasonable* to qualify for compensation under CLC. This defines "preventive measures" as any reasonable measures taken after an incident has occurred to prevent or minimise pollution damage. Most respondents would appear to agree that their national courts would apply a test of reasonableness not only to preventive measures in the narrow sense (i.e. those taken to avoid pollution) but also to measures of clean-up and restoration (which minimize damage after an incident has occurred).

1. The reasonableness of the measures taken

On the basis of the majority of the replies it can be said that compensation is not to be refused by reason only that preventive or clean-up measures prove ineffective, or mobilized equipment proves not to be required. A claim may however be refused if the measures or equipment were not reasonably required or appropriate in the circumstances existing at the relevant time, or in the light of technical information or advice available to the claimant.

There is also general agreement that compensation is normally payable for the reasonable cost incurred in disposing of oil or related debris.

2. The reasonableness of the costs claimed for the measures

The CLC definition does not explicitly provide that the test of reasonableness governs both the measures themselves and the costs incurred. This raises the question what the position would be if the claimant were to undertake reasonable measures (e.g. to employ a clean-up contractor), but were to pay an unreasonably high price (e.g. because the price quoted was agreed and paid without any attempt to invite tenders from other contractors, who would have been willing to do the same work for a lower charge).

Most respondents agree that not only the measures themselves but also the cost would be governed by a test of reasonableness. However in some countries (e.g. France) it appears that a different approach may be adopted, and that damage would qualify for full compensation if its actual occurrence and its linkage with the alleged pollution were both established.

3. Fixed costs of government and other public bodies

A recurrent issue concerns the extent, if any, to which government and other public bodies should be permitted to recover fixed costs which they would have incurred in any event, such as salaries paid to their employees engaged in clean-up measures, or the cost of maintaining plant and machinery for use in clean-up operations (e.g. oil combating vessels).

Following the decision of the New South Wales Supreme Court (Yeldham J.) in *Maritime Services Board of New South Wales* v. *Posiden Navigation Inc (The Stolt Sheaf and The World Encouragement)* (1982)[4] it is generally accepted that the recovery of costs is not limited to disbursements incurred by way of payments to third parties, but may include compensation for the use of the claimant's own personnel, plant or equipment. It was made clear in the judgment that this did not entitle the claimant to make a "commercial charge", but only to recover the actual cost incurred.

The application of these principles in practice has been a frequent source of controversy. Whilst salaries can be apportioned with relative ease to the period of the operations, more difficulty surrounds the question what overheads, if any, may reasonably be attributed to the incident and included as part of the cost. The problems are still greater in relation to plant and equipment, the capital cost of which is less easily apportioned to the period of their use in response to a particular incident. Attempts have sometimes been made to quantify claims by reference to rates prescribed by standard government tariffs, but in practice these have not proved acceptable since they have tended to include remote overheads and approach too closely to a commercial charge. An alternative method sometimes suggested is to calculate a suitable proportion of the annual allowance made for depreciation of the assets concerned, but there does not seem to be any

4. [1982] 1 NSWLR 72.

legal precedent for this approach, and a number of issues may readily arise concerning the assumptions made in such a calculation.

Given that clean-up operations are normally undertaken by public bodies, and that claims of this nature are a recurrent source of difficulty, this is an area in which much may be gained from standardizing the relevant law and practice.

4. Residual value of equipment or material purchased in response to an incident

The replies to the Questionnaire indicate general agreement that where equipment or material is reasonably purchased after an incident for the purpose of preventive or clean-up measures, compensation is payable for the cost of acquisition, but subject always to a deduction for the residual value of such equipment or material after completion of the measures.

5. Loss or damage caused by clean-up measures

Most respondents agree that compensation is payable for consequential loss or damage unavoidably caused by clean-up measures, such as damage to roads and embankments caused by heavy machinery.

6. Restoration

The term "restoration" is used here to describe measures taken after a pollutant has been removed, in order to reinstate the environment so far as possible to its former condition, e.g. by re-seeding or re-planting. Like "clean-up", it is not a term which appears in the Conventions, but nearly all respondents to the Questionnaire have indicated that the cost of such measures would in principle be recoverable under their national laws.

This raises the question whether a claimant is entitled to recover the full cost incurred in an effort to recreate with meticulous precision the exact state of a damaged site before the pollution occurred. Is there a point beyond which further restoration efforts should be considered disproportionately expensive, in comparison with other alternatives?

In this context two relevant alternatives may need to be considered: first, the possibility of an alternative mode of restoring the damaged site, and secondly, the possibility of creating a similar amenity at an alternative location.

In some jurisdictions there is authority to suggest that the principle of *restitutio in integrum* is not absolute, and will not extend to unreasonable or disproportionate measures. Decided cases involving damage to real property include, for example, an English decision concerning mining operations which caused a public road to subside. It was there held that the local authority could not recover the full cost of building an embankment, in order to restore the road to

its former level, when an unequally satisfactory road might have been made at lesser expense.[5] Similarly, in a case involving damage to a building caused by nearby pile-driving operations, it was held that the plaintiffs were not entitled to insist on complete and meticulous restorations, when a reasonable building owner would be content with less extensive work, which did not significantly diminish the appearance, life or utility of the building.[6]

Issues of a similar nature were considered in an environmental context in the *Zoe Colocotroni* case which was heard in 1980 by the First Circuit of the US Court of Appeals.[7] The matter concerned an oil tanker which had run aground as a result of her unseaworthy condition, causing pollution on the coast of Puerto Rico. At first instance, the government authorities of Puerto Rico were awarded some US$6m, of which $78,000 was needed to compensate them for the cost of clearing the spill. The remainder related to the cost of restoring the environment to its former condition, comprising $500,000 as the cost of re-planting mangroves, and some $5.5m as the estimated cost of replacing marine organisms killed by the spill.

The Court of Appeals refused to endorse this approach and laid greater emphasis on the need for a sense of proportion in assessing such costs. It held that the recoverable costs were those:

> reasonably to be incurred by the sovereign or its designated agency to restore or rehabilitate the environment in the affected area to its pre-existing condition, or as close thereto as is possible without grossly disproportionate expenditures. The focus in determining such a remedy should be the steps a reasonable and prudent sovereign or agency would take to mitigate the harm done by the pollution, with attention to such factors as technical feasibility, harmful side effects, compatibility with or duplication of such regeneration as is naturally to be expected, and the extent to which efforts beyond a certain point would become either redundant or disproportionately expensive.

It may be suggested that the *Zoe* decision is persuasive authority that the principle of *restitutio in integrum* does not justify disproportionate expense in meticulously restoring the environment to its pre-existing condition, if in the circumstances an alternative mode of restoring the damaged site would be more reasonable.

More controversial is the question whether compensation should be awarded for the cost of creating an *alternative site*, in preference to complete restoration of the polluted area.

The Court of Appeals recognised in *Zoe* that there might be circumstances where full restoration of the damaged area might be physically impossible or disproportionately expensive. It suggested that an alternative measure of damages might be appropriate if a more reasonable course would be to create a similar

5. *Lodge Holes Colliery Co.* v. *Mayor of Wednesbury* [1908] AC 323.
6. *Dodd Properties (Kent)* v. *Canterbury City Council* [1980] 1 WLR 333.
7. *Commonwealth of Puerto Rico* v. *The S.S. Zoe Colocotroni*, US Court of Appeals, 628 F.2d 652 (1st Cir. 1980).

environment at an alternative site. As examples, it postulated the possible acquisition of comparable lands or public parks, or re-forestation of a similar proximate site, where the presence of oil would not pose the same hazard to ultimate success.

The replies to the Questionnaire suggest that in some jurisdictions this approach may be too novel or radical to gain ready acceptance. Whatever practical good sense may lie behind it, it is seen by some to run counter to normal principle if damage in one location is compensated by ordering the defendant to pay for an alternative site elsewhere.

Nevertheless, those who favour this approach may argue that this is not really the issue. The question is not so much whether the defendant can be compelled against his wishes to pay for creating an alternative site; the real issue concerns the amount of money which should be paid to the claimant as compensation for pollution damage, and particularly the question whether he can recover the full cost of restoring the damaged location, despite objections that full restoration would be an unreasonable course, in comparison with the option of creating an alternative site. In such a case the defendant must necessarily be willing to pay the lesser amount required to create the alternative site, for if he is not, it would be hard to complain that the claimant has failed adequately to mitigate his loss. It should also follow that if the claimant himself takes the initiative in opting for an alternative site as the more reasonable course, the cost should be recoverable as reasonable expense of mitigation.

III. FINANCIAL LOSS

The replies under this head reveal widespread agreement that consequential loss is or should be recoverable in principle, but little consensus on what test to adopt in order to avoid an unreasonably wide range of claims for pure economic losses.

In many countries the scope of liability imposed on a wrongdoer is limited by a test of "remoteness" of damage, or by a test requiring the loss to have been *directly* caused by the harmful event. The mere fact that a causal link may be shown to exist between the wrongful act and the loss is not considered sufficient, for fear that this may open the floodgates to a vast range of unforeseen liabilities. Nor indeed is foreseeability necessarily considered an adequate test, since in some cases it is foreseeable that the defendants' activities may have remote consequences among an unreasonably wide range of potential claimants.

The question where the line should be drawn, between claims which are admissible and those which are too remote, has always been a fertile source of argument. In common law jurisdictions a distinction has been drawn between cases where financial loss is sustained as a result of physical loss or damage to property owned by the claimant, and those where the claimant suffers only "pure economic loss". See for example *Robins Dry Dock & Repair Co.* v. *Flint*

(1927),[8] where a shipyard negligently damaged the propeller of a ship during routine maintenance, and the US Supreme Court dismissed the time charterer's claim for loss of profits during the period of repairs; see also *The Mineral Transporter* (1985),[9] where the Privy Council (on appeal from the Supreme Court of New South Wales) held that a time charterer of a ship could not recover loss of profits from the owners of another vessel which collided with it. In an environmental context this principle has been applied in the UK in *Weller* v. *Foot and Mouth Disease Research Institute* (1966)[10] (dismissal of claim by cattle auctioneers for loss of profits following escape of virus from defendants' premises), and in the United States in the *Testbank* case (1985),[11] where a collision between two ships in the Mississippi River Gulf outlet caused a spill of hazardous chemical and led to closure of the outlet for nearly three weeks: claims for economic loss (other than those of fishermen) were dismissed in the absence of physical damage to any proprietary interest of the claimants. In recent years this traditional rule has been reaffirmed in the UK, on the grounds that though arbitrary it offers a clearer legal test: see *Murphy* v. *Brentwood District Council* (1990).[12]

This is an area in which many will feel that traditional jurisprudence is ill-suited to the particular problems of environmental claims. Fishermen who suffer lost earnings as a result of reduced catches of wild fish, and hoteliers who have suffered lost bookings, would normally fall foul of this traditional test of remoteness. In practice however these claims have very often been paid by the P & I Clubs, and by the IOPC Fund, despite the legal defences which might be argued.

It does nevertheless remain important to draw a line between claims which are reasonably proximate and those which are too remote. It cannot be right to compensate all claims, however remote or indirect, merely because they can be causally attributed to the incident. It is for example a controversial issue whether compensation should be paid not only to fishermen who lose earnings from reduced catches of wild fish, but also to seafood processing companies who purchase the fish from the fishermen: see for example *The Glacier Bay* (1990, US District Court for the District of Alaska), where claims of this type were upheld under the wide wording of the Trans-Alaska Pipeline Authorisation Act. It may be feared that if such claims were to be generally accepted, then this could all too readily lead to further extensions of the concept of "pollution damage", to include still remoter parties such as wholesalers who buy the processed food, and ultimately retail suppliers or restaurateurs. Similar extensions may also be anticipated in the tourist industry, in which claims have already been attempted

8. 275 US 303 (1927).
9. [1985] 2 All ER 935.
10. [1966] 1 QB 569.
11. 752 F.2d 1019 (1985).
12. [1990] 3 WLR 414.

for reduced earnings due to "loss of image" allegedly affecting an entire region, including areas which are geographically remote from the polluted location.

Against this background it is important to establish that where traditional tests of remoteness are abrogated by environmental legislation, this does not open the door to all claims for economic loss, and that it remains necessary to distinguish between losses which are reasonably proximate or direct results of an incident, and those which are not.

The IMO Protocols are an example of such legislation. The definition of "pollution damage" in CLC 1969 contains no guidance on the subject of economic loss, and no indication that national courts should not require physical damage to a proprietary interest owned by the claimant, if this would normally be required by their domestic laws. However the revised version in the Protocols provides that "pollution damage" means:

> "loss or damage caused outside the ship by contamination resulting from the escape or discharge of oil from the ship, wherever such escape or discharge may occur, *provided that compensation for impairment of the environment other than loss of profit from such impairment shall be limited to costs of reasonable measures of reinstatement actually undertaken or to be undertaken*" (emphasis added).

The words underlined make it clear that loss of profit may be recovered when it results from impairment of the environment, without physical damage necessarily being required to the claimant's property. They should not however be interpreted as meaning that *all* such claims are automatically recoverable, however remote they may be. In particular, no significance should be attached to the fact that the definition does not expressly require the loss to be a *direct result* of the impairment, this formula being dropped from the final text agreed at the IMO Diplomatic Conference in 1984: this was not because delegates wished to widen the definition, but because it was clear that these words would probably have a different significance in different legal systems. It was expected instead that national courts would develop their own criteria for placing reasonable limits on the scope of recoverable claims for economic loss.

Similar considerations apply to the IMO Draft HNS Convention. Loss or damage by contamination of the environment is embraced within the definition of "Damage" in Article I(6)(c) of the Draft. The relevant text is couched in terms almost identical to those quoted above from the Protocols. Different practical problems may result from contamination by substances other than oil, including for example hazards to health, and the possibility that an affected area may need to be evacuated. All manner of consequential losses may then be envisaged.

Similarly in the United States, the so-called "bright-line" rule exemplified by the *Robins Dry Dock* and *Testbank* cases will be inconsistent with statutory provisions which allow recovery of lost profits or earnings due to destruction or injury of natural resources, i.e. without any requirement of damage to the claimant's proprietary interests (see for example OPA s. 1002(b)(2)(E)). Ultimately however there will have to be some definable limit to such recoveries. As the US

MLA puts it in its Reply, "Our courts will have to define a new line of demarcation to determine what type of causation, foreseeability or connection is necessary for recovery under OPA. This will clearly be a major undertaking for our courts".

A similar challenge may be expected increasingly to confront courts all over the world, and especially those in common law jurisdictions. Possibly a lead may be found in the decisions of courts in countries which have shown a more liberal approach than courts in the US and UK: see for example the decision of the High Court of Australia in *Caltex Oil (Australia) Pty. Ltd.* v. *The Dredge "Willemstad"* (1976),[13] and the decision by the Supreme Court of Canada in *Norsk Pacific Steamship Co. Ltd.* v. *Canadian National Railway Co. (The Jervis Crown)* (1992), in which concepts of proximity are explored in preference to the exclusionary rule requiring accompanying physical damage. Unfortunately, however, the judgments in these cases reveal marked differences of approach, and it is not yet possible to identify any clear principle to be applied in an environmental context.

IV. CLAIMS FOR NON-PECUNIARY LOSSES

Even if a shipowner pays full compensation for the cost of clean-up and restoration after a spill, and for economic losses caused by the pollution, he still remains exposed in the United States to further categories of claim permitted by OPA. This authorises public trustees to bring claims for loss of or damage to natural resources, and for loss of use of natural resources, including the sometimes considerable cost of assessing the alleged loss or damage. These assessments are to be made in accordance with NRDA regulations to be laid down under OPA, following a pattern already developed in similar regulations promulgated under CERCLA.

These regulations will seek among other things to place a financial value on the claims of those who do not depend on the environment for their earnings, but who use it for other reasons such as leisure activities (e.g. sports fishermen and bird watchers). Whilst assessing loss of amenity is difficult enough in itself, particular controversy surrounds the fact that the regulations must extend this category of loss to include the so-called "non-user" values of "option", "existence" and "bequest": see *State of Ohio* v. *Department of Interior*, US Court of Appeals (1989).[14] "Option" value is defined as the dollar amount which would willingly be paid by people who are not currently using a resource, in order to preserve the option to use that resource in future; "existence" value is the amount people would pay just to know that the resource is there, and "bequest" value the amount they would pay to have it available for their children, after their death.

13. (1976) 136 CLR 529.
14. 880 F.2d 432 (DC Cir. 1989).

Supporters of this approach would doubtless argue that a loss may be real enough, even if it cannot readily be measured in financial terms. The courts have indeed found conventional ways of compensating other forms of non-pecuniary loss, such as loss of physical amenity due to personal injuries, and associated pain and suffering.

Others however would see a world of difference between the real sufferings of a physically injured plaintiff, and the relatively notional or ephemeral loss of non-user values. Moreover there are fears that the prescribed methodology can generate claims for astonishingly large figures, on top of the claims for provable loss or expense. It seems unlikely that these sums would be spent on actual clean-up and restoration of the environment affected by a spill, or in compensating claimants for any tangible loss, since these would be paid for in any event. Inevitably, sums paid under this head are likely to end up as a windfall to the public treasury, and indeed OPA provides for surplus recoveries to be transferred to the Oil Spill Liability Trust Fund. In these circumstances some would regard this category of loss as in truth more akin to a criminal fine, and as inappropriate for inclusion in a framework of civil compensation.

In contrast to the American approach the CLC Protocol provides that: "compensation for impairment of the environment . . . shall be limited to costs of reasonable measures of reinstatement actually undertaken or to be undertaken". Two points are made clear by this text. The first is to reinforce a Resolution adopted by the IOPC Fund at its Assembly in 1980: compensation depends on the cost of reasonable measures of reinstatement, and cannot be assessed "on the basis of an abstract quantification of damage calculated in accordance with theoretical models".

The second is that compensation is payable only for measures which are "*actually* undertaken or to be undertaken". Claims are not admissible for the estimated cost of reinstatement measures if in fact the claimant has no intention of carrying them out, and seeks only a financial windfall.

In its reply to the Questionnaire, the Italian MLA indicates that under present law the Italian courts would probably award the estimated cost of reinstatement measures, irrespective of whether the claimant actually intended to carry them out. An analogy is drawn in this context with cases where compensation has been awarded for unrepaired collision damage to ships. By contrast, the British MLA considers that this analogy would not be applied in the UK. There the estimated cost of ship repairs is relevant only as evidence of a reduction in the re-sale or market value of the vessel. Such a reduction must naturally be shown in order to prove both the fact and the extent of an actual loss to the plaintiff. The environment however has no market value, and if measures of reinstatement are not actually undertaken, their theoretical cost would not prove any actual loss to the claimant. Whichever view is preferred, the point would seem to be put beyond doubt by the Protocols, as and when they come into force.

What is less clear is the extent, if any, to which it will remain open to

contracting States to legislate for recovery of pollution claims outside the conventions. Where CLC applies, compensation thereunder is to be the sole and exclusive remedy for claims in respect of pollution damage caused by the incident. The Protocols reflect agreement among contracting States upon certain types of claim which in principle should or should not be admitted for pollution damage caused by persistent oil from ships. Where claims are excluded from the definition, difficulties may arise if this is interpreted as opening the door for alternative remedies under national laws outside CLC. It appears for example that under general environmental laws both France and Italy allow claims in some cases for non-pecuniary losses of a type which are not recognised in other contracting States, and which would not be admitted under the Protocols. If claims of this nature were to be admitted against shipowners for oil pollution in addition to claims under CLC, clearly this would seriously undermine the uniformity of laws which the Conventions were designed to achieve. The difficulties would be compounded by the fact that such claims would fall outside the shipowner's limit of liability under CLC, and would therefore impose an additional burden on top of his limitation fund. Moreover there must be some doubt how far, if at all, there would be any alternative right to limit this additional burden: the 1976 London Convention on the Limitation of Liability for Maritime Claims was not drawn up with this prospect in mind. It would of course be a curious irony if speculative claims for abstract losses—i.e. the very claims for which the international community has decided to exclude compensation by the terms of the Protocols—were to be admitted through the back door with more favourable treatment, outside any liability limits. It therefore needs to be established that CLC provides an exclusive remedy for *all* claims for oil pollution from ships, and the sole basis for determining the admissibility or otherwise of claims in contracting States.

CHAPTER 20

COLLOQUIUM ON ASSESSMENT OF ENVIRONMENTAL DAMAGE: SUMMARY OF THE DISCUSSION

NORBERT TROTZ*

The discussion at the Colloquium took place on the basis of a "Discussion Paper" prepared by Colin de la Rue (page 249, above). Two issues were mainly discussed, "economic loss' and "natural resource damage assessment, in particular non-pecuniary loss".

It was noted that liability in tort for economic loss had for many years been guided in common law jurisdictions by a rule which compensates financial loss sustained in consequence of physical damage to the plaintiff's property, but disallows "pure economic loss" sustained in the absence of such damage. The question was considered how far this so-called "bright line" rule had been abrogated by the 1984 Protocols and by US legislation. In relation to the Protocols it was questioned whether the revised definition of "pollution damage" did in fact allow recovery of pure economic loss, or whether compensation for lost profits was payable only to claimants with a proprietary interest in the polluted environment. It was generally agreed that the revised definition was not a model for clarity but that claims for pure loss of profits were intended to be recoverable. It was observed that questions of economic loss had not hitherto posed serious problems for the IOPC Fund, but concern was expressed that the issue could be problematic in future. Speakers from the United States also confirmed that the Oil Pollution Act 1990 had in their view abrogated the "bright line" rule in relation to claims resulting from oil pollution damage, thereby creating a vacuum in which a new test would need to be found to define the allowable scope of recovery. It was generally agreed that the search for a new test would be a significant challenge for national courts both in the United States and, in due course, elsewhere around the world.

On the subject of a possible new test for recovery, speakers from the US pointed out that OPA 90 had not abrogated the usual requirement that the loss should be proximately caused by the incident, and it was noted that "proximity" had in recent years found favour in other common law countries. Speakers from countries with a civil law tradition confirmed that in some states, at least, the relevant requirement was that the incident should be the direct and immediate cause of the loss. It was suggested that the 1984 Protocols were not

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necessarily the last word on the subject, and that their text could be improved by introducing a requirement of directness. There were however one or two speakers who expressed concern that any universal test of this nature might be more restrictive than certain national laws, and thus prove unacceptable in the countries concerned. Areas of disagreement centred, however, to a large extent on matters of jurisprudential theory.

The discussion of non-pecuniary losses echoed the controversy surrounding the allowance of such claims by OPA, and the development of Natural Resource Damage Assessment regulations currently in preparation. The proposition that some form of compensation should be paid for such damage did have some supporters at the Colloquium. A comparison was made with the law of salvage, in which an enhanced award may be payable to salvors whose efforts succeed not only in saving property, but also in averting damage to the environment. It was observed that in support of such claims, salvors were increasingly presenting evidence designed to place a financial value on the environmental damage avoided by their endeavours. Some speakers found it illogical that such an award could be made where the damage is avoided, but that where the damage is in fact sustained no similar evaluation could be made of any damages payable for polluting the environment.

Most participants however expressed concern that there were serious problems inherent in any system for paying claims of this sort. It was suggested that such a system did not focus sufficiently on the actual loss sustained by any party with standing to put forward a claim, with the result that damages acquired a more punitive and less compensatory characer. Concerns were also expressed that such claims were readily inflated by intractable issues of quantification, particularly in relation to so-called "non-use" values, and their assessment after an incident by contingent valuation methodology. When the available compensation would always be subject to finite limits, the prospect existed that the acceptance of such claims would unreasonably reduce the compensation available to other parties suffering more tangible losses. Accordingly, most participants were of the view that claims of this type could not be reconciled with a viable international system for compensating pollution damage.

CHAPTER 21

CONCLUDING STATEMENT

NORBERT TROTZ

Whilst the seminar put the liability issue in a broader context in discussing the different sources and types of pollution in conjunction with compensation for pollution damage, the discussion at the Colloquium concentrated on the assessment of pollution damage in cases where civil liability exists.

Assessment of pollution damage has different aspects. It may be considered, on the one hand, as a key issue of environmental policy in general because it is a measure of the extent to which the polluted environment should be restored in terms of environmental policy goals. On the other hand, it is the way to determine to what extent damage can be compensated under civil liability, taking into account the principles and rules prevailing within any civil liability system. Civil liability, in addition, requires insurance cover for individuals potentially liable. It is obvious that tensions exist between the public goals of environmental policy, and the rules of civil liability which require the availability of insurance cover. These "tensions" have been reflected in the debate of the discussion paper on assessment of pollution damage.[1] The question of the "non-user value" of the environment may serve as an example.

Furthermore, the application of well established rules and principles of civil liability becomes more and more critical in the light of the new dimension of damage and its consequences to persons who suffer damage. It is especially the problem of economic loss, which is not the consequence of physical damage but the result of loss of use of the environment (fishermen), that has caused difficulties for the application of liability rules. It appears that the problem of attribution of this type of damage to an individual act or incident which causes the damage exists in all national legislations under common law and civil law. However, the national liability systems provide for different methods or even different solutions due to their legal principles or traditions which prevail. This was clearly demonstrated in the discussion of the paper on damage assessment.

Liability rules on oil pollution damage are internationally unified by the Civil Liability Convention, 1969. The problem of different political goals in respect of restoration of the environment and their influence on national regulations as well as the different legal views on new issues (like "pure economic loss") should be regarded as an alarming sign for the stability and further development

1. Chapter 19, above.

of unification. Even the new definition of pollution damage in the 1984 Protocol to the Civil Liability Convention does not solve these problems. It would be even more correct to say that a general definition can only reflect principles and is, therefore, not the proper means to deal with detailed questions of damage assessment which may newly arise every day.

The CMI has set up a subcommittee on environmental damage assessment. A working group of this subcommittee had prepared the discussion paper which was discussed at the Colloquium. The discussion and the conclusions have shown that environmental damage assessment is a subject that not only plays a major role for the unification of civil liability but which, at the same time, puts unification at risk due to the gaps in the present damage definition of unified law and the influence of national environmental policy and national legal views and jurisprudence.

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