CHAPTER IV

ABUSE OF WORLD OCEAN ENVIRONMENT BY

FLAGS OF CONVENIENCE

Man has, for centuries, considered the world ocean as a bottomless sink, an inexhaustible mass of water churned by the winds, rocked by the moon, into which all his wastes could be channelled and cleansed. In fact, till this century, except for the public disgust with sea-side stench, the mal-treatment of the world ocean could hardly be noticed. Knowledge was limited about ocean depths and very little information was available about the oceanic currents that provide the complex circulatory system transporting millions of tons of water every day across the world ocean, rising and falling according to density, and carrying all kinds of particles from one sea to another.

Pollution of the sea may be caused by the discharge of oil, biological and vegetable refuse, and chemical and radio-active wastes. Indeed, the very definition of marine pollution may be open to challenge. In 1969, a group of scientists formulated a definition that, in one wording or another, has been introduced into a number of declarations, national laws and treaties: namely, 'the introduction by man into the marine environment (including the estuaries), directly or indirectly, of substances or energy, which bring about deleterious effects, such as damage to the biological resources, hazards to the human health, a lessening of the quality of the sea water for use, and a reduction of the
possibilities offered for its enjoyment'. The emphasis of publicists concerned about marine pollution thus rests upon the activities of man not nature.

Pollutants from the daily life of man reach the ocean in a variety of ways:

a) by the discharge of human, agricultural, and industrial wastes into streams and rivers whose waters flow into estuaries and the world ocean;
b) by the absorption by the sea of toxic substances like pesticides or chlorinated hydrocarbons or other poisonous gases discharged into the atmosphere from industrial units and blown into the sea across the land;
c) by the deliberate dumping of materials like dredged sediments in rivers, bays and offshore channels which may contain toxic substances, which may in turn seep into the seas; and
d) by leakages and spills in offshore oil prospecting units.

1. This definition was agreed upon in 1970 by the United Nations Group of Experts on the Scientific Aspects of Marine Pollution (GESAMP), a body of experts drawn from a number of U.N. Agencies. It became the generally accepted definition of marine pollution during the preparation for the 1972 U.N. Conference on the Human Environment held at Stockholm. U.N. doc/CONF.48/8, pp 78-79.

The greatest immediate danger arises at present from the discharge of oil, persistent or non-persistent, because of the amounts involved. Non-persistent oils are highly volatile and evaporate quickly leaving little or no residue, and are not generally regarded as a serious problem although scientific studies on the properties of oil are not yet conclusive as to their effects. The principal danger is however posed by persistent oils, which include crude oil and diesel and lubricating oils which spread quickly across the surface in a thin film as the volatile elements evaporate, leaving an emulsion which does not readily disperse. Oil pollution can result from accidental spillage, but the greater quantity of it is the produce of deballasting and cleaning of tanks. A 50,000 ton tanker may discharge 1,200 barrels of oil during cleaning, in the form of emulsified sea water.

The dangers to marine life from oil pollution are of paramount significance, secondary losses may ensue to tourist facilities and the cost of cleansing, and the further hazard of fire risk. Accordingly, the need has been recognised of international mechanisms for controlling deliberate discharge of oil, and minimising the effects of, and allocating liability for, accidental discharge, either from ships, or offshore wells.

The negotiations to control marine pollutant have involved numerous actors over many years, but the focus of debate has been in one international organisation, the Intergovernmental Maritime Consultative Organisation (IMCO). The IMCO owes its origin to Allied efforts during the war to establish an authority to co-ordinate all aspects of their shipping, and this took the form, first, of the combined Shipping Adjustment Board and then, in 1944, of the United Maritime Authority. The United Maritime Authority met for the last time in February 1948 and was succeeded by the United Maritime Consultative Council (UMCC), a temporary body set up to deal with the problems that arose in re-establishing normal peacetime activities.

At this time, the desirability of a permanent intergovernmental organisation in the shipping field became apparent, and the member-states of the UMCC recommended convening an international conference to set up such an organisation and after some deliberation, the IMCO, a permanent specialised body within the UN system was created in 1948. The IMCO, however, came into being a decade later in 1958, after the requisite twenty-one nations had ratified the convention.

1. Since 1982 IMCO has been rechristened as International Maritime Organisation (IMO). However, for the sake of continuity, the term IMCO is used in this chapter.
The creation and operation of IMCO has opened an entirely new chapter in the legal regulation of the world merchant marine. The Organisation has engaged in studies through its committees and secretariat, on problems of merchant shipping, which have led to international conferences, the preparation of codes, and multilateral conventions. It has also been given administrative responsibilities for the implementation and supervision of certain conventions besides being endowed with advisory and consultative powers.

The major organs of the IMCO created by the convention are:

i) an Assembly of all members, which has increased to more than 100 in the late 1970s.

This is the supreme governing body of IMCO and consists of all member governments and meets once every two years, although it can be called into 'extraordinary session' by at least one third of its members or by the Council. It deals with both substantive as well as organisational matters, passes resolutions forwarded to member government as 'IMCO recommendations'. A simple majority is required to pass these resolutions. Although the Assembly's recommendations are non-binding, they are often incorporated into national legislations or international conventions at a later date. The Assembly's organisational responsibilities include electing the Council, establishing subsidiary bodies, approving the appointment of the Secretary-General, and determining
ii) a Council, originally sixteen members, now twenty-four divided between those states providing the largest shipping services and those interested in sea-borne trade.

This is the IMCO's governing body between meetings of the assembly and meets generally twice a year but can also be called into 'extraordinary session' as it was following the 1967 Torrey Canyon disaster. It receives and comments on the reports of the Maritime Safety Committee (MSC), Marine Environment Protection Committee (MEPC), Legal Committee and Technical Cooperation Committee for transmission to the Assembly.

It reviews reports of its committees, proposes substantive recommendations and the organisation's budget to the Assembly and administers IMCO personnel, including appointment of the Secretary-General with the Assembly's approval. The Council is the IMCO's central policy organ and representatives to its meetings are drawn from national foreign ministries and from among high officials of transportation departments.

iii) a Maritime Safety Committee (MSC) which until 1978 consisted of fourteen to sixteen states, of whom
eight were to be the largest shipowning countries. It is now open to all members (Article 28). It normally meets twice a year, delegates to it are usually technical experts from national transport ministries. This is the main technical organ of the agency, and its work covers various fields such as aids to navigation, construction and equipment of ships and off-shore drilling units, rules for preventing collisions at sea, dangerous cargoes in packages and bulk, fire protection, maritime safety procedures and requirements, marine casualty studies, search and rescue, and any other matters connected with IMCO\(^1\). Its more detailed work is carried out through numerous sub-committees.

iv) The Legal Committee set up in May 1967 to examine possible changes in maritime law after the Torrey Canyon disaster. The committee has considered the legal aspects of issues such as liability and compensation for pollution, damage from oil and other substances; wreck removal and salvage, ships in foreign ports, passengers and baggage, and the enforcement of IMCO conventions.

v) The Marine Environmental Protection Committee (MEPC) was created by the Assembly of November 1973. The MEPC is concerned with the environmental aspects of shipping and with all facts of the implementation of the 1973 Convention for the Prevention of Pollution from Ships. The MEPC can act in a 'quasi-legislative' capacity with respect to the amendment of the 1973 Convention. Finally,

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the MEPC coordinates the pollution-control activities of IMCO with other organs and acts as a clearing house for information sent to it by governments and other international organisations.

vi) the Technical Cooperation Committee (TCC) is the final standing IMCO body concerned with pollution control. Originally created by the Council in 1969 to respond to the growing desire of the developing countries for technical assistance for their nascent shipping industries, it was made in 1977 the 'principal organ' reporting to the Assembly through the Council.

The ultimate IMCO deliberative 'organ' is the IMCO-sponsored conference called to conclude a treaty or revise an existing one. This conference, convened by the Secretary-General, is the basis of IMCO's law-creating process. IMCO members and members of other UN agencies are invited to an IMCO conference, where the approval of two thirds of the participants is required for each of the proposed articles of a draft convention. The final product of the conference becomes international law only when an agreed number and/or group of states ratify the conventions to deal with the problem of marine pollution and assign liabilities for the same. Two such important Conventions have been:

a) Prevention of Marine Pollution by Dumping of Wastes and Other Matter (1972),
Following the Stockholm conference on the Human Environment held in June 1972, an Intergovernmental Working Group on Marine Pollution was set up and its draft Articles were the subject of a Conference in London in 1972 which adopted the Convention on the Prevention of Marine Pollution by dumping of Wastes and Other Matter. Since the object of the Convention was to control the deliberate disposal at sea of industrial wastes, a careful definition of dumping was required. This definition was adopted from the European Convention adopted earlier that year at Oslo. Dumping was roughly defined as any deliberate disposal which is not incidental to normal operations and excludes the case of matter placed in the sea for a purpose other than disposal or disposal arising from offshore mineral exploitation. Dumping, therefore, includes both deliberate disposal and discharge of waste. There is no qualification that a vessel must be loaded with waste when disposed of, so that mere scuttling on its face is dumping.

This Convention prohibited the dumping of certain toxic substances like mercury, cadmium or DDT into the sea. The dumping of certain somewhat less toxic substances like lead, zinc, copper, cobalt, silver, cyanides or fluorides was permitted, but only with the specific authorisation of the appropriate government.
The draftmanship on the measures to be taken to control the States is quite curious. Article 4 prohibits the dumping of any wastes, and then proceeds to list out three 'exceptions' none of which is logically a true exception. The first exception repeats the prohibition but restricts its application to wastes listed in Annex I; the second states that a prior special permit is needed for the wastes listed in Annex II; and the third states that dumping of all other wastes requires a prior general permit issued in accordance with the factors listed in Annex II relating to characteristic and composition of the matter and of the dumping site and method of dumping. Emergency situations are exempted but emergency dumping must be conducted so as to minimise the likelihood of damage to human or marine life.

In short, the Articles of this Convention emphasise upon the obligation of States to control dumping and these controls are strictly territorial in their jurisdictional nature. The London Conference was also split on the question of the rights of States to enforce these controls against foreign ships. In brief, it was thought by some delegates that this Convention involved a commitment to agree upon a pollution zone beyond the territorial sea.


This Convention, better known as MARPOL 1973,

It made obligatory on new tankers over 70,000 deadweight tons (d.w.t.) to have segregated ballast tankers so that oil and water will never be mixed in such vessels. No provision was, unfortunately, made for retrofitting existing tankers with a result that only as new tankers replaced old ones, would the provisions of the Convention have any effect. In addition, non tankers over 4,000 tons were prohibited from using their fuel tanks for ballast water.

The maximum discharge of oil by the new tankers into the sea was reduced from 1/15,000 to 1/30,000 of the cargo, and for non-tankers a stipulation that they discharge as far from land as practicable was made. The most important addition to the discharge regulation was a provision allowing for the creation of 'special areas' where no discharges would be permitted except for 'clean ballast', that is, a ballast with an oil/water mixture of less than fifteen parts per million. Some such areas were the Mediterranean, the Black Sea, the Baltic Sea, the Red Sea, and the Persian (Arabian) Gulf. However, this restriction would have little impact on the conduct of ships in such areas unless the littoral States provided reception facilities for the oily waste residues of the tankers.
Excepting naval vessels, this Convention applies to all flag ships. The flag State has primary jurisdiction in the case of ships, and the coastal State in the case of fixed installations. A coastal State would have concurrent jurisdiction in respect of any foreign ship which violated the Convention within that State's territorial jurisdiction. Any violation of the Convention is to be made the subject of proceedings in accordance with the law of the State having jurisdiction, or that State is to furnish to the flag State evidence to enable a prosecution to be taken.

The main problem concerned with the punishment of pollution at sea is proof of the offence. Although the Convention made it obligatory for States to co-operate in the detection of violations, using all measures of monitoring like inspection of ships in port, the furnishing of evidence that a ship has discharged substances in a particular place at a particular time remains quite difficult. And this is primarily where the weakness of this Convention lies.

The recommendations of the IMCO as approved by the Conference provided a whole series of regulations which were extended to offshore platforms, as well as ships, and were intended to cover refined as well as crude oils. This Convention was therefore, adopted as a means of checking the marine pollution by ships by providing stricter measures, at least on paper, to check the violations and even
strict terms for penalising such violations.

With the above as a background, a brief sketch is given of the twentieth-century Merchant Marine.

After the uses of petroleum was discovered as a suitable substitute for running industries, coal and steam engines gave way to petrol or diesel ones. Ships, in particular, switched over to diesel engines, and the transportation of oil in bulk across seas was suddenly discovered as a very profitable business for shipping companies. Along-with the change of engines in ships, the size of the ships started increasing. Most of the tankers by 1979 (about 60 per cent of all the world tanker tonnage) were over 200,000 deadweight tons, and five monstrous tankers, over 1,333 feet long, were in service. Each of these tankers were capable of carrying more than one-half million tons of oil in a single voyage.

The main characteristics of the world merchant marine have been the following:-

a) the specialisation of cargo ships, such as tankers and containers;

b) the decline of passenger vessels;

c) the very large growth of tonnage with a modest rise in the number of ships; and
d) the concentration of world commerce by sea under a half-dozen flags, some of which are not maritime powers.

The last characteristic is a phenomenon of the last twenty years resulting in the re-alignment of tonnages under foreign flags. In 1978, eleven flags controlled about seventy-five per cent of all ocean tonnage. Ships registered under United Kingdom and United States dropped sharply, the Soviet Union created for the first time in its history a great merchant fleet; and a few small States have registered large tonnages generally owned by American corporations. Fewer than 1,400 ships carried the United Kingdom flag in 1978, while former colonies Singapore and Cyprus together had about a thousand ships flying their own flags. The United States reduced its flag-carrying, private merchant fleet to only 571 vessels, far below Norway with 978, Japan with 1,846, Greece with 2,379 and the Soviet Union with 2,456. Panama and Liberia reflecting the large number of American-owned vessels, together had 4,668 ships under their barrels at the beginning of 1978. With respect to tonnage, Liberia led the world by far with twice the tonnage of Japan, two and a half times that of United Kingdom and almost three times of Norway or Greece, the States with the greatest deadweight tonnage after Liberia.

Needless to mention here, the phenomenon of re-alignment of tonnage under foreign flags most of whom are
not even maritime powers have arisen because of the lure of flags of convenience. There can be no plausible explanation as to why, say, an American corporation would choose to register its fleet under the flags of say Liberia or Panama.

Study of the accidental pollution of the sea by the tankers under such 're-aligned scheme' would show that most of these ships involved were in fact flying such flags.

Accidental discharges from tankers are of two types: a) the 'terminal spill' which occurs during the loading and unloading of a tanker. Such spills, however, constitute only a very small percentage of the total pollution picture; and b) most important, the tanker accidents at sea.

Although both of these account for only 9.4 per cent of all ship-generated oil discharges and 3.3 per cent of all discharges, these accidents often have dramatic and devastating consequences and they are certainly spectacular 'media events'. The image of a Torrey Canyon splitting apart under pounding seas off the southern coast of England, or the stranding on the rocks of Breton and the spilling of the oil of Amoco Cadiz, or of an Agro Merchant breaking up off the north-eastern coast of the United States is not soon forgotten. To the experts these are part of the problem; to the public, they are oil pollution and should not happen.
About seventy-five per cent of the oil lost by accidents is discharged as a result of structural failures linked to the age of the vessels, groundings and collisions caused largely by navigational errors. Interestingly, thirty per cent of all collisions occur in the very congested English Channel and another forty per cent in the North Sea, Baltic Sea, and other waters surrounding Western Europe.

Smaller and older vessels registered in the flag of convenience States have by far the worst accident record. The higher rate of accidents for flag of convenience vessels is a result of numerous factors including their greater average age and generally lower standards. Although the records of some of these convenience States have improved in recent years, comparable ships registered in the developed maritime States do have significantly better records. Attempt to control accidental pollution therefore cover a wide range of problems, with special attention to be paid to flag of convenience and to substandard vessels.

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1. Data on accident and loss records by flag are provided in an OECD study (Maritime Transport 1974, pp 88-103) which covers the years 1964-1973 and a British study submitted to IMCO in 1977 (MSC/ME PC/9, pp 8-9) which covers the years 1968-1975. The OECD study includes seven flag of convenience States - Liberia, Panama, Cyprus, Somalia, Singapore, Lebanon and Honduras - as well as OECD, East Europe, and 'Rest of the World' categories. The records of the flag of convenience States did show some improvement over the ten years. Also, the records of Liberia, Singapore, and Honduras are considerably better than those of the other four.
The beginning of the story of marine pollution by ships flying flags of convenience is the wreck of Torrey Canyon, a 'jumboised' 119,000 ton Liberian tanker, lengthened to keep pace with the ever-rising demands for imported crude oil. It was an 'ideal' flag of convenience ship: it flew the Liberian flag, was built in Japan, registered by a company in the Bahamas, had an Italian master and crew and was on a single charter to British Petroleum from the Gulf to Milford Haven. On March 18, 1967, it ran aground on the Seven Stones Reef off the coast of Cornwall off Land's End, England, spilling over 100,000 tons of Kuwaiti oil into the sea. The accident was a product of extreme human negligence, causing widespread damage to the British and French coasts, killing a large number of fish, birds and other forms of marine life. Contamination of the sea continued day after day despite attempts to limit, burn or neutralise the oil outflow. At the time, it was the most spectacular case of oil pollution resulting from a shipping accident. After waiting for several days, the British Royal Air Force bombed the stricken ship in an attempt to burn off some of the oil left in the tanker. The total quantifiable costs was put at £14.24 million although it proved impossible to attribute monetary valuations to the ecological

1. See the report of the Liberian Commission of enquiry, C/ES.III/3/Add.6.
2. The Torrey Canyon spill killed between 40,000 and 100,000 waterfowlis (Nelson-Smith, Oil Pollution, p.161), besides adversely affecting tourism along the British South coast.
3. Numerous accounts of the incident have been written but for a dramatic and detailed exposition, see E. Cowan 'Oil and Water: The Torrey Canyon Disaster' (New York: Lippincott, 1968)
Excluding the ship and the cargo losses, the prevention and control costs alone were estimated at about £7.70 million (§ 18 million) and this substantially exceeded the value of the ship and cargo. These costs are listed in the following table:

Cost Estimates for the TORREY CANYON Spill¹.

<table>
<thead>
<tr>
<th>International cost (to shipowner)</th>
<th>£ million</th>
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<tbody>
<tr>
<td>a) hull of Torrey Canyon</td>
<td>5.90</td>
</tr>
<tr>
<td>b) cargo</td>
<td>0.60</td>
</tr>
<tr>
<td>c) salvage operations</td>
<td>0.04</td>
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</tbody>
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<table>
<thead>
<tr>
<th>External cost of prevention and control (UK)</th>
<th></th>
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<tbody>
<tr>
<td>a) cost of avoiding coastal pollution</td>
<td>2.20</td>
</tr>
<tr>
<td>b) cost of cleanup</td>
<td>2.70</td>
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<table>
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<tr>
<th>External cost of control (France and Guernsey)</th>
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<tr>
<td>a) Minimum estimate based on compensation claims</td>
<td>3.00</td>
</tr>
<tr>
<td>b) external cost of damage, extensive but unquantifiable</td>
<td>3.00</td>
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| Total quantifiable cost:                    | 14.24 million |

The agreed compensation for both the United Kingdom and France was slightly over $7 million — far below the total costs and damage incurred by these States.

Former IMCO Secretary-General, Sir Colin Goad observed in an interview that the Torrey Canyon disaster and the resulting increase in the organisation's involvement in the marine pollution areas was a 'godsend' for IMCO. During the mid-1960s there had been considerable concern on the part of a number of its members and national representatives that IMCO might not be able to survive as a specialised agency within the U.N. system given the narrow scope of its activities. With the Torrey Canyon disaster all this changed. In 1969, IMCO sponsored a Conference on Coastal State Intervention and Compensation in Oil Pollution Incidents; it organised the major Conference on Marine Pollution in 1973 and further capped its achievements with the Tanker Safety and Pollution Prevention Conference in 1978.

The next incident of such pollution of the sea involved the collision of two (Liberian) flag of convenience tankers in October 1970. The 46,000 ton tanker Pacific Glory collided with another tanker, Allegro in the English Channel spilling out their combined grimy guts upon the seas, polluting not only the sea but also the coastal zone rich in marine life and human activity. Only later in the course of investigation into the accident when it was found that the qualification...
of officers aboard both the ships were wholly inadequate that the need was found to tighten standards of officers and crew aboard all such ships. With this collision, a storm of protest blew against flag of convenience shipping in general and the Liberian shipping in particular. This accident did provide a desired result of a sort initiating a change in Liberian maritime policy with Liberia deciding to try to become a refuge only for well-run vessels. In the word of Liberia's IMCO legal representative, Frank Wiswall (an American), Liberia promised to become a 'blue-chip flag of convenience'. This accident also helped initiate the move to upgrade crew standards world-wide.

Incidents of oil pollution reached the New World in December 1976, visiting its shores dramatically when the tanker Agro Merchant vomited its contents there. By comparable figures, the Agro Merchant was a small tanker. She was carrying about 27,000 tons of crude, when on 15 December 1976, she grounded in New England off Massachusetts spilling out her entire contents into the sea. The sea was polluted and the threat of pollution was carried over to the popular resort areas of New England and the rich Georgia Bank fishing grounds. The slick emanating from the ship stretched more than 100 miles. This accident, signalling a spate of such accidents occurring adjacent to American coast in late 1976 and early 1977, led to a renewed offensive for higher environmental standards resulting ultimately in what was
called 'the Carter Initiatives' announced by President Carter on March 17, 1977. The President promised measured to prevent further accidents, and operational pollution and general cooperation with the international community against pollution. Charterers, who did not even make the hiring of tankers contingent on their previous pollution prevention and safety records, had began to inquire about the safety, pollution-prevention standards, and history of a vessel and to make chartering arrangements contingent on such information. It is still too early to judge the extent and efficacy of this program. Its voluntary nature does, however, limit its likely impact.

The worst pollution disaster in recorded history is the stranding of the Liberian Tanker Amoco Cadiz, a Very Light Crude Carrier (VLCC) of 228,513 tons deadweight (119,000 tons gross registered tons), owned by the Amoco Transport Company of USA, registered in Liberia, and carrying an Italian crew. The vessel was on a charter to an affiliate of Royal Dutch Shell for a voyage from the Arabian Gulf to Rotterdam, via Lyme Bay in the UK, where she was to off-load most of her cargo. She was carrying 120,000 tons of light Iranian


2. Regarding the new policies of some major oil companies see Trevor Lones, 'Getting Oil Off Troubled Waters,' Seatrade, July 1977, p.135; and World Shipping Journal, March 15, 1977, p.38.
crude, 100,000 tons of light Arabian crude and several tons of her own fuel oil.

On 16 March 1978, her steering failed off the island of Ushant and she was carried by the current towards the north-west coast of Brittany. After a delayed and ultimately unsuccessful attempt to tow the vessel to sea, she stranded on the rocks off the Breton village of Portsall and nearly all the oil she was carrying entered the sea, polluting over 100 miles of the French coastline from Paimpol to Brest.

This colossal disaster affected many States, firstly, both the exporting and importing countries directly e.g. those countries for whom the crude oil, once refined, was intended; secondly the U.S., as the country where the cargo owner was resident; thirdly, Liberia, as the flag State. However, France suffered direct physical and economic damage. Her beaches were polluted, seriously affecting the tourist industry which provided a substantial income. The oil damaged or destroyed marine and bird life and local fishing activities, particularly oyster and lobster farming. She had to bear the initial cost of the extensive clean-up operation, which involved 3,000 French troops and many civilians, and French vessels were deployed to spray the sea with detergents to neutralise the effect of oil over a considerable period. She also provided an initial compensation fund of just over 1 million U.S. dollars.
Immediately affected were the fishermen, hoteliers and residents of Brittany. Less immediately affected must be the consumers of petroleum products, for the loss of 230,000 tons of oil diminished the overall supply and must lead to higher prices, however negligible those increases might be on the price of a gallon of petrol. The crew of the vessel were put at risk and, while no lives were lost, some careers may have been irreparably damaged. The masters of *Amoco Cadiz* and the tug *Pacific* were arrested and charged with polluting the seas and the French Government blames the master of *Amoco Cadiz* for the incident.

The shipowner, Amoco, must have incurred considerable expenses in the stranding, in the subsequent clean-up operation and in the payment of compensation to the victim of the pollution given the justified demand of the affected to be compensated at a high level and the emphasis in the international conventions and the corresponding municipal legislation on the 'polluter pays' principle. Some of these costs were covered by insurance or by voluntary schemes within the oil and shipping industries, but in this case the available insurance was only about 50 million U.S. dollars, voluntary schemes added another 36 million U.S. dollars, or so, leaving behind an enormous deficit. The estimates of the total costs have not been computed fully but by September 1978, the French Government raised an action in New York claiming a total of 1,350 million U.S. dollars ($300,
million for the Government, $300 million for local authorities, and $750 million for fishermen, hoteliers, traders etc.). It is possible that the total costs may subsequently amount to over 1,700 million U.S. dollars.

Long before the IMCO tackled the problem of eliminating the, or minimising the human frailties on board ship that lead to accidents, the International Labour Organisation (ILO) had been tackling this problem through its Joint Maritime Commission, consisting of equal numbers of seafarers and shipowners, adopting a series of Conventions and Recommendations which now compose the International Seafarers' Code setting standards for almost all aspects of conditions of life and work at sea. The ILO has particularly concerned itself since 1933 with eliminating substandard ships and use of flags of convenience. Few of these Conventions actually enter into force, for they are subject to ratification often on a variety of conditions, as are IMCO ones. Among the Conventions, the 1976 Convention on Minimum Standards, though not yet in force, is most relevant to prevention of casualties. It was adopted following an ILO Report on 'Substandard Vessels, Particularly Those Registered under Flags of Convenience'. This Convention applies to all cargo and other commercial ships, and to sea-going passenger ships, and has no conditions for entry into force. It prescribes various safety standards including crew competency, hours of work, manning and safety of life on board, which ratifying
States undertake to enact into their national laws, effecting those standards on their flag ships. This, along with the limited form of port State jurisdiction giving the port State power to report the entry of ships to their flag States, makes this Convention clearly innovatory in eliminating substandard vessels from a State's waters.

It has been observed\(^1\) that to catalyse political action, IMCO has been extremely dependent on catastrophe. It was only with the disastrous Torrey Canyon accident that the oil pollution problem ceased being just a minor localised issue or a remote statistical trend and became instead a tangible political reality. Only then did IMCO begin hard negotiations on accidental and, interestingly, on operational pollution as well. However, IMCO is not to be blamed for this. The organisation is dependant on its members to initiate action, and not all catastrophes produce results, but only those off the coasts of developed, politically responsive countries with active roles in the agency such as the U.S. or the U.K. Many large spills have had minimal impact on IMCO's activities\(^2\). Moreover, while the catastrophe does have a general mobilising effect on States' treatment of pollution, it is often unrelated to the most serious pollution


2. Huge spills off Chile (Motula) and Spain (Urquiola) have had almost no noticeable effect in IMCO in comparison with spills that mobilised 'initiating' actors such as the United Kingdom and the United States in some of the incidents discussed in this chapter.
Lastly, projections of oil supply and demand indicate that the problem of oil pollution will be with us well into the twenty-first century. In addition, as today's super-tankers begin to age and traffic rises with increasing demand, the potential for pollution will rise. Tanker catastrophes, such as that of the Amoco Cadiz, are a statistical certainty, and they will continue to be the single most important spur to legislative action. Inadequacies in the regulatory system for operational discharges will also become evident, as they have in the past, and this will provide the impetus for ongoing reform. Finally, as more becomes known about the effects of oil in the oceans, it is probable that the problem will be viewed with increasing seriousness, for while pouring oil on to water used to be an acceptable method of preventing trouble, nowadays it has become a source of international friction.