

Paper presented by Dr. Karen Purnell, Managing Director, ITOPF on:

Oil Spill Preparedness and Response : Expectations & Realities

Introduction

For the first time since ITOPF began collating tanker spill statistics, no major oil spills were recorded from tankers in 2009. Defined as 700 tonnes or greater (> 5,000 bbls), the number of major spills from tankers has consistently been reducing over recent years such that the average number of major spills for the decade (2000-2009) is only three. This is less than half of the average for the 1990s and just an eighth of the average for the 1970s. The same is true for medium sized spills from tankers (7-700 tonnes, or 50 – 5,000 bbls) where the average number of spills occurring in the last decade was fourteen, half of that experienced during the previous decade. Consistent with the reduction in the number of oil spills from tankers, the volume of oil spilt also shows a marked reduction. In some cases, the total quantity of oil spilt in the last decade was less than had been spilt previously in a single year. Last year the volume of oil spilt, at 100 tonnes, was the lowest in ITOPF’s history of collating statistics on tanker spills. This reduction can largely be attributed to the combined efforts of the oil and shipping industries and governments to improve safety and pollution prevention.

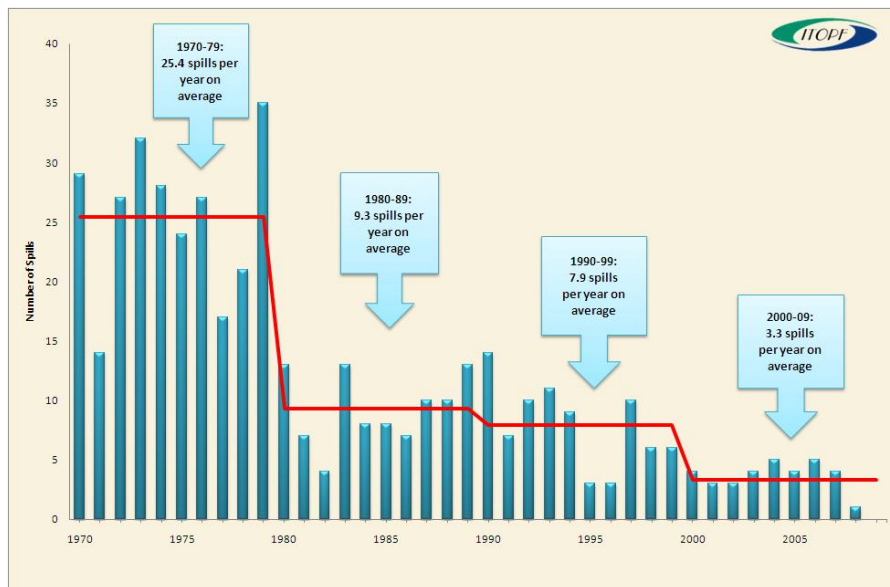


Figure 1: The Number of Major Oil Spills (>700tonnes) from Tankers from 1970 - 2009

Nevertheless, these reductions should not suggest that there is reason to view the ‘job as done’ and to become complacent when considering the preparedness and response to oil spills. There exists

considerable annual variation in the incidence of oil spills and the amounts of oil lost and a single major incident can severely distort the statistics for a particular year. Indeed, already the recent collision between a tanker and a vessel towing barges in Texas, USA, means that the record for 2009 will not be maintained; such is the unpredictable nature of accidents.

Against a background of reducing oil spills from tankers, maintaining oil spill preparedness and response is a challenge. Historically, effort expended on preparedness and training has tended to fluctuate in response to actual incidents, with a flurry of activity typically taking place after an incident. A more sustainable level of preparedness is more likely to be maintained by realistically assessing the risks and then focussing on issues where problems have typically occurred. This is especially the case when one realises that the oil spills that are occurring most often around the world arise from incidents involving non-tankers and involve persistent fuel oils. This paper highlights the evolution of expectations and realities in preparedness and response over time.

The origin of ITOPF

In the 1960s, it was the shipyards in Japan that took advantage of advances in engine design and improved steel quality to build tankers of record-breaking size. In 1966, the record for the largest tanker built went to the '*IDEMITSU MARU*', which was built at Yokohama and had a dwt of 206,000, and so began the era of the Very Large Crude Carrier, the VLCC. It was then only a matter of time before one of the new breed of supertankers would unleash pollution on a scale not previously seen from a ship, and so stimulate international demand for comprehensive changes in the law to address compensation for pollution damage.¹

When the tanker, the *TORREY CANYON*, ran aground off the south-west coast of the UK in 1967, there was no system of strict liability for damage caused by oil pollution in existence and claimants needed to establish fault before being able to receive compensation for lost income. In fact, it was in Tokyo in 1969 that some of the first discussions concerning the establishment of a system of fault-based liability and compulsory insurance for the shipowner and/or cargo owner took place.

Concurrently, the oil and shipping industries debated their own voluntary schemes in which tanker owners and the oil industry would pay compensation for pollution damage and so minimise the risk that governments would introduce unilateral solutions while waiting for an international system to be developed and to enter into force. The shipping industry established an agreement known as the Tanker Owners Voluntary Agreement concerning Liability for Oil Pollution (TOVALOP) and this was to be administered by a new entity established for this purpose, the International Tanker Owners Pollution Federation Ltd (ITOPF), also known simply as 'the Federation'. The intention was also that ITOPF would supplement its administrative role by establishing a technical department, able to provide expert advice and assistance in the response to oil spills. In December 1968 ITOPF was formally established with the support from the oil companies, independent tanker owners and P&I Clubs. The voluntary system that was subsequently established by the oil and shipping industry bore many similarities to the current 2-tier international system of compensation that is in place today, namely the CLC and Fund Conventions.² For almost 30 years, the voluntary schemes served their purpose by providing a system of compensation (and technical support through ITOPF) during the period when these international conventions gained support and entered into force. The voluntary

¹ *Shipping and the Environment, 2nd Edition, Colin de la Rue, Charles B. Anderson. Published by Informa, London 2009, ISBN 978 1 84311 3232.*

² *International Convention on Civil Liability for Oil Pollution Damage, (CLC); International Convention on the Establishment of an International Fund for Compensation for oil Pollution Damage (Fund Convention)*

schemes were eventually terminated on 20th February 1997 to make way for widespread ratification of the CLC and Fund Conventions. However, the provision of 24/7 emergency support to the oil and shipping industry and their insurers, together with the wealth of expertise and practical knowledge that had been assimilated by the Federation, ensured the continuation of ITOPF beyond this date and into the future.

The Role of ITOPF in spill response and preparedness: operation and co-operation

ITOPF is a not-for-profit making organisation. Over 90 per cent of its income comes from subscriptions paid by Protection and Indemnity (P&I) insurers on behalf of their shipowner members, who they enrol in ITOPF as either Members or Associates. This gives them access to the Federation's full range of technical and information services, usually at no cost. ITOPF's Membership comprises over 5,980 tanker owners and bareboat charterers, who between them own or operate about 10,500 tankers, barges and combination carriers with a total gross tonnage of about 301 million GT. This represents virtually all the world's bulk oil, chemical and gas carrier tonnage and so it is extremely rare for the owner of any such ship engaged in international trade not to be a Member of ITOPF. Associates comprise the owners and bareboat charterers of all other types of ship, currently totalling some 495 million GT. This reflects ITOPF's increasingly important role in recent years in responding to bunker spills from non-tankers.

ITOPF's activities are overseen by an international Board of Directors representing the organisation's independent and oil company tanker owner Members, its Associates and P&I insurers. Since its establishment in 1968, ITOPF has evolved into the maritime industry's primary source of objective technical advice, expertise and information on effective response to ship-source pollution. ITOPF has observer status at both the International Maritime Organization (IMO) and the International Oil Pollution Compensation Funds (IOPC Funds) and regularly contributes to discussions on matters relating to ship-source pollution.

Response to Marine Spills

Responding to ship-source spills of oil or chemicals is ITOPF's priority service and is normally performed, without charge, at the request of one of its Members or Associates and their P&I insurers. The IOPC Funds also usually call on ITOPF's technical services for oil spills with which they are involved. To date, ITOPF's technical staff have responded to some 634 ship-source spills in 99 different countries in order to give objective advice on clean-up measures, environmental and economic effects, and compensation.

ITOPF's first task on being advised of a new spill is to evaluate the probable behaviour, fate and impact of the oil or chemical, and the local capability to organise an effective clean-up response. At the same time as essential information about the incident and the type of oil or chemical involved is being obtained, our staff will be referring to internal information on environmental and economic resources likely to be at risk in the affected country, as well as on the national arrangements for spill response. Internal databases on the availability of clean-up equipment and materials, local surveyors and other experts will also be consulted and guidance sought from our experience of previous spills in the same region. If the evaluation of the spill indicates that it is likely to pose a serious threat to coastal resources, a member of the ITOPF technical staff will probably be asked to attend on-site immediately. The role of the ITOPF technical staff member at the site of a spill varies according to the circumstances but is always advisory. It normally includes one or more of the following activities:

- advising and assisting all parties on the most appropriate clean-up response, with the aim of mitigating any damage;
- helping secure equipment and organise the clean-up when there is a need to supplement the local response capability;
- monitoring the clean-up, in order to provide subsequent reports of events and of the technical merit of actions in relation to claims for compensation;
- investigating any damage to the environment and to coastal resources such as fisheries and mariculture.

In all cases the aim is to co-operate and work closely with all parties involved in a spill, and to reach agreement on measures that are technically justified in the particular circumstances. This not only helps ensure that the clean-up is as effective as possible and that the minimum of damage is caused, but also that subsequent claims for compensation can be dealt with promptly and amicably.

Damage Assessment and Claims Analysis

Assessment of the technical merits of claims for compensation is a natural extension of our on-site attendance at the time of a spill. It usually involves assessing the reasonableness of cleanup costs and the merits of claims for damage to economic resources. The assessment of damage to fisheries, especially mariculture facilities, is a particular area of specialisation which often requires the detailed analysis of complex claims, frequently in conjunction with other specialists who have in-depth knowledge of the affected area and the economics of its particular fisheries.

Our advice is also regularly sought on environmental damage caused by spills, and on the feasibility and technical justification of proposed restoration measures designed to enhance natural recovery.

ITOPF's role in damage assessment and claims analysis is limited to providing advice on the technical merit of claims. The final decision on settling any claim rests with those who will pay the actual compensation, usually a P&I insurer and/or the IOPC Funds.

Contingency Planning and Advisory Work

A major spill of oil or chemicals presents those in charge with a range of complex problems and prompt decisions are needed if an effective response is to be mounted. There is a greater likelihood that this will happen if effort has been devoted beforehand to the preparation of a contingency plan that is both comprehensive and realistic.

Using their extensive practical experience of spill response around the world, ITOPF staff often advise governments, industry, international agencies and other organisations on the preparation of contingency plans and related matters.

Training and Education

Regular training is vital if personnel are to implement a contingency plan effectively and mount an efficient response to an incident. ITOPF organises and participates in numerous training courses and seminars for government and industry personnel around the world, and frequently assists with spill drills and exercises conducted by shipowners and other groups.

Maintaining spill response capability and expertise in ITOPF

Figure 1 on page 1 clearly illustrates the dramatic reduction in the number of major spills from tankers over the last four decades. Similarly, the volume of oil spilt in the tanker incidents attended by ITOPF more recently is markedly reduced in contrast with the 1970's and 1980's (figure 2).

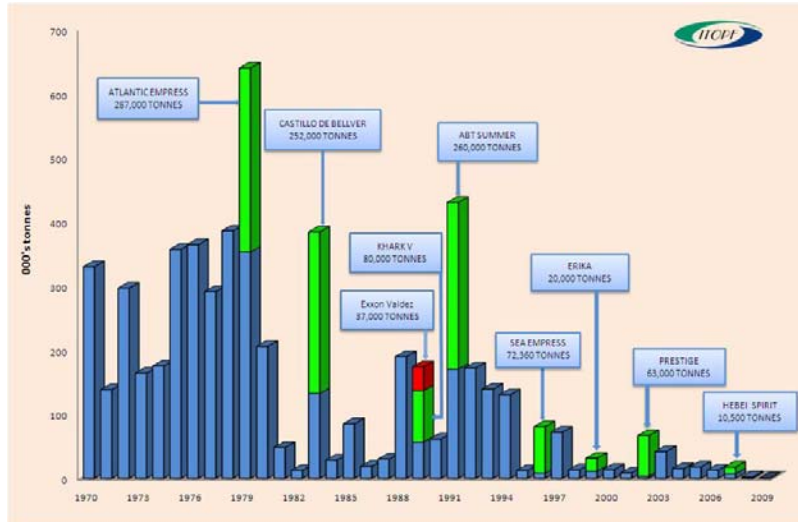


Figure 2: Tonnes of oil spilt (1970 – 2009)

In spite of this, the breadth of ITOPF's combined membership ensures that its technical staff are regularly called upon to respond to spills of bunker fuel, chemicals and bulk cargoes from other types of ship. As is shown in figure 3, the proportion of spills attended by ITOPF originating from non-tankers has steadily grown and, in 2009, only a fifth of all the spills that ITOPF attended involved tankers.

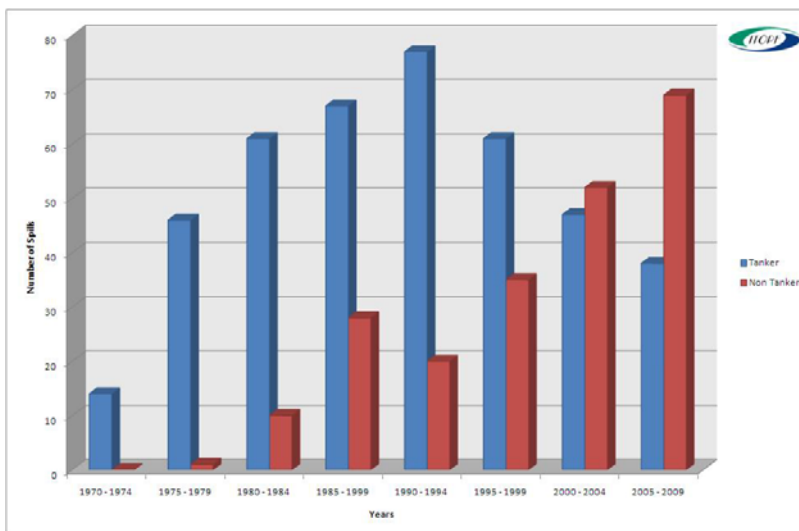


Figure 3: Number of tanker and non-tanker spills (1970 -2009)

Today, ITOPF attends both tanker and non-tanker incidents where the volume of oil spilt may only be a few tonnes, whereas in past years such low volumes would not have generated significant concern or interest. This change reflects the growing intolerance towards spills of almost any size and the growing demands and expectations of those affected by a spill. Now, even a small spill can result in claims for substantial damages and require ITOPF's involvement, sometimes for many years, to establish the extent of real loss. As a consequence, ITOPF has not experienced a reduction in demand for its services and a comparison of the number of incidents in which ITOPF has been involved over the last two decades (figure 4) shows only a modestly decreasing trend, averaging 23 to 24 incidents each year.

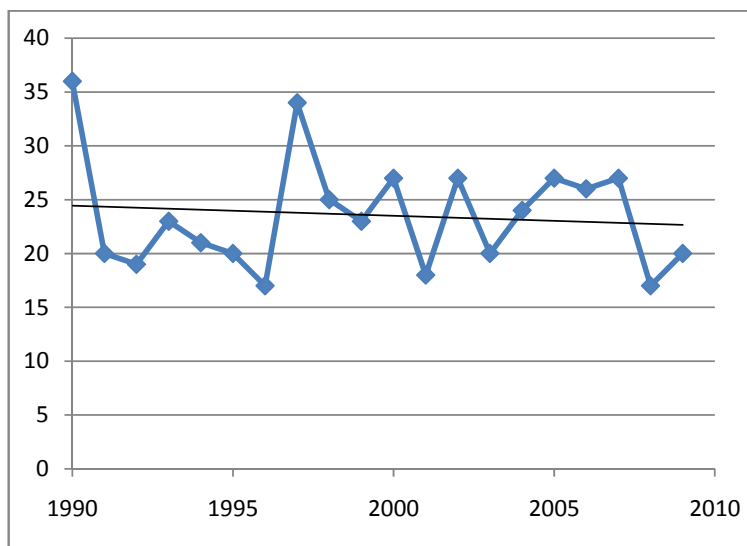


Figure 4: The trend in number of incidents attended by ITOPF over time (1990 – 2009)

During periods when spills are less frequent, ITOPF's technical advisers maintain their momentum by sharing and building upon their spill experiences with colleagues during in-house presentations and informal discussion. As a matter of good practice, ITOPF's staff meet regularly to review the cases that they are working on and to ensure consistency of technical advice. Even during periods of relatively few incidents, the shipowners and insurers recognise the value of retaining a not-for-profit, 24/7 group of experts with practical experience of spills in a multitude of different countries as they appreciate that much of the foundation of effective spill response is laid during 'peace-time', such as through visits to government agencies, conferences, seminars, training courses and the like. They are also aware that even one major incident, such as the *MT HEBEI SPIRIT* in Korea in 2007, may have significant and far-reaching consequences for the industry and are reassured by ITOPF's involvement, which provides for consistency of approach and the benefit of an established core of expertise.

Preparedness and Response: Expectations and Realities

ITOPF has found that there is sometimes a mis-match between expectations and reality when it comes to preparedness and response to incidents. Understandably, governments have many issues

on their agenda that may result in contingency planning being less of a priority. Placing the onus to respond on shipowners may seem like an attractive option in such circumstances. This may work in some situations, such as when ships are destined for the country (rather than passing their coastline) and the organisation and support of a shipowner-led response is in place. However, in ITOPF's experience it is more often the case that valuable response time is lost. This is because the ship is often not destined for the country in which the spill occurs and the shipowner is therefore unfamiliar with the local arrangements. Frequently the shipowner is unable to co-ordinate rapidly with the local authorities in the country affected due to lack of clarity over who may be 'in charge' of the response. He may also be unaware of the location of spill response resources primarily because his day-to-day work is running ships, not responding to oil spills.

Similarly, governments may be tempted to rely on the oil industry to respond to any and every oil spill because they have resources and the expertise. Many oil industries and terminals are usually able to provide some level of support in these situations. However, governments sometime place too much reliance on the oil industry, not recognising the fact that oil companies and terminals are frequently obliged to retain a certain amount of equipment for their own use and are unable to release it for response or, that in the case of spills from non-tankers or spills not involving them, an oil company may not wish to become associated with the incident for fear of reputational damage or for fear of incurring expenditure that they may be unable to recover.

The challenge of maintaining national/regional response capability

Contingency planning is essential if countries are to respond to oil spills promptly and effectively. Experience has shown that where a country has fully implemented the requirements of the OPRC Convention³ and has contingency plans in place with a complementary programme of training and exercises, a pragmatic and confident approach to the handling of a casualty is more likely. Many countries ratify Conventions without a proper understanding or application of their inherent obligations. Consequently, when an incident occurs they are unprepared, often without the infrastructure or equipment necessary to mount a prompt or effective response.

A national contingency plan should reflect a government's policy in an incident and clarify the roles and responsibilities of the different players involved; it should also identify the capabilities that are in place to prepare for these events and the strategy to be followed. Where bilateral or regional agreements are in place, or where arrangements are in place to pool government and industry resources, the mechanism to put these arrangements into effect should be described. The importance of clear, assertive leadership of government and clarity of the roles and responsibilities of the different parties involved during a response cannot be over-stated and this is the area that has been found most wanting in many countries.

A government-led response is more likely to be prompt and effective and will avoid the delay and confusion that can easily result from imposing a shipowner-led response, especially in cases where the ship was in transit and not destined for a port in the country. This tried and tested approach recognises the duty of care that governments have for their citizens and the obligation they have for implementing the strategies identified in their national contingency plan. This approach also builds on the intent that is embodied in the text of the international preparedness and compensations conventions. The 'polluter pays' principle is realised insofar as the shipowner and his insurer is expected to 'pick up the bill'. However, that is not to say that the shipowner should not contribute in a more active sense to the response.

³ *The International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990 (OPRC)*

The OPRC Convention places an obligation on Member States to ensure that ships flying their flag have onboard a pollution emergency plan (Shipboard Oil Pollution and Emergency Plan, SOPEP) to deal specifically with an oil spill. But it should be remembered that the SOPEPs are primarily intended to enable the crew to take practical measures to control and minimise a spill from the ship under different scenarios. It would be unrealistic to expect the crew to be in a position to do anything more than is required of them to minimize the risk of a release as their focus will be on their safety and not on responding to any release away from the confines of the ship. However, in a few countries, such as Canada, Japan and the USA, shipboard emergency plans are more extensive and include requirements to provide specific response capabilities beyond the required shipboard equipment through local spill response contractors.

The tiered approach to responding to spills has proven to be an effective and flexible mechanism for scaling the response according to the need. The concept of a local response using local resources (Tier 1) escalating to involve neighbouring government or industry-shared resources for spills beyond local capabilities (Tier 2), through to the mobilization of resources beyond Tier 2 capability to respond to a spill of national significance (Tier 3) is one that many countries have adopted. In ITOPF's experience, the use local resources and shared national resources have proven to be more effective than reliance on resources coming from outside of the country. This is primarily because local responders are better equipped to deal with local issues (such as internal transportation, internal labour issues, internal politics) and delays are minimized. Ensuring adequate preparedness at the local level is therefore a key criterion for achieving an effective response.

Maintaining preparedness at the local level

As mentioned earlier, undoubtedly, those organisations that maintain a programme of regular training and exercises are better able to provide a prompt and effective response to an incident. However, maintaining momentum and an adequate level of preparedness and response against a background of reducing spills is a challenge, particularly for organisations that have been established specifically for emergency response and especially if their services are established solely for the benefit of the oil companies, rather than shipping in general, and are restricted the larger incidents. One approach to keep momentum may be to focus on problems arising in other incidents and to consider how to avoid them. From ITOPF's experience the following are issues that have arisen on several occasions:

- Lack of clarity on roles and responsibilities
- Lack of an assessment of the risks of an oil spill
- No contingency plan or a 'paper only' contingency plan, i.e. not put into practice
- Over-reliance on external response equipment or personnel
- Inadequate logistical/customs support (e.g. over-flights, dispersant use, external resources)
- Insufficient consideration and integration of local resources, e.g. fishermen, villagers etc.
- Inadequate consideration of waste reception/disposal options
- Insufficient documentation and support of subsequent claims for compensation

Thus, reflecting on the extent to which a response organisation is able to address these issues, preferably in conjunction with government agencies, could be beneficial.

A good example of how the risk of a spill occurring and preparedness has been combined is provided by the PAJ stockpiles of response equipment. These stockpiles have been placed in strategic locations in accordance with the major shipping routes. The system that is in place to make these stockpiles available irrespective of the origin of the oil spill renders the stockpiles more useful than those dedicated only to certain circumstances. ITOPF has recommended their use on several

occasions. Nevertheless, if PAJ wished these stockpiles to be used more frequently, it may consider promoting them more widely among the spill response community and governments.

Summary

Despite the reduction in oil spills worldwide there is no doubt that concern about the effects of oil on the marine environment continues to increase making even the smallest of spills unacceptable to many. ITOPF continues to play a significant role on behalf of the industry and its insurers and anticipates this role being maintained in the future. Large incidents have the ability to shape legislation and thereby to have a lasting and far-reaching affect on the industry. Consequently, preparedness and response to incidents need to remain high on the agenda for both industry and government. Mechanisms to share responsibility as envisaged by the preparedness convention, OPRC, are likely to be more effective and organisations that continue to invest in training and exercises will be better able to demonstrate a competent and pragmatic response. Learning from past incidents and anticipating the problems may enable response organisations and governments to focus their efforts on realistic objectives or to diversify.