

## THE ITOPF PERSPECTIVE

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### INTRODUCTION

Maintaining an adequate level of training and preparedness for personnel involved in oil spill response is essential if countries are to demonstrate a capability for minimising economic and environmental damages whilst also satisfying the various stakeholders and politicians in an actual incident. Reaction to major oil spills has become predictable with a flurry of increased training initiatives, R&D fora, and reviews of preparedness, all measures taken in an attempt to stave off 'knee-jerk' legislation and penalties. An unfortunate consequence of such an increase in activity is that much of the investment is quickly lost unless the activities form part of a structured and sustained development of resources and capability. Conversely, as statistics continue to show a trend towards decreasing numbers of oil spills, and more oil majors and government departments consolidate their respective resources, the budgets available to support training and contingency planning show signs of strain and cut-backs in these areas are inevitable.

The key is to seek to reconcile these peaks and troughs of activity so that training is maintained at a level that will form the framework of a sustainable programme of preparedness. Quality, rather than quantity, is the standard against which these programmes should be measured. All too often, the underlying objective is to tick the boxes to demonstrate that certain mandated criteria have been met. However, when put to the test during a real incident, flaws quickly become evident and the consequences are sometimes costly and embarrassing.

Training and contingency planning should seek to combine the basics of oil spill response and management with a realistic understanding of the limitations of the different response techniques and a recognition of past mistakes and successes. Experience of actual incidents is obviously an advantage but this can be difficult in a climate of fewer incidents with fewer opportunities to gain 'hands-on' training.

Consequently, the value of learning from past incidents and the experiences of other countries have become even more important.

As the industry's source of unbiased technical advice, ITOPF has gained first-hand experience of more than 450 oil spills in 85 different countries. Our active participation in training courses, seminars and conferences worldwide provides an ideal platform from which to share our experiences. This paper seeks to review the reasons behind the successes and failures observed from a number of different perspectives, to reinforce some of the basic lessons of spill response and to highlight issues that may not be discussed in the classroom.

## **MANAGEMENT AND CO-ORDINATION OF A RESPONSE**

In most countries, through the consistent interpretation of the OPRC, government takes the lead role in a major incident in recognition of their stewardship of the environment and duty to the public. As such, the National Contingency Plan typically provides for a tiered response that relies on close co-operation between industry and government and the availability of government-owned stockpiles of equipment. This approach has the tendency to engender a pragmatic and reasonably scaled response as the government both leads and funds the efforts with the support of industry. Reimbursement of admissible expenses associated with the response may be obtained from the insurers of the ships involved or from one or more applicable Conventions. For example, the CLC and Fund Conventions.

A notable exception to this arises in the USA where OPA 90 requires that the Responsible Party (RP) – the spiller, is responsible for the clean up. As a result of this legislation, an extensive infrastructure has developed to support an 'industry-led' response. Although the response is often typified by over-resourcing and excessive costs, the mechanism works well in the USA. However, problems arise when attempts are made to adopt a USA-style approach to managing oil spills in other countries. Governments fail to realise that the infrastructure to support an industry-led response must be in place and adequately funded long before an incident occurs and cannot be established in an ad-hoc fashion on the day. The result is often a hybrid that invariably creates mis-communication, mistrust, duplication and unreasonable demands.

The experiences of ITOPF repeatedly reinforce the importance of good management and co-ordination. Unless the roles and responsibilities of individuals within the various organisations involved are clearly defined, well practiced and co-ordinated with others, the resources used will at best, be impotent, but may even result in additional damage through incorrect use.

## **THE RESPONSE**

### ***The early stages***

A wealth of useful lessons can be gleaned from comparison of the responses to different oil spills worldwide – too many to describe here. However, some frequently re-occurring issues are worthy of further consideration, especially as they serve to remind us that many exercises and training sessions are, inevitably, simplistic and theoretical.

Despite requirements in many countries to follow standardised reporting procedures, it is not unusual for the information contained in initial reports of an incident to be scant, even conflicting. Frequently, information is lacking on the type of oil involved (which has important implications for the response), or the quantity that has been spilled, or even the precise location of the incident. When ITOPF is asked to attend on site, our priority is to verify the initial information and gauge the likelihood of damage to sensitive resources. Frequently, this involves aerial reconnaissance of the area to locate the oil and determine its trajectory.

Whenever possible, flights should be co-ordinated to address the different concerns of those leading the response. The information obtained should immediately be transmitted to decision-makers from whom it can be disseminated to all interested parties. This approach avoids unnecessary duplication and wasted resources. Equally important is the need to use trained observers to maximise reliability and standardisation of the reporting. During a recent incident in Taiwan, fishermen were asked by the authorities to report any sightings of oil. Predictably, reports of oil were being received (without discriminating between sheen or black oil) at all times of the day and night. This generated a confused picture of the actual situation, resulted in exaggerated media reports, and wasted valuable time and resources while these sightings were checked. Even during the 'LAURA D'AMATO' incident, which occurred in Sydney Harbour in 1999, seagrass beds were reported as oil.

Thus, establishing the facts surrounding an incident is not always straightforward even before consideration is given to protecting sensitive resources or mounting a response.

### ***Protection of sensitive resources***

Paper exercises can make deployment of resources and booms deceptively simple. It is all too easy to draw a black line across a river mouth to illustrate deployment of a boom and then move on to the next problem without a second thought as to whether or not the boom will actually do its job. Unless consideration has been given to practicalities such as the type of boom needed, the current strength, ease of access and the nature of the seabed, the exercise is purely theoretical. It won't be until a real incident arises that the success or failure of this black line will be tested.

Equally important is the need to prepare contingency plans and hold exercises with those likely to be affected by the actions taken, for example, the local fishermen and harbour authorities. During the 'SEA EMPRESS' incident in the UK in 1996, fishermen cut the mooring lines of the boom that was put in place to protect the harbour in protest at being prevented from leaving. Involvement of fishermen's representatives and harbour masters at an early stage in the response may help to identify compromises, such as opening the boom at certain states of the tide if oil is not in the immediate area.

The UK has been supporting a series of practical boom deployment exercises to test 'black lines' drawn in local authority and port contingency plans. A similar initiative was taken recently in Sydney Harbour. Clearly, this is the favoured approach although realistically, resources and funding to do this will be limited and it is not always possible to verify booming plans. Nevertheless, contingency plan holders and responders should be conscious of the limitations of booming and act quickly to modify these plans on the basis of lessons learnt.

### ***Offshore and Shoreline Clean up***

Similar to the theoretical deployment of booms, tabletop exercises make it easy to move resources etc. to where they are needed. Little consideration may be given to the logistics of procuring the resources in the first place, how to physically manoeuvre them to the place where they are needed, or how to support the operations and handle the waste that is generated.

A lesson learnt from offshore skimming operations during the 'NATUNA SEA' incident that occurred in Singapore in 2000 is currently being addressed by the response organisations involved. Although adequate skimming capability was brought to the area, there were insufficient storage barges available to support the operations and some of the equipment subsequently lay idle. The availability of locally owned storage barges suitable for holding and discharging liquid waste are being identified in preparation for any future incident.

It is surprising how many times the same problem re-occurs during an incident, even within the same country. Following the grounding of the 'AMOCO CADIZ' off the coast of France in 1978, oil that had stranded on sandy beaches in the UK was collected in trenches dug in the sand. Difficulties recovering all of the oil from the trenches resulted in seepage from the sand for many months after the clean up had finished. 18 years later during the 'SEA EMPRESS' incident, the same problem arose. If the costs associated with these 'problem' beaches are examined in the light of the activities taking place at the time, it is apparent that more than half of the total expenditure for two beaches (Saundersfoot and Freshwater East) can be attributed to re-excavation of the trenches to release trapped oil [Figure 1]. Where the oil was placed in a banded area (rather than collected in trenches) the majority (80%) of the expenditure was incurred during the early stages of the clean up and very little effort was required to restore the beach to normal use beyond this stage. {Purnell, K.J. 1999}.

Good management and co-ordination is vital during the clean up if resources are to be used effectively. All resources and costs need to be tracked (in real-time) so that problems and areas of unreasonable expenditure can be identified and addressed quickly.

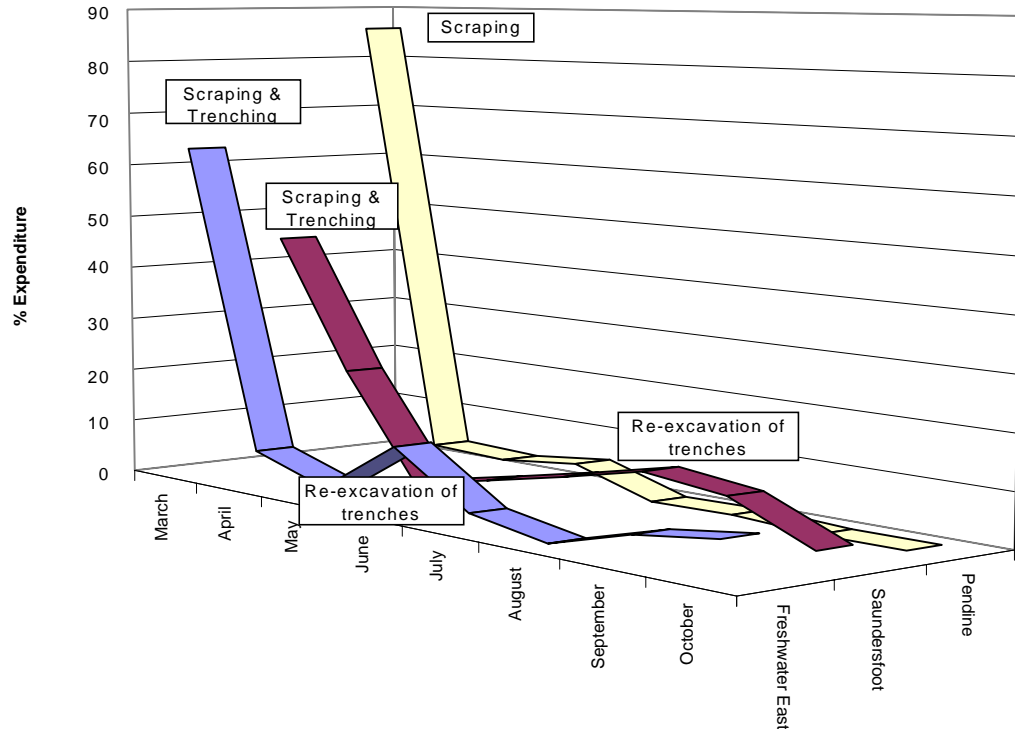


Figure 1: Review of claimed expenditure and clean up activities on three sand beaches during the 'SEA EMPRESS' incident.

### ***Termination of the Clean up***

Most training courses and exercises will emphasise the importance of establishing criteria for terminating the clean up well in advance of an incident. It is not difficult to appreciate why this phase in the response generates the most problems. There will often be pressure to satisfy several different agendas, some political, some technical and some environmental and it is likely that compromises will be necessary. It is far better to resolve these potentially conflicting interests in 'peace-time' and document them in contingency plans rather than risk confrontation and wasting valuable time attempting to decide these criteria when an oil spill occurs.

Following the loss of fuel oil from the tanker 'KURE' in California, USA in 1997, the Incident Command agreed to use the criteria in Figure 2 to reach consensus on terminating the clean up. Not only were these criteria sufficiently pragmatic and flexible to address the key concerns, but the fact that they had been agreed by all parties before starting to survey the affected areas, meant that the temptation to continually move the goal posts was avoided.

**Shoreline Inspection Guidelines (Humboldt Bay Oil Spill, 1997)**

The shoreline inspection team will determine when each shoreline segment has been cleaned to a reasonable degree, based on minimizing risk of impact to the environment and preventing human contact with the spilled oil. The following guidelines provide criteria for assessing shoreline status:

*Water surface*

No recoverable floating oil should remain on the water surface.

*Sand beaches*

The shoreline should be free of liquid oil. Tarballs, tar patties, oiled stranded eelgrass wrack and oiled debris that could contaminate wildlife should be removed – to the extent removal using reasonable clean-up techniques is feasible. Oil stain on sand that does not produce rainbow sheen may be allowed to weather and degrade naturally.

*Marshes*

Marsh vegetation should be free of oil that could contact and contaminate wildlife. Oil that is not likely to affect wildlife may be allowed to weather and degrade naturally.

*Riprap and seawalls*

Oiled riprap and seawalls should be free of bulk oil except for oil stain (defined as a thin layer that cannot be scraped off using a fingernail), which may be allowed to weather and degrade naturally.

Figure 2: Termination of clean up criteria used during the 'KURE' incident in California, USA in 1997. {IPIECA 2000}

Less realistic termination criteria may be pursued after an oil spill for a variety of reasons; most notably to satisfy political agendas or an ill-informed public, or sometimes to obtain compensation for clean up that is ultimately never intended. It is worth recalling that compensation is generally only payable for technically reasonable actions and only after expenditure associated with those actions has actually been incurred - not on the basis of estimates for work pending.

**RECOVERY OF COSTS**

Although many training courses and exercises consider compensation and claims preparation, the importance of this subject is rarely fully appreciated until a claim is made following a real incident. Many countries have ratified one or other of the compensation Conventions applicable to spills of persistent oil from tankers (CLC 69,

CLC 92 and Fund 92). As mentioned earlier, the USA is an exception and, instead, OPA 90 is in force. Treatment of claims arising from other types of incidents are usually addressed under national legislation. Nevertheless, if one of the International Group of Protection and Indemnity (P&I) insurers is involved in an oil pollution incident, the claims are normally assessed on the basis of guidelines set out in the context of the Conventions {IOPC Fund, 2000}. Simply interpreted, this means that all claims are subject to the test of 'technical reasonableness'.

Anyone who considers that they have incurred a loss as a direct result of the oil pollution is able to claim and the guidelines referred to above outline the procedure for making a claim under these Conventions. Claims may be made for expenditure incurred during the clean up or for other reasons, such as the loss of income due to the inability to catch fish, cancelled hotel bookings, damage to property etc. The objective of the compensation schemes is to pay claims promptly and without the need to revert to the courts to establish fault or cause. Thus, the tanker owners and the IOPC Fund are strictly liable for incidents covered by the Conventions. However, sometimes the resolution of claims can take a long time, attracting criticism of the Conventions. The reason for such delays may result from a lack of supporting documentation or proper justification for the expenditure or loss, inadmissibility of the claim or, the total of the claims has exceeded the available compensation and it is necessary to limit the compensation that is paid by pro-ration.

As an illustration of these points, the government of Venezuela submitted an environmental damage claim in two different courts following the '*NISSOS AMORGOS*' incident in 1997. The losses were not substantiated and the claim is considered inadmissible for compensation under the terms of the CLC and Fund Conventions. As a consequence of the magnitude of the claim and the risk that both Venezuelan courts may award damages, it has been necessary to restrict payment of all admissible and legitimate losses incurred by other claimants to a mere 25% of their claimed amount. Genuine claimants have yet to receive full compensation.

In contrast, and where the spirit of the Conventions is followed, claims that are properly supported are paid promptly and normally, in full. As an extension of ITOPF's role on site, the insurers and the administrators of the Fund Convention may ask for a technical evaluation of the claims for compensation.



## **ENVIRONMENTAL MONITORING AND CLAIMS FOR DAMAGE**

Protection of the marine environment is, quite rightly, high on the priority list for many countries. There is no shortage of NGO's and other environmental organisations from both the private and public sectors prepared to voice an opinion about one or other topical subject. A major incident, especially if it occurs in an environmentally sensitive area, is almost certain to provoke an emotional reaction from the public, the media and, in response to this, the politicians. Very few training courses and exercises can prepare the attendees for the pressure that can arise from these sectors and the unreasonable demands that may be placed on them as a consequence. Calls will be made for the polluter to pay, as the environment must surely have been damaged, even when this cannot be quantified in monetary terms. A plethora of monitoring projects are frequently spawned out of perceived 'damages' to the environment and these are often undertaken with little appreciation of the ability of the environment to recover naturally.

A number of incidents in the Asia-Pacific region during the last 18 months has resulted in claims for damages to fisheries allegedly because the oil has killed the plankton upon which fish feed and/or killed juvenile fish. It is well known that the planktonic stages of different fauna and flora are produced in vast numbers to compensate for the very low survival rates and that they are distributed widely in the ocean. Additionally, plankton will undergo tremendous variation from year to year and season to season as a result of natural environmental fluctuations. Consequently, plankton studies have invariably shown inconclusive results and are not suitable for studying the short-term effects of an oil spill. Whilst it is quite possible that reduced catches of fish are being experienced, it is almost certainly the result of over-fishing or, in some cases, reduced fishing effort.

Following the '*ESTRELLA PAMPEANA*' incident in Argentina in 1999 in which about 4,600 tonnes of crude oil contaminated brackish-water marshes, a decision was made to clean a sheltered marsh holding large quantities of mobile oil, despite the risk of causing additional damage. A monitoring programme was initiated to follow the recovery of this marsh, in comparison with oiled but un-cleaned marshes and reference sites, because of fears of erosion. However, after 3 years the marsh has completely recovered and is functioning normally again without the need for restoration, illustrating the extraordinary resilience of this environment and its capacity for natural recovery.

Although the circumstances of an individual oil spill may be very different each time, there are very few occasions where the situation is so unique that the lessons learned and data obtained from previous incidents and research/monitoring projects cannot be applied. Consequently, environmental monitoring programmes should be undertaken with this in mind and not merely duplicate existing studies. ITOPF is frequently asked to review proposals for environmental monitoring studies and/or restoration following an oil spill to ensure that it is both focussed and technically reasonable.

In response to calls by Fund Member States for a review of the criteria against which claims for environmental monitoring and environmental damage are assessed, a paper has been prepared for approval by the Fund Assembly later this year. This paper proposes the refinement of the Fund criteria to encourage innovative restoration measures whilst retaining the need for any such measures to be technically feasible and in proportion to the damages they are intended to restore.

## **CONCLUSION**

A review of some of the more commonly experienced lessons from different aspects of oil spill response has been undertaken in this paper. From an ITOPF perspective, good management and co-ordination of the response is the key. It is also the area that most often falls short of the ideal when a real incident occurs. Rather than reacting in an ad-hoc fashion following a major incident, quiet periods should be utilised to review past oil spill experiences, update contingency plans and train personnel as part of a sustainable programme of improving preparedness.

Although some may argue that there is no substitute for the real thing, in a climate of declining frequency of oil spills, training and exercises are important for teaching the basics of oil spill response and ensuring that a constant preparedness is maintained. Previous incidents provide the ideal opportunity to supplement this training, inject realism, and hopefully, promote better understanding of the practicalities and limitations of oil spill response.

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