
Editorial

Preparedness and Response to Accidental Marine Pollution

Most of the time, merchant vessels go about their work in a benign sort of way carrying cargo from place to place, out of everybody's sight with occasional sightings in a port or at the sea's horizons. Only when a shipping accident occurs and is brought to our TV screens do we probably note the existence of the shipping industry. It is the graphic images of large quantities of spilled oil, damaged beaches, mangroves, blackened foreshores, oiled marine birds and mammals which leave their mark and linger in our memory. Undoubtedly, at the time of the event, these images provoke strong reactions with worries of lasting damage to the environment and human welfare.

The 23rd Business and Scientific Meeting of the Malta Chamber of Scientists held on 19 June focused on the topic of "Preparedness and Response to Accidental Marine Pollution". Four speakers were invited to express their views on the subject: The Hon. Dr. G. Vella, Deputy Prime Minister, Minister of Foreign Affairs and the Environment and Leader of the House of Representatives; Mr. J.C. Sainlos, Director, IMO/UNEP Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC); Professor V. Axiak from the Department of Biology and Professor A. Vella from the Department of Chemistry, University of Malta.

"Accidental marine pollution" arises from low probability-high consequence maritime related events. This is because shipping casualties are not an everyday occurrence and therefore of low probability but of high consequence because the effects from the relatively large volumes spilled can be quite damaging. Much has been done at the international, governmental and industrial level to prevent accidental marine pollution through the introduction of tighter preventative measures such as environment protective ship design (e.g. the double bottom in oil tankers), more efficient cargo handling and better trained and qualified personnel serving on vessels. However, despite these regulatory measures, accidents continue to occur as shown by the Exxon Valdez in 1989 which lost 37,000 tonnes of crude oil in Prince William Sound, Alaska, and the more recent accident of the Sea Empress which lost 72,000 tonnes of crude oil and 360 tonnes of heavy fuel oil off the Welsh coast in 1996. It follows, therefore, that the protection of the marine environment from such events should be integrated in the overall environmental policy of a country with a coastline.

The risk of accidental marine pollution is very much related to the area itself. In the Mediterranean, some 23% of the world's seaborne oil transits this sea. This

consists of oil exported from the Middle East via the Suez Canal and the Sumed pipeline at Sidi Kerir, Egypt, together with substantial exports from Libya and Algeria en route to Spain, France and Italy. In future, it is anticipated that oil throughput will increase from the Black Sea through the Bosphorus and from certain Turkish ports on the Mediterranean side as new oil reserves are discovered and pipelines built in the newly-formed ex-Soviet Union States. Although this traffic might not be of economic value to the Mediterranean ports, from the point of view of accident potential, it cannot be ignored. In addition, the Mediterranean suffers from a high density of merchant traffic other than oil tankers which, like oil tankers, either do not enter any one port but transit the sea in an East-West direction and vice-versa or are directed to the 300 or so odd ports scattered along the coastline. Overall, it can be said that the Mediterranean is an area of high risk with the bottlenecks of the Straits of Gibraltar, Boniface, Messina, the Suez Canal, the Dardanelles and the restricted waters of Southern Greece at an even higher risk.

Evidence of this risk is highlighted by some accidents: the oil tanker *Patmos* (1985) which spilled 700 tonnes of oil, off the coast of Messina following collision with another tanker which was in ballast; the oil tanker *Haven* (1991) which caught fire and suffered a series of explosions off Genoa and subsequently broke into three parts spilling 10,000 tonnes of fresh and partially burnt oil in the process; the oil tanker *Iliad* (1993) which spilled 300 tonnes of light crude oil following its grounding after leaving the port of Pylos.

When a spill occurs, irrespective of its size, there are a number of other mitigating factors that will determine the impact of the spill and influence the scale of the response. Although the system will vary from country to country, it is essential to have in place a national system to deal with such events. The purpose of a national system is to maintain an organisational framework capable of optimising the country's resources to support the response effort. All this requires pre-planning which will pay dividends in times of crisis. A national contingency plan for preparedness for and response to marine spills will describe the system. The plan should, as a minimum, contain:

- the organisational relationship of various entities involved (public, parastatal, private) and a clear definition of the responsibilities of the participating organisations;
- the lead agency responsible for providing the response (at sea, on shore, in port etc.);

- the arrangements of communications for mobilizing resources;
- an inventory of strategically positioned spill equipment and programmes for its use in the protection of pre-defined sensitive areas such as ecologically important habitats, water intakes for desalination plants or power stations;
- a comprehensive national training programme for response personnel including the periodic organisation of exercises to test the plan.

Undoubtedly, a country's response capability may be overwhelmed regardless of the resources available. In 1975, the United Nations Environment Programme (UNEP) in co-operation with other specialized U.N. agencies launched a programme for the Mediterranean and invited coastal states to adopt a comprehensive action plan for the protection of the Mediterranean sea. This paved the way for the adoption of an international treaty for the protection of the Mediterranean sea against all types of pollution, in 1976 in Barcelona, which entered into force in 1978. This treaty has been ratified by all coastal states, including Malta, and by the European Union. Known as the Barcelona Convention for short, it is a framework Convention that leaves specific commitments to be taken up under separate technical Protocols, which in turn are themselves full-scale international treaties. One such Protocol deals with "Co-operation in Combating Pollution of the Mediterranean Sea by Oil and other Harmful Substances in Cases of Emergency".

The rationale behind this particular Protocol is that coastal states will pool forces to combat massive accidental pollution and assist one another in such catastrophic events. Importantly, the Protocol was never conceived as a "substitute for" a national response capability but rather as a "supplement to ". Also in 1976, the Mediterranean coastal states agreed to establish a centre to help with their commitments under the Protocol which, at the invitation of the Government of Malta, is hosted in Malta. This centre, known as the "IMO/UNEP - Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC)", is administered by the International Maritime Organisation (IMO) which is the specialized U.N. agency dealing with safety in shipping and protection of the marine environment from ship related activities. The centre operates on the basis of decisions by the Contracting Parties to the Barcelona Convention. In layman's terms, this means that the mandate and activities of the Centre are decided by the coastal states and the E.U. Funding is

ensured by the same Parties through a common kitty known as the Mediterranean Trust Fund.

The role of REMPEC is to reinforce the response capability of the Mediterranean coastal states by: 1) disseminating information and technical advice; 2) organizing training programmes at the regional and national level; 3) assisting in the preparation of contingency plans including sub-regional operational agreements; 4) facilitating and co-ordinating mutual assistance in cases of emergency.

In Malta, efforts continue to be undertaken to build the capacity to deal with accidental marine pollution. Oil combating equipment has been purchased under a project financed by the E.U. and this is being augmented by civil protection equipment to be bought under the bilateral agreement between Italy and Malta. In addition, equipment belonging to the private sector is also available. Towage and salvage capacities exist. A governmental unit - the Pollution Control Co-ordinating Unit has been set up some time ago. Local media have reported that inter-agency exercises based on likely scenarios have been carried out. Malta is also a Contracting Party to the Protocol in Cases of Emergency for the Mediterranean. All this augurs well. However, one point that emerged from the June meeting of the Malta Chamber of Scientists was the lack of a national plan which might infer a disjointed response effort with critical time lost in the initial stages of a major pollution accident.

There is no doubt that a tested national contingency plan supported by administrative arrangements in the form of a legal act which will define and dispatch duties and responsibilities for each component of the envisaged system to deal with such major events will go a long way. A hidden value when developing a plan of this type is that organisations are brought together, contacts established, views exchanged and competencies recognized.

Malta relies heavily on the sea. In the case of a marine casualty involving major pollution affecting our shores, we will have more on our hands apart from the complex task of salvaging the vessel - a lot more.

Stefan Micallef

IMO/UNEP Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC)

This was an invited editorial. It reflects the views of the author and not necessarily those of the United Nations, its specialised agencies or the Malta Chamber of Scientists.