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## **India needs an oil plug plan**

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The Indian electronic and print media, while concentrating on the terrible Bhopal gas tragedy has also been studiously following the Gulf of Mexico oil spill disaster. Given the impact of marine pollution disasters it is imperative to examine India's continuing lack of preparedness and its implications.

All aspects of marine pollution (Marpol) are governed by the London-based UN body, International Maritime Organisation (IMO), whose Marpol conventions and protocols are applicable to all signatory nations, including India.

On April 20, 2010, while capping a newly-discovered oil well (at 5,000-ft sea depth, and drilled to another 18,000 ft) for future use in the Gulf of Mexico, British Petroleum's (BP) semi-submersible rig Deepwater Horizon encountered an explosion emanating from the oil well. It killed 11 of its 126 workers and sank the burning rig on April 22, resulting in the ongoing massive oil spill, presently estimated at between 200,000 to 400,000 tonnes.

By June 17, BP had managed to commence a complex operation of retrieving some oil and burning it at sea. Two relief wells are also being drilled to link up with the "incident well" so as to pump cement into it and plug the spill, by August this year. The US government is considering increasing the present \$75 million cap on spills to \$10 billion, while BP has put aside \$20 billion in an "Escrow account" to pay compensation. This article is about India's willingness to learn from the Gulf of Mexico spill and prepare for a major marine disaster involving hazardous and noxious substances (HNS), i.e. ammunition, chemicals, liquefied natural gas etc. transported by ships.

In the Gulf of Mexico, US government and BP have deployed over 38,900 personnel, 6,800 vessels and 400 skimmers (to remove oil-water mix), laid out about 200 km of boom barriers at sea (to prevent the oil-seawater from reaching the beaches). On June 30, the US accepted equipment and

expertise from a dozen nations (including the world's largest 20,000-ton capacity skimmer from Taiwan). India, which has numerous ships operating in its vicinity and has large-scale oil-cum-gas drilling at sea, has less than 15 per cent of the counter pollution effort deployed in the Gulf of Mexico.

In India, vide the Coast Guard Act of 1978, and the Merchant Shipping Act of 1958 (amended in 1990 for oil pollution, and later amended in 2003 for HNS pollution), the Indian Coast Guard (ICG) is mandated as the single window agency for countering marine pollution, and director-general ICG is the chairman of the National Oil Spill Disaster Contingency Plan (NOS-DCP). Indeed, NOS-DCP needs to be amended to include HNS protocol of the IMO, which was ratified by 15 nations and came into force on June 14, 2007). The HNS protocol covers the following:

- Cargo which is dangerous when packed for shipping, eg acids, cyanides, pesticides, ammunition etc.
- Liquefied natural gas shipped in bulk.
- Liquids shipped in bulk which have a flash point below 60 degrees centigrade, like acetone, ethyl alcohol etc.

Depending on the type of oil polluting the sea, different oil dispersants can be sprayed as antidotes by most ICG ships, helicopters and Dornier aircraft. Oil dispersants mix with the oil to form small heavy "balls" which sink to the seabed. For best results, oil dispersants should be used within 24 to 72 hours of the oil spill. Since oil dispersants are toxic and can destroy marine life, they must be used only when absolutely necessary.

Fortunately for India, in warmer waters natural biodegradation takes place faster, i.e for every 10 degrees celsius, its rate of biodegradation is double. This means we would have to use less oil dispersant.

As per IMO norms, Marpol oil spills are categorised as follows:

- Tier 1: Below 700 tonnes of oil. At present all the 13 major Indian ports and coastal oil refineries have Tier 1 capability to deal with oil spills.
- Tier 2: Between 700 to 10,000 tonnes. The ICG is supposed to have the capability to neutralise this threat.

· Tier 3: 10,000 to 100,000 tonnes. No capability exists in India to counter this spill (or spills over 100,000 tonnes), and the ICG urgently needs to acquire this capability, or, as an interim measure, tie up with some international private firms in Singapore and the Gulf, for quick response.

Another major worry is that presently the ICG has no capability to detect, monitor and neutralise HNS type of marine pollution. This capability needs to be created urgently.

The ICG, which is expecting to receive the first of three indigenously-built 2,000 ton dedicated Pollution Control Vessels this year, and has another 100 patrol vessels on order, will need to further increase its existing strength.

Countering Marpol is a specialised task and the ICG regularly sends a few officers for training abroad. Hence, unlike coastal security, which was handed over to the Indian Navy by the government post 26/11, countering Marpol will continue to be the responsibility of the ICG.

There are many lessons to be learnt from the Bhopal gas tragedy, the Gulf of Mexico oil spill, and also the 50-year-old ongoing Nigerian oil spill which has polluted its land and rivers. A recent New York Times article mentions that oil-rich Nigeria has, for the last 50 years, had five times the estimated daily oil spillage of Gulf of Mexico due to rusting pipes and leaking valves of companies owned by Western oil companies.

The Indian government needs to revisit our existing environmental laws and also look closely at the proposed Nuclear Liability Bill. In the short term, India should legislate that all ships visiting Indian ports must have a comprehensive oil-cum-HNS pollution insurance with a reputed International Counter Marpol Company so that clean up operations are not paid for by the Indian taxpayer, as is happening in the Bhopal gas tragedy 26 years later. In the long term, the ICG will need to expand and master complex new technologies.

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