

Oil spill may trigger long-term environmental problems

Entire marine ecosystem will be hit – with it the coastal population too



Fishermen take pictures of the damaged cargo ship MSC Chitra in the Arabian Sea off the Mumbai coast on Monday.

– PHOTO: REUTERS

Vinaya Deshpande
& Meena Menon

MUMBAI: The oil leak from MSC Chitra could not have happened at a worse time. This is the breeding season for marine animals, and environmentalists fear that the spill may impact not only the breeding cycle, but also much more in the future if the oil contaminates the sediments and the sea bed. The spill is set to disturb the entire marine ecosystem, including the mangroves, in turn affecting the livelihood of the coastal population.

Environmentalists have called for a systematic study of the incident.

An ongoing survey by the Bombay Natural History Society (BNHS) has revealed that a six-eight inch oil sediment has already reached the shore of four villages on the Mumbai-Raigad coastline.

"Around 20 km coastline of Revas, Mandwa, Sasawne and Kihim has been contaminated," Deepak Apte, scientist and head of the BNHS team, told *The Hindu* on phone. "A little contamination has also been found at Alibaug, but it may not necessarily be the oil spill from the leaking ship," he said. Some oil-coated biscuit packets have also been spotted at the

- Oil sediment has already reached shore of four villages on Mumbai-Raigad coastline: study
- There is no accurate information on the contents of the containers

Gateway of India in Mumbai.

The exact impact assessment cannot be done as no one has the accurate information about the contents of the ship. But according to experts, India does not have the technology, the money, or the protocol to clear the slick once it reaches the beach. "The beaches where the oil has reached are virtually permanently damaged now," Bitu Sahgal, editor of *Sanctuary Asia*, told *The Hindu* on phone.

Shyam Asolekar, Professor at the Centre for Environmental Science and Engineering, Indian Institute of Technology (IIT), Mumbai, told *The Hindu*, "The marine ecology consists of all the small and big living organisms in the sea, the particulate matter and the sediments. There are other living forms like the sea gulls that are dependent on the marine life for survival. Even they are a part of the ecosystem and may stand the risk of being affected."

He said the crude oil con-

tained various sizes of particles that affected the ecology in different ways. "Some float and form a thin layer on the water. These are the particles that are generally cleared. Some get dissolved and absorbed in water. Though their proportion is not much, they are detrimental to the marine ecosystem. Others are volatilised particles that evaporate. They cause toxicity to birds and other living forms outside the marine ecosystem." Because the nature and extent of the spill has not yet been completely revealed, it is difficult to assess the impact.

Many environmentalists are upset by the poor risk assessment. Mr. Sahgal said the real issue was not the oil leak, but that no one had been told what was in the containers. "First, we have to establish the content of every container to ensure that there is no life-threatening risk when the dry chemicals mix with water," he said.

"What if there is radioactive material in some of the

containers? What is the big secret that the Coast Guard does not want to reveal," asked one of the agitated environmentalists who did not wish to be named.

Debi Goenka, executive trustee of the Conservation Action Trust, blamed the Coast Guard for taking slow action. "It is the nodal agency. It should have swung into action immediately and set up containment booms that very day," he said. (Oil booms are floating tubes which act as barricades and absorb oil from the surface of the sea.)

"Considering the location of the leak, it would have been easier to contain the spill if immediate action had been taken. The spill happened in the sheltered water in the creek," he said.

"Remove containers"

Ashish Fernandes, Oceans Campaigner for Greenpeace, said the spill had to be contained as soon as possible by removing the existing containers on the ship. It was crucial to know what the cargo contained in terms of hazardous substances. Organophosphates were toxic and could enter the food chain of aquatic life and cause havoc.

It was important to retrieve the floating containers

and get them to safe storage. Lube was the most serious of all the oil on the ship. If the oil had already reached the shores of Mumbai, especially near the mangroves, there would have to be physical mopping operation, he said.

The monsoon, high tides, wind currents and internal currents aggravate the impact of the spill and can hinder the containment operation. R.K. Patil, chairperson of the Maharashtra Macchhimar Kruti Samiti said: "Because of new moon, the tide would be maximum for the next few days. This will take the oil slick to the otherwise inaccessible coastline as well."

He said the slick would have a major impact on the livelihood of the fishermen community. "Around 10 lakh people will get affected. This includes the fishermen and their families. Fishing is our only source of survival," he said. Mr. Patil blamed the pilots of the ships for the accident and urged Prime Minister Manmohan Singh to intervene by setting up an inquiry commission. "Oil spill keeps happening on the Mumbai coast. No adequate action is taken. We fishermen have brought so much of oil slick and tar balls to the notice of the Coast Guard, but to no avail," he said.