

Catastrophe in the world's largest single tract of mangrove forest - The Sundarbans of Bangladesh

Oil from sunken tanker spreads alarmingly, polluting the river and forest floor, and severely jeopardizing biodiversity in the forest

The Sundarbans is a unique habitat for a number of wildlife. Apart from the Bengal tiger, Gangetic and Irrawaddy dolphin, primates, Indian fishing cat, Indian otter and spotted deer, many other fauna populate the single biggest mangrove forest in the world. The Sundarbans harbours 334 species of trees, shrubs and epiphytes, and 269 species of wild animals. The 139,700 ha forest is a World Heritage Site of the UNESCO where three wildlife sanctuaries Sundarban East, Sundarban West and Sundarban South are located.

The healthy existence of the forest ecosystem is crucial for Bangladesh. In 2007, the Sundarbans, acted as a natural shield against the devastation of cyclonic storm Sidr, and prevented irrecoverable damage in the country.

The Sundarbans now faces a major environmental disaster, after a vessel carrying over 358,000 litres of furnace oil capsized in Sela River (Fig. 1), as the spill jeopardizes a dolphin sanctuary, food chain and the ecology in the area. With various authorities, who neither have the experience nor the capability to handle such a case, trying to pass the responsibility on to each other instead of making a move, the situation is getting worse since the accident took place in the early hours of December 9, 2014.



Google Earth

Fig. 1 The collision of tankers and oil spill occurred near the confluence of Sela and Pasur Rivers in Chandpai

Oil tanker Southern Star Seven was anchored in the river because of dense fog. It capsized around 6.00 am at a place inside the Chandpai Range under West Zone when another empty tanker MT Southern slammed into it because of poor visibility.

The route that the capsized vessel took is prohibited to all kinds of large vessels. For many years, researchers and pro-environment groups have repeatedly warned the government against the use of this route. The Sela River is known to be a sanctuary for the sweet-water Irrawaddy and brackish-water Ganges dolphins. These vulnerable marine creatures will be the first to be impacted by the oil spill. They will soon find breathing hard because the thick layer of oil over the river water will reduce the level of dissolved oxygen.

As a coastal mangrove forest, the vegetation in the Sundarbans gets inundated twice a day by high tides. Now that there is oil, as water recedes during the low tide, the oil will remain on the vegetation and the forest floor. The vegetation is the main food of various kinds of deer that live in the dense forest surrounding the river. The deer, in turn, is one of the main food sources of the Bengal tigers. So, in the long run, the population of deer and tigers, the two best-known animals from the Sundarbans, will be affected.

The mangrove ecosystem of the Sundarbans is primarily made up of four species of salt-water trees: Sundari, Kewra, Goran, Poshur and Gol. These trees reproduce from the waterborne seeds that fall on the ground. As oil settles on the forest topsoil, these seeds will die and over time, forest regeneration of the Sundarbans will be adversely affected. That in turn will put the deer and different types of primates in trouble who depend on these trees for living. These seeds are also the staple food of the Pungash fish that inhabits the Sela waters. This fish again is one of the main foods of crocodiles – a famous reptile from these forests. If Pungash does not get anything to eat, they will die, eventually putting the lives of crocodiles at risk as well.

Capsized tanker Southern Star Seven was carrying 358,000 litres of furnace oil to a power station in Gopalganj district from the Khulna oil depot when it capsized. The physical distance between Khulna and Gopalganj is not very much, but on water, it is a tedious round about journey. The Sela River route that the Southern Star Seven took is prohibited for all kinds of large vessels because it runs through deep forest and also a dolphin sanctuary. Then again, large vessels such as oil tankers do not have any option but to travel on Sela River because the legal route Mongla-Ghosiakhali-Morelganj has been unusable for more than three years because of excessive siltation.

The Centre for Environmental and Geographical Information Services (CEGIS), an autonomous body of the Water Resources Ministry, has been trying to press their recommendations to the government for a long time, even before the legal route went fully unusable in 2011. However, their recommendations for protecting the Chandpai dolphin sanctuary in Sela River, have never been heeded. The CEGIS has warned that plying of large vessels in the sensitive channel will result in ecological imbalance, water pollution and riverbank erosion.

Acknowledgement

Some information is cited from newspaper articles of *The Daily Star* and *Dhaka Tribune* of Bangladesh.

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