Indian National Centre for Ocean Information Services (INCOIS)
Ministry of Earth Sciences (MoES), Govt. of India, Hyderabad

Press Release

INCOIS advisory on Containers drift and simulated Oil Spill from on-fire ship WAN HAI 503 off Kozhikode, Kerala coast on 09 June 2025

Indian National Centre for Ocean Information Services (INCOIS), under the Ministry of Earth Sciences, Government of India, delivers critical ocean state forecasts and advisory services aimed at safeguarding the lives and livelihoods of maritime communities. These services are especially vital during extreme weather events such as tropical cyclones, high wave episodes, swell surges, search and rescue, oil spill, etc. INCOIS employs a state-of-the-art, multi-model operational ocean forecasting system that assimilates real-time observational data from a network of coastal and deep-ocean buoys.

On 09 June 2025, the Indian Coast Guard reported a maritime incident involving the Singapore-flagged Cargo vessel *WAN HAI 503*. The vessel, en route to Nhava Sheva, Mumbai from Colombo experienced a container explosion resulting in a significant onboard fire. The vessel was located approximately 70 nautical miles from Kozhikode, Kerala when the incident occurred and the vessel is currently adrift.

INCOIS promptly activated its Search and Rescue Aid Tool (SARAT). This tool is designed to assist maritime authorities in identifying probable drift paths of containers, persons or other floating objects at sea based on real-time and forecast oceanographic and meteorological data. In addition, recognizing the potential risk of environmental contamination, INCOIS deployed its Oil Spill Trajectory System. This system forecasts the movement and dispersion of simulated oil spill in the marine environment using advanced ocean circulation models. The simulation outputs help decision-makers assess the possible spread of oil spill, identify vulnerable coastal areas, and coordinate timely and efficient containment and clean-up strategies to minimize ecological damage.

INCOIS continues to monitor the situation and remains in close coordination with the Coast Guard, and other stakeholders, to provide updated advisories as needed.

The updated information of Search and Rescue Aid Tool and simulated Oil Spill Trajectory advisories given as Annexure-1 and Annexure-2 respectively.

Disclaimer: *The information provided is based on available data and simulations run by INCOIS using Mathematical models and forecasting tools. INCOIS is not responsible for any decisions or actions taken based on this information. Users are advised to consult relevant authorities for official guidance.*

Annexure-1

Search and Rescue Aid Tool (SARAT) output for drifting/missing objects

Based on the simulation outputs generated by INCOIS using its Search and Rescue Aid Tool (SARAT), there is an estimated 70-80% probability that the containers, persons, debris which went overboard from the vessel Wan Hai 503 may drift south-southeastwards from the accident location for the next 3 days, as shown in Figure 1. Simulations show that the containers are likely to continue to drift in the ocean for the next 3 days and might take longer to beach. However, caution is advised about a few containers beaching between Kozhikode and Kochi. The situation is closely monitored and updated drift directions will be provided.

This forecast provides a critical window for local authorities to enhance coastal surveillance, issue precautionary advisories to coastal communities, and prepare for potential marine hazards such as navigational obstructions or shoreline contamination.

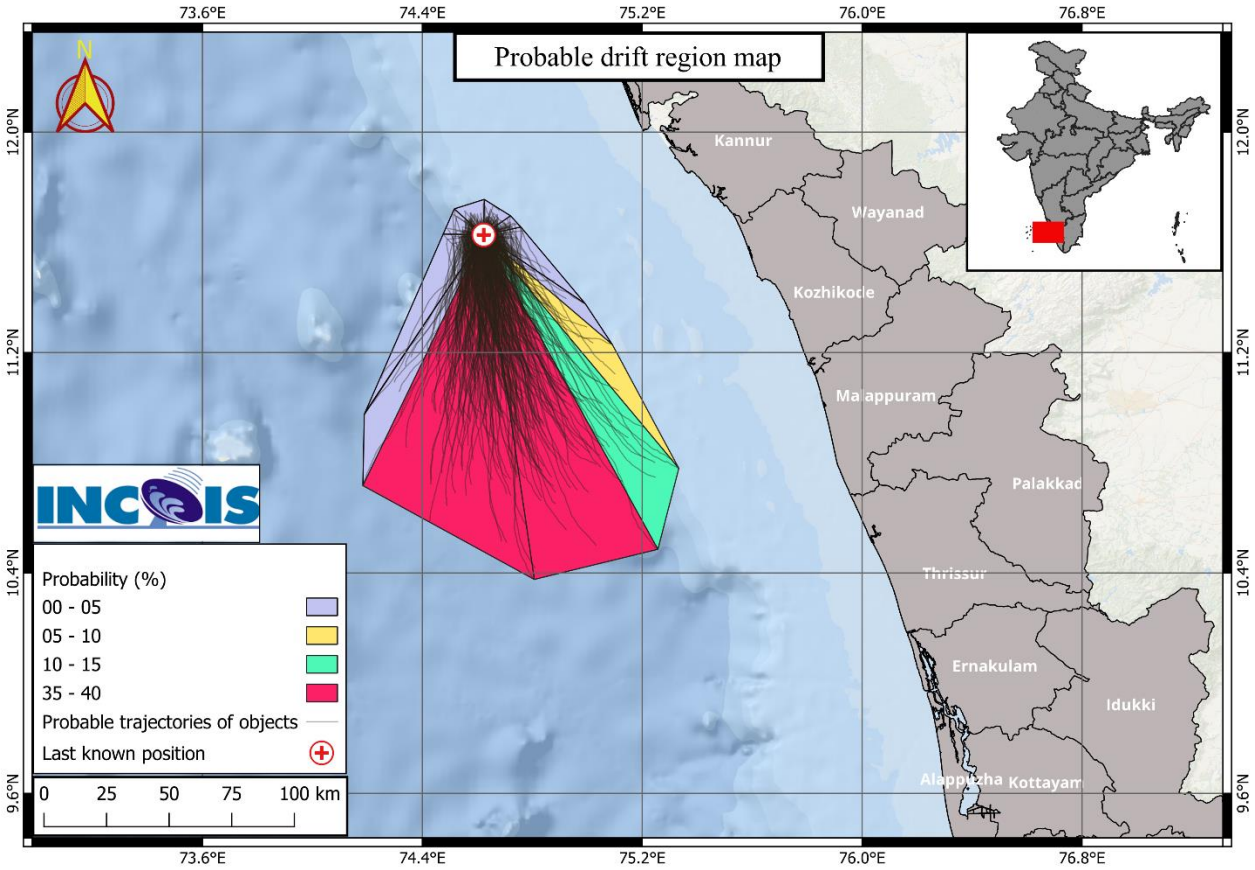

Figure 1**:** Probable drift areas of overboard containers, persons, debris.

Annexure-2

Advisory on the simulated Oil spilled Off Kozhikode

Details of the model run

Vessel location: 74.633 °E, 11.5333 °N; Hypothetical Spill start at16:00 hrs of 09.06.2025.

Pollutant considered: Bunker Oil 100 Tons (exact quantity spilled not known)

Model Run: 1600hrs of 09.06.2025 till 1600 Hrs of 13.06.2025 IST.

Hypothetical Advisory:

According to model run, the simulated spilled oil pollutant is anticipated to drift parallel to the coastline 1600 hours on 10 June 2025. By 1600 hours on 11 June, the pollutant is expected to continue its movement in a parallel direction along the coast. At approximately 1600 hours on 12 June, the spill is projected to maintain this trajectory. By 1600 hours on 13 June, the pollutant is expected to have progressed further in parallel direction along the coast. These projected drift patterns are illustrated in the accompanying Figure 2.

The black "+" symbol marks the reported spill location, while red crosses and red dots represent beached and floating oil particles, respectively. The spill movement is being continuously monitored using forecast data. INCOIS will issue periodic advisories to provide timely updates and guidance for mitigation efforts.

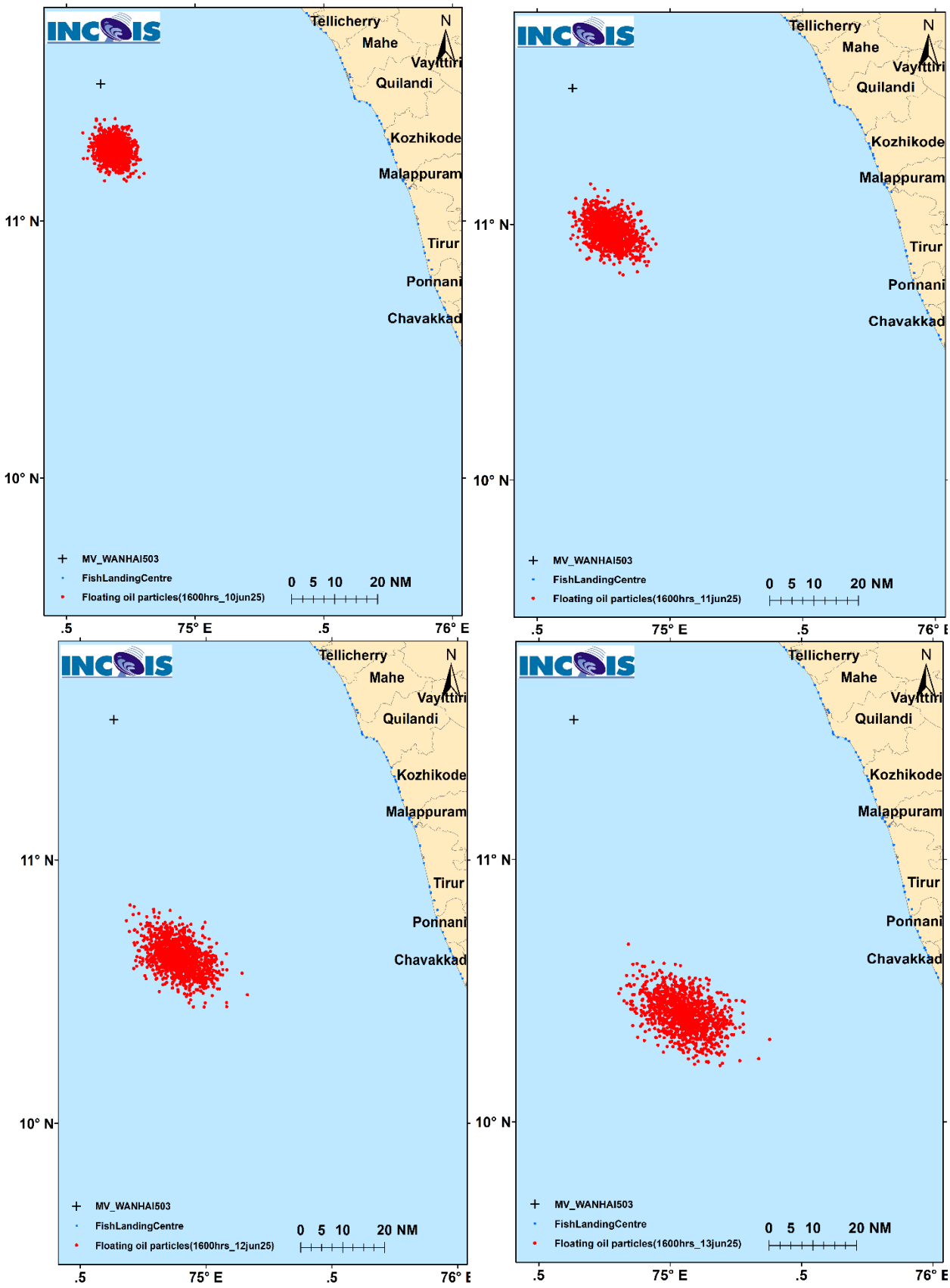

Figure 2**:** Probable oil drift pattern along Kerala coast