

## **Gis And Oil Spill Tracking Model in Forecasting Potential Oil Spill-affected Areas Along Terengganu and Pahang Coastal Area**

### **ABSTRACT**

Oil contamination can occur accidentally or incidentally in the environment as long as petroleum or shipping activities exist. There is a need to take appropriate preventive measures to reduce the negative impact by carefully monitoring the sprinkles and dispersion particles due to the oil spill movement. An expected oil spill originating from the Resak platform is positioned at 49.1 nautical miles from the Kuala Terengganu shoreline. The Dulang platform, positioned at 69.8 nautical miles from the Kuala Terengganu, can pollute the coastline of the Terengganu and Pahang ecosystems. This study aims; (i) make predictions from the direction of oil particle dispersion and (ii) engage the ecosystem to determine the effect of an oil spill on a platform around the coastal area. The combination of the Geographic Information System (GIS) and the Oil Spill Trajectory Model (OSTM) has been used to establish the appropriate response to locate the dense area of the slick. The result from the model running show in Northeast (NE) monsoon season, Terengganu and Pahang, have a high potential to affect. It is highly likely to reach the Terengganu coast area, especially in Dungun. It was predicted that 466 barrels of oil would arrive within four days of the December incident. Moreover, Kemaman and Pekan districts in Pahang also have the highest risk of being exposed to oil pollution during the Northeast Monsoon. This is due to the wind factors, which blow from South to North along the East coast of Malaysia Peninsular with a speed maximum of 13 ms<sup>-1</sup> and indirectly carry the oil particles to coastal areas in Terengganu and Pahang.