

## **Field Study to Identify River Plume Extension of Kerian River Discharge during Neap Tide and Spring Tide**

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River flow discharge into adjacent ocean carries buoyant of sediment and nutrient which produces a unique structure known as river plume. Sediments may be load along the surface, suspended within the water column, or creeping just above the sea bed. River plume is the sediment fuel that can be associated to the formation of future delta within the estuary area. The study was performed at mouth of Kerian River that is located at the Northern part of Malaysian state of Perak and originated

from Bintang ranges, Kedah. The data collection were performed twice; once during neap tide and spring tide to see the offshore extension of Kerian River plume. The data gathered in the field include salinity, temperature, turbidity, and Total Sediment Suspended, TSS. Analysis of the collected data indicate Kerian River plume extension is up to 3 km from the river mouth during neap tide and suppressed upstream during spring tide into 2 km seaward from the river mouth.