

Phytoplankton assemblage of the Merambong Shoal, Tebrau Straits with note on potentially harmful species

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Abstract: Merambong Shoal of the Tebrau Straits is an important seagrass bed and feeding ground to the marine mammal, *Dugong dugon*. The area is exposed to greater environmental pressures due to coastal development in recent years. Phytoplankton composition of the Merambong Shoal was assessed in this study based on the samples collected during the JSPS-Malaysia Joint Expedition in July 2012. A total of 30 genera of micro-phytoplankton were documented, with five and twenty five genera of dinoflagellates and diatoms recorded respectively. Species composition was dominated by diatom (83.33%). Station SD1 (sandy area) showed the highest diversity, followed by ST1 near the port of Tanjung Pelepas. The diversity was low at ST4 (Iskandar Marine Park) and ST5 (reclamation area), with only ten and eleven genera of dinoflagellates and diatoms found. Potentially harmful species were identified at all stations, of which six were known as bloom-forming species that responsible for fish kills (i.e., *Chaetoceros affinis*, *Chaetoceros decipiens*, *Chaetoceros lorenzianus*, *Ceratium furca*, *Ceratium fusus* and *Ceratium tripos*); four were associated with Diarrhetic Shellfish Poisoning (DSP) (i.e., *Dinophysis acuta*, *Dinophysis caudata*, *Dinophysis miles*, and *Prorocentrum micans*); and two was potentially associated with Amnesic Shellfish Poisoning (ASP) (*Pseudo-nitzschia brasiliiana* and *P. pungens*). The findings of this study have provided a baseline reference for future phytoplankton monitoring in the area.

Keywords: phytoplankton assemblage, harmful algal bloom, Merambong Shoal, Tebrau Strait

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