

## ASSESSING PREVALENCE OF CORAL HEALTH AND DISEASE IN TIOMAN ISLAND MARINE PARK, MALAYSIA

**Fikri Akmal Khodzori<sup>1</sup>**, Shahbudin Saad<sup>1,2</sup>

<sup>1</sup>Department of Marine Science, Kulliyyah of Science, International Islamic University Malaysia, Jalan Sultan Ahmad Shah, 25200, Kuantan, Pahang, Malaysia

<sup>2</sup>Institute of Oceanography and Maritime Studies, Kulliyyah of Science, International Islamic University Malaysia, Kg. Cherok Paloh, 26160, Kuantan, Pahang, Malaysia

\*Corresponding author email: [ocean@iium.edu.my](mailto:ocean@iium.edu.my)

### ABSTRACT

Coral disease outbreaks continue to reduce coral populations worldwide. Its occurrence and prevalence are increasingly reported around the Indo-Pacific countries. However, there is a paucity of research on the coral disease in Malaysia. This study provides baseline information on the prevalence of coral health and disease in Tioman Island. Disease surveys were recorded a higher mean prevalence of healthy (66.9%) compared to diseased (6.9%) and compromised (26.0%) coral colonies. Developed isolated (9.1 ± 3.8%) and west coast (6.4 ± 1.2%) reef areas exhibited higher disease prevalence compared to less developed east coast (4.5 ± 0.5%) area of Tioman. Among five recorded diseases, yellow band disease/ YBD (3.0%) showed the highest mean prevalence, followed by ulcerative white spot/ UWS (1.5%) and white syndrome/ WS (1.1%). Meanwhile, sediment necrosis/ SN (6.7%), algal overgrowth/ AO (6.5%) and predation scar/ PS (6.5%) were the higher mean prevalence of compromised health states. *Fungia* sp. was found dominant being affected by YBD while *Porites* sp., being affected by UWS, AO and PS. Overall, this study suggests that the coral colonies in Tioman were in good condition. However, further study is required to examine the factors influenced by the occurrence of recorded coral diseases and other compromised health.

**Keywords:** Coral disease, Yellow band disease, Ulcerative white spot, White syndrome, Peninsular Malaysia

**Acknowledgement:** This research was funded by E-Science Grant (SF16-002-0071) under the Ministry of Energy, Science, Technology, Environment and Climate Change, Malaysia (MOSTI). The authors wish to express their gratitude to the laboratory teams from the Department of Marine Science, Kulliyyah of Science, International Islamic University Malaysia (IIUM) and the INOCER Research Centre, for technical assistance and logistics throughout the sampling period. Appreciation also goes to the Department of Marine Park Malaysia (DMPM) for providing a permit to conduct the scientific research in the marine protected area of Tioman Island.