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著者	Zulfigar Yasin, Aileen Tan Shau Hwai
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## The Short and Intermediate Term Impacts of the Indian Ocean Tsunami 2004 on the Malaysian Fisheries and Some Associated Marine Habitats in the Straits of Malacca

## Zulfigar Yasin and Aileen Tan Shau Hwai

School of Biological Sciences, UniversitiSains Malaysia, Penang 11800, Malaysia

Human communities living along the coasts were greatly affected by the tsunami of 26 December 2004. Apart from the lost of life and property the detrimental effects of the tsunami came about from the direct losses as a result of damage to natural coastal ecosystems. These were the source of their livelihood. We have categorized the damage caused by the tsunami into immediate damage (damage seen after from hour to a period of weeks following the tsunami), short term (one to two months following the tsunami) and intermediate term damage (from two months to more than a year). Damage in the long term will be duly assessed. The degree of damage to the coastal ecosystems is non-uniform and is a function of the severity of the wave and the status of the ecosystem before the wave hit. Impacts can also be direct (as a result of the wave energy and/or sea water inundation on non salt-tolerant species and/or introduction of foreign material into the coastal habitat). Indirect impacts resulted from changes intermediated through biological channels such as changes in the food chain, living environment and maybe even changes in the living community components. The offshore reefs and islands showed damages unlike that of large storm damage. Erosion was recorded on the reef tops, especially the reef edge. Sediment resuspension and physical damages had caused severe damages to fragile coral skeletons. The shallow and intertidal reefs were most affected, followed by evidence of secondary effects of tsunami. As for the mudflats and coastal sandy beaches, changes in beach profile as well as the animal communities had been recorded. Benthic epifauna was most affected and there was a strong evidence of community changes.



## Zulfigar Yasin

(e-mail: zulfigarusm@yahoo.com)

Professor. My research interest is on the ecological aspects of marine macrobenthos, in particular the coral reefs. My interest also includes ecological, taxonomy and conservation studies on corals, molluscs and sea cucumbers. I am also focusing on the effect of climate change on the coral reef ecosystem, with special interest on ocean acidification and coral bleaching. I am currently engaged in studies on coral bleaching and ocean acidification in the coral reefs of Coral Triangle, as well as the Straits of Malacca.