

BASIC KNOWLEDGE IN MARINE SCIENCES

Edited by

Normawaty Mohammd-Noor



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Anidha Visvanathan & Normawaty Mohammad-Noor

Institute of Oceanography and Maritime Studies, Kulliyah of Science, International Islamic University Malaysia, Jalan Sultan Ahmad Shah, Bandar Indera Mahkota, 25200 Kuantan

Introduction

Benthic dinoflagellates are dinoflagellates which are rarely found swimming freely in water but are rather found living epiphytically on algal surface (Fukuyo, 1981; Faimali, *et al.*, 2011), as well as in association with seagrasses, corals, mangrove and sediments such as sand particles (Leaw *et al.*, 2010; Mohammad-Noor *et al.*, 2010; Faimali, *et al.*, 2011). They are primary producers and therefore contribute greatly to the production of the coral reef community (Fukuyo, 1981). However, dinoflagellates make up 75% of toxin-producing microalgae (Smayda, 1997) and are harmful towards herbivorous fishes and molluscs.

Among all known benthic dinoflagellates, those from the genus *Gambierdiscus* and *Ostreopsis* are potentially the biggest threat towards human health as well as the environment (Parsons, *et al.*, 2011).

Benthic Dinoflagellate Blooms

Benthic dinoflagellate blooms gives rise to major environmental effects that impacts health and economic conditions, especially in tourist destinations (Faimali, *et al.*, 2011). When it happens, blooms do not only pose threat to humans but also animals which live within the marine environment (Kim *et al.*, 2011). Blooms are often associated with tropical climate areas but recently, they have been occurring in areas of temperate climate (Mangialajo, *et al.*, 2008; Shears, *et al.*, 2009).