



## **A perspective on the pH measurements and the state of coral reefs in the South China Sea**

Z. Yasin

School of Biological Sciences, Universiti Sains Malaysia, 11800 Penang, Malaysia

A review on the historical measurements of the pH in the past 30 years in the South China Sea and the Straits of Malacca was carried out. Direct measurements from other major research expeditions such as the Research on the Seas and Islands (ROSES) Expedition, the Matahari Expeditions and the Southeast Asia Fisheries Development Corporation (SEAFDEC) involving the Southeast Asian countries are examined. Where sea surface temperatures are also collected, the aragonite saturation values are calculated.

The data summarized the state and volume of measurements carried out on the pH of the surface waters South China Sea. This is relevant due to the importance of the area as a rich marine biodiversity realm of the coral triangle, which is expected to be adversely affected by ocean acidification.

The paper also illustrates the state of the coral reefs in the area as revealed by the ROSES Expedition of Malaysia in 2004 and subsequent observations. These include the coastal fringing reefs of north Borneo and the offshore reefs of the South China Sea.

A review is also made on the recent and local threats that affect the coral reefs in the area. The paper attempts to provide a baseline for the existing conditions and the surface pH of the South China Sea upon which the expected changes in climate will operate.