

# UMS: Red Tide in Sabah not linked to sea warming



Dr Ann: Other factors

KOTA KINABALU: Although increase in sea water temperatures have been known to trigger the deadly Red Tide in cold waters, Universiti Malaysia Sabah (UMS) researchers say this is not the case in Malaysia.

"In Malaysia where surface sea temperatures are normally high, we found no correlation between this and blooms of Pyrodinium," said Assoc. Prof. Dr Ann Anton.

Its School of Science and Technology, instead, identified nutrients and hydrographical (water movements) as the

contributing factors.

"These two factors are important in stimulating the growth of the Pyrodinium cyst (equivalent to 'seeds') which the plankton produces when conditions are not conducive for its survival," she said Monday.

On Sunday the Fisheries Department confirmed the presence of Red Tide in parts of the West Coast and cautioned the public against consuming all types of shellfish such as oysters, mussels, clams and cockles until further notice. Consuming affected shell-

fish causes paralytic poisoning and symptoms include vomiting, abdominal pains, diarrhoea, nausea, hypersalivation, inability to walk, paralysis and numbness, among others.

The first record of Red Tide in Sabah was in 1976 in which 200 people were afflicted. An outbreak in 1980 killed four children and two more the following year. It is caused by rapid growth of toxic phytoplankton known as Pyrodinium bahamense.

Sea waters around Pulau Gaya, off the State Capital, recorded a cell density of

16,830 per litre of P bahamense on May 21 and oysters taken from there the same day had a toxin level of 1,940 Mouse Units (MU).

The Fisheries Department usually imposes a ban when toxin level reach 400MU.

Dr Annn said a group of UMS professionals headed by herself recently conducted research on the link between nutrients and hydrographical factors in causing Red Tide.

"Our findings revealed nutrients and hydrographical factors to be vital in stimulating the growth of the

Pyrodinium cysts.

"The cysts settle to the bottom sediments and when they are resuspended in the water column by water currents, the nutrients in the water allow them to reproduce at a fast rate and bloom, thus causing Red Tides," she said.

The UMS team carried out detailed studies on nutrient concentrations in order to detect slight changes in their levels as well as a thorough study on the cysts.

She said the team have been collaborating with Japanese researchers from the

Asian Natural Environmental Science Centre in Tokyo University.

Ann confirmed that coastal waters off Sabah's west coast have been infested by Pyrodinium bahamense var compressum, a phytoplankton causing red tides for over 20 years.

She said the plankton produces a toxin (paralytic shellfish poisons or PSP) which shellfish "feeds" on and results in mortalities only when humans eat the poisoned shellfish.

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