Coral reef monitoring in the Sisters’ Islands Marine Park, Singapore
Using Aanderaa Water Quality Sensors and SeaGuard II Doppler Current Profiler

Haven for coral reef

Singapore is densely populated with a high level of economic development. It is also one of the largest harbours in the world, putting the surrounding marine environment under stress. In 2015, the National Parks Board of Singapore designated a marine park area (160,000 m²) at Sisters’ Islands to provide a safe refuge for the coral reef ecosystem. The park has also become a platform for outreach, educational, conservation and research activities related to Singapore’s native marine biodiversity. The water must be monitored continuously along with observed changes on the reef to understand how coral species and other reef organisms respond to changes in the water conditions.

Coral reef monitoring

In a cooperative effort with St. John's Island National Marine Laboratory (TMSI, NUS) and the Friends of the Marine Park (FoMP), an Aanderaa SeaGuard II Doppler with water quality sensors will be deployed on the reef.

Better monitoring

Before the longer monitoring campaign, a 1-month trial was done, measuring currents, particles, oxygen, salinity, and temperature. Based on results from the trial it was decided that the set-up will be expanded with a wave and tide sensor mounted on the instrument and a cable-connected DCPS 5810 with oxygen and turbidity to assess currents closer to the reef structure, as well as gradients of oxygen and particles above the reef. Oxygen gradients will enable calculations of metabolic rates of the reef and particle gradients to better understand particle settling.

Newsflash

For more information and questions please contact us at aanderaa@xyleminc.com.