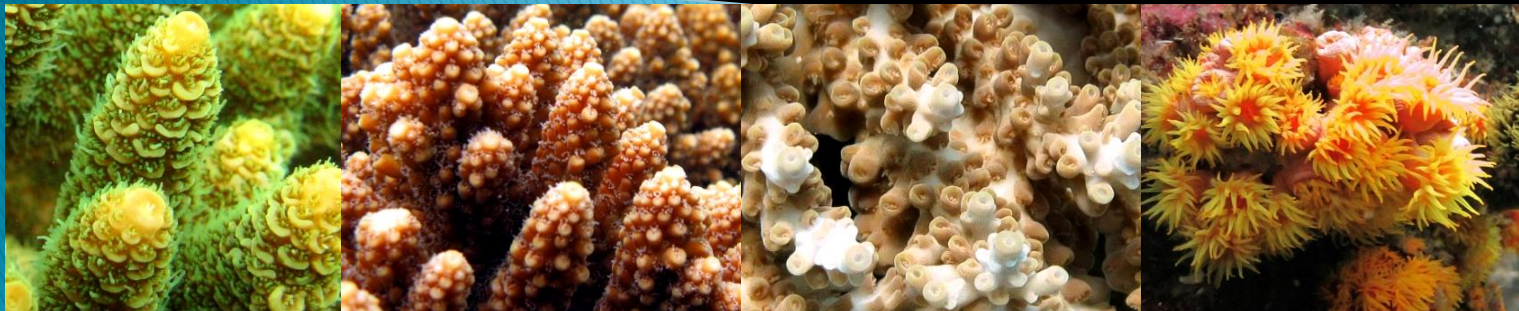




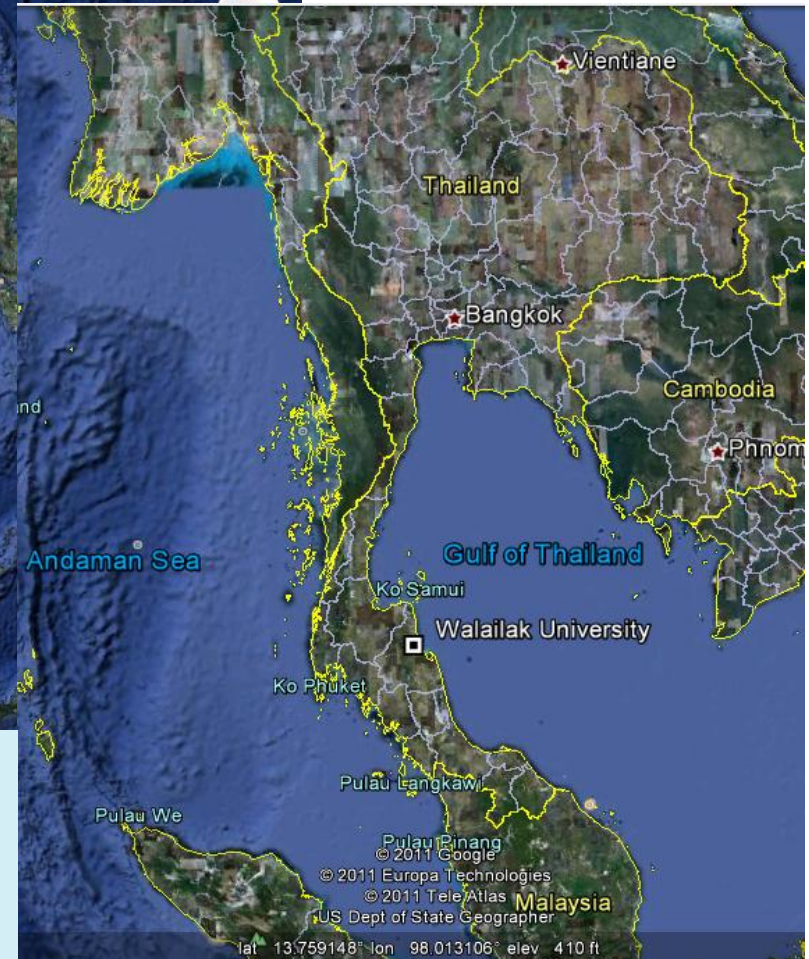
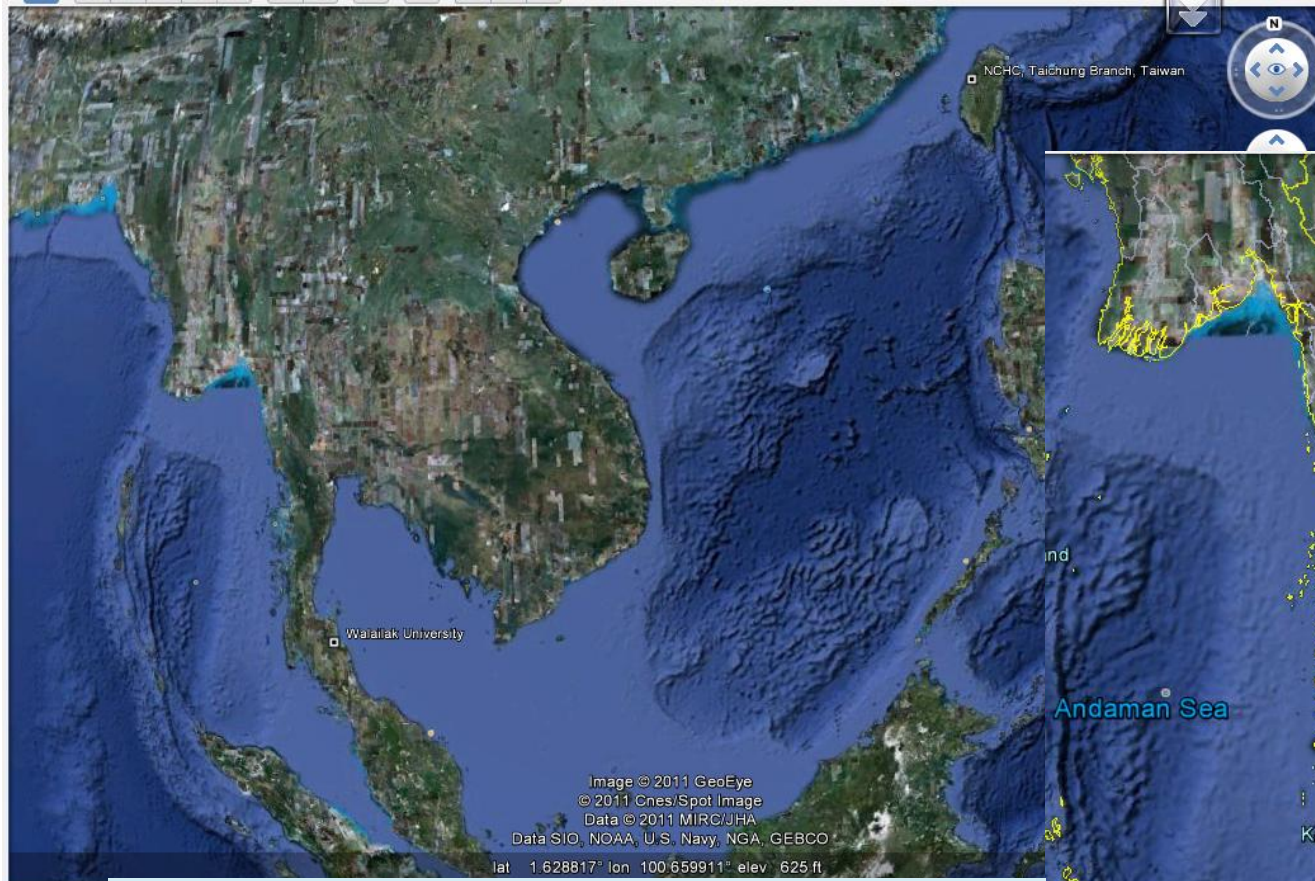
Center of Excellence for Ecoinformatics NECTEC–Walailak

Sirilak Chumkiew

Center of Excellence for Ecoinformatics (CoE for Ecoinformatics) NECTEC–Walailak University,
Nakhon Si Thammarat, Thailand



Where we are?



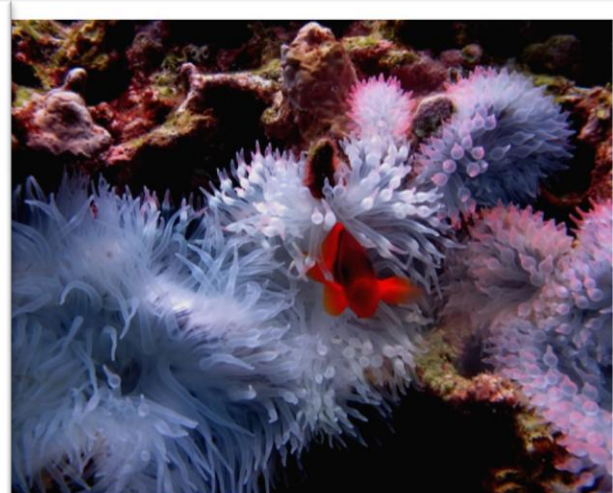
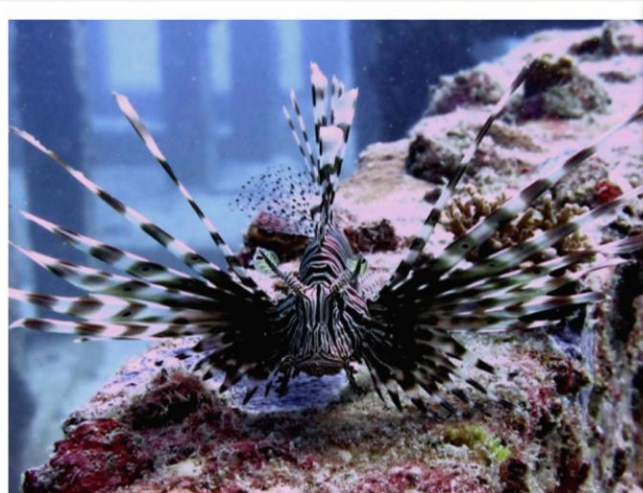
CoE for Ecoinformatics
School of Science, Walailak University,
222, Thasala, Nakhon Si Thammarat,
80161, TH Tel. 6681-9220597
Email: krisanadej@gmail.com

Area of Our Interests

- ▶ Computing
- ▶ Ecology: Cloud Forest, Coral Reef, Parah Forest and Oyster Farm etc.
- ▶ Public Health: Mosquito and Dengue Fever and Dashboard Decision System
- ▶ Sensors Technology

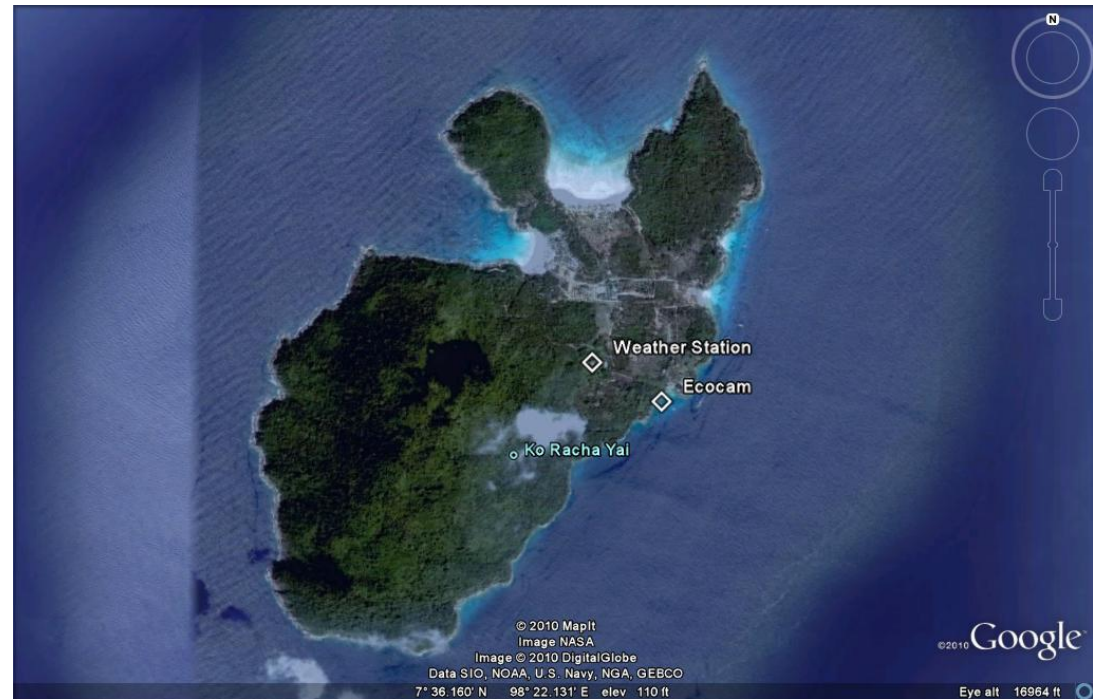
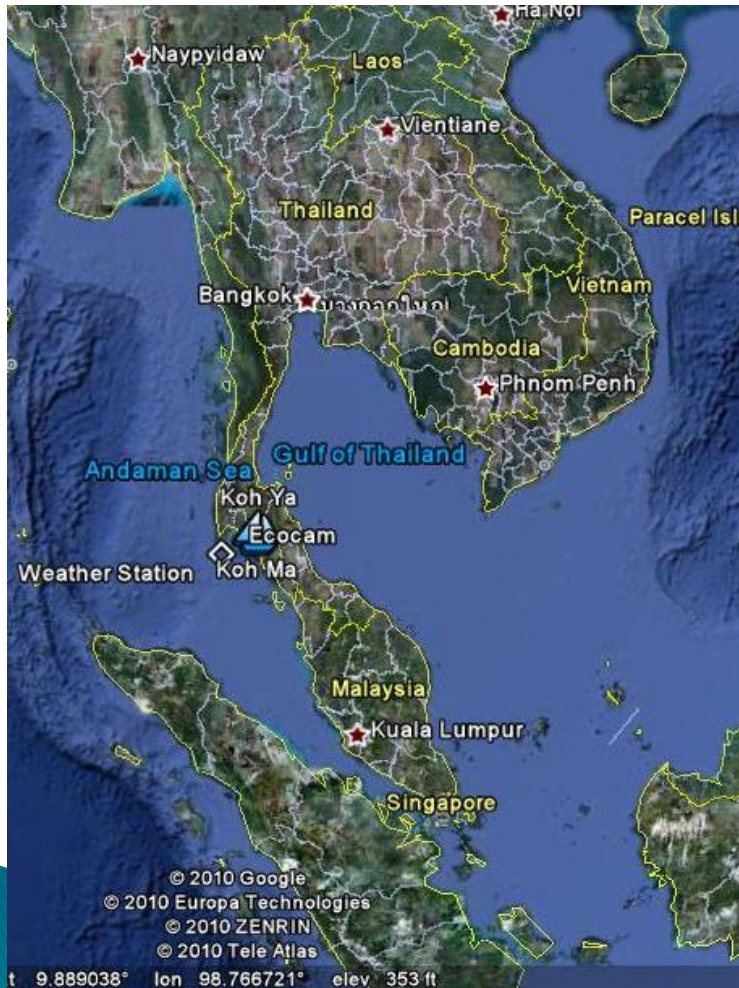


Coral Reefs Monitoring



Site Location

- ▶ Racha Island, Thailand is located at latitude 7.61528°N and longitude 98.37125°E



Racha Island's coral diversity

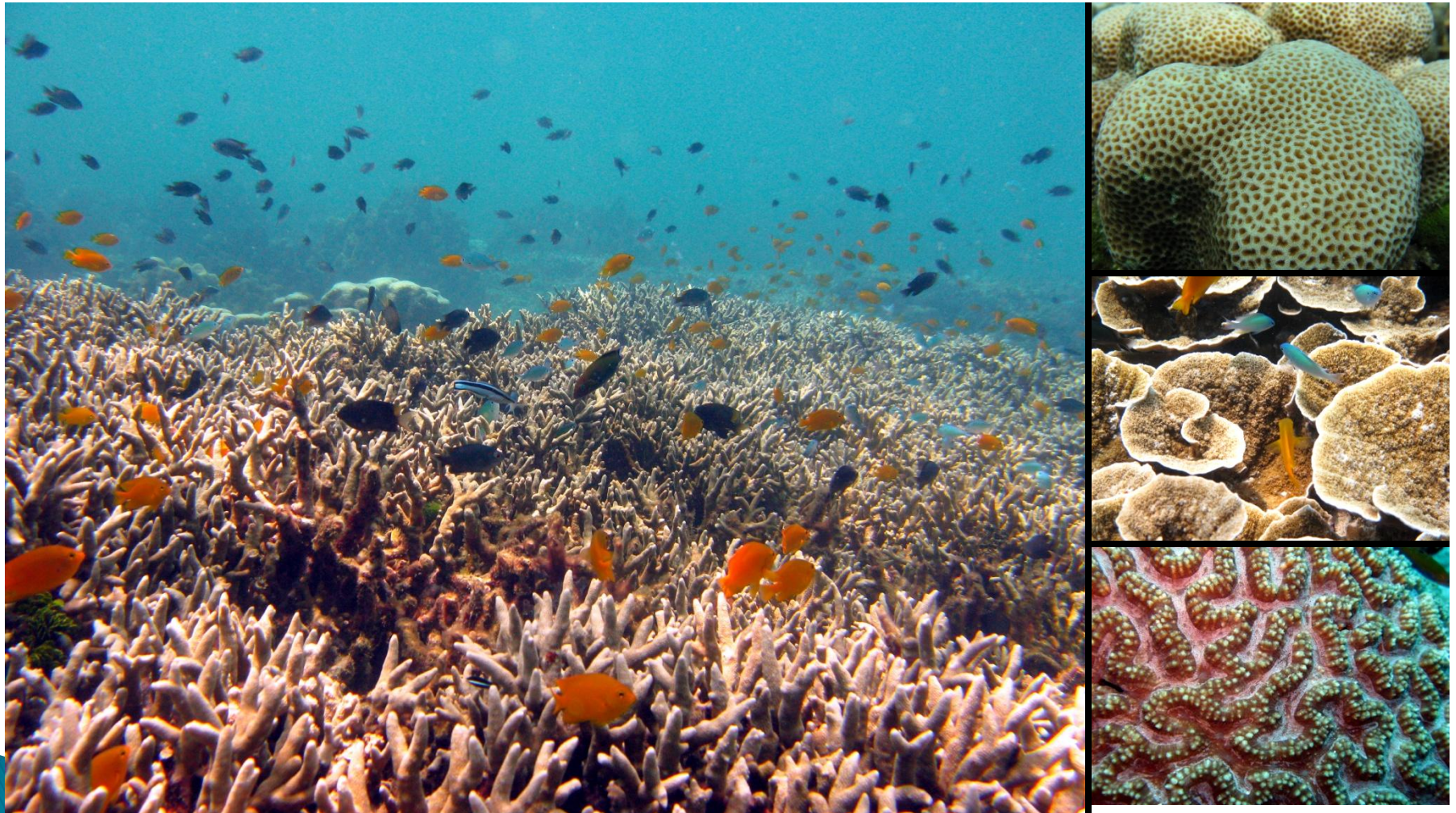


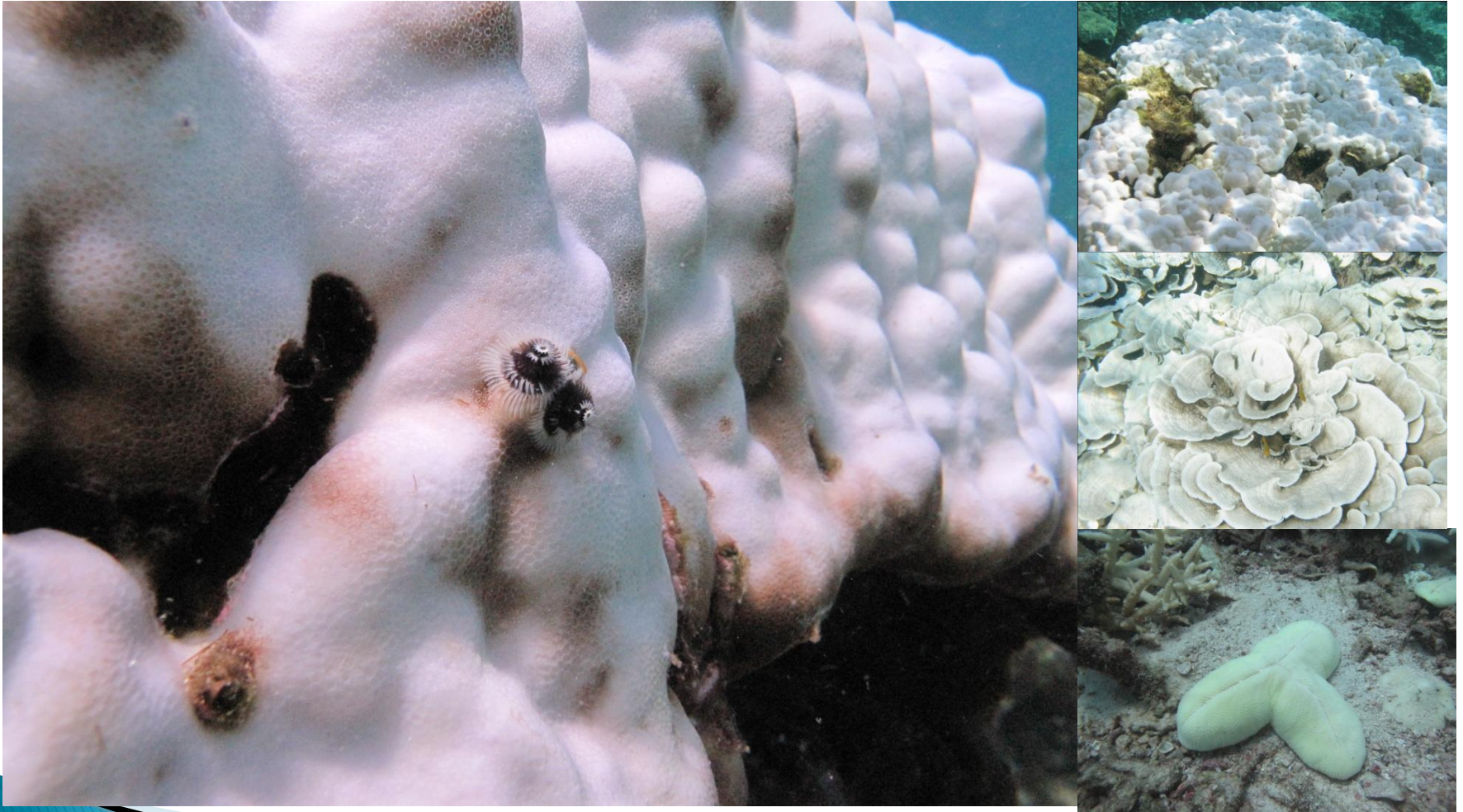
Photo by Virtual Racha Yai

Racha Island's diversity

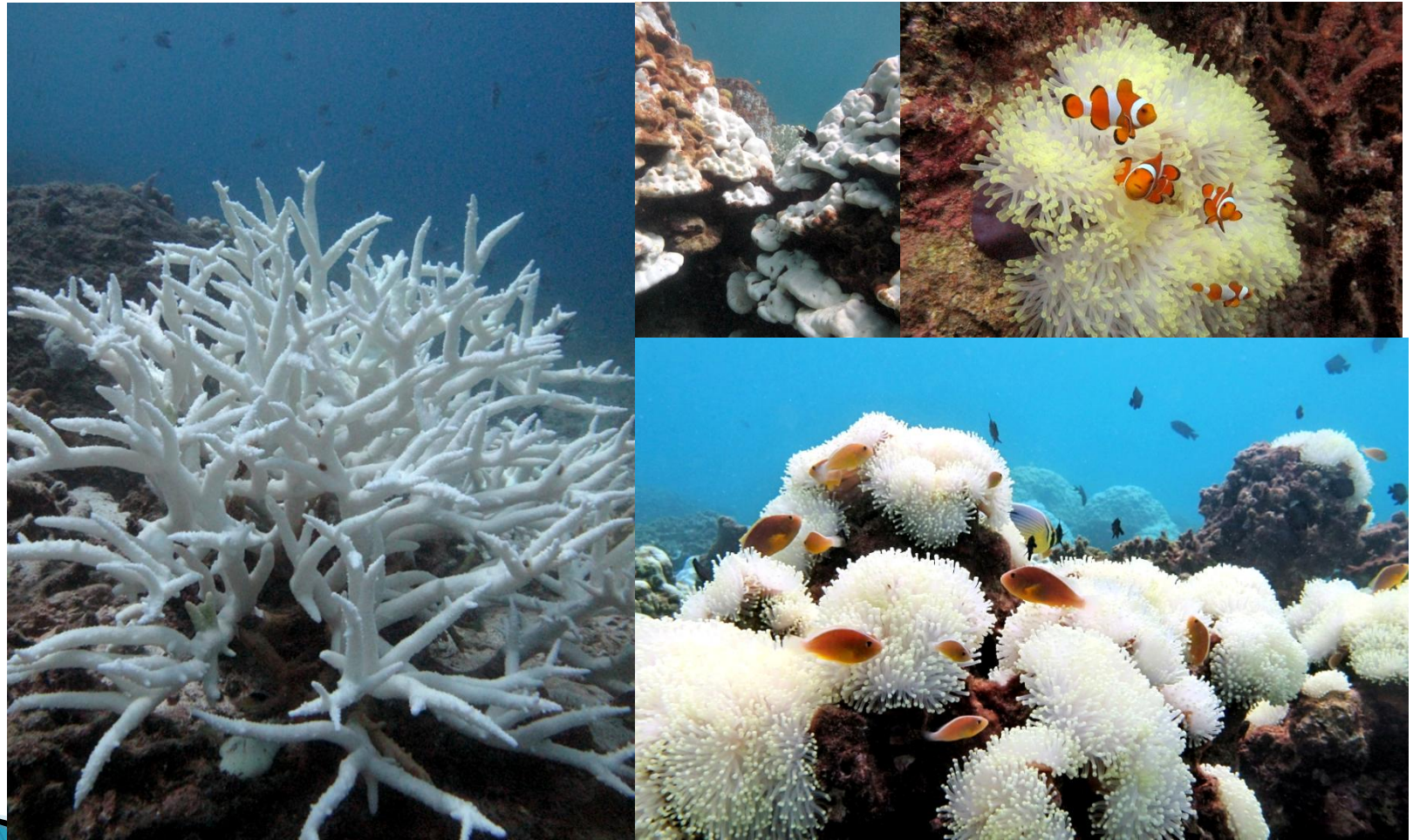


Photo by Virtual Racha Yai

Bleaching Event at Racha Island during May 2010



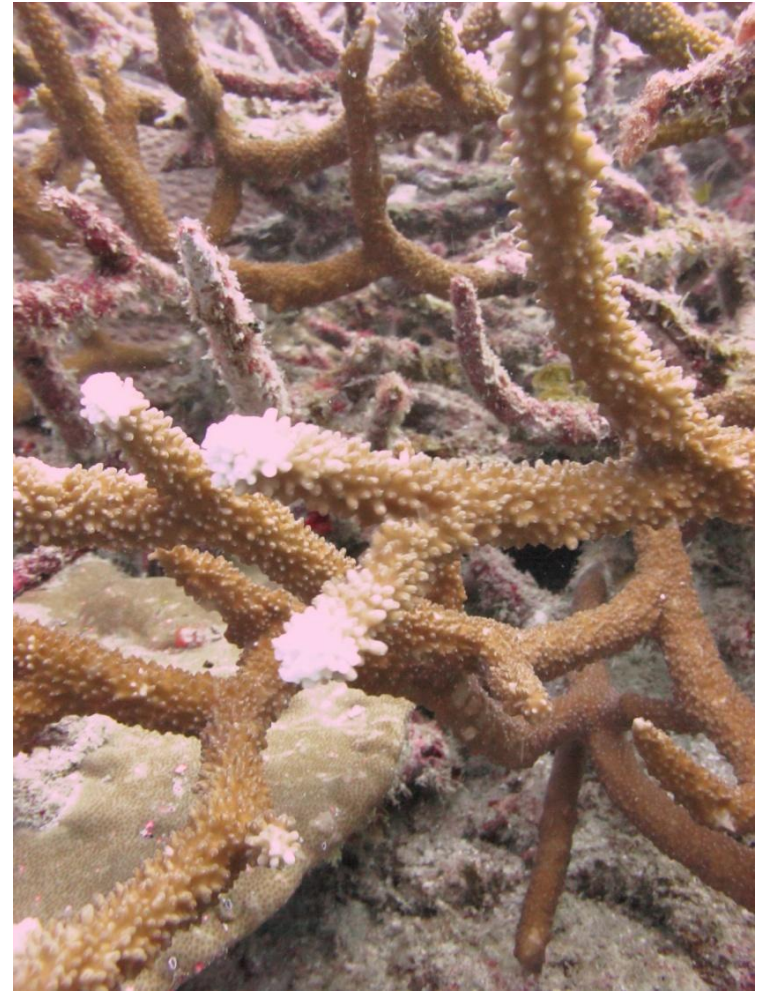
Bleaching Event at Racha Island during May 2010



After Bleaching Event at Racha Island during May 2010



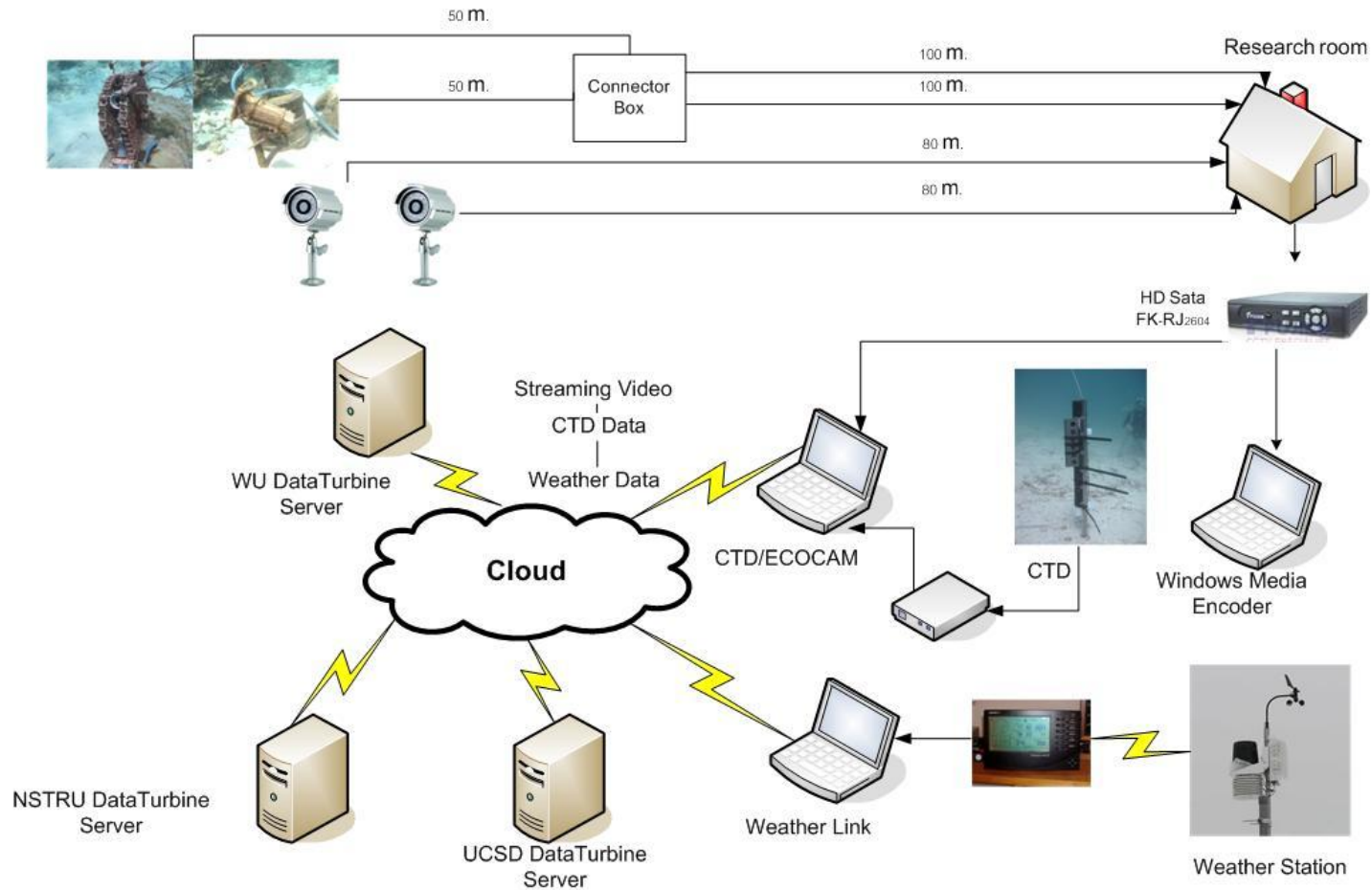
After Bleaching Event at Racha Island during May 2010



Research Question

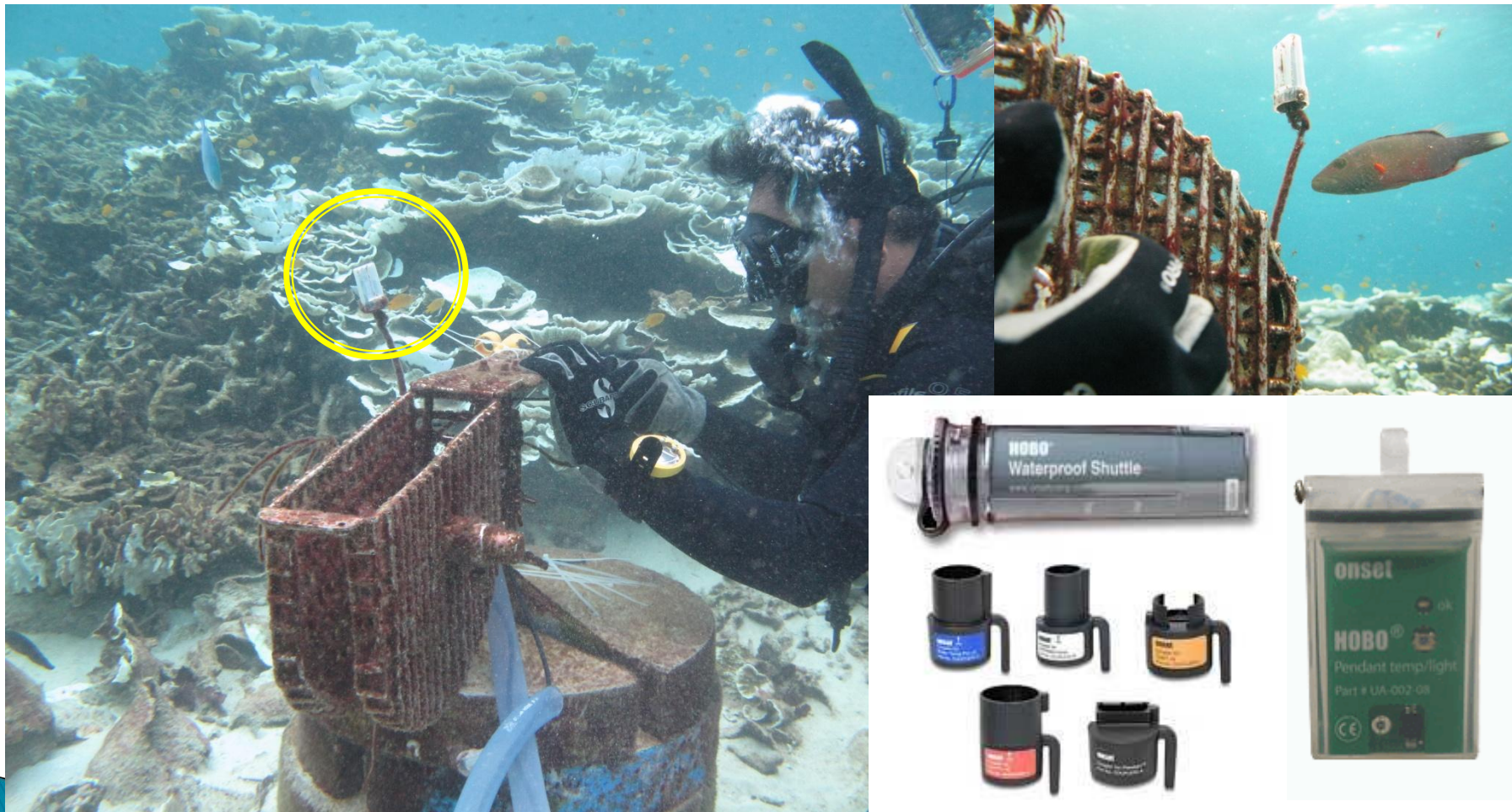
- ▶ Does the Climate Change Occur at Racha Yai Island?
- ▶ Does the climate change affecting on Coral Reef at Racha Yai Island?
 - How is the climate change affecting on coral bleaching event at Racha Yai island?
- ▶ Does the climate change affecting on Coral Reef Fish at Racha Yai Island?
 - How coral bleaching, coral mortality and habitat degradation affecting on the colonisation of fish (in term of fish abundance and diversity)?

System Overview

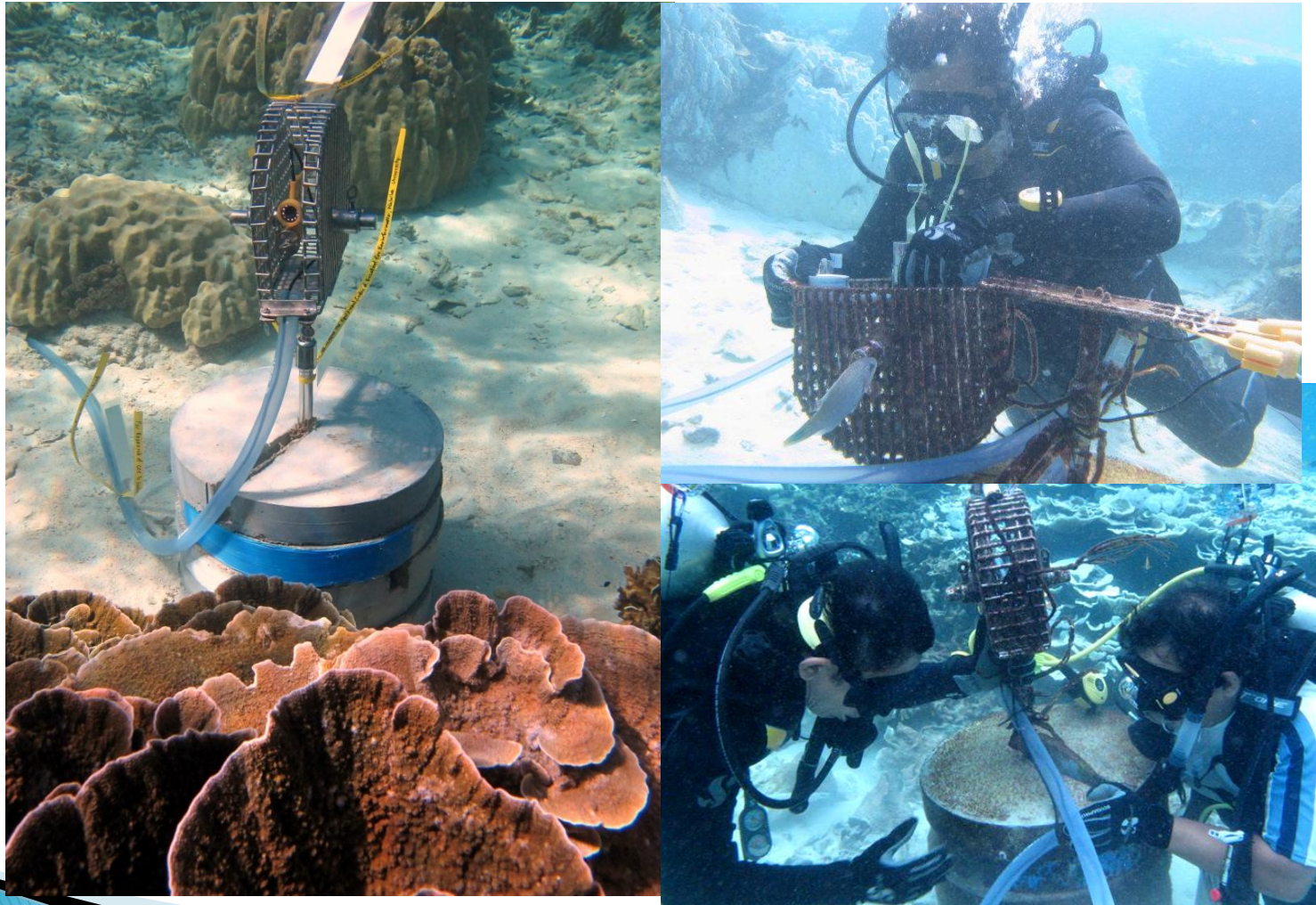


System Overview of Racha Island,
Walailak University

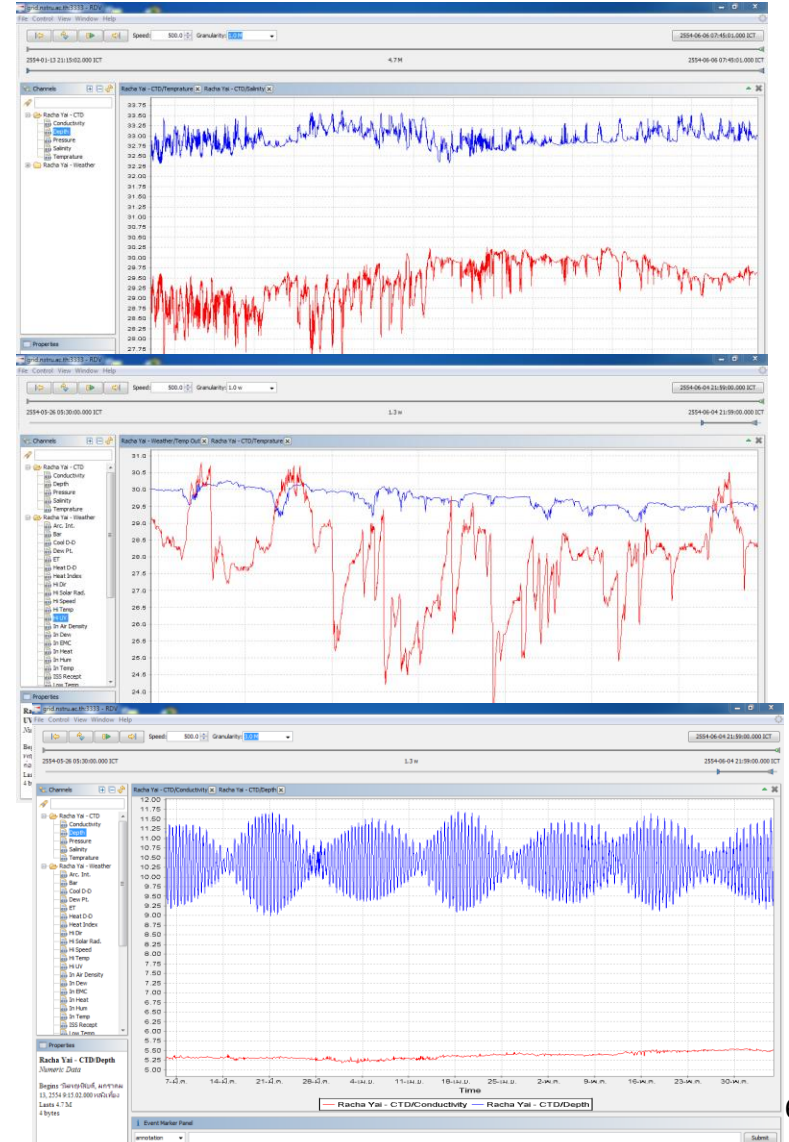
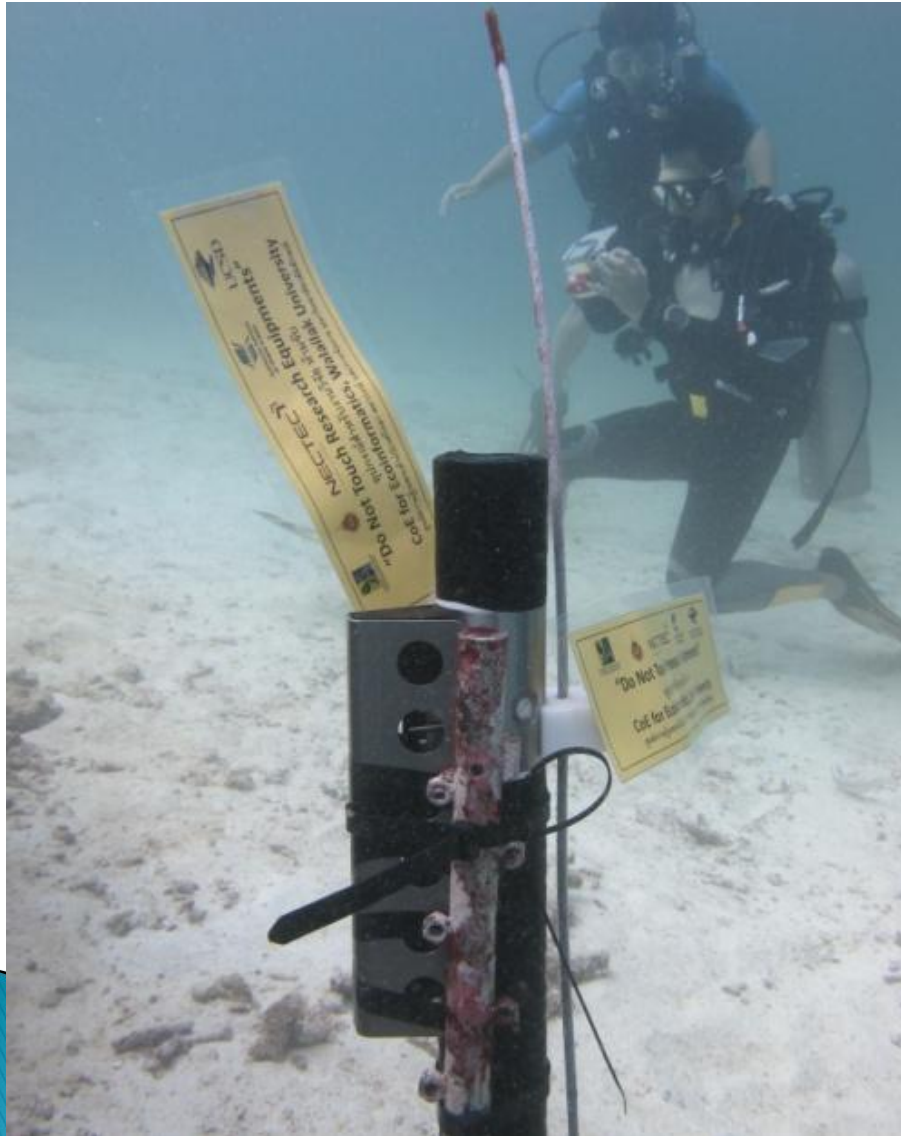
Monitoring physical parameters at Khon Kae Bay, Racha Island



Monitoring physical parameters at Khon Kae Bay, Racha Island



Monitoring physical parameters at Khon Kae Bay, Racha Island

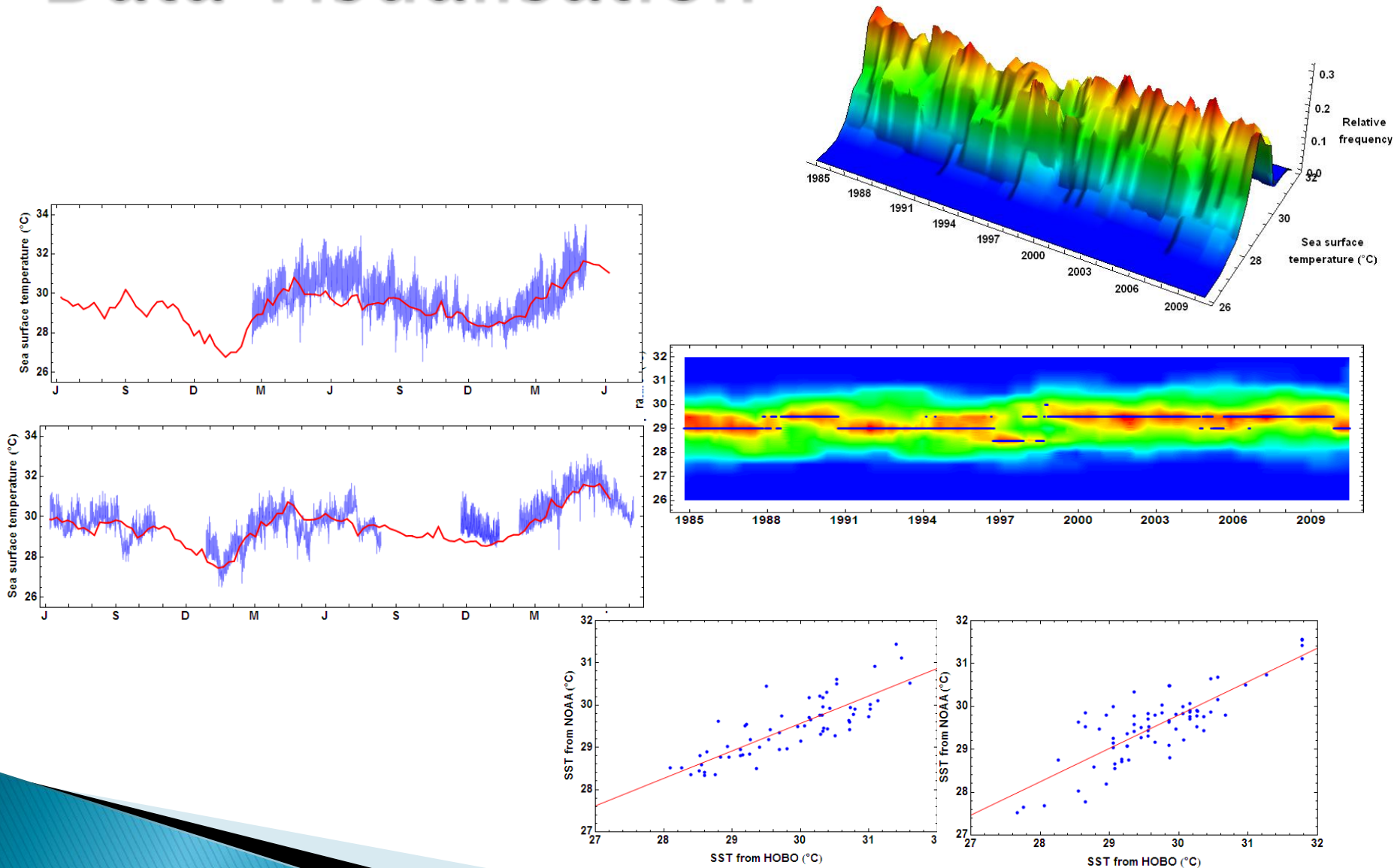


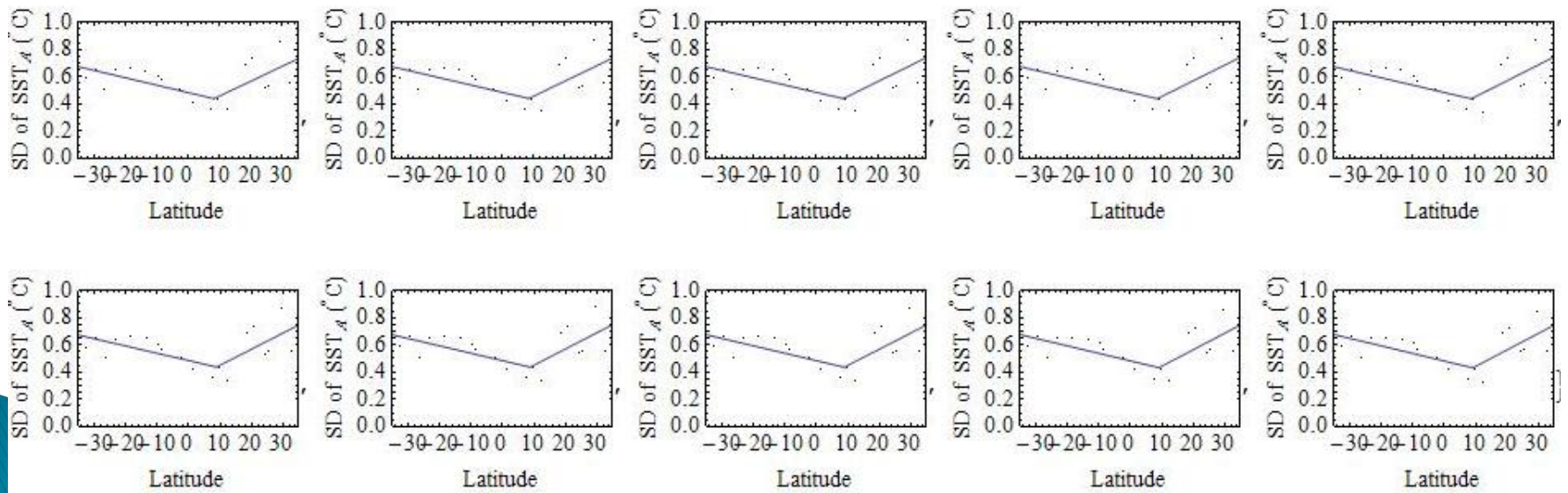
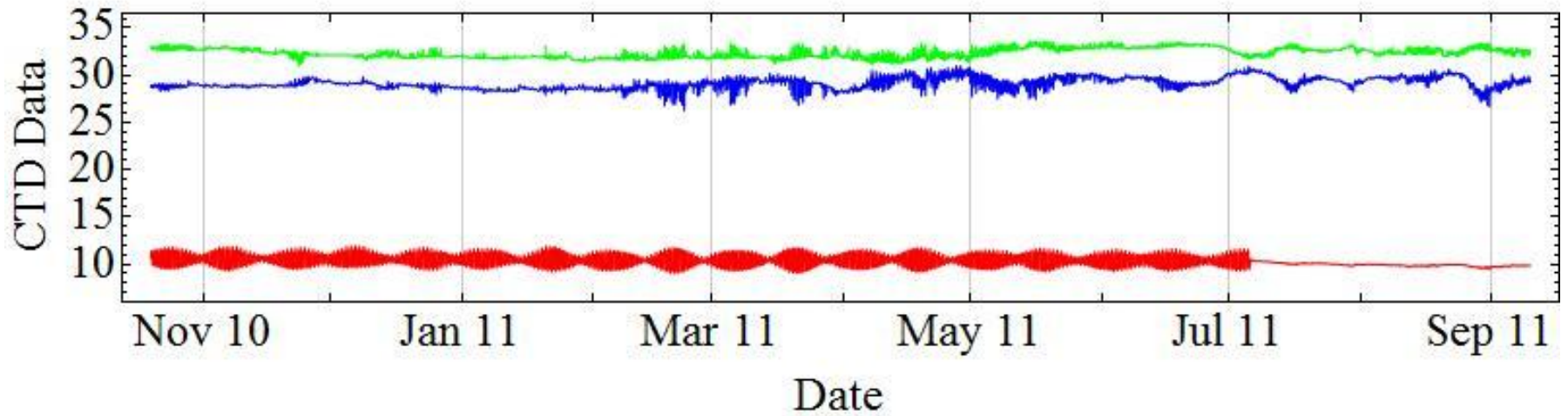
Monitoring physical parameters at Khon Kae Bay, Racha Island

- ▶ Davis Vantage Pro II Plus was installed at Racha Island since Nov 2009.
- ▶ 26 weather data were measured, e.g. max/min temp, RH, rainfall, UV index, solar radiation, wind speed, wind direction.



Data Visualisation





Student Training



Developed Teacher Guide



Version.1

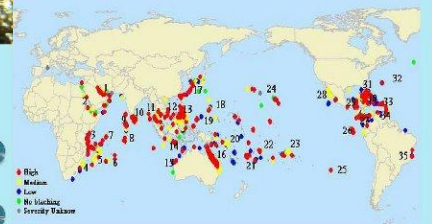
Teacher Guide Virtual Site Coral

11

Teacher Guide Virtual Site Coral Reef

Version.1

หน่วยที่ 1 ระบบนิเวศปะการัง



Teacher Guide Virtual Site Coral Reef

Version.1

หน่วยที่ 4 อุณหภูมิน้ำทะเลในระบบนิเวศปะการัง

Version.1

หน่วยที่ 3 พฤติกรรมของสิ่งมีชีวิต