

## **Coral biology and coral reef monitoring methods**

Chasing coral, Reef Check, and the practice of using Coral Point Count with Excel Extensions (CPCe) program

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### **Summary**

Coral reefs, the rainforest in the ocean, deliver several services, including providing protein, servicing as tourist spots as well as protecting the coastline. However, in the Anthropocene era, corals, in particular scleractinian corals, one of the main reef builders in coral reef ecosystem, are facing multiple threats caused by human activities and climate change. In the first section of this lecture, we are going to explore how amazing of scleractinian corals and the biggest threat of coral reefs, coral bleaching events, by watching a documentary, Chasing Coral. In the second section, a citizen scientist approach for monitoring the status of coral reefs, Reef Check, will be introduced briefly. In the last section, a practice, we will explore the benthic community composition on the intertidal zone at Green Island by analysing the images collected earlier using Coral Point Count with Excel Extension (CPCe) program.

### **Key Concepts**

- Scleractinian corals and coral reefs systems are vital for both the ecosystem and for human.
- Coral reef systems are under threats, including pollution, habitat destruction, overfishing, human activities and climate change.
- There are several approaches everyone can help the coral reef ecosystem even if you are not a marine biologist, such as participating the citizen scientist program, Reef Check.
- The question would like to be answered is the key point of selecting the suitable methods for monitoring the status of coral reefs.

### **Group Discussion**

Following the lecture given by Hui-Chen Lin and Allen Liu. Students are going to explore the outcome of a local thread, tourist activities, to the benthic community composition on the intertidal area in Green Island by analysing benthic images using CPCe software. Please discuss and explain the pattern of benthic community composition at different sites surveyed.

## Further Readings

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