

# Abstract

## **Ecosystem services of mangrove forests with reference to the transportation of organic materials to coral reefs: A case study in Palau for the MPA management**

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Mangrove forests have several important ecosystem services including, 1) Storage of high quantities of organic materials and nutrients, 2) Source of organic materials supply to coral reefs, 3) Environmental purification functions by feeding behavior of benthic animals, 4) Shelter for young coral reef fish, 5) Site for marine leisure activities, such as kayaking, 6) Provision of habitats to birds, insects and other animal species. 7) Field for food resources, 8) Field for environmental education including eco-tour, and so on. In order to clarify these services, a preliminary survey was conducted in Palau where mangroves are dominant along the coast, connecting to coral reefs. Accumulation of organic materials was conspicuous around the river mouth area, but it seemed that those would be dispersed in coral reef area. Research on biogeochemical cycle must contribute to clarify the importance of ecosystem services in mangrove forests as well as the information on sustainable use of mangrove and coral reef ecosystems for tourists. Ecosystem evaluation should also be done from the interdisciplinary aspects.