

Study on the impact of anthropogenic pressure on coral reefs around Cape Rachado Malacca, and recommendations to improve its management

ABSTRACT

Coral reefs that occur in Malaysia are of global significance, and an important resource for the sustainable development of the country. One key step taken to conserve the coral reef resources in Malaysia, was the establishment of Fisheries Prohibited Areas (FPAs). Unfortunately, coral reef management measures are virtually non-existent at these areas, exposing the reefs to many pressures driven by the rapid development of the adjacent coastal areas. The limited understanding of the true economic value of coral reef ecosystems, is the main reason that sufficient resources are not appropriated and to manage and conserve this fragile yet important resource.

The aim of this study was to estimate the economic benefits of improving management of coral reefs that occurs at FPAs, by taking the FPA at Cape Rachado, Malacca as a case study. Contingent Valuation Method was adopted in this study, to elicit the willingness of pay (WTP) by local tourists for an improved coral reef management scenario for this area. The scenario was developed after a thorough review of literature related to this reef, followed by consultation with environmental experts and a site inspection visit.

The key findings of the review shows that the live coral and fish population at Cape Rachado reef is in decline. The reef is under constant stress from increased sediment-runoff and discharge of sewage and wastewater into this area. The situation is exacerbated by the lack of proper enforcement of existing prohibition of fishing and collection of any sea creatures within the FPA. Fishing and harvesting of corals still

occurs within this FPA. Furthermore, large quantities of litter can be observed on the nearby beaches such as Blue Lagoon and Teluk Kemang, left behind by weekenders. The improved coral reef management scenario provides preliminary management measures to tackle these key issues.

The contingent valuation survey demonstrated that the local visitors were supportive of a conservation fee, if the money was exclusively used to fund the coral reef management scenario. The estimate of median WTP for conservation fee was MYR 3.00. If a conservation fee of MYR 3.00 can be fully captured from population of local visitors to the beaches along Port Dickson and Cape Rachado, it can conservatively generate as much as MYR 1.03 million per annum.