

## **Economic impact of artificial reefs: a case study of small scale fishers in Terengganu, Peninsular Malaysia**

### **ABSTRACT**

This paper examines the economic benefits of artificial reefs (ARs) on artisanal fishers in Terengganu in the east coast of Peninsular Malaysia. The data for this study was obtained from interviews with 290 artisanal fishers from three districts of Terengganu, using a structured questionnaire. The study found that for fishers, income from fishing was significantly lower in AR areas, compared to non-AR areas. The income of the fishers who used drift nets as their main fishing gear was significantly lower in AR areas. This indicates that income from fishing was not attributable to the AR programme in Malaysia. The results suggest that artificial reefs may not be effective at increasing catch and income for artisanal fishers in Terengganu. Furthermore, the larger-engined boats gained substantial fishing income, which seems to reflect unequal distribution of benefits, because only those who could invest in fishing equipment and who spent more on fishing operations were able to gain maximum benefits. The results suggest that the current use of multiple gear in the same fishing locations created conflicts between various groups of fishers, and increased fishing costs. These conflicts could be reduced if the artificial reef locations are clearly marked and they established user rights among various fisher groups. The fisheries agencies involved in artificial reefs programme should ensure that artificial reef development produces positive social and economic benefits for the local fishing communities through sustainable fisheries management in Malaysia.

**Keyword:** Artificial reefs; Artisanal fishers; Marine fisheries; Economic impact; Peninsular Malaysia