

Evaluation of Artificial Reefs in West Coast, Peninsular Malaysia

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The use of artificial reefs in Malaysia is relatively new and if properly constructed, artificial reefs (ARs) can enhance fish habitat and easier access to quality fishing grounds and improved quality of catch will benefit fishermen and coastal communities. The first ARs were built in year 1975 by Department of Fisheries Malaysia and now there are more than 250 ARs were built in Malaysia. This paper examines the economic return of artificial reefs on the fishermen and the industry in West Coast (states of Kedah, Perak and Melaka), Malaysia which are to asses the influence of these ARs on the fisheries and the impact of income changes on the socioeconomics conditions of fisher-folk fishing at ARs. In the middle of 2007 and early 2008, a survey has been carried out to evaluate artificial reefs in the states within a period of 10 months (from April 2007 until January 2008) and with a sample size of 7 boats in Kedah, 20 boats in Perak and 7 boats in Melaka. This survey involved two types of survey books which are the blue books and the red books. All the information regarding ARs and fishing operations were stated in the books by days and months. To analyze the collected data, the descriptive analyses which have been applied are monthly catch analysis, monthly operation cost, profitability operation analysis and cost-benefit analysis have been done to describe the information of the quantity of catch, value of catch, cost of catch, profitability and the income of the fishermen. From the results, Perak has the highest fish landing which is 30,819.35 kg, followed by Melaka (11,252.23 kg) and Kedah (11,190.50 kg). The income of the three states are between RM700-RM1,900 per month (increased by 20% to 700%) and the state that gained highest income is Perak. While the profitability percentage of the states are between 125.8% to 1400%, which is lead by Melaka. The percentage of operation cost is referring to the difference between profitability and the income of the fishermen. The overall findings



suggest that the deployment of ARs is one of an effective way in helping the fishermen's income and their profitability.