Distribution of Mangrove Red Snapper Lutjanus argentimaculatus in response to hydrodynamic condition at the reef patches of Lankayan, Sugud Islands Marine Conservation Area, Sabah, Malaysia

ABSTRACT

The species Lutjanus argentimaculatus is a prized food-fish in the tropical and subtropical fisheries, as well as the aquaculture industry. This study investigated the distribution of L. argentimaculatus at three patch reefs of Lankayan Island, within the Sugud Islands Marine Conservation Area. Fish surveys of this species were conducted 12 times at each of the selected patch reefs, from August 2016 until March 2017. In addition to taking underwater video footages, hydrodynamic parameters, i.e. water current direction and current speed were recorded during each survey. The distribution patterns of the fish were then plotted against these parameters to determine any correlation, in response to these parameters. As a result, we found a significant relationship between the current direction and the position of L. argentimaculatus at the reef where the schoolings were found to occur. We found that regardless of the current speed, the schools of L. argentimaculatus were always present at the reef slope facing the incoming current. This finding is important for the management and conservation of this species, which is a targeted species in the Live Reef Fish Food Trade (LRFFT), and is useful for the manager of a Marine Protected Area (MPA) in general. This finding is also important as it provides useful insights into the ecology of Lutjanus spp.