

An assessment of the carrying capacity of Sipadan island park, Sabah, Malaysia

ABSTRACT

Sipadan Island is a small oceanic island in Malaysia, and renowned as one of the world's top ten dive destination. However, it was only recently that the island was gazetted as a Marine Protected Area. The aim of this study is to assess the carrying capacity of Sipadan Island Park. The objectives are to enumerate diver and dive frequency, and to record the presence and sighting rate of iconic fishes in each of the 11 established dive sites on Sipadan. The study was carried out monthly over a 12-month period in 2011 and 2012. In that period, we recorded a total of 66,243 dives, of which, more than one third (35%; $n=23,215$ dives) was in Barracuda Point alone. In comparison, the least popular dive site - West Ridge–North Point - recorded just 154 dives. Thus, Barracuda Point, along with three other sites are found to have greatly exceeded the carrying capacity of a dive site. Iconic fishes are present throughout the year, and their sighting rate was similar in all months ($p>0.05$). However, our data showed a significant correlation between popular dive sites and sightings of iconic fish ($p<0.05$).