Abstract

Isla del Caño is a marine protected area on the south Pacific coast of Costa Rica, surrounded by coral reefs and coral communities. The ecology of these coral reefs has been studied for over 20 years, but they have not been mapped. Maps are considered a great research, planning, management and monitoring tool. Medium to high resolution images (HyMap 2005 and Quickbird 2007 respectively) were processed and classified in order to test and compare their accuracy in producing a marine habitat map. Manta tow surveys were performed in the field for identification of 7 marine habitats: 1. Coral community; 2. Coral reef; 3. Bed rock; 4. Sand; 5. Sand with boulders; 6. Sand with rodoliths; and 7. Deep water. The overall accuracy was slightly higher using Quickbird (87%) than using Hymap (60%), however the difference was not significant. The map produced using Quickbird was selected to represent the marine habitats of Isla del Caño. This map will help to analyze the adequate size and zoning of the marine protected area.

Keywords
Marine habitat map, coral reef, Costa Rica, Isla del Caño, Hymap, Quickbird.