

Analysis of humpback whale distribution data to guide the sustainable development of the Abrolhos Bank - Brazil - breeding ground.

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ABSTRACT

In order to guide the coastal development of the Abrolhos Bank area, the most important breeding ground for humpback whales in the Brazilian coast. The specie distribution data gathered during aerial surveys conducted in the peak of the breeding season in two consecutive years, 2001 and 2002, vessel survey data from 2002, coral reefs distribution, and deep contours were analyzed using Geographic Information Systems (GIS). The aerial survey covered the continental shelf from the coastline to the 500 m isobaths between 12°10'S and 20°42'S (77 transects lines spaced 25 km). The groups registered, 158 in 2001 and 178 in 2002, were concentrated in the Abrolhos Bank region (16°04' - 19°30'S) with an increasing gradient from the coast until ~60-80 nautical miles, and the whales were observed closer to the shore in 2001 than in 2002. It was possible to identify a coastal zone between Caravelas (BA) and Barra do Riacho (ES) between the 10m and 20m isobaths where few sights were recorded. SPUE data obtained during vessel surveys corroborates the aerial surveys findings. This low-density area was recommended to Aracruz Celulose S.A. that established a navigation corridor where a barge carrying eucalyptus began to transit in March 2003. Two different routes will be used: one closer to the shore during winter months and another one straightforward from Caravelas to Barra do Riacho during summer months. The barges will be used as an opportunity platform to collect data of cetacean distribution and to analyze the short-term reactions of them. Aerial surveys are recommended to investigate the habitat use patterns of cetaceans allow monitoring possible trends. The population recovery and the potential establishment of oil exploitation activities in the region and the intensification of coastal ship transit may affect the species dynamic and proper management of this coastal zone should be done.