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TITLE: Marine Biodiversity in the Atlantic and Pacific Coasts of South America: Knowledge and Gaps

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ABSTRACT:

The marine areas of South America (SA) include almost 30,000 km of coastline and encompass three different oceanic domains--the Caribbean, the Pacific, and the Atlantic--ranging in latitude from 12?N to 55?S. The 10 countries that border these coasts have different research capabilities and taxonomic traditions that affect taxonomic knowledge. This paper analyzes the status of knowledge of marine biodiversity in five subregions along the Atlantic and Pacific coasts of South America (SA): the Tropical East Pacific, the Humboldt Current,the Patagonian Shelf, the Brazilian Shelves, and the Tropical West Atlantic, and it provides a review of ecosystem threats and regional marine conservation strategies. South American marine biodiversity is least well known in the tropical subregions (with the exception of Costa Rica and Panama). Differences in total biodiversity were observed between the Atlantic and Pacific oceans at the same latitude. In the north of the continent, the Tropical East Pacific is richer in species than the Tropical West Atlantic, however, when standardized by coastal length, there is very little difference among them. In the south, the Humboldt Current system is much richer than the Patagonian Shelf. An analysis of endemism shows that 75% of the species are reported within only one of the SA regions, while about 22% of the species of SA are not reported elsewhere in the world. National and regional initiatives focusing on new exploration, especially to unknown areas and ecosystems, as well as collaboration among countries are fundamental to achieving the goal of completing inventories of species diversity and distribution.These inventories will allow accurate interpretation of the biogeography of its two oceanic coasts and latitudinal trends,and will also provide relevant information for science based policies.

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