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Panama Saves Whales and Protects World Trade: Smithsonian Science at Work

The Republic of Panama's proposal to implement four Traffic Separation Schemes (TSS) for commercial vessels entering and exiting the Panama Canal and ports was approved unanimously by the International Maritime Organization in London on Friday, 23 May. Based on studies by Smithsonian marine ecologist Hector Guzman, the new shipping lanes are positioned to minimize overlap between shipping routes and humpback whale migration routes and reduce vessel speed four months a year at the peak of the whale overwintering season.

Several cetacean species move through the tropical waters near the Pacific entrance to the Panama Canal in the Gulf of Panama. With Smithsonian ecologist Richard Condit, intern Betzi Perez-Ortega and colleagues from Whalesound Ltda. in Chile and College of the Atlantic in Maine, Guzman recently published new results from six seasons in Panama's Las Perlas Archipelago. Based on photo-identifications of nearly 300 individual humpback whales, including 58 calves, they estimate the total population as over 1000 animals that visit year-round and match them to individuals sighted from the Antarctic Peninsula, Chile and Colombia. They conclude that the Archipelago, only 60 kilometers (40 miles) from the Pacific entrance to the Canal, is an important breeding area for humpback whales from the Southern Hemisphere.

Panama is a leader in global commerce as well as a steward of this exceptional marine biodiversity. Nearly 17,000 commercial vessels cross the Gulf of Panama each year. This number is expected to increase significantly when new locks now under construction permit larger, "post Panamax" vessels to transit the Canal and enter its ports.

Based on his analysis of whales tagged with satellite transmitters, Guzman estimates the new policy will reduce potential areas of collision between ships and whales by ninety-three percent and reduce the interactions between ships and whales by ninety-five percent in the Gulf of Panama.

In the Pacific, an array of three schemes is also expected to significantly diminish the potential of ship collisions with coastal fishing vessels and pollution-causing accidents impacting seven marine protected areas including Wildlife Sanctuaries, a UNESCO World Heritage site and wetlands protected under the international RAMSAR convention.

The Panama Maritime Authority (AMP) took the lead, based on the input from the Panama Canal Authority's Captain Fernando Jaen and the Maritime Chamber's Jocelyne Anchor to define the policy and shepherd it through the approval process.

"This is a clear example of Smithsonian research that makes a difference," said Acting Director, William Wcislo. "We are a research organization, not a conservation organization, but our research

feeds conservationists' efforts to protect biologically rich and vulnerable ecosystems.”

“Scientific results impact conservation, but putting policy into effect takes a great deal of time,” said Guzman. “We have to be patient and consistent. It took two years of teamwork to design the policies and obtain a consensus for the traffic separation schemes for whale protection. Now Panama has six months to implement the TSS’s and the maritime industry has six months to comply.”

Guzman is currently working with scientists and policy makers from Ecuador and Chile to safeguard passage for whales along the entire coast of South America and plans to expand the project to other countries in South and Central America.

The Smithsonian Tropical Research Institute, headquartered in Panama City, Panama, is a unit of the Smithsonian Institution. The Institute furthers the understanding of tropical nature and its importance to human welfare, trains students to conduct research in the tropics and promotes conservation by increasing public awareness of the beauty and importance of tropical ecosystems.

Website: www.stri.si.edu

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