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## MARINE TURTLES OF COSTA RICA: PART 1

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Costa Rica is bordered in the east by the Caribbean Sea and in the west by the Pacific Ocean. Although a relatively small country, Costa Rica is home to many of the largest sea turtle rookeries in the world. Green turtles come to nest in large numbers in Tortuguero National Park. The Caribbean coast also hosts small numbers of nesting hawksbill turtles and very occasionally a loggerhead may crawl up to nest. Many of the beaches on the Pacific coast receive visits by olive ridley turtles. The largest arribadas take place on the beaches of Nancite and Ostional. Small numbers of hawksbill and black turtles also come to nest. The giant leatherback turtles come ashore on both coasts. The difference in sea turtle species and populations along the two coasts of Costa Rica are caused by currents, climate and plate tectonics which have formed entirely different marine circumstances along the two coasts. On the Pacific side, weather is variable and seasonal, there is upwelling, cool water, pelagic primary production and abundant shrimp, pyrosomes and salps. On the Caribbean coast on the other hand, the climate is more stable, nutrient content is low, the water is high salinity and warm, primary production dominated by sea grass and the shallow clear water stimulate growth of coral reefs. For these reasons, olive ridleys are abundant in Pacific Costa Rica and hawksbill and green turtles more common in the Caribbean. Leatherback turtles feed further away from the coast so nearshore habitats are probably of less importance and consequently we have leatherback turtles arriving to lay eggs on both coasts.

Humans have had profound effects on sea turtles in Costa Rica. Indigenous people utilized turtles for thousands of years with unknown effects on populations. The European arrival had a huge impact. One of few ways to have fresh meat on long journeys between Europe and the New World was to stock up on sea turtles. In the 1950's, Dr Archie Carr first visited Tortuguero. He formed the Caribbean Conservation Corporation (CCC) in 1959 and CCC continues the work to this day. Research increased the interest and concern for sea turtles and in 1963 the first decree protecting turtles was passed. In 1969, the export of calipee was banned. Tortuguero National Park was created in 1970. Many other nesting beaches are now National Parks or Wildlife Refuges. The green turtle fishery was modified by decrees in 1983 and 1988. During the 1990's concerns grew that the catch was exceeding the annual quota of 1,800 green turtles. The green turtle fishery was outlawed in early 1999. A comprehensive sea turtle law was passed in 2002 and firmly places the responsibility of sea turtle issues with the Ministry of Environment and Energy. The only legal consumptive use is the regulated collection of olive ridley eggs at Ostional. Another important aspect of sea turtles and use in Costa Rica is the development of tourism to observe nesting turtles. Visitation to sea turtle

nesting beaches such as Tortuguero has increased dramatically since the mid-1980's and Tortuguero now hosts over 32,000 turtle tourists each year. Tourism generates livelihoods through guiding and other services and has created economic incentives in favor of sea turtle conservation. Five decades of sea turtle research and conservation have had positive effects in Caribbean Costa Rica. The green turtle trend at Tortuguero demonstrates the increase in nesting. CCC estimates that the Tortuguero green turtle rookery now averages over 100,000 nests per year, making it one of the largest green turtle rookeries in the world.