

Conservation on Cape Verde's Maio Island: a sea turtle paradise

By Juan Patiño-Martínez, 5th October 2021

Sea turtle species are found across the oceans and have a strong historical, cultural, and economic relationship with people. Females are able to navigate hundreds of kilometres to return to their natal beaches, where they then lay their eggs. Given that globally coastlines are becoming increasingly urbanized, illuminated and disturbed, and that sea turtles are considered conservation-dependent, undisturbed rookeries are vital places for sea turtle conservation.



Sea turtle returning to sea after laying her eggs.

The island of Maio is one of the 10 islands of Cabo Verde, West Africa. Cabo Verde hosts one of the largest nesting colonies of the Vulnerable loggerhead sea turtle *Caretta caretta*. In our article we present the first detailed study of loggerhead turtle nesting on Maio, including abundance, spatial distribution of nesting, reproductive success, and threats over 4 years. We also evaluate hatchling

productivity (the number of hatchlings that would reach the sea) under two nest management strategies that were implemented on beaches with low natural hatching success.



Hatchlings making their way out to sea.

During 2016–2019 we monitored 38 km of undeveloped sandy beaches that have minimal artificial lighting and where all nesting on Maio takes place. Our findings demonstrate that there are considerably more loggerhead turtles nesting on Maio than previously estimated. Our counts on Maio and data from other locations indicate Maio is one of the five largest loggerhead nesting colonies globally, making it an important site for conservation of this species. The interannual hatching success (the proportion of eggs producing hatchlings) varied between sites. The most prevalent threats to the nests on Maio were tidal flooding, beach erosion and predation by crabs. Near the main city, predation by dogs is an emerging problem that needs to be addressed. Poaching was not a major threat on Maio, most likely thanks to ongoing conservation efforts. The eastern coast hosts the largest number of nests at the highest density, with the highest nesting success and consequently the greatest number of hatchlings.



A mother laying her eggs.

Our observations on Maio and the increase in nesting activity in Cabo Verde since 2015, highlight the importance of this subpopulation for loggerhead turtle conservation. Approximately 75% of nesting in Cabo Verde occurs on the island of Boa Vista, Maio and Sal islands host 16.6% of nests and the remainder are deposited on the other islands. We thus estimate there have been a mean of 95,762 nests annually in Cabo Verde during 2016–2019, which may be the largest loggerhead turtle nesting population globally.



Researchers observing a turtle laying her eggs.

We evaluated different nest management strategies at multiple sites, finding that hatcheries are not always the best option for nest management. As the beaches on Maio are relatively undisturbed, and there is a high abundance and density of turtle nests, the island should be protected as a globally important refuge for the conservation of the loggerhead turtle, and of coastal biodiversity more broadly. Our main conservation objectives now are to maintain the natural conditions of the coastal ecosystem, to train and involve local people in the sustainable management of their natural resources, and to improve peoples' well-being through social investment.

All photos: Diana Patino-Martinez

The article [Globally important refuge for the loggerhead sea turtle: Maio Island, Cabo Verde](#) is available in *Oryx—The International Journal of Conservation*.



Juan Patiño-Martínez

Juan Patino-Martinez is the scientific coordinator of Maio Biodiversity foundation, Cabo Verde, and a conservation researcher with special interest in ecology and sea turtle conservation. His research has focused largely on the effects of global change and environmental factors on sea turtle reproduction.