

Reefs in Timor-Leste's Ataúro Island hold the world's highest reef fish species average

August 19 2016



Credit: Gerry Allen

A biodiversity survey in the waters of Ataúro Island, situated 36 kilometres (22 miles) north of Timor-Leste's capital Dili, conducted by NGO Conservation International (CI) in July has revealed that the island hosts the highest average fish diversity globally.

The 10 study sites averaged 253 reef [fish](#) species per site, including one site where 315 species – the third highest globally – were recorded. This reflects a near 20% increase in average species diversity from CI's biodiversity survey in 2012, which yielded an average of nearly 212 species per site.

Conservation International Timor-Leste's country director Trudiann Dale explained, "With each study, we discover something new within Timor-Leste's magnificent biodiversity, making it even more critical to protect marine life here. The results prove beyond doubt that the reefs of Ataúro Island are extremely diverse and valuable to the people of Timor-Leste."

As Ataúro Island becomes an increasingly popular tourism destination, known locally for its rich marine life, there has been few formal studies confirming its biodiversity. Conducted as part of CI's Rapid Assessment Program (RAP), the study aims to expand scientific knowledge of the island's marine ecosystems to help inform its protection and value, especially from ecotourism, for local livelihoods.

Over the course of a week, through around 120 man-hours underwater, a total of 642 reef fish species were recorded by the RAP team – comprised of marine biologist and Vice President for CI's Asia-Pacific Field Division's marine programs Dr. Mark Erdmann, CI Timor-Leste's marine program manager Anselmo Amaral, marine biologist Gerry Allen and coral reef taxonomist Emre Turak.

Timor-Leste's average site species count has now surpassed Raja Ampat in the Bird's Head Seascape, Indonesia, which hosts the most marine

biodiversity in the world, and is on par with much larger islands such as Chuuk and Pohnpei in Micronesia, and Christmas Island in the Indian Ocean.

The RAP team also assessed the health of Ataúro's surrounding waters and coral reefs, and found that the reefs were healthy overall, with the exception of a few areas.

Combating reef damage with regulation

CI noted that a number of reefs have been previously damaged by blast fishing, and some had a notable absence of larger reef fish – a worrying sign of overfishing. Additionally, only one shark, a key indicator of healthy coral reef ecosystems, was recorded.

Promisingly, in May new regulations were put in place to combat this decline by the Ministry of Agriculture and Fisheries – a result of two Ministerial Diplomas proposed by CI.

The Ministry imposed a minimum catch size of commonly eaten market fish to reduce juvenile fish catches and educate communities on the appearances of juvenile fish. The aim of this is to aid the replenishment of the fish stocks that local communities rely on for their food and livelihoods. This move expands the government's coastal marine management efforts following their implementation of the country's first no-take zones in Nino Konis Santana National Park in 2013.

In addition, 19 new species have been added to the country's Marine Protected Species list – including sharks, dugongs, sea turtles, whales, dolphins, both oceanic and reef manta rays, spotted eagle rays, nautilus, and giant clams, among others making it illegal for any of these species to be captured, as the Ministry recognizes their importance to marine ecosystems, and high economic value in the marine tourism industry.

"We are heartened that the Ministry has always been quick to act by implementing regulations to protect the coral reef ecosystems," said Dale. "CI is committed to supporting the government and working closely with local communities to protect their natural marine assets, which prove to possess high tourism value, for sustainable livelihoods and food security."

With its vast biodiversity and ecosystem services, nature in Timor-Leste holds significant potential for food security and economic development through ecotourism. CI continues to work with the government towards a sustainable development pathway, to establish protected area networks and supporting the traditional knowledge of local communities in conserving their natural resources.

Provided by Conservation International

Citation: Reefs in Timor-Leste's Ataúro Island hold the world's highest reef fish species average (2016, August 19) retrieved 25 April 2024 from <https://phys.org/news/2016-08-reefs-timor-leste-ataro-island-world.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.