No-Take Areas Created for Galápagos Islands After Long Negotiations

Management of one of the most famous marine ecosystems in the world will now include no-take zones, following last month’s conclusion of years of negotiations between managers and fishers in the Galápagos Islands.

The Galápagos Marine Reserve, officially created in 1998 but not zoned until now, will be divided into three basic zone types: strict nature reserves, in which only scientists will be allowed; no-take zones, managed for tourism, recreation, and education; and “extraction zones,” in which managed fishing will be allowed.

About 20% of the coastline will be no-take zones. Managers made concessions on scheduling the phase-in of some zones, and offered fishers priority for new tourism activity permits as an incentive to leave the fishing sector.

The conclusion of negotiations follows a decade in which the Galápagos Islands endured steep increases in immigration and fishing pressure, multiple changes in the national government (including a short-lived military coup this January), and even isolated violence -- threatened and real -- to resource managers. "It’s been a rough, rocky road to get to where we are now," said Jerry Wellington, a University of Houston (US) coral biologist who has assisted in Galápagos marine planning since the 1970s.

Now it’s up to the fishing community to do its part, said Rodrigo Bustamante, head of marine research and conservation for the islands’ Charles Darwin Research Station. "If the no-take zones really stick, then you could call it a breakthrough," he said.

Renowned islands

The Galápagos Islands are known worldwide as much for their history as for their unique biodiversity. Charles Darwin developed his theory of evolution after studying the archipelago’s extensive speciation of birds and giant tortoises. The islands’ special place in scientific history contributed to their being named a UNESCO World Heritage site. It also helped them become a global hotspot for ecotourism, with people from around the world coming to walk among the tortoises and dive with sea lions. In 1997, more than 60,000 tourists paid the park entry fee.

Since creation of the reserve, the Ecuadorian mainland-based tuna fleet -- the largest of its kind in the world -- has regularly disregarded the reserve’s ban on industrial fishing, according to news reports. The Ecuadorian Navy and the National Park Service are responsible for enforcing the ban, although their limited resources -- the Park Service has one patrol boat -- have made comprehensive coverage difficult.

Those limited resources may be further challenged by the new no-take area designations. The local populace is relatively poor, and Wellington said that for the no-take zones to work, education would be essential. "When people are below the threshold of making a decent living, protecting biodiversity is the last thing they think about," he said. "I don’t know if there’s an easy solution, aside from gutting it out and educating enough people on why protection is important."

Incentives for former fishers

A multi-stakeholder group, called the Participatory Management Board (PMB), developed the zoning plan. Consisting of the park service, the research station, local fishers, tourism brokers, educators, and guides, the PMB agreed that for the no-take zones to work, local fishers would need help. The plan therefore includes provisions to develop economic alternatives, including the encouragement of deepwater fishing and preferential access for former fishers to new permits for marine tourism activities.

Marine tourism in the Galápagos is limited by the number of boats engaged in the industry, each permitted to hold a certain capacity (from 12 to 100 passengers). The research station’s Bustamante said that small-scale marine tourism -- e.g., bay tours, snorkeling, and scuba diving -- is a market that has not yet been developed, and therefore provides an opportunity for fishers. "So far, there are only three to four serious day dive tours in the whole archipelago," he said, "so there is a chance for growth in this area." He said he expected tourist numbers to increase as former fishers take to the tourism industry.

Resource managers offered a concession to one particular fishing sector: mullet [local] fishers, who will be allowed temporarily to continue fishing along two beaches that are otherwise in no-take zones. They will be required to discontinue fishing in those zones once an incentive scheme is developed to phase them into the small-scale tourism industry. "In the heat of the arguing and negotiation, it seemed at the time that a small concession would guarantee the achievement of larger no-take areas elsewhere," said Bustamante. "These were also beaches in which there was no tourist use and no existing monitoring plans."

Bustamante said he expects much more work ahead, including demarcation, protection, and monitoring of the no-take zones, institution of a pilot plan to encourage deepwater fishing, and research of by-catch problems.

"And there will surely be plenty more arguments to come about the acceptable limits of artisanal fishing in deeper waters, the pressure to give more permits to fishing boats, [the defining of] who is really a fisherman or boat owner, etc.,” he said in a note in March to colleagues in the MPA field. "Ah, and do good science, too! But if we do not blow a fuse, we will stick with it."  

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The Galápagos zoning plan

Details of the Galápagos Marine Reserve zoning plan include:

- Roughly 20% of the coastline will be designated as no-take zones out to a distance of two nautical miles. Part of the 20% will be in large blocks -- measuring up to 12 nm of coastline -- in each biogeographic region.

- In a deal between managers and fishers, two small islands (Darwin and Wolf) will eventually become no-take zones in their entirety, once the tourism-incentive scheme for fishers is created.

- Of the remaining 80% of coastline, a small portion will be in areas close to main ports, which are to have their own mini-zoning schemes planned by the port communities. The majority of the 80%, which includes all of the islands’ deepwater area, will allow managed fishing.

The 20% figure for no-take zones was based on recommendations from several international fisheries biologists who have cited it as an appropriate precautionary target for the protection of fish stocks, pending further research on fishing’s impacts. It has been used to set policy elsewhere in the world, including in the Bahamas (MPA News 1:5) and the US (MPA News 1:6).

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