

PROJECT SUMMARY

'Blue carbon' credits take root in Colombia's mangroves

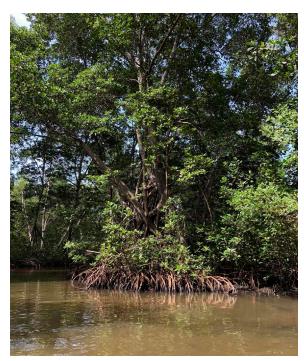
angroves are climate superstars. In **V** a single square mile, the mud held in their tangled roots can lock away as much climate-warming carbon as the annual emissions of 90,000 cars. Until now, however, that carbon had not been accurately measured — effectively shutting mangroves out of carbon markets and precluding financial incentives to protect them.

That changed with a new project on Colombia's Caribbean coast in the Cispatá Bay mangrove forest. Conservation International joined a group of local and international partners to flip the economic script that so far has rendered mangroves more valuable dead than alive. The project, known as "Vida Manglar" (Spanish for "mangrove life"), is the first to fully measure — and monetize — the carbon that mangroves sequester in their soil, using recent methodology developed with the non-profit organization Verra, a global leader in creating standards for channeling carbon finance toward conservation.

The resulting <u>blue carbon</u> credits — that is, verifiable emissions reductions tied to carbon stored in marine ecosystems — were issued in May 2021. As of April 2022, most of the credits from the first verification period have been committed. The vast majority of these revenues — 92 percent — will

be invested in Cispatá Bay's conservation management plan to protect the mangroves and support the livelihoods of 12,000 people who live in or near the project site.

Cispatá Bay's 11,000-hectare (27,000-acre) mangrove forest is expected to sequester nearly 1 million metric tons of carbon dioxide over the 30-year lifespan of the project roughly equivalent to taking 184,000 cars off the road for one year.



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AMONG THE MANY SOLUTIONS NATURE OFFERS TO CONFRONT CLIMATE CHANGE. MANGROVES ARE A STANDOUT. THEY PROVIDE A PROTECTIVE BARRIER FOR COASTAL COMMUNITIES, LOCK AWAY LARGE AMOUNTS OF CARBON AND CAN GENERATE LONG-TERM REVENUES FOR **COMMUNITIES VIA** CARBON CREDITS — A TRIPLE WIN."

María Claudia Díazgranados

Director of Conservation International's blue carbon program The Cispatá marine protected area in Córdoba, Colombia includes a 27,000 acre mangrove forest divided into zones that indicate when mangrove workers can use a particular area.



Carbon credits backed by science

olombia's government declared the → Cispatá Bay a marine protected area in 2006. But despite this designation, the mangroves continued to be cleared for cattle and agriculture as farmers would move their fences further into the forest during the dry season. Though the protected area had a good management program, it lacked the financial resources needed to enforce its protection.

That's where Conservation International and partners stepped in. A coalition including Colombia's Marine and Coastal Research Institute (INVEMAR), the national environmental authorities Coporación Autónoma Regional del Valle del Sinú (CVS) and Corporación Autónoma Regional de Sucre (CARSUCRE), the local NGO Fundación Omacha, and community-based associations of mangrove workers — saw an opportunity to protect this ecosystem by using carbon finance to cover funding gaps.

With support from Apple, scientists pioneered a simple but effective system for measuring the vast amounts of carbon that had accumulated in the soil among mangroves' root systems: Wading into the forest, they used a special pipe to extract sediment up to one meter deep. The soil's carbon content was then analyzed in INVEMAR's research lab.



Financing conservation

he Vida Manglar project's carbon stores have been fully certified using the Verified Carbon Standard and the Climate, Community & Biodiversity Standards developed by Verra.

Overall, 92 percent of the income generated from blue carbon credits will be invested in the Vida Manglar project — a much higher percentage than most projects are able to achieve. Funds will be used to:

- Implement the conservation management plan: Carbon credit revenues will help fund training and equipment for local communities' conservation activities. These include cleaning waterways, monitoring local species and helping biologists gather soil samples for carbon assessments. So far, 14 mangrove associations (known in Spanish as "mangleros") have signed onto voluntary conservation agreements, which guide their participation in these activities.
- Hire local experts: Revenues will also cover the salaries of a new Vida Manglar team consisting of 11 local experts who will run the project's daily operations. (Carbon credits will not support salaries for partner organizations' staff.)

Supporting sustainable livelihoods

on support from local communities, which are part of the project's governance structure and actively participate in monitoring, data collection and species conservation.

In exchange for making specific commitments that limit the amount of wood they extract from the mangrove forest, community members receive benefits, such as wages for patrolling forests to prevent illegal logging. The Cispatá Bay is the only area in Colombia with this conservation model.

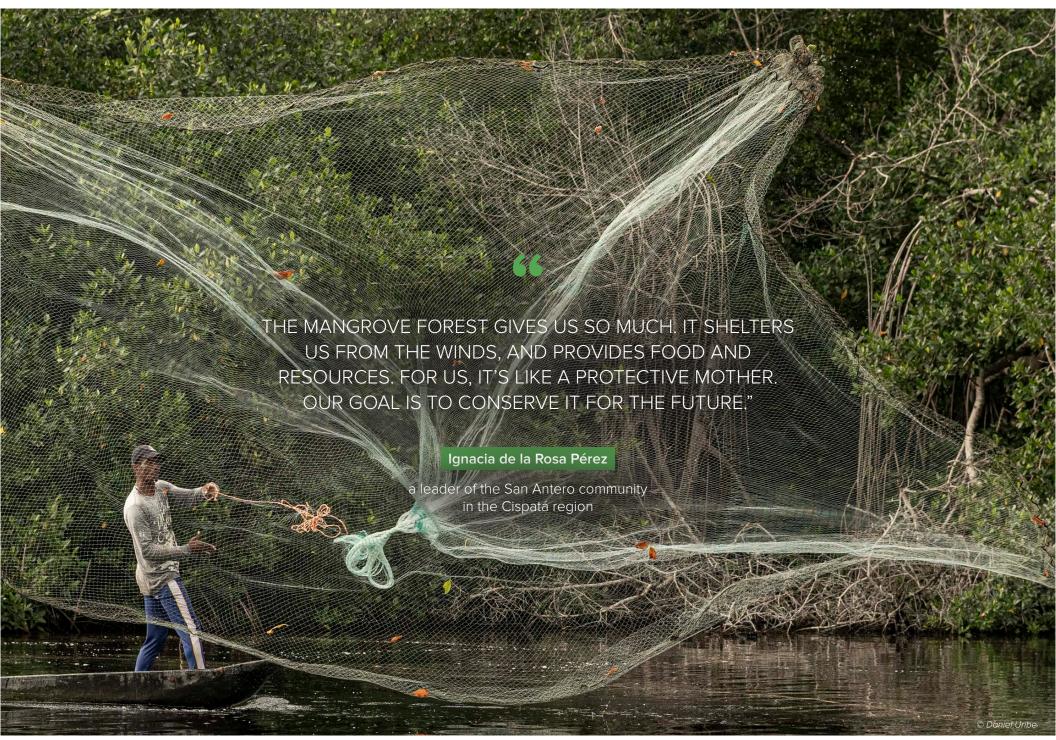
Some families are starting vegetable gardens to diversify their source of income. They

will receive technical support and seeds for corn, yucca, eggplant and other crops, which they plan to sell at local markets. Women in the community have also asked for support to improve the production and market access for their rare honey, which is made by stingless bees that feed on the nectar of mangrove flowers.

Funds from carbon credits will also help develop an ecotourism business model focused on attracting visitors to view endangered crocodiles, marine mammals such as dolphins and manatees, and migratory birds.



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Protecting threatened species

ispatá Bay's five species of mangroves provide habitats for migratory birds, sea turtles, manatees, otters and the American crocodile, known locally as the needle-nose crocodile.

Crocodiles were critically endangered in the area 15 years ago. However, the regional environmental authority, CVS, helped to create a local association that monitors the population, collects eggs and releases mature individuals back into the wild. Thanks to community efforts, hunters became crocodile custodians — resulting in the rehabilitation and release of nearly 10,000 crocodiles in the Cispatá Bay over the last 18 years. Today, local communities use the species for ecotourism activities only. Blue carbon revenues will support a wild crocodile monitoring plan to keep track of the health of the population.

CVS also created a program to release captive manatees into the Morrosquillo Gulf. Local communities, working with the Omacha Foundation, are monitoring their populations.



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Next steps: scaling up blue carbon markets

lobally, mangroves cover only 0.1 percent of Earth's surface — and they are quickly shrinking. Vida Manglar provides an important proof of concept for blue carbon credits — with science and policy implications for the survival of mangrove forests. The project is demonstrating that carbon offsets, combined with collaborative, communitybased approaches, produce conservation results.

Vida Manglar is expected to issue a new round of carbon credits in 2023 and expand current conservation efforts, such as the cleaning of waterways and natural forest regeneration. Colombia's government is seeking to replicate this successful flagship project in six other locations along the Caribbean coast – scaling it up into a national program and bringing the concept of marketdriven conservation to new areas.

In addition to the Colombian government's future projects, Conservation International intends to expand blue carbon efforts to new sites and is conducting feasibility studies in countries around the world, including Brazil, Chile, Fiji, Liberia, Mexico and the Philippines.

Currently, international demand for blue carbon far outweighs the supply. Conservation International's experience in Cispatá has helped build investor

confidence and demonstrated the value of high-quality blue carbon offsets. Going forward, as the project pipeline grows, it will be critical to ensure that offsets are done correctly, combining internationally verified methods with robust participation from local communities.

In 2022, Conservation International CEO M. Sanjayan announced a global coalition on blue carbon to inform science and policy and help ensure the quality of future projects. It will include the Government of France, the Government of Costa Rica, the government of Colombia, AXA, Bank of America, Blue Ventures, Climate Asset Management, IUCN, Ocean Risk and Resilience Action Alliance. and the Voluntary Carbon Markets Integrity Initiative. IOC-Unesco, HSBC and Verra will be part of the initial working group.



Conservation International



BUT THE CISPATÁ CONSERVATION PROJECT. A COLLABORATION BETWEEN COLOMBIA'S MARINE AND COASTAL RESEARCH INSTITUTE (INVEMAR), CONSERVATION INTERNATIONAL (CI) AND APPLE, IS NOT JUST OF INTEREST TO BIRDWATCHERS AND ECOLOGISTS. IT HAS ATTRACTED THE ATTENTION OF MARINE SCIENTISTS. RESEARCHERS AND CORPORATIONS. AS IT IS AMONG THE FIRST TO MEASURE AND SELL A NEW TYPE OF CREDIT TO FUND CONSERVATION: "BLUF CARBON"

The Guardian

Vida Manglar at-a-glance



Reduced CO₂ emissions and proceeds

- Over 30-year life span of the project, Vida Manglar is expected to prevent an estimated 1 million tons of CO₂ from being emitted the equivalent of taking 184,000 cars off the road each year.
- 92% of all proceeds will be reinvested in the project.



Accreditations

- Vida Manglar is fully accredited under the Verified Carbon Standard and Climate Community & Biodiversity Standards.
- The project achieved gold level exceptional community benefits and exceptional biodiversity benefits.



Community

- 12,000 people depend directly and indirectly on Cispatá's mangroves for their livelihoods.
- So far, 350 families have signed onto conservation agreements, which provide training and other incentives that promote sustainable economic activities.
- Community associations have specific permits to use mangrove wood in a sustainable manner in exchange for monitoring the forest and cleaning its waterways.
 The Cispatá Bay is the only area in Colombia with this conservation model.
- Vida Manglar is expected to issue a new round of carbon credits in 2023 and expand current conservation efforts.



Biodiversity

Cispatá's
 ecosystem
 includes
 threatened
 species such
 as otters,
 needle-nose
 crocodiles
 and
 manatees.



THE CONSERVATION AGREEMENT MODEL ONLY WORKS IF COMMUNITIES FEEL THEIR VOICES HAVE BEEN HEARD. THERE ARE NO OFF THE SHELF SOLUTIONS. A LOT OF RESEARCH GOES INTO UNDERSTANDING WHAT FAMILIES IN THE AREA NEED AND FINDING SUSTAINABLE SOURCES OF INCOME. THAT'S ALL PART OF THE PROJECT DESIGN."

Jennifer Howard

Senior Director, Blue Climate Program, Conservation International

