

Tech4Nature Brazil

Amazon Coast

Watch: *Empowering Communities for Climate Resilience and Species Conservation*



Photo: José Alvarez

Soure Extractive Marine Reserve (RESEXMAR Soure)

The Project

Global partnership between the IUCN Green List and Huawei's TECH4ALL program to advance nature conservation through digital innovation and cross-sector collaboration.

In Brazil, the initiative develops low-cost technologies to monitor climate impacts and strengthen community-based conservation in mangrove ecosystems, implemented by IUCN Brazil, ICMBio, Rare Brasil, LAPMAR/UFPa, and ASSUREMAS.

Where?

RESEXMAR Soure, in the state of Pará, was created in 2001 to address the demands of local fishing communities.

It is Brazil's first protected area to join the IUCN Green List, a global certification that recognises the equitable and effective management of protected and conserved areas.



Meet the Mangrove Crab!

The *Ucides cordatus*, or “caranguejo-uçá”, is vital for healthy mangrove ecosystems and local livelihoods.

Through ICMBio's National Monitoring Program, ecological monitoring combines science and local knowledge to track populations and ensure sustainable crab fishing.



Key Results

MILESTONES MARKING REAL-TIME DATA AND MAKING SOURE A LIVING LAB FOR CLIMATE RESILIENCE.

- Low-cost climate sensor developed by UFPA/LAPMAR calibrated and monitoring water and weather conditions;
- 9 mangrove and crab monitoring plots across 3 sites and RESEXMAR Soure integrated into National Monitoring Program;
- 1,000+ fisher interviews conducted through participatory crab-fishing monitoring;
- Capacity-building workshops conducted with extractivist communities and institutions;

Next steps: Pilot studies with AI launched for mangrove monitoring.

The Tech

The sensor developed by UFPA's LAPMAR laboratory is an open-source, low-cost device designed to monitor coastal ecosystems in real time.

It measures air and water temperature, humidity, wind speed and direction, salinity, and sea level, providing critical data to support climate adaptation and conservation planning.

Currently operating in Soure, the sensor's design make it highly replicable in Brazil and beyond, empowering communities to participate in environmental monitoring and strengthen climate resilience.



Get in touch

🌐 Learn more:

- [Tech4nature.iucn.org](https://tech4nature.iucn.org)

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