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Brazil's Award-Winning Alcatrazes Archipelago Joins Hope Spot Network

[SÃO PAULO, BRAZIL] -- Just off the coast of São Paulo, Brazil, a small grouping of rocky islands teem with life above and below the ocean's surface. The Alcatrazes Archipelago and their surrounding waters are home to coral reef environments over rocky shores, and contain two no-take marine protected areas (MPAs) that safeguard over 1,300 marine and terrestrial species, 20 of which are endemic.

International marine conservation nonprofit Mission Blue is pleased to announce the Alcatrazes Archipelago as a Hope Spot. Dr. Vinicius José Giglio, Professor at Universidade Federal do Oeste do Pará (UFOPA), and Dr. Ronaldo Bastos Francini-Filho, Professor and Researcher at Center for Marine Biology at the Universidade de São Paulo are recognized as the Hope Spot Champions.

Dr. Sylvia Earle, founder of Mission Blue shares, "The Alcatrazes Archipelago is home for more than 1,500 species including reef fishes, seabirds and cetaceans including bottlenose dolphins, humpback whales, fin and minke whales. It's also home to people who are successfully collaborating for conservation, education and research. The commitment to protect the Alcatrazes Archipelago in recent decades is cause for great hope that this exceptional part of the ocean will continue to thrive."

The biomass of reef fishes in Alcatrazes Archipelago is one of the greatest in Brazil, and it is considered internationally an Important Marine Mammal Area. The confluence of two oceanic currents, the cold, nutrient-rich South Atlantic Current, and the warm, oligotrophic Brazilian Current, results in high biodiversity for both tropical and subtropical species. The intrusion of deeper cold waters, particularly during summer, could offer a climate refugia for reef coral species impacted by global warming, such as

the extensive areas covered by the Brazilian endemic brain coral *Mussismilia hispida*. Two new species of corals were recently described in the Alcatrazes Archipelago, the endemic solitary scleractinian coral (*Coenocyathus sebroecki*), and *Terrazoanthus silveirai*.

“The Alcatrazes Archipelago is an example of successful biodiversity conservation alongside well-implemented public visitation and the commitment of stakeholders and local communities to support the effectiveness of MPAs. Such efforts have resulted in improved MPA outcomes regarding ecological and social attributes,” explains Dr. Vinicius José Giglio, Professor and Hope Spot Champion.

Researcher, Professor and Champion Dr. Ronaldo Bastos Francini-Filho elaborates, “The Alcatrazes MPA is the result of a genuine bottom-up process in which local stakeholders fought for many years for its creation and implementation. It was a privilege for me to participate in this struggle. I learned to scuba dive in Alcatrazes, and after nearly three decades working in marine conservation throughout Brazil, I feel privileged to now spend most of my time dedicated to applied research for the conservation of the Alcatrazes Hope Spot. Despite the success of the MPA, we still face many challenges, such as high fishing pressure in its surroundings, increasing coastal occupation and pollution, and accelerated climate change.”

Two no-take marine protected areas (MPAs) were established in the archipelago’s waters in 2016, the Tupinambás Ecological Station and Alcatrazes Archipelago Wildlife Refuge. A smaller MPA was created in the 1980s, and the islands had been off-limits to the public for decades due to restrictions established by the Brazilian Navy. The management of Alcatrazes Archipelago MPAs has been considered effective, with measurable increases in the biomass of reef fish, the recovery of endangered species, the maintenance of endemic fauna and flora, and the conservation of seabird nesting sites. With these positive results, the Alcatrazes MPAs have the potential to contribute to the spillover of natural resources to fishery activities outside its area, and it earned the Blue Park International Gold Level Award in 2022.

The main threats to the Archipelago include illegal fishing, overfishing in the surrounding areas, invasive species, as well as shipping traffic and pollution, mainly in coastal areas, where most reef fish nurseries are located. Despite regular surveillance, both recreational and commercial fishers undertake illegal fishing operations, usually under the cover of darkness. The invasive sun coral (*Tubastraea spp.*) colonizes the rocky reef slopes of the Alcatrazes with impressive speed, and requires local managers to spend significant resources and effort to control the spread.

The Alcatrazes Archipelago has an important cultural history, with evidence of human occupation for more than 4,000 years with archaeological sites including middens, ceramics, and other ruins from the precolonial period.

Local fishing communities employ traditional fishing techniques from small boats, including the canoe *caçara*, crafted in a special shape and considered a world heritage property recognized by UNESCO. Recreational fishing is practiced both by locals and visitors, and the region is also targeted by larger industrial fishing vessels that employ trawling, gillnet, longlines and traps.

Today, the Alcatrazes Archipelago welcomes visitors with trained guides for low-impact activities such as recreational diving, bird- and whale-watching and boating. All recreational activities are accompanied by trained guides that ensure low-impact behavior and provide education and environmental awareness throughout the visit.

The conservation priorities of Hope Spot Champions Dr. Giglio and Dr. Francini-Filho include the effective enforcement and management of the Alcatrazes MPA, the expansion of legal protection for deeper waters and the reproductive aggregations found there, and the recovery of shallow areas and nursery grounds. They also hope to expand monitoring, research, and educational programs.

Current challenges include the control of invasive species, mitigation of threats from areas surrounding the Alcatrazes MPAs, understanding and mitigating climate impacts, and maintaining continuous access to resources for management.

The next steps for the Hope Spot involve the start of cutting edge research focused on the role of Alcatrazes as a climate refugia for reef corals, new monitoring activities including the monitoring of shark aggregations with closed circuit rebreathers, and the creation of a visitation center with multiple activities aiming to educate visitors about the importance of Alcatrazes Archipelago for biodiversity and human well-being. Finally, the nominators will articulate partnerships with decision makers and managers to increase the effectiveness of the Hope Spot to reach the goals of the UN's COP 15 2030 agenda.

About Mission Blue

Led by legendary oceanographer Dr. Sylvia Earle, Mission Blue is uniting a global coalition to inspire an upwelling of public awareness, access and support for a worldwide network of marine protected areas – Hope Spots. Under Dr. Earle's leadership, the Mission Blue team implements communications campaigns that elevate Hope Spots to the world stage through documentaries, social media, traditional media and innovative tools like Google Earth. Mission Blue embarks on regular oceanic expeditions that shed light on these vital ecosystems and build support for their protection. Mission Blue also supports the work of conservation NGOs around the world that share the mission of building public support for ocean protection.

About Universidade Federal do Oeste do Pará

The Universidade Federal do Oeste do Pará is a public institution which aims to provide education and foster research and community engagement in northern Brazil. The university offers a diverse range of undergraduate and graduate programs across various fields, including environmental sciences, biology, engineering, and humanities. UFOPA is renowned for its commitment to sustainable development and its significant contributions to the understanding and preservation of the Amazonia. The institution's emphasis on interdisciplinary studies and collaboration with local communities highlights its dedication to addressing regional challenges and promoting social and environmental well-being.

About Center for Marine Biology at the Universidade de São Paulo

The Center for Marine Biology at the University of São Paulo is a leading institute excelling in both basic and applied research in Marine Biology and Oceanography. CEBIMAR's mission is to develop and disseminate technical-scientific knowledge to inform public policies and environmental education programs. Its aim is to preserve and conserve marine biodiversity and ecosystem services while promoting the rational and sustainable use of marine resources.