

ANNUAL REPORT 2021



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After an atypical 2020, marred by the emergence of the pandemic, 2021 saw some important advances regarding health and sanitary security and a return to normality. At FUNBIO, the signing of robust new conservation initiatives north and south of the country was a significant step, and another indication of the urgent need to prioritise investment in solutions that intensify and guarantee practices that move us towards increasingly more sustainable development.

Since 2021, we have been financially managing the East Amazon Fund, created by the state of Pará to finance initiatives to spur the transition toward a carbon-neutral economy. The FAO (in Portuguese acronym) has already amassed enough funds to kick start this important mission in the nation's second-largest state. The FAO, which was present at the COP-26 Climate Conference in Glasgow, focuses much of its efforts on forest restoration, a line that is of growing importance in FUNBIO's portfolio.

In the last two years, forest restoration has been the theme of one third of all FUNBIO's project calls, totaling some R\$60 million pumped into ten thousand hectares (equivalent to ten thousand football pitches) in the Atlantic Forest, Caatinga, Pantanal and Pampa. The technical modalities have been varied, depending on the specificities of each area. This knowledge has afforded gains in efficiency and improved results in what the United Nations is calling the Decade on Ecosystem Restoration.

In the Amazon, another important initiative was also present at COP-26: the Legal Amazon Consortium, a first-of-its-kind collaboration involving all nine subnational governments in the Brazilian Legal Amazon, united behind the importance of implementing actions to protect and conserve the biome. We've been partners of the Consortium since 2019, and, last year, with support from the French Embassy in Brazil, work began on drawing up an integrated plan for illegal deforestation control.

Among the projects signed into action in 2021 are initiatives funded by legal obligations. Back in 2009, we designed The Atlantic Forest Fund, the first financial mechanism capable of ensuring the efficient and transparent use of environmental compensation payments in protected areas throughout the state of Rio de Janeiro. In the years that followed, we began to manage other projects financed with legal obligations, and these have gone on to free up funding for species conservation, the fostering of local economies, and the recovery and strengthening of traditional activities.

Now, as we renew our partnership with the Norwegian Embassy in Brazil, work is getting started on a new project rising to one of the most daunting challenges of the century: marine litter. The project takes the successful pilot carried out in São Paulo and extends it to four other states—Rio de Janeiro, Amapá, Bahia and Paraná—, where it will create and steer activities to address the problem.

I invite you all to read this 2021 activities report, which, we have no doubt, signals a return to normalcy—and one more aware and sustainable than ever.

ON AN INCREASINGLY SUSTAINABLE PATH



JOSÉ BERENGUER

Chairman of the Deliberative Board, FUNBIO

For a long time now screenwriters and novelists have been fascinated with the idea of time travel, and transformed it into a bevy of films and books that revisit the past or strike off into the future. In real life, alas, time travel is not possible. And yet, in the constant hurry of our present, milestones remind us of what was planned, what was done, and what is left to do to secure our future. And that future hinges upon our capacity to avoid the so-called point of no return, after which, science predicts, we will experience increasingly extreme events caused by our short-sighted and predatory development models.

In 2022, we celebrate a milestone: exactly 30 years ago, in June 1992, Rio de Janeiro hosted a meeting of delegations from over 150 countries for a first-of-its-kind debate: the United Nations Conference on the Environment and Development. Eco-92, or Rio-92, as it came to be known, floated the idea of a new development model that could sustainably ally the economy, environment and human wellbeing. Other gatherings have followed, such as the UN Conventions on Biological Diversity, Climate-change, and to Combat Desertification. FUNBIO's origins lie in Rio-92. We were created 26 years ago, and have been working ever since to support the implementation of the Convention on Biological Diversity in Brazil—and so conserve the future.

Thirty years on, the connection between the conventions is more apparent than ever, and the urgent need for change underlined by shocking images of wildfires, flash floods, lost harvests, and unparalleled destitution. This year, we intensified and expanded partnerships and approaches and we hope it will help to translate those discussions started three decades ago into more and ongoing initiatives. Dialogues with public prosecutors are a core part of the COPAÍBAS program, and will be the subject of a series of debates on and offline. On another front, the same initiative involves a partnership with the governments of Minas Gerais, Goiás, Maranhão and Mato Grosso to strengthen Protected Areas in the Cerrado.

In 2021, various states showed their determination to transition to a new economy. Pará is a case in point, with the innovative East Amazon Fund (abbreviated to FAO in Portuguese), the state has been rallying Brazilian and foreign partners behind the bioeconomy, forest restoration and land use. Last year, FUNBIO was selected as financial manager of the FAO, and it will receive the benefit of our 26 years of experience going forward.

In Rio, we're partnering the state on forest restoration financed by the Atlantic Forest Fund, a successful, innovative financial mechanism which FUNBIO designed for the Rio government in 2009. Since then, the Fund has channeled environmental compensation payments into the state's Protected Areas (PAs).

Now, in 2022, as the world returns to some semblance of normality after the COVID-19 pandemic, thanks to a blend of science and resilience, we're also celebrating the 20th anniversary of the world's largest tropical forest conservation initiative. The Amazon Region Protected Areas Program, launched by the federal government at a meeting to celebrate Rio-92, has soldiered through two decades, grown, surpassed its targets, and consolidated as a model for other countries. ARPA covers both federal and state-run PAs, and, since day one, has had FUNBIO as its financial manager.

If we could go back into the past with the knowledge and experience of the present, we would perhaps have more ARPAs in other biomes, and more forests would have been preserved, ensuring continued access to genetic heritage of inestimable value to humanity. And, if a time traveler should ever arrive in the future, our hope is that she'll find a world in which the effort, conviction and passion of those working for the environment, heeding the call initially issued by Rio-92, will have helped transform the planet into a better and more harmonious place. It all depends on the decisions of the present.

A FUTURE OF GOOD CHOICES



ROSA LEMOS DE SÁ
Secretary-General of FUNBIO



MISSION

To provide **strategic resources** for **biodiversity conservation**



VISION

To be the benchmark in **enabling strategic resources** and **solutions for the conservation of biodiversity**



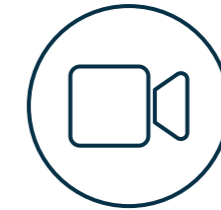
VALUES

FUNBIO is guided by the **following values**:

- › Transparency
- › Ethics
- › Effectiveness
- › Receptiveness
- › Independence Intellectuality
- › Innovation

A QUARTER CENTURY OF MANY STORIES

Find out about FUNBIO's main achievements

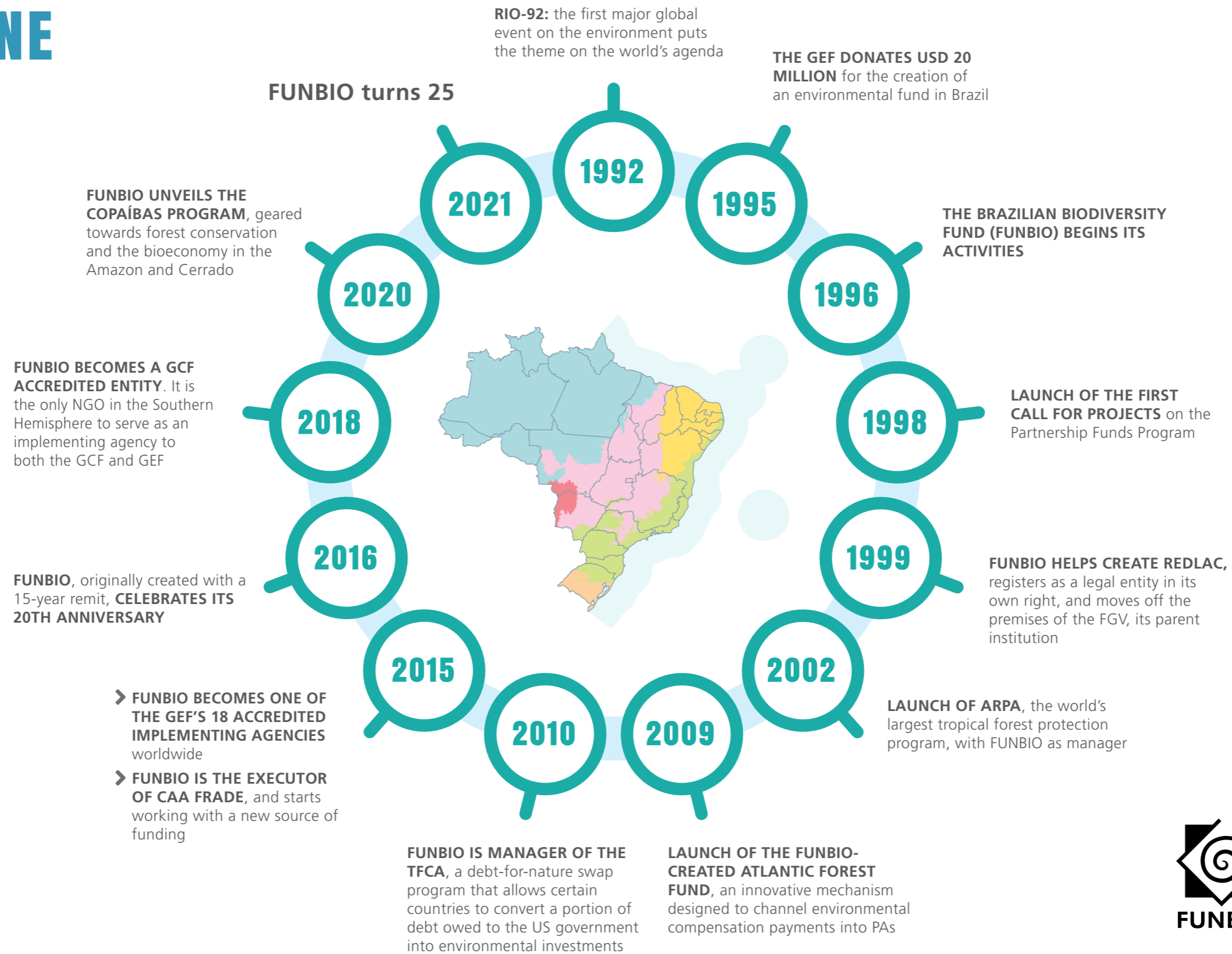


CLICK AND WATCH THE VIDEO

In 2021, we celebrated 25 years conserving the future. FUNBIO began its activities in 1996, and has been driven ever since by knowledge, innovation, actions and results that have created a legacy in biodiversity conservation in Brazil. In partnership with government, civil society, companies and academia, we work, and will continue to strive, to ensure that this and future generations live in a world in which development and conservation walk hand-in-hand.

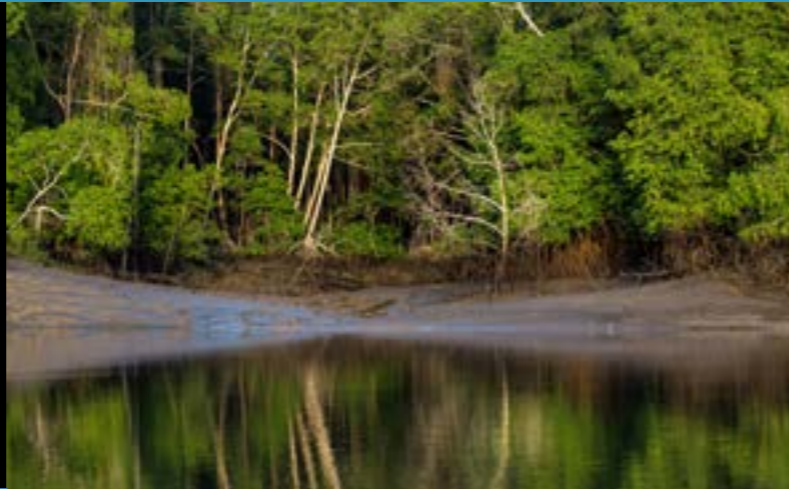


TIMELINE



“FUNBIO taught me the importance of working at something you believe in, because it really makes all the difference.”

FERNANDA MARQUES, project portfolio manager



“My dream for conservation is that society comes to understand just how important nature is for the quality of life we have, and deserve to have. I don’t know if I’ll live to see it, but I hope my daughters get to witness a society that values and understands the importance of the environment.”

ROSA LEMOS DE SÁ, CEO



“It’s a conversation about development, about the country we want to see in the future; the legacy we want to leave to future generations.”

FÁBIO LEITE, GEF and GCF Agencies Manager



“It’s a major challenge, because we take decisions based on what we see today and on what we understand will be best for the evolution of this system, that environment or this particular species.”

MAYNE MOREIRA, project analyst

“What we show is that conserving tomorrow is an investment. A society that can’t invest will never be able to change course over the long-term.”

MANOEL SERRÃO, superintendent of programs



“For me, FUNBIO means reconnection with nature and, in fact, reconnection with ourselves.”

ALEXANDRA VIANA, internal auditor



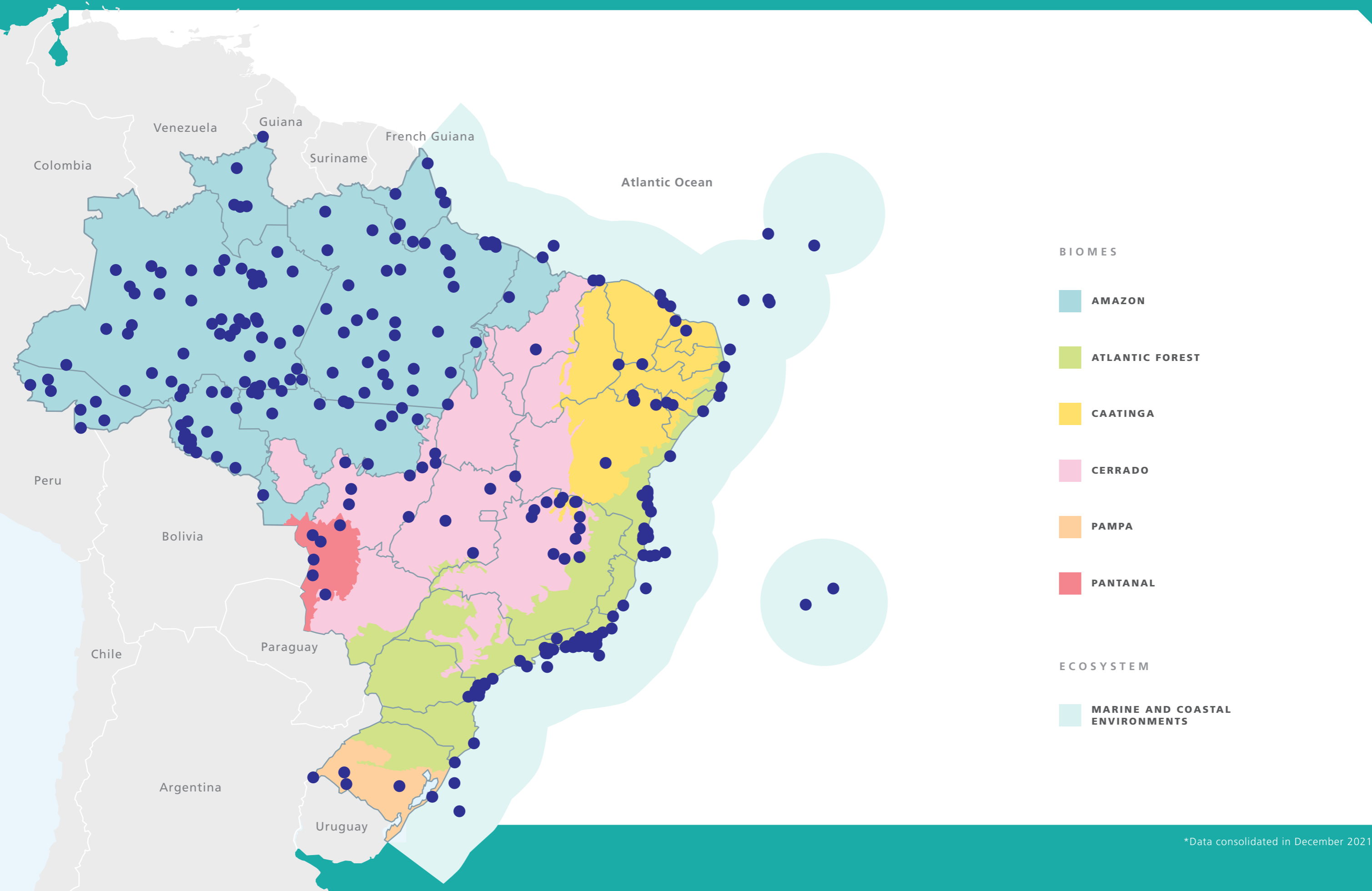
“It is so gratifying to grow alongside an institution that makes a difference.”

FLÁVIA MÔL, administrative coordinator



FUNBIO is a reference, an example, it is transformation. It’s about doing things differently; doing what so few do.”

MANUELA MUANIS, project portfolio manager



*Data consolidated in December 2021.

26

YEARS OF ACTING

54

CALLS FOR PROJECT

411

SUPPORTED PROTECTED AREAS

305

SUPPORTED INSTITUTIONS

950

SPECIES SUPPORTED

66

INDIGENOUS TERRITORIES
SUPPORTED

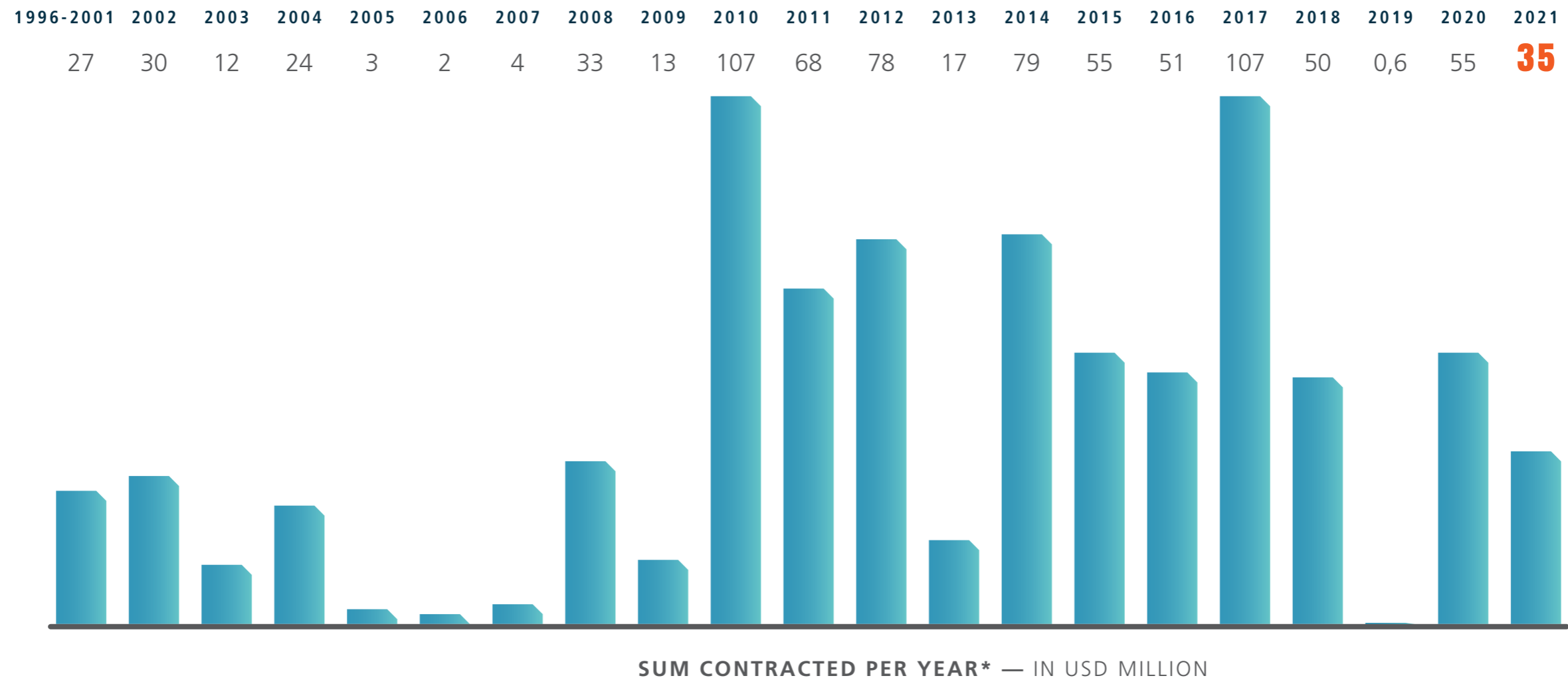
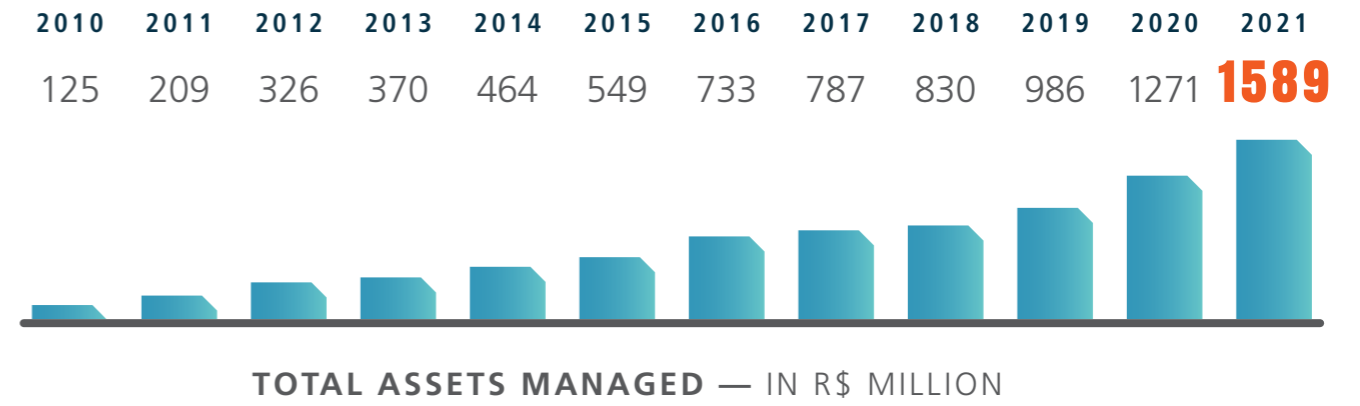
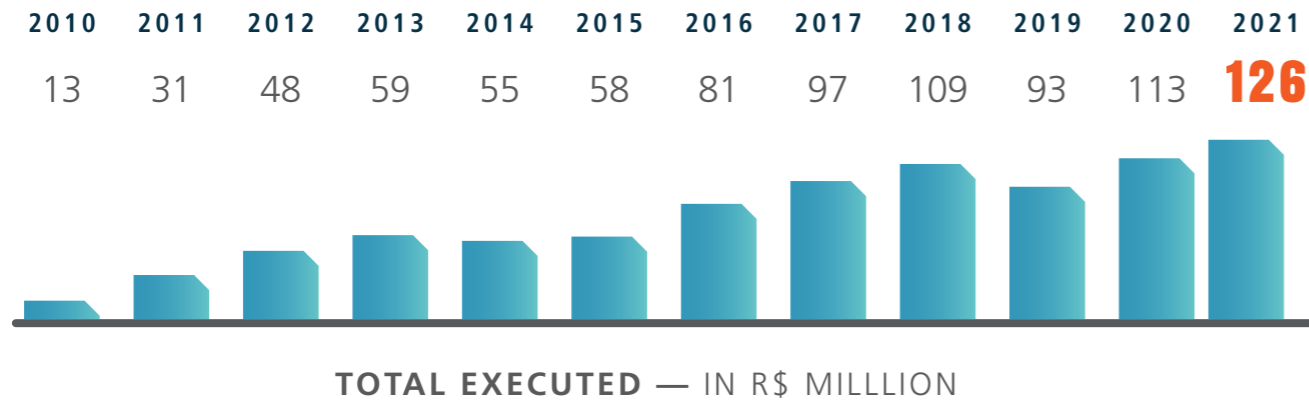
97

FINANCERS

411

SUPPORTED PROJECTS

IN NUMBERS



*Project sums converted into US dollars (exchange rate as of the last day of the month of the contract's signing)

FINANCERS

- 1 Anglo American
- 2 Arapyáú Institute
- 3 Bahia Mineração S/A
- 4 BID
- 5 BID/GEF
- 6 BNDES/FA
- 7 Brasfels
- 8 Cargill Foundation
- 9 Chevron and PetroRio
- 10 CI
- 11 CI/GCF
- 12 CSN
- 13 Embassy of France in Brazil
- 14 Embassy of Norway in Brazil
- 15 Eurofins Foundation
- 16 European Union
- 17 ExxonMobil Ltda
- 18 GCF
- 19 GEF
- 20 Gordon and Betty Moore Foundation
- 21 Humanize Institute
- 22 Institute for Climate and Society
- 23 KfW
- 24 KfW/BMU
- 25 KfW/BMZ
- 26 L Figueiredo
- 27 Natura S.A.
- 28 O Boticário Ltda
- 29 Petrobras S.A.
- 30 Rock World S.A
- 31 Several companies
- 32 TPAR
- 33 Transpetro
- 34 University of Colorado
- 35 Vale S.A
- 36 Votorantim
- 37 World Bank/GEF
- 38 WWF – Brazil
- 39 WWF-US

PROJECTS

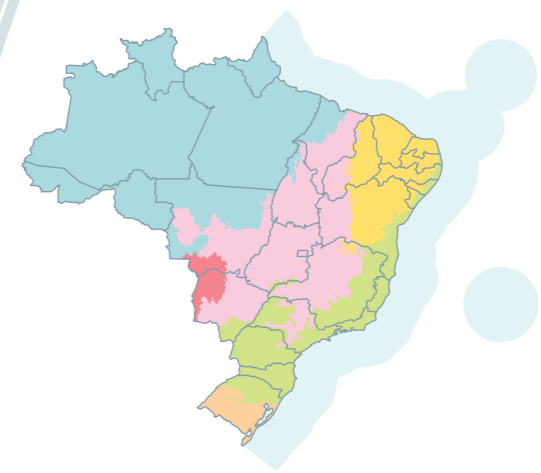
▶ A MILLION TREES FOR THE XINGU	30	+	
▶ ABROLHOS LAND AND SEA FUND	11	+	
▶ AMAPÁ FUND	10	+	
▶ ARPA	39	+	1 4 6 8 20 23 24 25 27 28 38
▶ ATLANTIC FOREST	23	+	
▶ CONSORTIUM LEGAL AMAZON REGION	31	+	2 13 21 22
▶ COPAÍBAS	14	+	
▶ EAST AMAZON FUND	31	+	
▶ ENVIRONMENTAL EDUCATION	9	+	
▶ FMA/RJ	31	+	
▶ FUNBIO GRANTS – CONSERVING THE FUTURE	21	+	15
▶ FRANCISCANA CONSERVATION	9	+	
▶ GCF TASK FORCE	34	+	
▶ GEF MAR	37	+	
▶ GEF TERRESTRE	5	+	
▶ GOLDEN LION TAMARIN ECOLOGICAL PARK	17	+	
▶ GOLDEN LION TAMARIN ECOLOGICAL PARK PHASE II	17	+	
▶ GREEN AGAIN	12	+	
▶ KAYAPÓ FUND	10	+	6
▶ MARINE LITTER IN BRAZIL	14	+	
▶ MARINE AND FISHERIES RESEARCH	9	+	
▶ PROBIO II	38	+	36
▶ PRO-SPECIES	37	+	19
▶ REM MT	25	+	
▶ RAPID RESCUE FUND	35	+	
▶ SEA GARBAGE IN SP	14	+	
▶ SUPPORT TO PAs	9	+	
▶ TAC ALSUB	29	+	
▶ TAC CORAL-SOL	36	+	7 29 32 33
▶ TAJ PARANAGUÁ	29	+	
▶ TCSA PORTO SUL	3	+	
▶ TRADITION AND FUTURE IN THE AMAZON	29	+	
▶ WINDOWS ONTO THE RESTINGA DE BERTIOGA STATE PARK	26	+	

PARTNERS













BIOMES

- 14 AMAZON
- 12 ATLANTIC FOREST
- 3 CAATINGA
- 4 CERRADO
- 14 MARINE AND COASTAL ENVIRONMENTS
- 4 PAMPA
- 4 PANTANAL



THEMATIC LINES

	 CAPACITATION OF TEAMS AND PARTNERS	 CLIMATE CHANGE	 CREATION AND CONSOLIDATION OF PROTECTED ÁREAS	 ENVIRONMENTAL MANAGEMENT OF INDIGENOUS TERRITORIES	 FINANCIAL MECHANISMS	 FOREST RESTORATION	 GENDER EQUALITY	 INSTITUTIONAL STRENGTHENING OF OUR PARTNERS	 SPECIES MANAGEMENT	 SUSTAINABLE PRODUCTIVE ACTIVITIES
A MILLION TREES FOR THE XINGU	✓	✓		✓		✓	✓	✓	✓	✓
ABROLHOS LAND AND SEA FUND			✓		✓					✓
AMAPÁ FUND					✓	✓	✓	✓		✓
ARPA		✓		✓	✓				✓	✓
ATLANTIC FOREST	✓	✓	✓			✓		✓		
CONSORTIUM LEGAL AMAZON REGION	✓	✓			✓	✓		✓		✓
COPAÍBAS		✓	✓	✓						✓
EAST AMAZON FUND	✓	✓	✓		✓	✓		✓		✓
ENVIRONMENTAL EDUCATION	✓						✓	✓		✓
FMA/RJ			✓		✓	✓		✓		
FRANCISCANA CONSERVATION	✓							✓	✓	✓
FUNBIO GRANTS – CONSERVING THE FUTURE		✓	✓	✓	✓			✓		
GCF TASK FORCE	✓	✓				✓				✓
GEF MAR	✓		✓		✓			✓		✓
GEF TERRESTRE	✓	✓	✓			✓			✓	✓
GOLDEN LION TAMARIN ECOLOGICAL PARK						✓		✓		
GOLDEN LION TAMARIN ECOLOGICAL PARK PHASE II						✓		✓		
GREEN AGAIN						✓		✓		
KAYAPÓ FUND	✓			✓	✓		✓	✓		✓
MARINE AND FISHERIES RESEARCH	✓	✓			✓		✓	✓	✓	✓
MARINE LITTER IN BRAZIL										
PRO-SPECIES	✓						✓	✓	✓	
PROBIO II	✓	✓				✓	✓		✓	✓
RAPID RESCUE FUND	✓	✓		✓		✓		✓		✓
REM MT		✓		✓		✓	✓	✓	✓	✓
SEA GARBAGE IN SP										
SUPPORT TO PAS			✓		✓				✓	✓
TAC ALSUB			✓							✓
TAC CORAL-SOL					✓			✓	✓	
TAJ PARANAGUÁ			✓							
TCSA PORTO SUL		✓	✓			✓		✓	✓	
TRADITION AND FUTURE IN THE AMAZON	✓	✓		✓			✓	✓		✓
WINDOWS ONTO THE RESTINGA DE BERTIOGA STATE PARK	✓							✓		✓

The conservation initiatives FUNBIO supports work toward the 17 Sustainable Development Goals (SDGs), Brazil's Nationally Determined Contributions (NDCs) and the National Action Plan and Strategy for Biodiversity (EPANB, in Portuguese). In this report, projects with a bearing on the SDGs, Brazil's NDCs, or the EPANB are flagged with the respective icons.

SUSTAINABLE DEVELOPMENT GOALS (SDGS)

In 2015, the United Nations (UN) announced that its member states were adopting 17 Sustainable Development Goals in order to protect the planet, eradicate poverty and ensure prosperity for all. The SDGs carry on from where the Millennium Development Goals left off in 2000, giving those who fell short of those targets a second chance to hit the mark. The set of measures will guide Brazil and the 192 other signatories in drafting national policies and negotiating international cooperation agreements between now and 2030.



NATIONALLY DETERMINED CONTRIBUTION (NDC)

The same year, Brazil presented its Nationally Determined Contribution (NDC), the nation's commitment to the Paris Agreement. The NDC was revised in 2020, when, in accordance with the Third National Inventory, Brazil promised a 37% reduction in greenhouse gas emissions by 2025 relative to the year 2005, and a 43% cut by 2030. The new version of the inventory replaced the earlier, both of which were produced by the Ministry of Science, Technology and Innovations (MCTI).



THE NATIONAL BIODIVERSITY STRATEGY AND ACTION PLANS (NBSAP)

The National Biodiversity Strategy and Action Plans – NBSAP is intended to promote the conservation and sustainable use of biodiversity, with an equitable sharing of the benefits of genetic use. It was created by the Federal Government in collaboration with state governments, business, academia and civil society. It contributes to the country's biodiversity goals. All FUNBIO projects contribute to the NBSAP.

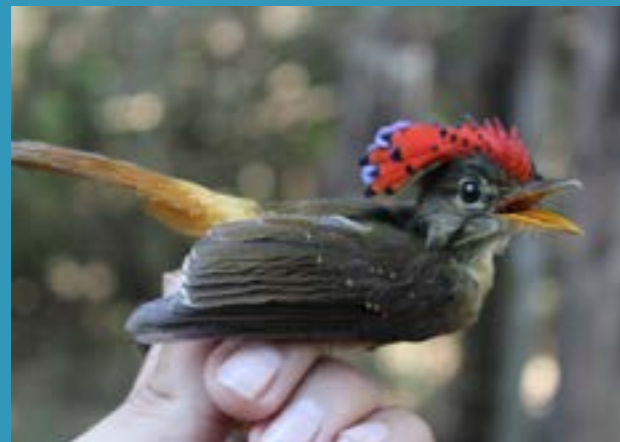


SDG AND CONTRIBUTIONS

	1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	LEADS	
A MILLION TREES FOR THE XINGU					✓	✓							✓		✓		✓	✓	✓
ABROLHOS LAND AND SEA FUND								✓				✓	✓	✓	✓		✓		✓
AMAPÁ FUND		✓						✓					✓		✓		✓	✓	✓
ARPA		✓			✓	✓							✓		✓		✓	✓	✓
ATLANTIC FOREST													✓		✓		✓	✓	✓
CONSORTIUM LEGAL AMAZON REGION	✓	✓							✓			✓	✓	✓	✓		✓	✓	✓
COPAÍBAS	✓	✓						✓					✓		✓		✓	✓	✓
EAST AMAZON FUND	✓	✓				✓	✓	✓				✓	✓	✓	✓		✓	✓	✓
ENVIRONMENTAL EDUCATION		✓			✓									✓			✓		✓
FMA/RJ						✓							✓	✓	✓		✓	✓	✓
FRANCISCANA CONSERVATION														✓			✓		✓
FUNBIO GRANTS – CONSERVING THE FUTURE				✓									✓	✓	✓		✓		✓
GCF TASK FORCE		✓					✓					✓					✓	✓	✓
GEF MAR		✓			✓			✓						✓			✓		✓
GEF TERRESTRE													✓		✓		✓	✓	✓
GOLDEN LION TAMARIN ECOLOGICAL PARK								✓					✓		✓		✓	✓	✓
GOLDEN LION TAMARIN ECOLOGICAL PARK PHASE II								✓					✓		✓		✓	✓	✓
GREEN AGAIN											✓				✓		✓	✓	✓
KAYAPÓ FUND		✓			✓								✓		✓		✓		✓
MARINE AND FISHERIES RESEARCH					✓							✓		✓			✓		✓
MARINE LITTER IN BRAZIL			✓											✓			✓		✓
PRO-SPECIES														✓	✓		✓		✓
PROBIO II		✓			✓	✓	✓					✓	✓		✓		✓	✓	✓
RAPID RESCUE FUND	✓	✓	✓		✓		✓			✓		✓	✓			✓	✓	✓	✓
REM MT		✓			✓			✓				✓	✓		✓		✓	✓	✓
SEA GARBAGE IN SP			✓											✓			✓		✓
SUPPORT TO PAs													✓	✓	✓		✓	✓	✓
TAC ALSUB								✓			✓	✓	✓	✓			✓		✓
TAC CORAL-SOL														✓	✓		✓		✓
TAJ PARANAGUÁ														✓	✓		✓	✓	✓
TCSA PORTO SUL						✓							✓	✓	✓		✓	✓	✓
TRADITION AND FUTURE IN THE AMAZON					✓								✓		✓		✓		✓
WINDOWS ONTO THE RESTINGA DE BERTIOGA STATE PARK								✓				✓			✓		✓	✓	✓

JANUARY

- ▶ Roll out of **Tradition and Future in the Amazon**, with support from the Petrobras Socioenvironmental Program. Focused on the preservation and valuing of Kayapó traditional knowledge, the project promotes biodiversity conservation by honing territorial and environmental management in the ethnicity's Indigenous Territories (ITs).
- ▶ The Eurofins Foundation announces its support for the 2021 edition of the **FUNBIO Grants Program – Conserving the Future**.



FEBRUARY

- ▶ With support from **GEF Terrestre**, the Foundation for Research and Extension Support in Sergipe (FAPESE) begins work on mapping species at the São Francisco River Natural Landmark (Alagoas, Sergipe, Bahia) with a view to performing diagnostics and extinction-risk assessments on Caatinga fauna.



MARCH

- ▶ With support from **Marine and Fisheries Research**, the “Sustainable Consumption Guide to Marine Fish” is published, offering guidance on popular edible fishes that considers extinction risk, contamination with pollutants, and overfishing.



APRIL

- ▶ **FUNBIO** is the manager of **conservation actions funded through the Underwater Stocks Conduct Adjustment Agreement**, signed between Petrobras and the Federal Public Prosecutors’ Office. The project will focus on Rio de Janeiro’s Green Coast.



MAY

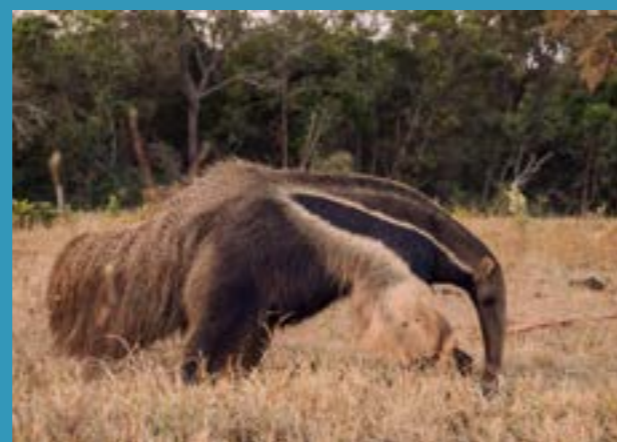
➤ **FUNBIO issues its first call for projects of 2021.** By the time the year was out, there would be 5 calls in all, and 5 calls for expressions of interest.



JUNE

➤ **FUNBIO celebrates its 25th anniversary:** two and a half decades dedicated to biodiversity conservation and sustainable development.

➤ **FUNBIO Grants opens for applications for its fourth edition.** Since 2018, the program has supported 97 research projects in the field Brazil-wide (60% of these led by women).



JULY

➤ **The tradition and Future in the Amazon project supports its first activity in the field,** geared towards artistic and audiovisual production among women of all ages and youngsters from the Pukanu village in the Menkragnoti Indigenous Territory in Mato Grosso.

➤ **The Biodiversity and Climate Change in the Atlantic Forest project issues its first call** for proposals to restore degraded areas and buttress the production chain associated with the biome's recovery.

➤ **FUNBIO is announced as the financial agent for the Green Recovery Plan,** an initiative by the Interstate Consortium for Sustainable Development in the Legal Amazon. The initiative, which brings the region's subnational governments together for the first time, is designed to foster green-economy development and deliver a string of targets including the eradication of illegal deforestation by 2030.

➤ **The Marine and Fisheries Research Project broadens the scope of its support and issues a call for new initiatives** for the conservation of endangered sharks and rays along the coast of Rio de Janeiro.

AUGUST

➤ **ExxonMobil renews its support contract with the Golden Lion Tamarin Association,** FUNBIO's partner on two initiatives for the species. The resources are mainly channeled into structuring the ecological park, with the construction of belvederes and a watch tower.

➤ **Funds from the REM MT program are rerouted into the acquisition of 100 sets of Personal Protection Equipment** for volunteer fire-fighters at Indigenous Territories. The measure is taken to equip the residents to combat forest fires.

➤ Conservation funding is a key theme in our work and it was covered in an episode of the **podcast Proteja**, in which FUNBIO discusses the international conjuncture, new business and legal obligations.

➤ **The Amapá Fund issues its first call for projects to nurture** sustainable production chains and the bioeconomy.



SEPTEMBER

- **FUNBIO is selected financial manager of the innovative East Amazon Fund**, a financial mechanism created by the state government of Pará to rally private funding and international cooperation behind the strengthening of public policies and social initiatives focused on the state's environment and development.
- **The RedLAC – Network of Latin American and Caribbean Environmental Funds Assembly is held in virtual format** and FUNBIO speaks at a roundtable on the Mobilization of Bi and Multilateral Resources.



OCTOBER

- **FUNBIO is manager of the Biodiversity Conservation Program for the Coast of Paraná**, a region of ecological importance to the preservation of the Atlantic Forest and marine and coastal system. The program's funding comes from a Consent Decree agreed in 2021 by Petrobras, the Paraná State and Federal Public Prosecutors' Offices, and the Paraná State Environmental Institute.
- **The Franciscana Management Project supports the Toninhathon**, a hackathon to engage students, researchers, the fishing community, managers, and society in generating creative ideas and solutions for the conservation of the franciscana and other endangered marine species.
- **Implementation starts on the COPAÍBAS program, in partnership with the Norwegian Ministry for Foreign Affairs**. The initiative is a drive to reduce illegal deforestation in the Cerrado and Amazon, a key factor in climate change. It involves alliance-building, protected areas, and the pioneering use of artificial intelligence applied to communication.

NOVEMBER

- **The Marine and Fisheries Research Project channels funds into the Friends of the National Museum Association** for the construction of a taxidermy laboratory and acquisition of new marine specimens. The original collection was lost in the fire that devastated the institution in 2018.
- **Launch of the Franciscana Museum, backed by the Franciscana Management program and designed by the Aquatic Mammals and Bioindicators Laboratory (Maqua)**. This interactive virtual space shines a light on the species in a showcase replete with virtual reality, photos, videos and comprehensive information about the species.
- **The Biodiversity and Climate Change in the Atlantic Forest Project selects 10 institutions** to work on the restoration of degraded areas and strengthening of the associated production chains.
- **FUNBIO attends the COP26 Climate Conference in Glasgow**.
- **FUNBIO will execute the new Sun Coral Conduct Adjustment Agreement (CAA)**, which will perform diagnostics, monitor the region's biodiversity, and roll out early-detection procedures to spot this invasive species, especially at the Tamoios Ecological Station.

DECEMBER

- **Funded by the Norwegian Embassy in Brazil, a project lending continuity to the Marine Litter Monitoring and Assessment Plan for Brazil is signed into life**, extending the studies to Rio de Janeiro, Bahia, Amapá and Paraná.
- **Also given the go ahead is the Concerted Strategy to Tackle Ethnoenvironmental Emergencies in the Brazilian Amazon – Rapid Rescue Brazilian Amazon, financed by Re:wild**. The organization will develop activities in areas of the Brazilian Rainforest severely affected by fires and deforestation.
- **The fourth edition of the FUNBIO Grants Program – Conserving the Future announces its grant awardees**: 37 doctoral and master's degree researchers from 23 institutions, with studies across all Brazil's biomes.



FUNBIO is a private, not-for-profit civil-society organization founded in 1996 with a donation from the Global Environment Facility (GEF) and a federal government brief to support the implementation of the United Nations Convention on

Biological Diversity. FUNBIO has extensive experience in managing projects and financial assets deriving from international cooperation, private-sector donations and legal obligations incurred by the Brazilian business sector. FUNBIO does not execute

funds from the national budget. In 2015, FUNBIO received accreditation as a Global Environment Facility (GEF) implementing agency, and, in 2018, became a Global Climate Fund (GCF) accredited entity. In 2018, it adopted the International Finance

Corporation’s social and environmental performance standards. Since its activities began in 1996, FUNBIO has supported over 340 projects that have benefited upwards of 270 institutions Brazil-wide.



FUNBIO is structured into three areas:



DONATIONS UNIT

Projects financed through private donations and bi-and multi-lateral agreements brokered with the Brazilian government.



LEGAL OBLIGATIONS UNIT

Projects financed through privatesector legal obligations: environmental compensation, Consent Decrees/Terms of Conduct Adjustment, and other mechanisms.



SPECIAL PROJECTS UNIT

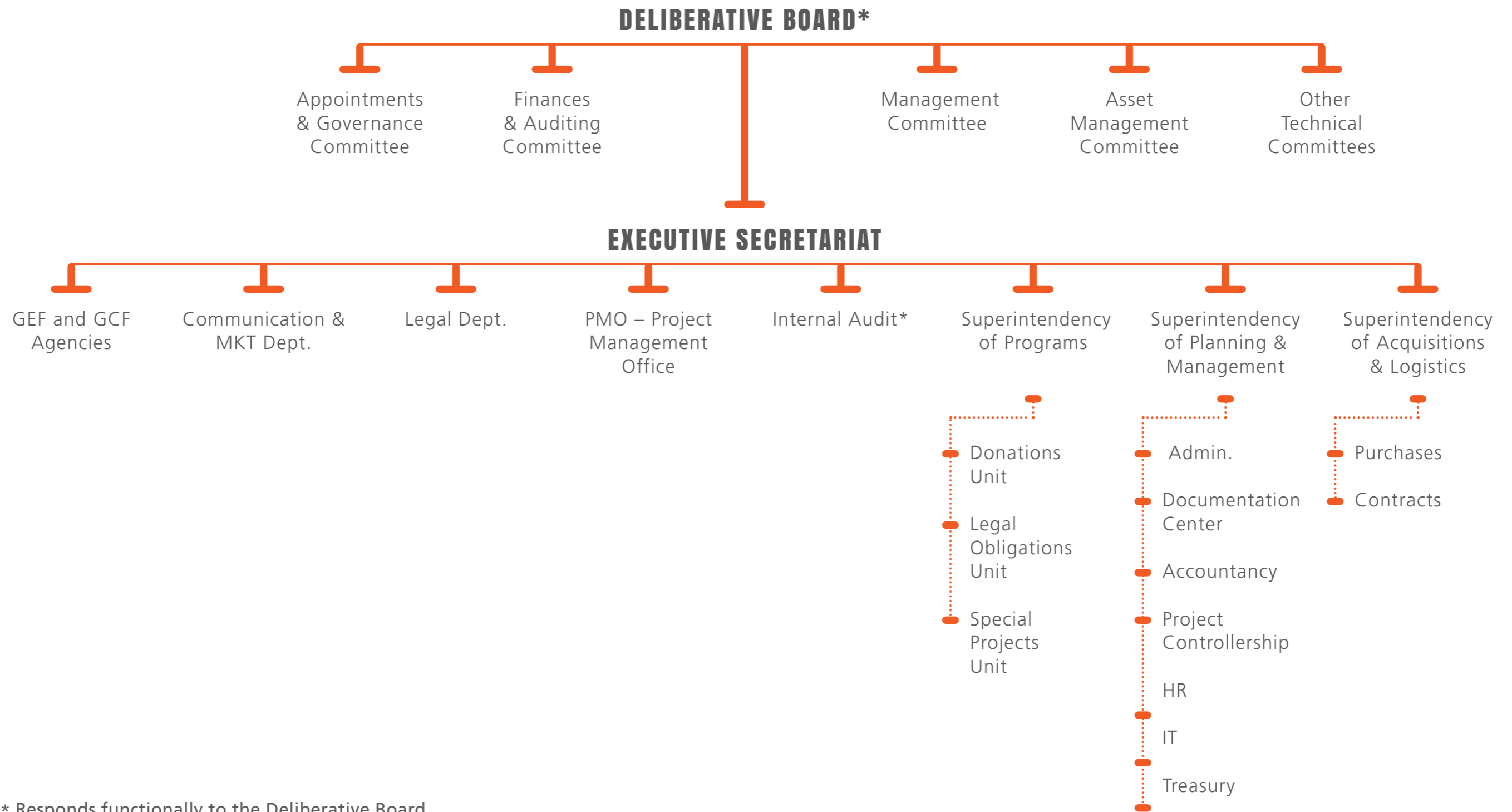
Diagnoses financial environments and designs mechanisms and tools that unblock access to new financial sources.



ACCESS THE WEBSITE

- › Anglo American
- › Bahia Mineração S.A.
- › Brazilian Development Bank (BNDES)
- › BP Brasil Ltda.
- › Bundesministerium für Umwelt – BMU
- › Companhia Siderúrgica Nacional – CSN
- › Conservação Internacional – CI-Brasil
- › Conservation International Foundation
- › Department for Business, Energy & Industrial Strategy – BEIS
- › Eurofins Foundation
- › European Union – EU
- › ExxonMobil Química Ltda
- › ExxonMobil Exploração Brasil Ltda
- › Global Conservation Fund
- › Global Environment Facility – GEF
- › Gordon & Betty Moore Foundation
- › Green Climate Fund – GCF
- › Humanize Institute
- › Institute for Climate and Society – iCS
- › Inter-American Development Bank (IDB)
- › KfW Bankengruppe
- › L. Figueiredo Empreendimentos Imobiliários
- › Linden Trust for Conservation
- › Margaret A. Cargill Philanthropies
- › Natura Cosméticos S.A.
- › Norwegian Agency for Development Cooperation
- › Norwegian Ministry of Foreign Affairs
- › O Boticário Franchising Ltda
- › Petróleo Brasileiro S.A. – Petrobras
- › Petro Rio Jaguar Petróleo Ltda.
- › Re:wild
- › Rock World S.A.
- › Service de Coopération et d’Action Culturelle d l’Ambassade de France Au Brésil
- › World Bank – Banco Mundial
- › WWF-Brasil
- › WWF-US

ORGANIZATIONAL FLOW CHART



* Responds functionally to the Deliberative Board
 Department composition

The Deliberative Board (DB) sits 16 members from the academic, environmental, business and governmental sectors. It is FUNBIO's chief governing body.



CHAIRMAN

José de Menezes Berenguer Neto

VICE-CHAIRWOMAN

Danielle de Andrade Moreira



ACADEMIC SECTOR

Ana Maria de Oliveira Nusdeo

School of Law of the University of São Paulo (USP)

Bernardo B. N. Strassburg

International Institute for Sustainability (IIS)

Danielle de Andrade Moreira

Pontifical Catholic University of Rio de Janeiro (PUC-Rio)

Fabio Scarano

Brazilian Sustainable Development Foundation (FBDS)



ENVIRONMENTAL SECTOR

Adriana Ramos

Socio-environmental Institute (ISA)

Maria de Lourdes Silva Nunes

Boticário Group Foundation for Nature Protection

Maria José Gontijo

International Education Institute of Brazil (IEEB)

Valmir Ortega

Conexus



BUSINESS SECTOR

Flavio Ribeiro de Castro

FSB Comunicação

José de Menezes Berenguer Neto

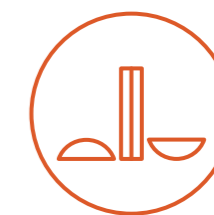
Banco XP

Marianne von Lachmann

Lachmann Group

Walter Schalka

Suzano



GOVERNMENTAL SECTOR

Eduardo Lunardelli Novaes

Ministry of the Environment [until August/2021]

Maria Beatriz Palatinus Milliet

Ministry of the Environment [since August/2021]

Fernando Cesar Lorencini

Instituto Chico Mendes de Conservação da Biodiversidade (ICMBio) [until November/2021]

Marcos de Castro Simanovic

Instituto Chico Mendes de Conservação da Biodiversidade (ICMBio) [since November/2021]

Marcelo Moisés de Paula

Ministry of Economy

Our demonstration of accountability dated December 31, 2021, along with the independent auditor’s report and explanatory notes are available for consultation at:



EXTERNAL AUDIT

FUNBIO has contracted an independent external audit every year since its foundation. The external audit was carried out in 2021 by Ernst & Young.

Its statements of account, all passed with unqualified opinion, the independent auditor’s reports and explanatory notes are all available for consultation on the FUNBIO website.



INTERNAL AUDIT

Since 2013, FUNBIO has also conducted an internal audit to buttress aspects of control and the integrity of its accounting and financial data. The internal audit is an instrument that probes every level of the organization, ensures an adequate working relationship between the different areas, and supports and promotes ongoing process improvements. It is a reference for the implantation and engagement of best practices in organizational governance. The statements of account, independent auditor’s reports and explanatory notes are all available for consultation on the FUNBIO website.



Created in 2013, the FUNBIO Ethics Committee is formed by four members of staff encumbered with developing the Code of Ethics, a document that sets forth the organization's norms of ethical conduct. The Code is approved by the Deliberative Board. The committee members, who serve two-year, oncerenewable mandates, are also responsible for annually training FUNBIO employees in the Code. Issues can be raised and complaints made through the appropriate channels on the institution's website.

In 2021 the Committee met at regular intervals to serve the following functions:



Provide annual ethics training to the whole FUNBIO staff. The training was administered online through the FUNBIO University between November 10 and November 23, 2021. Further to that, an interactive online activity was held for new hires on November 16. The training was focused on ethical concepts, the Code of Ethics, and Funbio's best practices.



In December 2021, Manuela Muanis joined the Ethics Committee, replacing João Ferraz, whose mandate, which should have expired in September 2021, had been extended until November.



In 2021, there were 5 cases under Committee review, 3 of which were reports of unethical conduct and 2, consultations. The channels remained open throughout the period. Consultations are reported on separately, and any additional orientation that might arise from them is covered by Funbio's periodical top-up training.



Average processing time for reports was 3 (three) months.



ACCESS THE WEBSITE



ACCESS THE ETHICS COMMITTEE



MEMBERS OF THE ETHICS COMMITTEE IN 2021

Flavia Neviani Coordinator
Alexandra Viana Leitão
Heloísa Helena Henriques
João Ferraz [until November]
Manuela Muanis [since November]

In 2018, FUNBIO adopted the safeguards applied by the International Finance Corporation (IFC), part of the World Bank Group.



ACCESS POLICIES AND SAFEGUARDS

GENDER INTEGRATION POLICY

ENVIRONMENTAL AND SOCIAL POLICY

Performance Standards



PS1
Assessment and Management of Environmental and Social Risks and Impacts



PS2
Labor and Working Conditions



PS3
Resource Efficiency and Pollution Prevention



PS4
Community Health, Safety, and Security



PS5
Land Acquisition and Involuntary Resettlement



PS6
Biodiversity Conservation and Sustainable Management of Living Natural Resources



PS7
Indigenous People



PS8
Cultural Heritage

FUNBIO is the only civil society Organization in the Southern Hemisphere to hold both GEF agency and GCF entity accreditation.



The Green Climate Fund (GCF) was set up in 2010 to support projects tackling climate change. Since then, it has supported over a hundred projects totaling USD 2 billion in funding. In 2018, FUNBIO, BNDES and the federal bank Caixa Econômica Federal became Brazil's first GCF accredited entities.



ACCESS GCF AGENCY



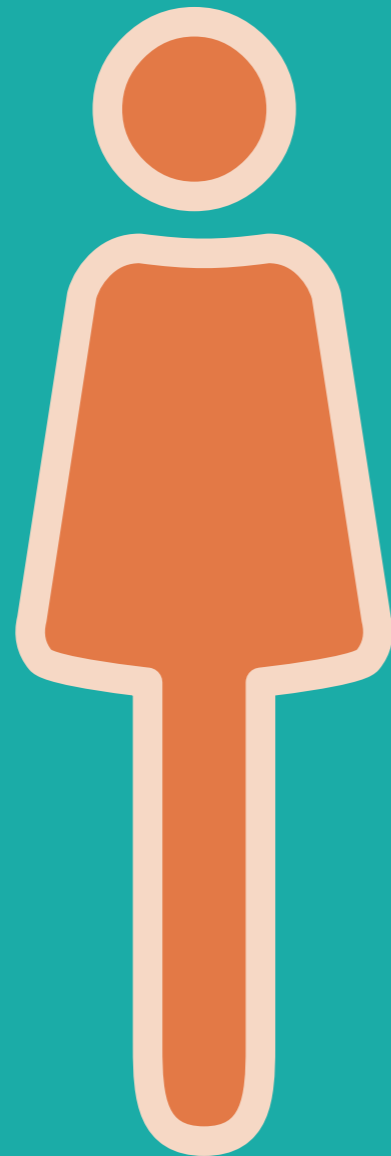
The Global Environment Facility was established at the Earth Summit in Rio de Janeiro in 1992 to help tackle some of the most pressing problems facing the environment. Since then, the GEF has channeled USD 21.1 billion into over 5 thousand conservation projects across 170 countries. Today, there are 18 GEF Agencies worldwide, working together to increase and diversify this portfolio. In 2015, after careful assessment, FUNBIO received national GEF agency accreditation. Its maiden voyage as a GEF Agency came in 2018, when work began on the National Strategic Project for the Conservation of Endangered Species (Pro-Species).



ACCESS GEF AGENCY

STAFF AND INTERNS

65%



35%



LEADERS

69%

31%

*The list includes staff and interns who were part of the FUNBIO team in 2022.

SECRETARY-GENERAL'S OFFICE

Rosa Maria Lemos de Sá CEO
Zeni Pinheiro
Manager

GEF & GCF Agencies
Fábio Heuseler Ferreira Leite
Manager

TEAM:
Maria Vitória Elicher Alentejano

COMMUNICATION & MARKETING
Helio Yutaka Hara
Manager

TEAM:
Ana Clara Dias Gualda Pereira
Isabelle Pereira da Costa
Samira Chain Nascimento
Talissa Silverio Araujo

LEGAL DEPARTAMENT
Flavia de Souza Neviani
Manager

TEAM:
Alice Regnier Gomide
Paulo Miranda Gomes
Rafaela Luiza Pontalti Giongo

INTERNAL AUDIT
Alexandra Viana Leitão

PROJECT MANAGEMENT OFFICE (PMO)
Mônica Aparecida Mesquita
Ferreira Manager

TEAM:
Julia Annarumma Rocha de Aguiar Coelho

SUPERINTENDENCY OF PROGRAMS

Manoel Serrão Borges de Sampaio
Superintendent

DONATIONS UNIT 1
Fernanda Figueiredo Constant Marques
Portfolio Manager

Alexandre Ferrazoli Camargo
Project Manager
Clarissa Scofield Pimenta

Project Manager
Daniela Torres Ferreira Leite
Project Manager

Fabio Ribeiro Silva
Project Manager
Paula Cavalcanti Ceotto

Project Manager
TEAM:
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Andre Luiz Ferreira Lemos
Fernanda Abduche Correa de Paiva Estrella

Gustavo Menezes Cobelo Lima
Heliz Menezes da Costa

Maiara Duarte Teixeira de Souza
Michelle Tosetti Dantas

Paula Vergne Fernandes
Pedro Alberto Dantas da Silva
Thales Fernandes do Carmo

Vivian Saddock da Silva
Edegar Bernardes Silva

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Portfolio Manager

João Ferraz Fernandes de Mello
Project Manager

TEAM:
Rodolfo Cabral Costa Gomes
Marçal

Bruna Valença Godinho
Dante Coppi Novaes
Gabriella Furtado

Mariana Fernandes Gomes
Galvão
Mariana Melo Gogola

Mary Elizabeth Lazzarini
Teixeira

LEGAL OBLIGATIONS UNIT
Manuela Mosse Muanis
Portfolio Manager

Ana Helena Varella Bevilacqua
Project Manager
Mayne Assunção Moreira

Project Manager
TEAM:
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Bruno Bernardo Ramos
Laura Pires de Souza Petroni

Mariana Gonçalves Tavares
Renan Alves Conceição
Thiago da Fonseca Martins

SPECIAL PROJECTS UNIT
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Project Manager

TEAM:
TEAM:
Ana Paula França Lopes

Camila da Costa Golfetto
Dalissa Granja Villa Nova
Felipe Augusto de Araujo

Camello
Felipe Dias Mendes Serra
Igor Santos da Silva

Juliana Siqueira da Silva Schuler
Mayara do Valle Bernardes de Lima
Natalia de Sousa Freire

Priscila Ribeiro Larangeira
Freitas
Administration
Flávia Mól Machado
Coordinator

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Cláudio Augusto Silvino

Marcio de Vasconcelos Maciel
Matheus Duarte Ramos

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Ana Maria Rodrigues Martins
Bruno Miceli Parede Pinheiro
Jefferson Luis Mattos Jesus

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Coordinator

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Guilherme Brito da Silva

Mariana Ribeiro de Amorim
Cabral
Mylene Costa Barbosa Milesi

Nara Anne Brito do Nascimento
Suellen Pereira de Freitas
Thais dos Santos Lima

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Camila da Costa Golfetto

Dalissa Granja Villa Nova
Felipe Augusto de Araujo
Camello

Felipe Dias Mendes Serra
Igor Santos da Silva
Juliana Siqueira da Silva Schuler

Mayara do Valle Bernardes de Lima
Natalia de Sousa Freire
Priscila Ribeiro Larangeira

Freitas
Vanessa Guimarães Ribeiro de Barros

Vanessa Ravaglia Cohen
Vitor da Silva Vieira

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Bruna Gabriella de Oliveira

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Heloisa Helena Henriques

Leticia Cristina Ferreira
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Roberta Alves Martins

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Luciana Bernardes Natal

Thais de Oliveira Medeiros
INFORMATION TECHNOLOGY
Vinicius de Souza Barbosa

Coordenador
TEAM:
Alessandro de Assis Denes

Caroline Cavalcanti de Oliveira
Jacobina
Deywid Carvalho Dutra

Igor de Veras Coutinho Soares
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Fernanda Alves Jacintho

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Allan da Silva Cabral
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Flavio do Sacramento Miguel

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Lima Filho
Luiza de Andrade Lima
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Maria Eduarda dos Santos
Domingues
Tatiane Tito Rodrigues

Vinicius Chavão da Cunha de Souza
Viviane dos Santos da Silva
Viviane Ferreira da Costa

Willian dos Santos Edgard
CONTRACTS
Suzana Amora Ramos

Coordinator
TEAM:
Cleyton Oliveira Lima de Souza

Elizangela da Conceição Santos
Luisa Brandt Pinheiro da Silva
Renata da Luz Leandro

Thais Mariano da Silveira de Brito

WOMEN IN CONSERVATION

In the 2021 edition of the Annual Report, we presented three women whose lives and work were devoted to defending the environment, their communities' traditions and female participation in decisions historically taken only by men. The stories of Maial Paiakan, Cilene dos Santos, and Áurea Garcia recently intersected with the Tradition and Future in the Amazon, Environmental Education, and GEF Terrestre projects, respectively.

Whether it's in science or at community assemblies, women's involvement is still a far cry from the equality they deserve. Despite accounting for 51.8% of the Brazilian population, women still face impediments that make access to front-office spaces all the more difficult. In this section, we pay tribute to women, and present success stories that display women's strength in breaking through these glass barriers, and spreading inspiration.



“In Indigenous society, man is known for his strength, but not for being in any way above women. We're equals with different roles. We have a lot of value in our society.”

MAIAL PAIAKAN, first Kayapó woman to obtain a law degree



“e want to see more and more women taking lead roles in actions to conserve the Pantanal, and taking decisions. We want to be recognized as wetland women.”

ÁUREA GARCIA, co-founder and general director of Mulheres em Ação pelo Pantanal



“I took it upon myself to create the Associação das Mulheres Caiçaras Buzianas in order to recover the history of our town. The project is a way to give our caiçara women professional independence and a source of income.”

CILENE DOS SANTOS, chairwoman of the Associação das Mulheres Caiçaras Buzianas

MAIAL PAIAKAN

MAIAL PAIAKAN, THE FIRST KAYAPÓ TO HOLD A DEGREE

Becoming the first Kayapó to hold a degree was no accident in the life of lawyer **MAIAL PAIAKAN**, 32, considered one of the main up-and-coming leaders of the ethnicity and a role-model for hundreds of 'menires', as women are called in the Kayapó language. From a childhood steeped in culture and traditions, Maial understood early on just how important it was to preserve indigenous culture, and she has never set aside her Mebengôkre roots.

Moved by the will to write her own story in defense of indigenous rights, the young girl left the Aukre village, in the Kayapó Indigenous Territory in Pará, at the age of nine in order to study at the town of Redenção. Daughter of Paulinho Paiakan, a historic leader of the Kayapó, Maial is proud of her vision of life, her traditions, and the encouragement her father gave her to pave her own way outside the village.

"I was one of the first children to leave the village to study. My father was very strong at the time. He

had to talk to the community to explain why myself and my sisters were moving to the town. My paternal grandfather, for example, was against it, mostly because he was afraid of non-indigenous society, especially for women", he says.

His concerns were legitimate. If women and men have clearly defined roles and importances in Kayapó village society, life in town was a shock: the gender inequality in non-indigenous society became startlingly clear over the years, especially when Maial took her first career steps. It was then that she realized something that marked her deeply.

"Many of my projects were led by men, but executed by women. In the villages, women have their importance too, they are guardians of a great deal of our culture, they are essential in carrying the traditions forward through the generations, tending to the family plots, for example. In indigenous society, men are known for their strength, but their work is not consid-

ered more important than the women's. We're equals, but with different roles. Women are valued highly in Kayapó society, but that's not the case outside. If it's hard for an indigenous woman to earn her space, imagine how tough it must be for the non-indigenous women? They have to work twice as hard", she says.

After graduating in Law from the University of Tocantins, the young Kayapó began to occupy positions indigenous women rarely reach: she now holds a master's degree from the University of Human Rights, run by the Federal University of Pará, and has worked at the National Indigenous Foundation (Funai) and Special Department for Indigenous Health. She also served as an aide to Federal Representative Joênia Wapichana at the House of Representatives in Brasília. Maial is currently a consultant on the Tradition and Future in the Amazon project, translating three legal milestones into the Kayapó language ([see the text on page 63](#)). And she has done all this to better disseminate infor-

mation essential to life in the ethnicity's villages. For Maial, her career will hopefully inspire more indigenous women to find their own space in the professional world, especially at institutions that deal with indigenous human rights. After six years in Brasília, Maial felt a need to return to her childhood village and continue defending the Kayapó people in other ways, paying back some of the care that had propelled this promising Indigenous girl into the wider world.

"I decided to pursue law to help the collective, my people, in order to better defend our rights. But as a woman, I needed to prove my worth twice as hard in the city. It's an enormous responsibility being the first Kayapó woman to obtain a degree, and it has encouraged other indigenous women to follow the path of formal education. I want to continue defending the Kayapó by serving as a mirror, just as I had my aunt Tuíre, my sister and my mother as models when I struck out to achieve my goals. I am very proud of what I've achieved."



Maial Paiakan. Photo: Private collection



ÁUREA GARCIA

WETLAND WOMAN IN THE DECISION- MAKING SPOTLIGHT

ÁUREA GARCIA, from Mato Grosso do Sul, woke young to the wetland life, fascinated by the stories she'd hear from her father, who worked on a ranch and always came home with wonderful tales that forged in her a deep emotional bond with a place she knew only in her child's imagination. Decades later, the stories gained form, the Pantanal became a pillar of her life's purpose, and she now works to spur the women of the world's largest floodplain toward the recognition they deserve.

"One thing that always struck me is that the institutions, and even the literature, speak of the 'wetland man'. You never hear of the wetland population, the traditional communities that are also made up of women", she says. With a doctorate in Science Teaching from the Federal University of Mato Grosso do Sul, Áurea became interested in the environmental sector back in the 1990s, when she joined a consortium and began to handle

a water resources project. "I have not left the socioenvironmental area since", she recalls. It was during her years in this job that she received an invitation to take part in an event on women and the environment.

But, in 2000, Áurea took her first real steps towards transforming the reality of the Pantanal and the women from its traditional communities. At a meeting with other women involved in environmental projects, the idea for Women in Action for the Pantanal (Mupan) was born, a non-governmental organization (NGO) created to broaden female participation in decisions on the management of the biome's water resources. With support from GEF Terrestre ([see page 57](#)), the NGO now involves women in the restoration of degraded areas.

Among its activities, the institution offers capacity-building for women in seed collection and sapling production. As it's an organization

dedicated to diversity, Mupan also works with men, especially as a way to make them accustomed to having women in environments where they rarely used to encounter them. "We work together to strengthen the captancy and empowerment of women leaders and women in general. On a Mupan project with families, for example, we saw that women were breadwinners in 9 out of every 10 houses. How can they not be represented in professional decision-making positions?", wonders Áurea, the co-founder and general director of Mupan, adding: "For cultural reasons, men are reluctant to deal with women. Sometimes, they don't have an opportunity to participate, and when they do they can't hold on to their positions. In the projects we propose and execute, female participation in decision-making on water management processes is always a must", she says.

One of the most emblematic and rewarding things Áurea has heard was at the end of a



> Áurea Garcia. Photo: Private collection

workshop Mupan administered, and it was there that she understood the relevance of her work. "A lady came up to me and said: 'until taking this course I was Antônio's Neusa. Now I'm just Neusa'. This short sentence moves me to this day because it really showed the impact the participation of wetland women is having not only on Pantanal conservation and water management, but on their lives", she says.

CILENE DOS SANTOS

THE TRADITIONS OF BÚZIOS BY THE HAND OF CAIÇARA WOMEN

From a simple fishing village to world fame, Armação de Búzios, in the Lagoon District of Rio de Janeiro, saw its name reach tongues worldwide in 1964. The reason for the sudden renown was the French movie star Brigitte Bardot, who arrived in Brazil in search of a quiet paradise to spend some time in. Almost despite itself, the town, which then belonged to the Cabo Frio district, became a Mecca for tourists, many of whom set up home there too. In the midst of all this newfound diversity, the local culture fell by the wayside, replaced by other ways of living.

CILENE DOS SANTOS, 57, granddaughter, daughter and sister of fishermen from Búzios, talks about the stories she grew up hearing from locals and older family members. The memories come without regret, but there is, today, a desire to return to the local caiçara roots, and to speak of them to those who have settled there or come to visit.

Twenty years ago, the caiçara Cilene worked at a fair on Praia da Armação, selling arts and crafts she made herself. After years of watching the changes roll in and the local traditions slip away, Cilene decided to do something about it. “During the pandemic, I saw some projects that had nothing to do with Buzian culture receiving support, so I decided to create the Association of the Caiçara Women of Búzios as a way of rescuing our history. In the beginning I had only the women from my family helping me, but today there are 50 caiçara women involved”, says Cilene.

The Association to which Cilene refers was designed to train a spotlight on Búzios’ roots through storytelling, traditional cuisine—such as the famous fish and banana—and typical caiçara arts and crafts. One of the main goals is for local associates to embroider small tapestries telling the stories that have most marked them as caiçaras. As a tribute to the culture and the local women, all of these tapestries will then be

woven into a huge mural to be exhibited at the association’s future base—a dream Cilene nurtures.

With numerous activities and aims, the group plans to generate extra income for the women and help them professionalize. It also looks to boost their self-esteem, and foster diversity and gender equality. “Búzios has a beautiful history, especially when it’s told by caiçara women”, says Cilene.

Among the memories the caiçara women want to revive and instill in the young is that of Wilson dos Santos, aka Soca, Cilene’s brother, known in town as the best diver in the world. “Our dream is to drum up support for a book about my brother for the local schools. His dream was to discover what was 'down there on the seafloor', as he always said. Brigitte Bardot gave him his first dive mask, and he went after his dream. He became a professional diver, traveled the world, and is a huge source of pride for our family and



> Cilene dos Santos. Photo: Private collection

all the caiçaras of Búzios. It’s stories like this that we have to take to the local schools and value appropriately. It’s our memory”, she says. Cilene’s plans include numerous ways to rescue the culture of Búzios, such as putting together a book on the town’s history and setting up a restaurant that blends storytelling with some of the traditional dishes from the fishing village pre-1964, and still enjoyed today.

The Association of Caiçara Women of Búzios is a beneficiary of the Guardians of Fishing Community Traditions initiative, coordinated by the Darcy Ribeiro foundation, and supported by the Environmental Education project.



FUNBIO GRANTS CONSERVING THE FUTURE



▲ Cocoa agroforestry in the south of Bahia. Photo: José Victor Ferreira



▲ Lis Marques, a researcher supported by the fourth edition of FUNBIO Grants – Conserving the Future. Photo: Private collection



▲ Amazon Rainforest. Photo: João M. Rosa/AmazonFACE



▲ Lucas Cabrera collects sediment with an Eckman grab. Photo: Private collection

PARTNERS



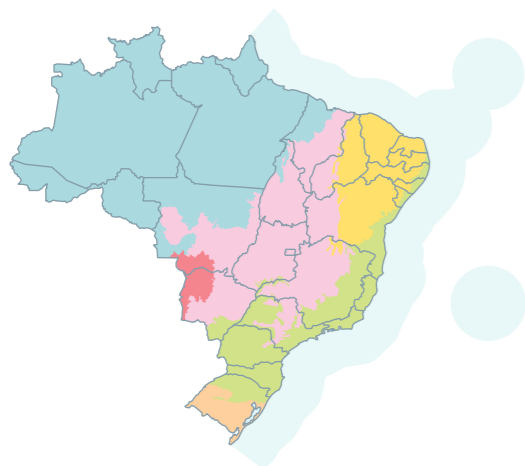
THEMATIC LINES



BIOMES AND ECOSYSTEM

Amazon, Caatinga, Cerrado, Marine and Coastal environments, Atlantic Forest, Pampa and Pantanal

FUNBIO GRANTS – CONSERVING THE FUTURE



IN THE PRESS

31.05.2021 | Valor Econômico
Fieldwork scholarships

04.06.2021 | Revista Cláudia
Amana Garrido, biologist conducting pioneering work on the nation's corals

09.06.2021 | O Eco
FUNBIO opens grants program for master's and doctoral research in conservation

FUNBIO's mission of channeling strategic resources into biodiversity involves knowledge, networks, relationships, and support for the young researchers who may go on to lead conservation initiatives and make high-impact contributions. FUNBIO Grants – Conserving the Future, which focuses on field research at master's degree and doctoral level, celebrated its fourth edition in 2021, with 37 projects selected from nearly 400 proposals from all over the country. In total, R\$ 1.14 million was pumped into this research.

Partnered by Instituto Humanize since its maiden edition, the initiative became stronger still in 2021, with further funding from the Eurofins Foundation.

Of the 30 doctoral candidates and 7 master's degree students selected from 22 institutions across 16 states and the Federal District, 26 are women and 11, men.

The Program was already supporting the research of 134 scientists from

42 higher education institutions, and almost 64% of the projects underway are led by women. Some of the most innovative subjects being pursued are the use of artificial intelligence in Protected Area governance, an investigation into micro-plastics in the Amazon, and a novel survey of Cerrado bat varieties that may be reservoirs for viruses that are potentially dangerous to humans.

The call is launched on June 5 each year—World Environment Day, and the anniversary of FUNBIO's founding.



CLICK HERE FOR A LIST OF THE PROJECTS CHOSEN IN 2021

MICROPLASTICS AND CLIMATE CHANGE ON THE AMAZONIAN HORIZON

VIVIANE CAETANO FIRMINO

Studying for a PhD in Zoology at the Federal University of Pará



[CLICK HERE TO READ MORE ABOUT VIVIANE'S RESEARCH](#)

They're in Arctic snow, the world's oceans, and now in the rivers and streams of the Amazon: microplastics, the result of plastic degradation and industrial waste, are one of the main research fronts of the biologist Viviane Caetano, a FUNBIO grant-holder from the University of Pará. The study takes a novel look at two invisible threats to biodiversity—climate change and microplastics—and will fill a knowledge gap in relation to how their combination might affect the Amazon.

“Studies suggest that climate change is having a negative impact on shredder insects, common prey items which, as

the name suggests, shred leaves that fall into the water. These leaves follow the watercourse, flow into rivers and, once decomposed, generate nutrients essential to life. Other research indicated that microplastics affect insects that perform this shredding function. Moreover, the microplastics they contain are then found in fish used for human consumption. What's new about this research is that it assesses the simultaneous impact of these two factors: global warming and microplastic pollution in the Amazon”, says the scientist, who hails from Amapá.

To better understand this cycle, it is important to know what and who it

involves: ground zero are the streams and brooks that carry shed foliage into larger rivers and kickstart the whole chain. Once they sink, these leaves are colonized by fungi, which (1) break them down into nutrients; and (2) make them more palatable to shredder insects. Once on the stream bed, the leaves are shredded by these insects, which break them into smaller, more transportable fragments which the river then carries forward, generating nutrients as they go.

It's as if the leaves functioned as mobile fuel sources for nutrient production. The study will determine what can happen when the temperature increases

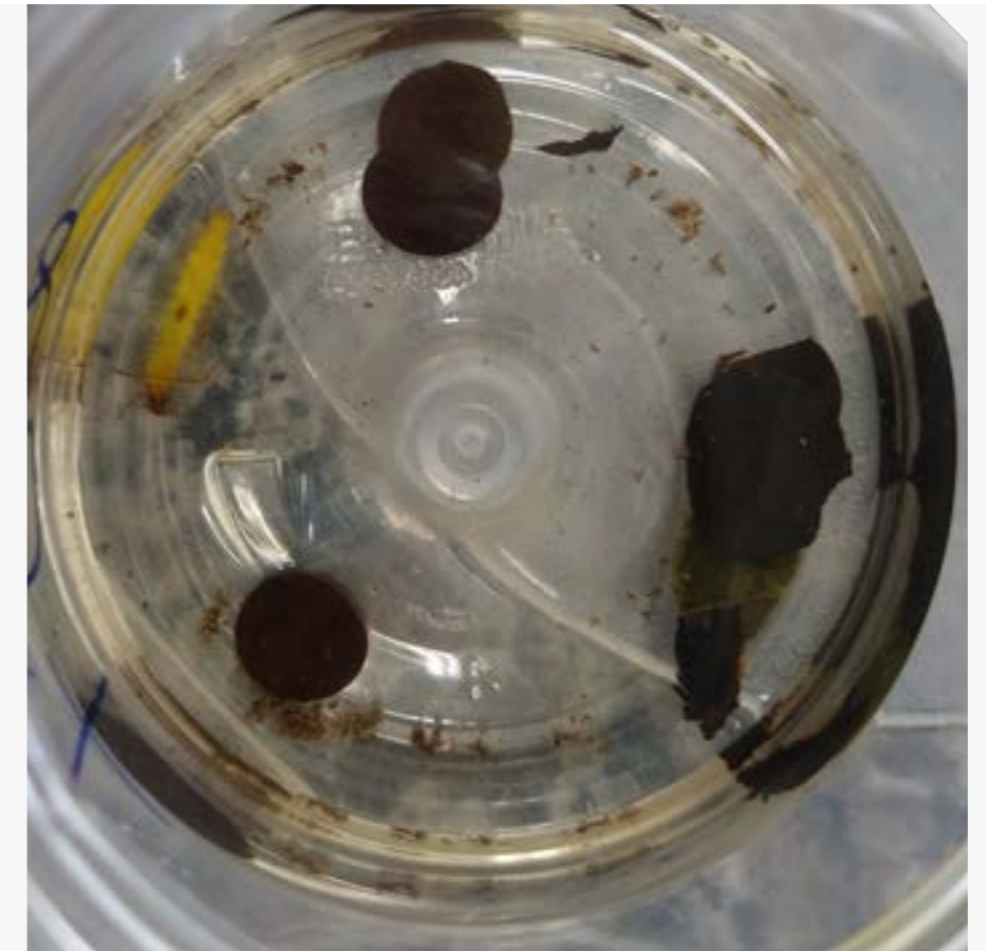


Viviane Caetano Firmino, biologist and researcher supported by the fourth edition of FUNBIO Grants – Conserving the Future. Photo: Private collection



> Samples collected for research.
Photo: Viviane Caetano Firmino

> Microcosm with leaf discs and the shredder insect *P. elektoros*.
Photo: Viviane Caetano Firmino



“At the end of the study, I’d like to release the results to the population, to show how the plastic we throw into the rivers can affect an insect that can then contaminate the food we eat.”



and, simultaneously, these insects are exposed to different concentrations of microplastic. If this double whammy reduces shredding insect numbers, the knock-on effect could lead to a reduction in nutrient-generation, impoverishing the life in the rivers and impacting the livelihoods and food security of populations that depend on the Amazon’s fish stocks. Contaminated insects and leaf fragments also mean the introduction of unsafe particulate into the human food chain: microplastic accumulations in species at the top of

the chain, those with higher commercial value, would inevitably end up on the consumer’s table.

Viviane will collect *Phylloicus elektoros* (shredder insect) larvae at the Adolpho Ducke Forest Reserve, in Manaus. Back at the lab, these larvae will then be exposed to temperature increases mirroring projections for the year 2100 in Manaus: +1.5C, +3C, +4.5C. They will also be exposed to higher carbon levels. The larvae will be fed with prepared leaves of the species *Goupia glabras* (cupiúba),

which is common in the region, and microplastics will be introduced in varying concentrations. This should allow Viviane to assess the impact caused by all three factors—higher temperatures, higher carbon and microplastics—, and provide data for possible predictive models and public policies to address the problem.

“I hope attention turns to the issue of environmental education, because we’re talking about the legacy of future generations. The idea is that this should

serve as more than just academic data. At the end of the study, I’d like to release the results to the population, to show how the plastic we throw into the rivers can affect an insect that can then contaminate the food we eat”, says Viviane, whose study is titled “Effect of Climate Change and Microplastics on Shredder Insects in Amazonian Streams and Microbial Decomposition of Leafy Detritus”. The laboratory end of her doctoral research will be carried out at INCT-Adapta, the Amazonian National Research Institute, and at the Aquatic

Insect Cytotaxonomy Laboratory / Inpa, in Manaus.

Studies on microplastics in aquatic environments tend to focus on the oceans, but these microfilaments have been detected in Amazonian fish (Federal University of Pará – UFPA) and in sediment in the Negro, Solimões and Amazon rivers (Federal University of São Paulo – Unifesp and University of São Paulo – USP).



URBAN POLLINATORS AT WORK

VICTOR HUGO DUARTE DA SILVA

Studying for a PhD in Ecology, Conservation and Wildlife Management at the Federal University of Minas Gerais



CLICK HERE TO READ MORE ABOUT VICTOR'S RESEARCH

In Praça da Liberdade, Belo Horizonte, the sinuous curves of the Niemeyer Building, a landmark of modernist architecture in the city, dip in and out of the surrounding vegetation, home to a varied urban fauna. There, while the scientist Victor Duarte collects pollinating insects for observation, it's not unusual for someone to stop and ask: "Are you from the health board, looking for dengue mosquitos?" To which Victor will smile and shake his head. The doctoral candidate from the Federal University of Minas Gerais-Post-graduate program in Ecology, Conservation and Wildlife Management is conducting one of the few city-based studies in Brazil exploring

the impact of urbanization on bees, wasps, butterflies and other pollinating insects over time. Among the variables are the levels of urbanization and the effects of the dry and rainy seasons on the interactions between pollinators and both the exotic plants that pervade urban gardens and the native Cerrado and Atlantic Forest species found in our cities.

"The project is partnered by the Belo Horizonte City Department for the Environment, and the results may be used to underpin a public policy on the management of vegetation in our parks and squares that considers pollinators.

In other words, it will help choose the best time of year to plant certain species, factoring in the impact they'll have on pollinating insects. It will also help better devise urban planning with insects in mind", says Vitor, whose study will examine the temporal variation of these interactions, determining what causes them and what they mean.

A study at the University of São Paulo (USP) has estimated that the pollination services insects like bees provide free of charge in Brazil per annum is worth something in the region of R\$12 billion reais (USD 2,3 billion). These services help maintain and generate biodiversity



Observing flowers in a street near Liberdade Square, Minas Gerais, one of the grant-holder's collection spots. Photo: Victor Hugo Duarte da Silva



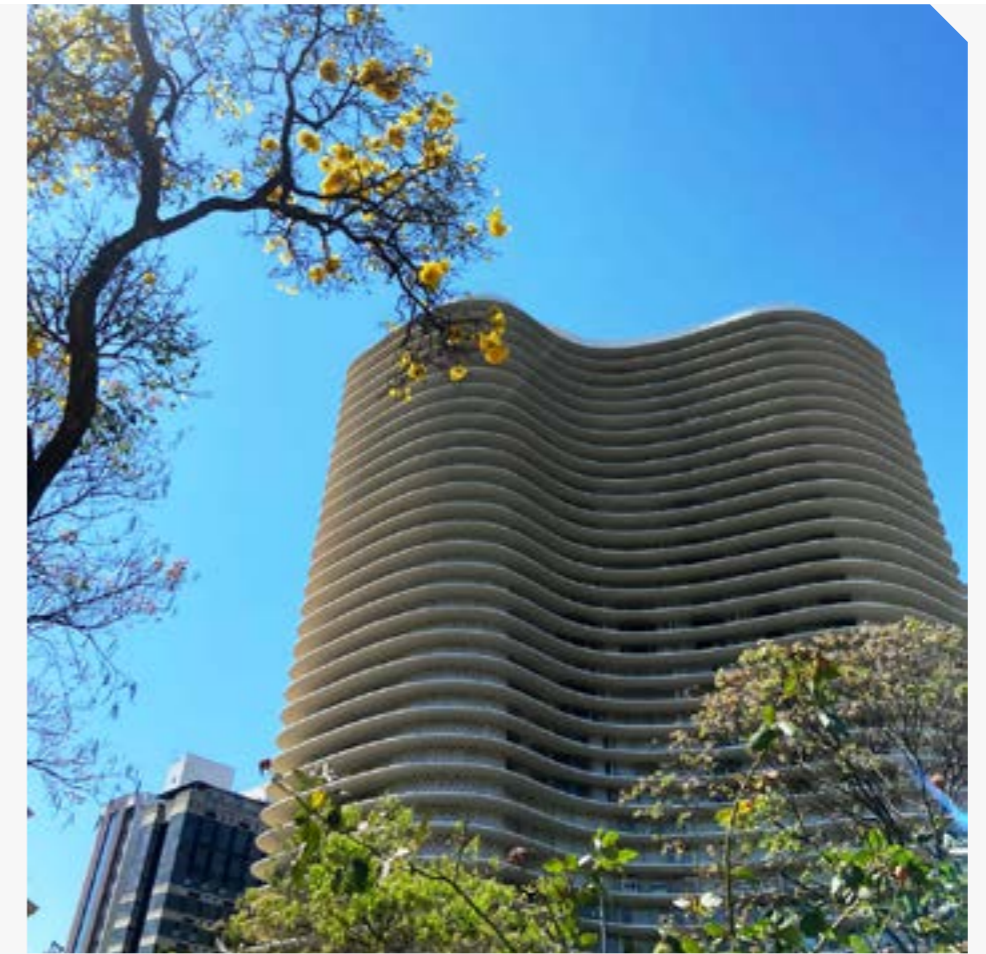
Observing flowers on higher ground at the Renato Azeredo Ecological Park, another of the grant-holder's collection spots, with a greater percentage of impermeable surface. Photo: Victor Hugo Duarte da Silva



> *Apeiba tibourbou* flower at the Jornalista Eduardo Couri Park. Photo: Victor Hugo Duarte da Silva

> Golden trumpet tree (*Handroanthus albus*) with the Niemeyer Building in the background. Photo: Victor Hugo Duarte da Silva

✓ Victor Hugo Duarte da Silva assembling his collection of references with insects gathered in the field. Photo: Private collection



“Knowing the impact of urbanization and the potential of urban greenery to provide refuge, why not make cities more hospitable to these pollinators?”



and are of vital importance in food production. Of all the flowering plants known, 87.5% depend on pollinators. When it comes to plants used for human consumption, the figure is 75%.

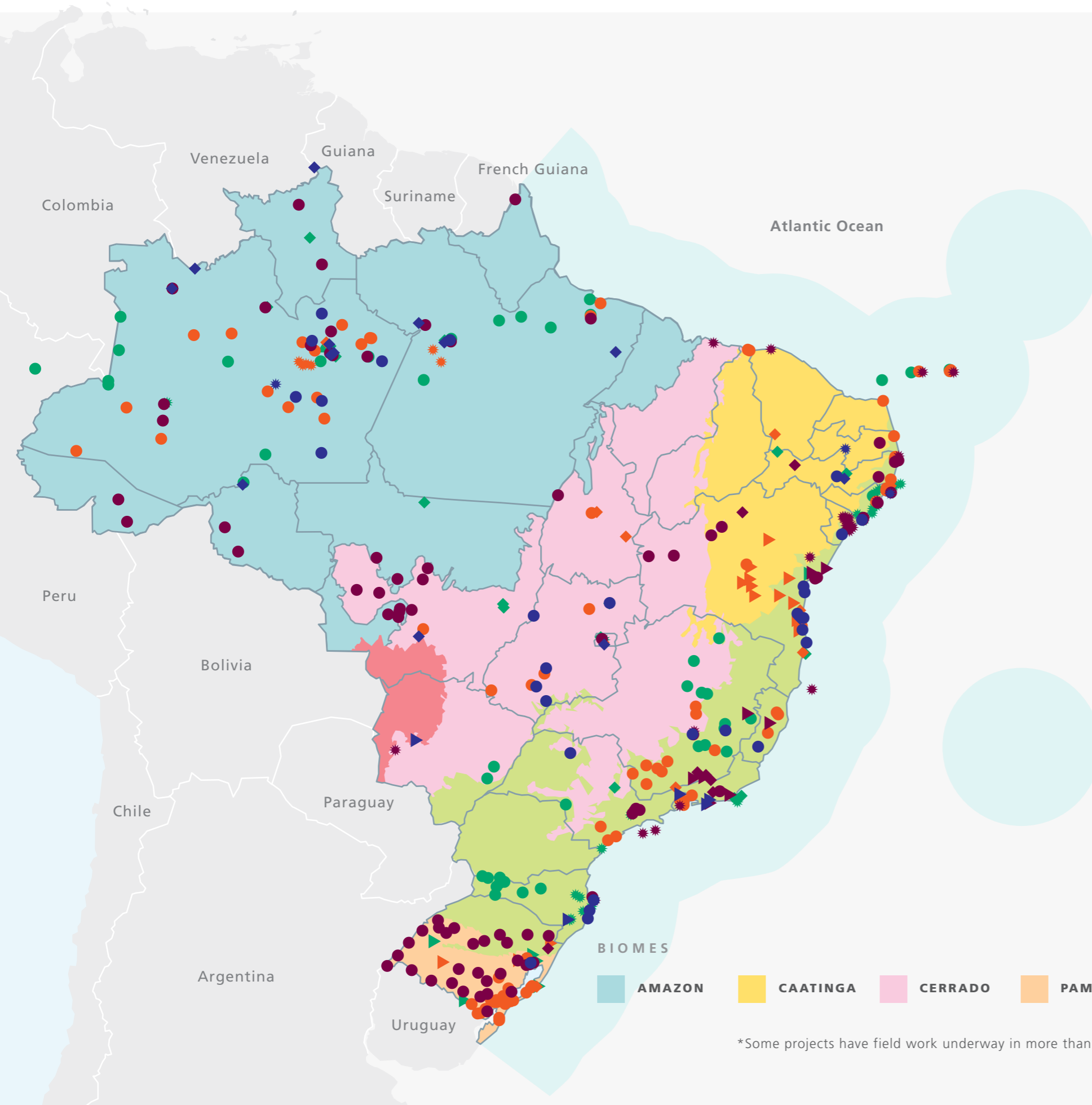
Pollinators operate within variable ranges, some as wide as five kilometers, which suggests cities and towns could serve as potential refuges for pollinators, with knock-on benefits for surrounding rural areas. In countries with temperate climates, where more studies have been done on pollinators, it was seen that some species benefit from urban gardens and parks, but not all.

“Here, we plan to evaluate the impact of urbanization on bees, butterflies, beetles, flies, wasps and other insects found in the wild, and to do so over time. Some pollinators are highly specialized, and their dwindling or disappearance could have devastating effects on the species they pollinate. Knowing the impact of urbanization and the potential of urban greenery to provide refuge, why not make cities more hospitable to these pollinators? There are various ways this could be done, such as creating corridors of plants attractive to pollinators,

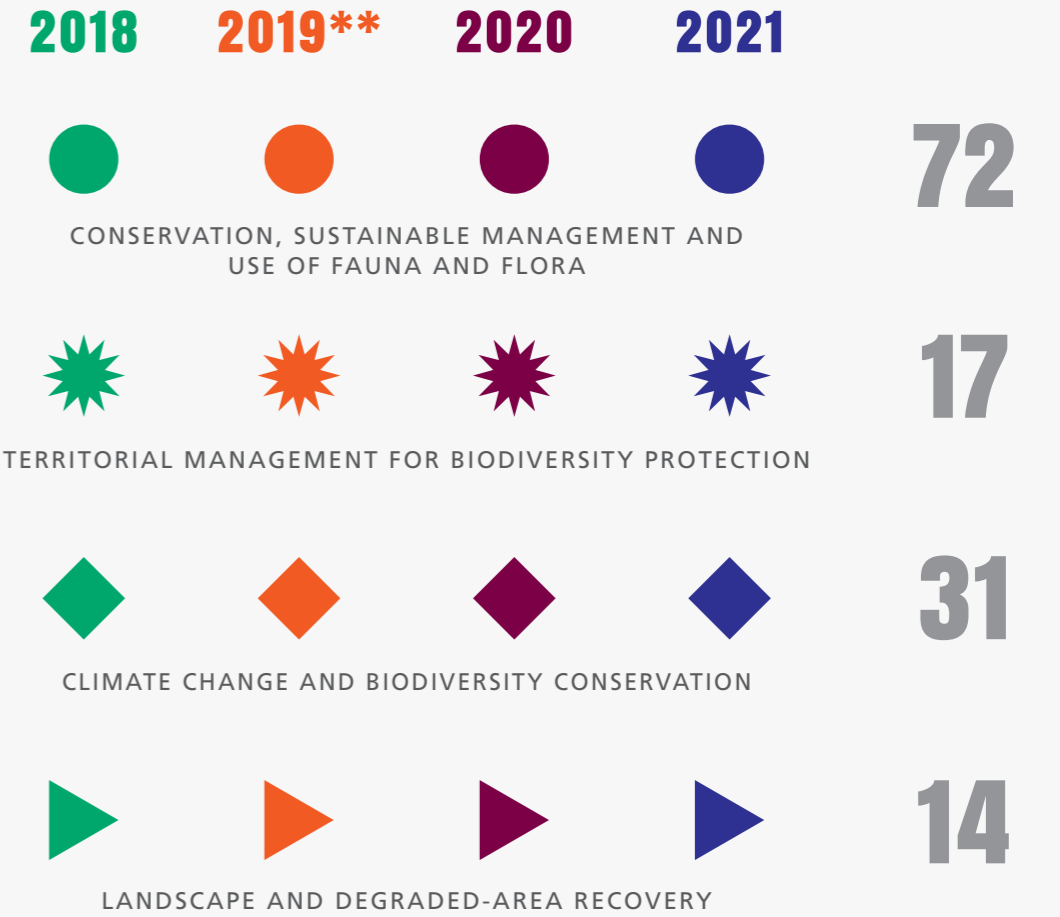
providing adequate nesting spaces, and maintaining a continuous supply of foods for them”, says the scientist.

Based on the results, Victor believes it would be possible to draw up a digital map that cross-references data, showing the relationship between rates of urbanization, temperature, humidity and presence/activity of urban pollinators, and tracking those data sets over time. The study area is home to some 290 plant species (native and exotic), with at least 70 different insect species visiting them.

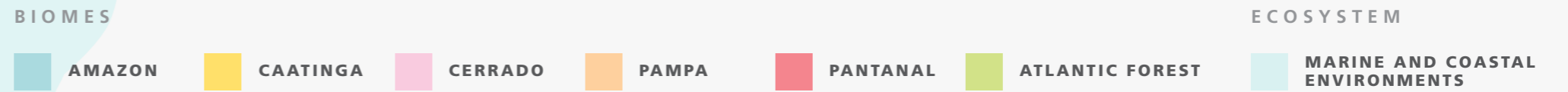




PROJECTS SUPPORTED*



**In 2019, the thematic group Conservation and Sustainable Use of Biodiversity was subsumed under Conservation and Sustainable Management and Use of Fauna and Flora.



*Some projects have field work underway in more than one territory, hence the dots on the map outnumber the projects supported.

“For humanize, supporting the FUNBIO Grants Program – Conserving the Future since its launch in 2018 has been a joy that coincides with the transformation we want to see in Brazil. The four editions of the program so far have benefitted 25 master’s degree candidates and 109 doctoral candidates. 85 of these inspiring researchers are women, which is cause for celebration. The group has reinforced our belief in plurality and collective intelligence as unbeatable allies in bringing about positive and lasting impact in the areas of biodiversity conservation and sustainable use of flora and fauna. With so much learning, we’re making strides towards a tomorrow with more opportunities for scientists and more qualified decision-makers.”

GEORGIA PESSOA, executive director of Instituto humanize



ANA CAROLINA PRESTES

Doctoral candidate in Plant Biology, Universidade do Estado do Rio de Janeiro (UERJ)

CONTROLLING CYANOBACTERIA AND ITS COLLATERAL EFFECTS

High level of nutrients in the water, mainly due to the dumping of raw sewage, combined with exposure to elevated light and temperature, generates a proliferation of cyanobacteria (photosynthetic microorganisms similar to alga), which, in turn, cause a decline in water quality. In addition to an unpleasant odor, cyanobacteria produce toxins that are lethal to fish and other life forms. So controlling nutrient concentrations is crucial to eradicating these organisms. The project aims to ascertain the existence of possible side effects a nutrient-removal technique may have on aquatic creatures. In order to do this, mosquito larvae will be used as indicators.



DIEGO PEDROZA GUIMARÃES

Doctoral candidate in Ecology, Instituto Nacional de Pesquisas da Amazônia (INPA)

BIRDS OF THE FLOODED FOREST UNDERSTORY IN THE AMAZON

Floodplain forests in the Amazon are inundated during the rainy season each year. When this happens, the fauna and flora have to adapt to the changed conditions. Understory birds, which occupy the lower branches of the tree cover, are directly affected by the high waters. However, there is currently little information about how they adapt to their transformed environment. In order to better understand what happens, the project will fit some of these birds with identification rings or tracking devices and accompany their movements around the Amazonian floodplain streams during rainy season. Knowing how the birds behave in the face of this seasonality is key to predicting possible impacts from human interference, such as the deforestation of floodplain forest, climate change, and hydroelectric dam building.



JÉSSICA BOELTER

Master’s degree candidate in Ecology, Universidade Federal de Santa Catarina (UFSC)

POPULATION DYNAMICS OF THE DUSKY GROUPER

The dusky grouper, the fish that graces Brazil’s one-hundred real note, is listed as endangered domestically and globally, as its commercial value led to severe overfishing. In Brazil, some conservation measures are in place, such as the adoption of a closed period during which the species cannot be fished and caps and floors on landing sizes. However, there is scant information available on dusky grouper numbers in Brazil. By studying the sizes of juvenile and adult specimens in Santa Catarina, the project aims to help define adequate strategies for sustainable-use, conservation and management of this fish.

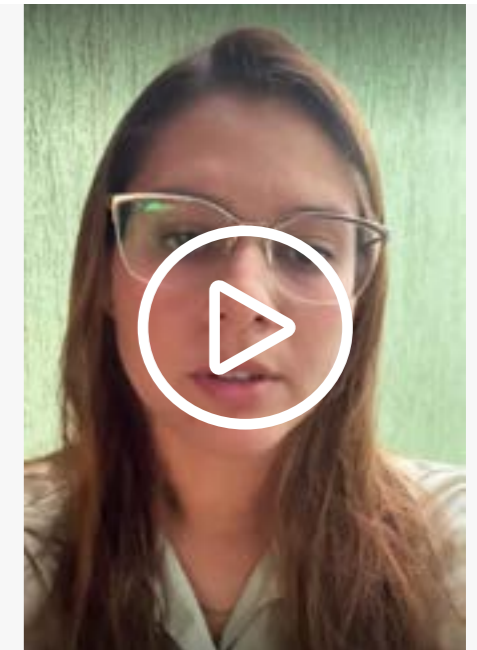


JULIA CAON

Doctoral candidate in Geology at the Universidade Federal do Rio de Janeiro (UFRJ)

FIRST BRAZILIAN REEF ATLAS

Though coral reefs are one of the most complex, diverse and productive ecosystems on earth, they are extremely sensitive to changes in climate and environment. Conserving and protecting important reefs is high-cost, high-effort and requires specialized personnel. In order to minimize costs and optimize management, remote sensing emerges as a promising alternative. The project aims to use satellites to map the coral reefs at the Costa dos Corais Environmental Protection Area in a more efficient and cost-effective manner. The Costa dos Corais EPA is Brazil’s largest marine protected area, covering some 400 thousand hectares along a 120km stretch of coast (from Tamandaré to Maceió), featuring beaches, reefs and mangroves.



LETÍCIA REIS

Doctoral candidate in Ecology and Conservation at the Universidade Federal de Mato Grosso do Sul (UFMS)

SOCIOECOLOGICAL RESTORATION IN INDIGENOUS TERRITORIES

The Pantanal wetlands is one of Brazil’s most complex biomes when it comes to ecological restoration. In addition to its dynamic of dry and rainy seasons, it is also prone to seasonal wildfires. In light of these factors, the project aims to assess the viability of different socioecological restoration techniques in degraded areas. The project will also involve the indigenous community at the Cachoeirinha IT in Miranda, Mato Grosso do Sul, which will assist in the collection and production of saplings. By blending scientific and traditional knowledge, the project will attempt to ascertain whether these ecological restoration techniques are viable project tools in efforts to conserve the biome.

42 ARPA
45 COPAÍBAS
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53 GEF MAR
55 SEA GARBAGE IN SP
56 MARINE LITTER IN BRAZIL **NEW**
57 GEF TERRESTRE
59 ATLANTIC FOREST
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70 GOLDEN LION TAMARIN ECOLOGICAL PARK PHASE II **NEW**
72 PROBIO II
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75 RAPID RESCUE FUND **NEW**
76 EAST AMAZON FUND **NEW**
78 LEGAL AMAZON CONSORTIUM
80 GCF TASK FORCE **NEW**

DONATIONS

UNIT

PARTNERS



THEMATIC LINES



BIOME

Amazon



In 2021, two new Protected Areas were added to the ARPA Program, the largest tropical forest conservation initiative in the world. This brings the total of Protected Areas supported by ARPA across the nine states of the Legal Amazon to 120. The total area under coverage went from 60.8 million hectares in 2020 to 62.5 million ha. last year, an increase of 1.7 million hectares—an area about half the size of Belgium. The two new PAs, initially created with ARPA support, are the Acari National Park and the Maicuru Biological Reserve, both in Amazonas.

The ARPA Program, launched by the Federal Government of Brazil in 2002, entered Phase III, known as the Transition Fund (TF), in 2014. With donations coming from within Brazil and abroad, and matched with counterpart funding from the Federal and state governments, the TF will support the creation, consolidation and maintenance of PAs through to 2039, when the full onus of funding will pass to public authorities.

FUNBIO has been the financial manager of ARPA since day one, a role that included assisting on the program’s planning, and managing all hirings and acquisitions to ensure smooth PA functioning. FUNBIO also supplies the Program’s PA managers with training in the use of resource-planning systems and occupies the role of Secretary of the Transition Fund Committee, formed by representatives from government and the Fund’s donors. The TF is the last line of decision-making concerning the use of ARPA resources.

2021 saw the execution of some important projects. Over 5 years into the TF, the program’s financial mathematics model came up for review. The introduction of improvements reinforced the robustness and security of the Transition Fund’s investments in the PAs.

Consultancies were hired to provide orientation and assessments, and one of the

ARPA

AMAZON REGION PROTECTED AREAS PROGRAM

▼ Amanã Sustainable Development Reserve, Amazonas. Photo: Victor Moriyama/FUNBIO



62,5

HECTARES OF LEGAL AMAZON PROTECTED – AN AREA ALMOST TWICE THE SIZE OF GERMANY

9

STATES

15%

OF THE BRAZILIAN AMAZON

120

PROTECTED AREAS ACROSS 9 BRAZILIAN STATES

2

NEW PROTECTED AREAS INTEGRATED INTO THE PROGRAM

consultancy projects taken under contract focused on the performance of the Integrated Management Centers (IMCs), a methodology created by the Instituto Chico Mendes de Conservação da Biodiversidade (ICMBio) in which different territories are unified under the same management so as to boost administrative and economic efficiency. Four IMCs installed within the ARPA framework on a test basis were evaluated, and the assessment will serve as groundwork for the adoption of more Centers of this kind, starting in 2022.

Also in 2021, the adoption of Covid-19 sanitary safeguards enabled the PAs to step up their activities over the levels seen throughout 2020. PAs were able to resume such important tasks as biodiversity

monitoring, while intensifying protection actions that had continued at a diminished rate during the pandemic.

FUNBIO held planning workshops for PA managers which broached a number of themes, including the drafting of Terms of Reference, which is an important stage in optimizing procurement processes, such as the revision of management plans.

New tools for executing resources were also consolidated, including the fuel, maintenance and food expenses cards. A pilot project for a prepaid debit card was also rolled out with a view to expediting the minor expenses PAs incur locally. Of course, all of this was financially tracked by the Program.



> Food is distributed at the Maicuru Biological Reserve in Bahia. Photo: Lidiane França.

✓ A similar initiative occurred at the Cautário-Guaporé Integrated-management Center. Photo: Lidiane França



MANAGEMENT DURING THE PANDEMIC

In 2021, ARPA worked directly on the operationalization of emergency actions to tackle the Covid-19 pandemic, lending continuity to its support to PA managers and traditional communities begun the previous year. In all, throughout the emergency mission, the sum of R\$ 262 thousand was channeled into 32 PAs on the program, with the provision of 276 items of PPE for the PA teams and distribution of over three thousand basic food baskets to 201 local communities, benefiting almost 8 thousand people. In addition, support was given to register 372 beneficiaries on the government emergency aid scheme, and transport was provided to 50 community members so that they could receive their cash benefit.

BRAZIL, COLOMBIA AND PERU

Financed by the Global Environment Facility (GEF) through the World Bank, the Amazon Sustainable Landscapes (ASL) program is designed to promote sustainability, biodiversity protection and the implementation of policies for sustainable land-use and the restoration of native vegetation in Protected Areas throughout the Brazilian, Colombian and Peruvian Amazon. The approach, which transcends borders, goes wherever Amazon landscapes grow. The USD 30 million in ASL funds have been filtering into the ARPA Transition Fund since 2017.

Even with the restrictions imposed by the pandemic, the program managed to carry out two supervisory missions, at which FUNBIO, in conjunction with the Ministry for the Environment, presented the results of its execution of these funds, and its progress towards attaining the targets set under ARPA, an ASL component.

FUNBIO also contributed towards the production of a guide to long-term project finance. This guide, an ASL initiative, takes the ARPA Program as a case study and success story.

NECESSITY BREEDS INNOVATION

Presence on the ground lies at the heart of ARPA, with workshops, courses, and training programs administered to protected-area managers. The Covid-19 pandemic forced ARPA to reinvent this element with the introduction of remote-training mechanisms. Based on its first experience with distance learning administered in 2020, FUNBIO was able to press ahead with capacity-building in 2021, benefiting 59 PA managers in all. Throughout the year, FUNBIO also developed its first 100% distance-learning training program.

The course was administered through the FUNBIO University virtual platform. At the end of 2021, 39 protected-area managers were trained in the use of goods and services requisitioning systems and procedures, and received their remote-learning certification. This capacity-building program via video, text and drilling exercises was developed by FUNBIO in-house. The results of the maiden class will be assessed in the first quarter of 2022 in order to course-correct and tweak the tools.

The digital resource will not completely replace onsite training. ARPA is a project with a lot of stakeholders, which means person-to-person exchanges are always extremely enriching. The aim is to follow a hybrid model, with remote learning and, when sanitary conditions permit, onsite modules too.

IMPACT OF COVID-19 EMERGENCY AID

276

ITEMS OF PERSONAL PROTECTION EQUIPMENT DISTRIBUTED TO PA TEAMS

372

PEOPLE REGISTERED AS BENEFICIARIES OF A FEDERAL GOVERNMENT EMERGENCY STIPEND

50

COMMUNITY MEMBERS WERE ASSISTED WITH TRANSPORT SO THEY COULD WITHDRAW THEIR CASH BENEFIT

3.343

BASIC FOOD BASKETS DISTRIBUTED

201

COMMUNITIES ASSISTED (FOOD SECURITY)

7.727

PEOPLE ATTENDED (FOOD SECURITY)

NDC



SDG



PARTNERS

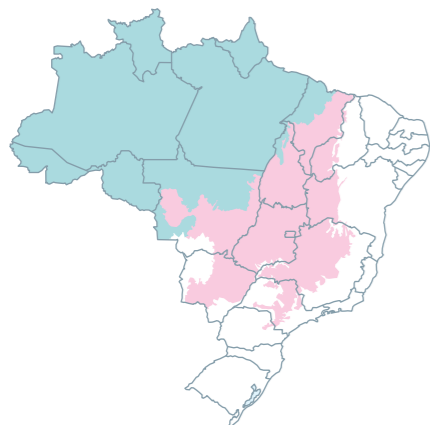


THEMATIC LINES



BIOMES

Amazon and Cerrado



4

COMPONENTS

21

SUPPORTED PROTECTED AREAS

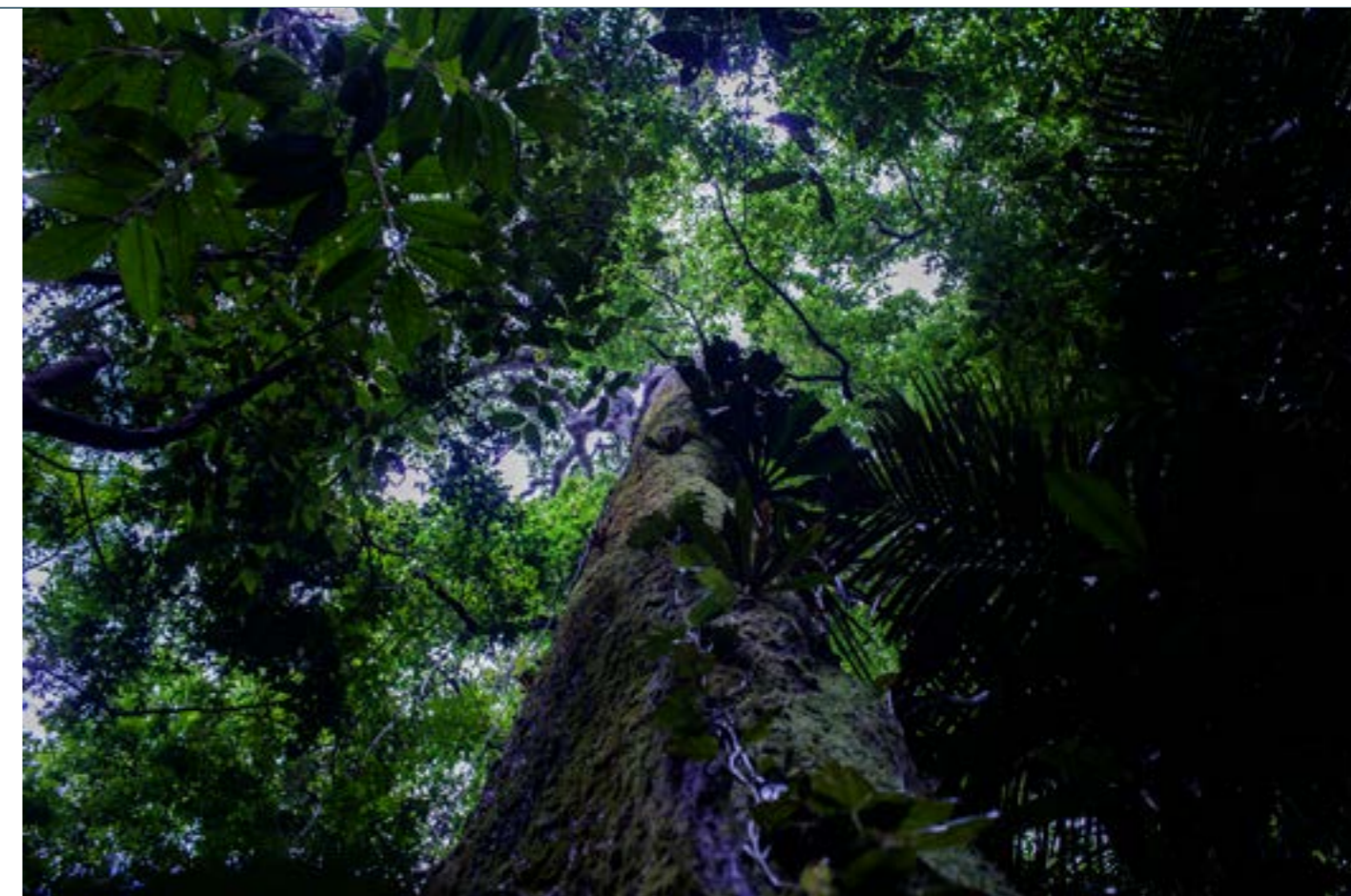


IN THE PRESS

28.09.2021 | Agência Minas
Copaíbas Program sets aside upwards of R\$ 30 million to strengthen Protected Areas

> A chestnut tree in the Amazon National Park, Pará. Photo: Marizilda Cruppe/FUNBIO

Launched in 2020 to contribute toward the conservation of the Amazon and Cerrado, which together account for the lion's share of Brazil's land cover, COPAÍBAS—The Community, Protected Areas and Indigenous Peoples Project in the Brazilian Amazon and Cerrado Savannah was structured between July



2020 and October 2021, with implementation beginning in the final quarter of last year. The program's core aim is to reduce the rate of deforestation and help mitigate climate change, while improving living conditions for the biomes' traditional and indigenous populations.

The program will be executed by FUNBIO using funds from

the Government of Norway's International Climate and Forests Initiative, through the Norwegian Ministry for Foreign Affairs.

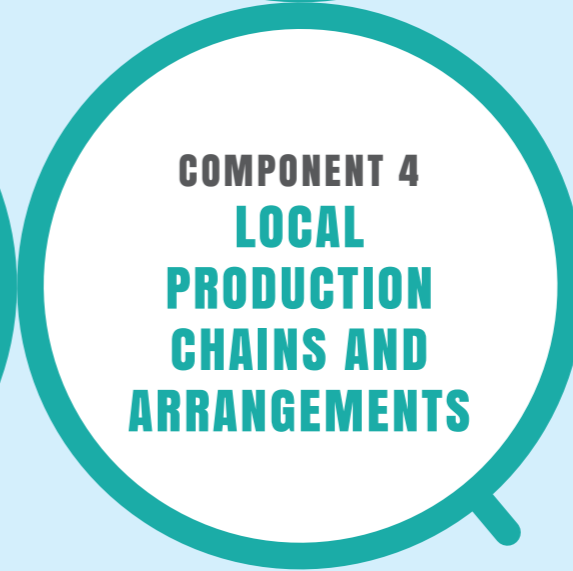
During the program's planning phase, the targets and implementation strategies were defined, and a whole action-monitoring framework was put in place.

Phase two of the program will take a little under five years, from October 2021 through to June 2026. COPAÍBAS actions will be carried out by FUNBIO directly—in the case of the procurement of goods and services for Protected Areas (PAs)—, and by civil-society third parties selected through Calls for Projects to be issued in the first semester of 2022.



LEARN ABOUT THE PROGRAM'S FOUR COMPONENTS AND CORE OBJECTIVES

STRENGTHEN the Protected Area System in the Cerrado



STRENGTHEN territorial and environmental management at ITs in the Cerrado and Amazon

FOSTER AWARENESS AND INFORMED dialogue on themes connected with climate change and biodiversity conservation

PROMOTE economic alternatives that preserve forests and native vegetation by structuring Local Productive Arrangements in the Cerrado and Amazon and making strategic investments in sociobiodiversity value-added production chains



COMPONENT 1:

TWENTY-ONE PAS SUPPORTED BY THE PROGRAM

By the end of 2021, this front had sealed cooperation agreements with four states: Goiás, Maranhão, Mato Grosso and Minas Gerais.

In all, 21 PAs were selected, of which 4 are in Goiânia, 4 in Mato Grosso, 1 in Maranhão and 12 in Minas Gerais. The Program's team employs a tool specifically designed and implemented to track management-capacity progress at these PAs. The software analyzes a set of indicators

for benchmarks or themes considered fundamental to PA management and oversees the planning of the activities to be carried out at these PAs by their respective managers.

The management-analysis tool studies a set of 15 indicators, including the creation or revision of a Management Plan and its approval by a managing body; the existence of an officially-constituted and regularly-convened board or council; and the availability of a legal

framework for the activities and uses of natural resources.

In addition, there are actions geared towards public visitation, with a focus on environmental tourism and education. Four PAs will be selected to draw up and implement public-usage plans. In a process that involved PA managers and managing bodies, a consultancy was hired to set the selection criteria.

Another important aspect in strengthening Protected Areas

in the Cerrado is Integrated Fire Management (IFM), as the biome has historically been affected by fires, many of which have assumed devastating proportions in recent years. COPAÍBAS identifies the PAs facing the toughest pressure, yet whose managers are also most amenable to adopting IFM approaches. A consultancy was hired to systematize data that will inform IFM activities-planning at PAs. Additionally, in 2021, the program destined a total of R\$ 374 thousand to

emergency fire-fighting actions at six PAs.

The Program will also work toward establishing Private Natural Heritage Reserves (PNHRs), with the designation of new areas to be transformed into PAs and the creation of PNHR management plans.

In the case of the PNHRs, COPAÍBAS will be launching a Call for Projects to support civil society organizations that work with private landowners,

showing them the benefits of establishing these private reserves. At present, PAs represent only 8% of total Cerrado landcover.



COMPONENT 2:

EXPANSION OF DIALOGUES FOR THE FIRST INDIGENOUS PROJECT CALL

Territorial and environmental management in Indigenous Territories (ITs) trains its focus on the Brazilian Amazon and savannah, and contributes towards the leadership, autonomy and self-determination of indigenous peoples in processes of territorial control, environmental protection and the sustainable use of natural resources. In 2021, FUNBIO fostered dialogue with

indigenous leaders and indigenists in order to discuss the specific directives and goals of this component.

In parallel, ITs in the Cerrado and Amazon were mapped, and the data cross-referenced with inputs related to indigenous governance and environmental impacts in order to identify priority deforestation hotspots. The actions will be implemented through a public call for

projects issued to indigenous and indigenist organizations that already have conservation projects underway in the field.

The first planned call will be launched in the first semester of 2022, and will focus on supporting projects to create and revise territorial and environmental management instruments and the implementation of Territorial and Environmental Management projects.



“The COPAIBAS project shows how preservation and measures to foster sustainable economic alternatives that support indigenous peoples and traditional communities are fundamental to biodiversity conservation in the Amazon and Cerrado biomes, and to tackling deforestation and climate change. Cooperation with Funbio is immensely valuable to Norway.”

CAMILA CAVALLARI, Programme Officer, Norwegian Embassy in Brazil



COMPONENT 3:

DIALOGUE WITH PUBLIC ATTORNEYS, AND ARTIFICIAL INTELLIGENCE

The communication component of the COPAÍBAS program aims to divulge knowledge and build dialogue to make strategic publics aware of themes connected to climate change and biodiversity conservation. The first call will be launched in the first quarter of 2022.

This front is divided into two parts. The first is geared

towards building dialogue with public attorneys (prosecutors, defenders, environmental judges, the Public Prosecutors' Office, etc.), broadening their knowledge and presenting context and perspectives on environmental issues. The aim is to contribute towards a better understanding of the relationship between deforestation and climate change.

The other subcomponent explores the use of artificial intelligence as a means of disseminating knowledge to wider society and of getting more and better information through to decision-makers. The idea is to analyze large quantities of data and use the findings to steer communication strategies related to program-relevant themes.



COMPONENT 4:

CHALLENGES AND SOLUTIONS FOR SUSTAINABLE PRODUCTION

The fourth COPAÍBAS component concerns local production chains and arrangements. Focusing on the Amazon and Cerrado, it will enable organizations society-wide to present proposals and implement activities related to sociobiodiversity produce.

The calls will aim to boost the economic efficiency of local production chains and arrangements, structuring the activity in the field in order to aggregate value to sustainable

produce and so generate further income. The action will work each link in the production chain, from the level of extraction and processing through to commercialization and industrial production, all the way to the end consumer. Brazilnut, souari nut, babassu, açaí, cocoa and fish are among the possible chains the project could support.

The planned initiatives include infrastructural improvement, incentives to use alternative

technologies for the sustainable use of natural resources, openness to, or consolidation of, sales and markets, as well as increments to build capacity in the production of sociobiodiversity goods.

In 2021, FUNBIO launched a call for expressions of interest so as to better understand the challenges faced by local producers. In all, 200 responses were received from producer organizations in the Amazon

and Cerrado. The information was used to determine the first cycle of support for these activities.



Community workshop at Mirador State Park, Maranhão. Photo: Francisco das Chagas



Children take part in activities at Mirador State Park, Maranhão. Photo: Francisco das Chagas



NDC



SDG



PARTNERS

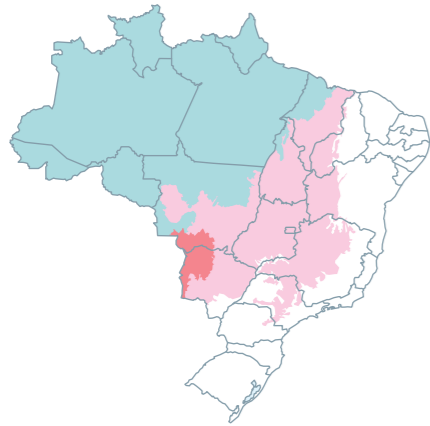


THEMATIC LINES



BIOMES

Amazon, Cerrado and Pantanal



REM MT

REDD EARLY MOVERS (REM) GLOBAL PROGRAM – MATO GROSSO



Cracking Brazil nut shells. Photo: Associação de Coletores de Castanha-do-brasil do PA Juruena.

The Global REDD Early Movers Program (REM) is a joint initiative by the German and British governments to reward countries and states that have taken significant steps to mitigate the effects of climate change through forest conservation. In 2017, the program recognized the state of Mato Grosso for its importance to the biodiversity of three key biomes—Amazon, Cerrado and Pantanal—and for obtaining a 90% reduction in deforestation between 2004 and 2014.

In 2021, REM Mato Grosso started work on 29 initiatives selected on the project's first two project calls, launched in 2020. Among these, 23 focus on strengthening the production chains—dairy cattle, seed production, and others—covered by the Smallholder Farming sub-project, and another 6 on the Production, Innovation and

Sustainable Markets component, designed to benefit small and medium-sized producers, and production and value chains in the areas of beef cattle, soy, and timber forest management.

The program works to maintain carbon stocks and reduce carbon emissions caused by deforestation and the commodities production process across the state of Mato Grosso (soy, lumber, cotton, and cattle) through the restoration of degraded areas, improvements on pasturelands and investments in innovations in low-carbon technologies.

In 2021, the initiative sealed a partnership with the Mato Grosso Meat Institute (IMAC) to help improve the state's pastures and certify beef production. The initiative's aim is to ensure the compliance of properties



IN THE PRESS

08.06.2021 | Gov. Mato Grosso
Mato Grosso's Satellite-monitoring system is impressive, says British Ambassador



REM MT

interdicted under the Legal Meat Conduct Adjustment Agreements made between 600-plus meatpacking companies and the Federal Public Prosecutors' Office over the last decade. The measure was applied as a means of prohibiting the purchase of cattle from ranches that had illegally cleared forest to make pasture.

Financed by the German Development Bank (KfW) and the Department for Business, Energy and Industrial Strategy (BEIS) of the government of Great Britain and Northern Ireland, REM Mato Grosso has FUNBIO as its financial and operational manager.



➤ Smallholders tilling. Photo: Igor Murilo



IN THE PRESS

20.07.2021 | *O Bom da Notícia*
REM helps indigenous communities combat forest fires in Mato Grosso

20.09.2021 | *G1*
Project will plant 11 thousand trees in tribute to COVID-19 victims in Mato Grosso

4
KEY GOALS

29
SUPPORTED PROJECTS

29
INDIGENOUS TERRITORIES SUPPORTED

7
PROJECTS TO SUPPORT INDIGENOUS POPULATIONS AGAINST COVID-19

REM MATO GROSSO SUB-PROGRAMS

With important goals within the state of Mato Grosso, REM MT's actions play out across four main fronts. On the **INSTITUTIONAL STRENGTHENING AND STRUCTURING PUBLIC POLICIES SUB-PROGRAM**, the initiative works to consolidate public policies that help reduce deforestation and favor social and productive inclusion.

On the **SUSTAINABLE PRODUCTION, INNOVATION AND MARKETS SUBPROGRAM**, REM MT operates in those areas most affected by the impacts of the soy and beef cattle production chains, for example. Among the main goals is support for technological innovation as a way of improving production efficiency and reducing carbon emissions.

On the **SMALLHOLDER AGRICULTURE AND TRADITIONAL PEOPLES AND COMMUNITIES SUB-PROGRAM**, the objective is to reduce deforestation and increase carbon stocks by involving communities in order to generate and increase the incomes of smallholder farmers and extractivists.

And, finally, the **INDIGENOUS TERRITORIES SUBPROGRAM** is designed to generate appreciation for the traditional and sustainable ways of life of native peoples and to learn from them as a way to mitigate climate change.

▼

MONITORING OF FOREST COVER

In the last year, the program also renewed the contract on forest-cover satellite monitoring and satellite-based deforestation alerts. REM Mato Grosso is currently developing a similar system of its own, in-house, which will reduce costs and provide the State's Department of the Environment (SEMA/MT) with greater monitoring autonomy in the long run.

Still in connection with deforestation monitoring and alerts, in order to expedite the process of issuing fines and charging offenders, in 2021, under the aegis of its Institutional Strengthening and Structuring Public Policies subprogram, REM MT contracted a special service that confiscates and removes the heavy machinery used for illegal deforestation, such as tractors and even helicopters. These machines and equipment belong to loggers and landgrabbers, and have a devastating impact on the forest.

▼

BRAZIL NUT CHANGES THE LIVES OF THE LOCAL POPULATION

An association of Brazil nut gatherers is changing the future for the small town of Cotriguaçu and environs in the north of Mato Grosso state, one of the regions of the Amazon most severely affected by deforestation.

In 2021, with REM MT funding, the Brazil Nut Gatherers Association, part of the Juruena Settlement (ACCPAJ) project, purchased the machinery needed to process Brazil nut. This enabled the association to aggregate value to its product and generate more local jobs.

The association pursues some specific strategies to involve more and more women in its activities. One of the examples is Brazil nut processing, an ACCPAJ action designed to attract more women workers. Vacancies are also set aside for women and youths on capacity-building initiatives and in the processing stages of production.

Rich in proteins and minerals, Brazil nut is internationally considered a superfood. The association sells roughly 70 tons a month during the July to August harvest, with most of the shelled product sold to processing companies. In addition to the social aspect, the initiative also focuses on the environment, making sure the harvests leave enough Brazil nut in the wild for other species to feed off. The association also used GPS to map the trees and fight forest fires.

▼

SMALLHOLDER AGRICULTURE

Over the last year, REM MT started implementation on 23 projects geared towards smallholder agriculture, supporting cooperatives, community banks and the supply of microcredit to smallholder farmers. Among the initiatives supported is the Instituto Ouro Verde, a rural credit fund that offers loans of up to R\$50 thousand at low interest rates to small rural producers who do not qualify for the National Program to Strengthen Smallholder Agriculture.

With some R\$ 300 thousand in revolving credit, the initiative has registered low levels of default. That is largely because the community bank provides consultancy to the beneficiaries, assessing their needs and the real costs of making the necessary changes and improvements. This financial advice means the smallholders don't borrow more than absolutely necessary, or under disadvantageous terms.

With the solid results and welcome reception from the smallholders, the initiative is planning for the long haul: repaid debts go straight back into the fund, so that there'll be credit available for the foreseeable future.

▼

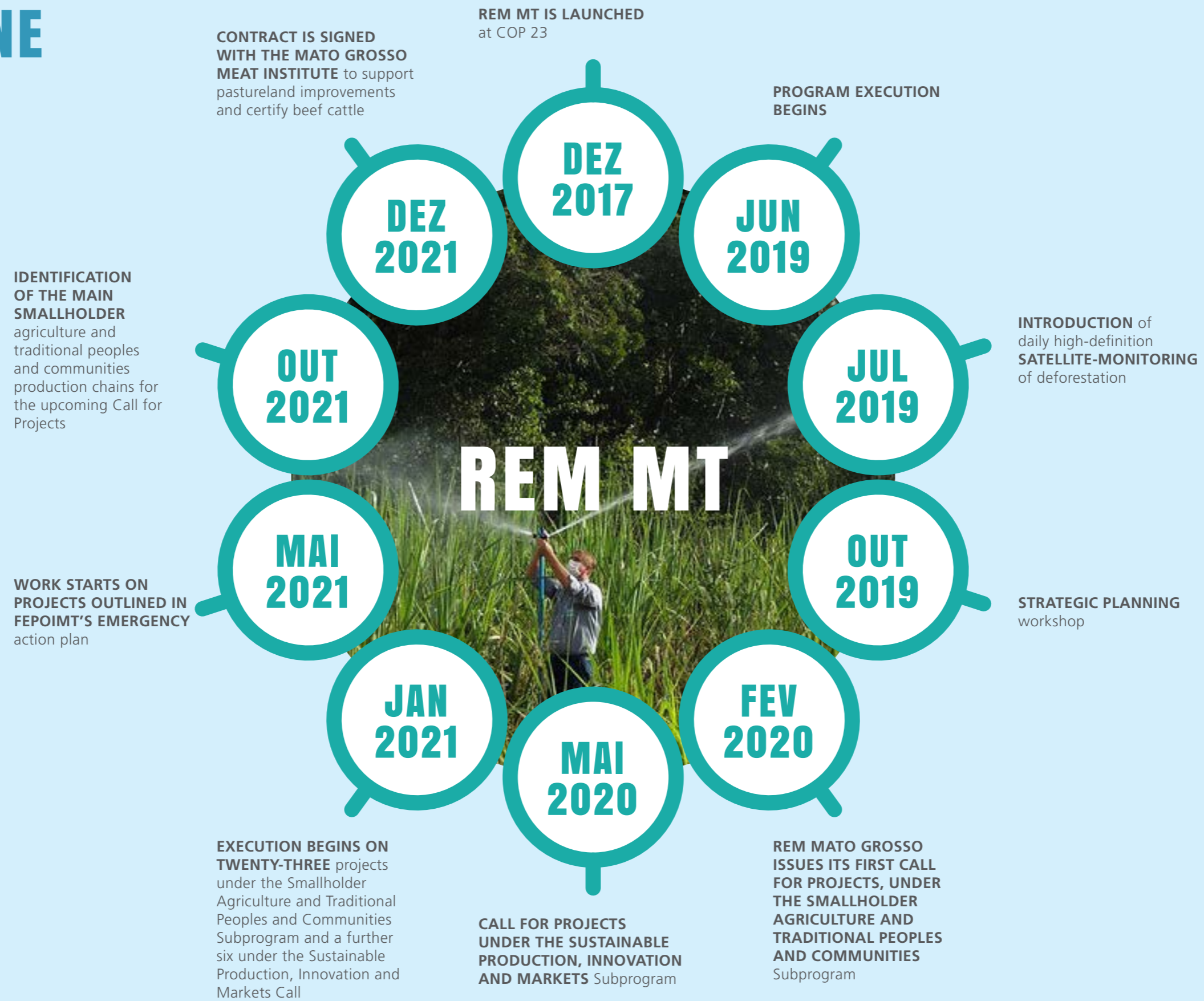
SUPPORT DURING THE COVID-19 PANDEMIC

REM MT actively participated in actions to minimize the effects of the COVID-19 pandemic throughout 2021: seven projects recommended by the Federation of the Indigenous Peoples and Organizations of Mato Grosso (FEPOIMT) in its COVID-19 Emergency Action Plan were taken under contract to support indigenous populations. The projects were executed by four institutions: Associação Terra Indígena Xingu; Instituto Centro de Vida; Instituto Raoni; and The Nature Conservancy. FEPOIMT defends the interests of 43 indigenous peoples of Mato Grosso, understanding their demands, brokering solutions, and informing public policies for native peoples. In 2020, when the number of infections rose among traditional populations, the need for medical supplies, PPEs and food provisions also grew. With FEPOIMT's assistance, R\$ 7.5 million was channeled into COVID-19-related projects, benefitting 70 Indigenous Territories across the state.

Medical supplies, such as masks, disinfectants/sanitizers and rapid tests were acquired and, in answer to the restricted mobility during lockdown, which meant many indigenous communities couldn't travel to purchase food and other necessities, 3,397 staple food baskets were distributed so as to stave off malnutrition.

With focus on food security, long-term projects were also implemented, such as the construction of flour mills and introduction of improved food production techniques, with cassava saplings and chicken rearing. The projects also aimed to boost appreciation for indigenous culture and traditional medicine.

TIMELINE



NDC



SDG



PARTNERS



THEMATIC LINES



ECOSYSTEM

Marine and Coastal environments



12

STATES

95

MILLION HECTARES OF MARINE AND COASTAL AREAS BENEFITED

30

PROTECTED AREAS



GOVERNOS ESTADUAIS DA COSTA DO BRASIL



MINISTÉRIO DO MEIO AMBIENTE



GEF MAR

MARINE AND COASTAL PROTECTED AREAS PROJECT



Seafloor at the Parcel de Manuel Luís Marine State Park. Photo: Leo Francini



With results that have made it a success story in biodiversity conservation in Brazil, the Marine and Coastal Protected Areas Project (GEF Mar) intensified in 2021 with a suite of actions carried out inside local communities and the consolidation of support initiatives for the 95 million hectares under the project's remit.

Coordinated by the Ministry of the Environment, executed by the Instituto Chico Mendes de Conservação da Biodiversidade (ICMBio) and the Departments of the Environment of Pernambuco, Maranhão, Bahia, Parnaíba, Ceará and Espírito Santo, and financially managed by FUNBIO, the project, created in 2014, was initially funded by the Global Environment Facility (GEF) through the World Bank. From October 2018 onwards, further funds were channeled into the project through a Deed of Undertaking signed between IBAMA and Petrobrás. The project is implemented in partnership with civil society organizations and was designed to promote the conservation of marine and coastal biodiversity and to act in conjunction with local communities.

Throughout 2021, GEF Mar pressed ahead with actions to mitigate the impact of an oil spill that occurred off the Northeastern coast in the latter half of 2019, and which the Federal Public Prosecutors' Office described as the worst environmental disaster ever to hit the Brazilian coast. The main measures that received support included laboratory analyses of oil, water, and fish samples, leasing of research boats, purchase of fuel for beachcombing, the hiring of crews to clean the affected beaches, and the commissioning of special socioenvironmental diagnostics.

Toward the end of 2021, the project expanded its scope to include emergency aid for the South Bahian communities it operates in. Freak rainstorms hit the state's southern coast causing widespread flooding that drove dozens of families from their homes. A total of 300 basic food hampers were distributed.

The region also received support for institutional strengthening from GEF Mar to shore up four projects preparing community associations to secure access to different sources of funding.



Parts of a shipwreck are mapped at the Parcel de Manuel Luís Marine State Park. Photo: Leo Francini

Aerial photograph of the Parcel de Manuel Luís Marine State Park taken during a diagnostic flyover for the protected area's management plan. Photo: Leo Francini



SUPPORT FOR RESEARCH

In 2021, the project's backing helped draft a renovations plan for the base of the Baleia Franca Environmental Protection Area (EPA) in Santa Catarina, as well as the Tamar bases in Espírito Santo, more specifically in the municipalities of Guriri and Regência. Since the 1980s, the Tamar initiative has worked to protect endangered sea turtles.

In addition, staff lodgings were remodeled at the Integrated Management Center (NGI)—an organizational structure that encompasses Protected Area management—in Fernando de Noronha. Also overhauled was the research vessel Soloncy Moura, operated by the National Center for Marine Biodiversity Research and Conservation in the South and Southeast

(CEPSUL), which had gone years without periodical renovations.

Another important activity of GEF Mar is the research grant program, which continued its expansion in 2021 with the launch of the 23rd call for proposals. Since 2016, over 150 scholarships have been awarded by the project, totaling some R\$8 million in funding. The spectrum of areas supported thus far includes: IT & Communications development and Scientific Support for such activities as action plan supervision; species conservation assessments; funding for expeditions; capacity-building; field and laboratory work; and the drafting of species maps, among other important contributions.

PROTECTED AREA MANAGEMENT PLAN

Some of the assistance GEF Mar provides includes the acquisition of equipment for protected-area management and the drafting, revision and implementation of management plans.

The project acquired fisheries monitoring systems for the Integrated Management Center in São Pedro and São Paulo, and management and biodiversity monitoring equipment for PAs. Also purchased were marine research tech and materials, such as remotely-operated vehicles (ROVs) for underwater studies, diving gear and bird-banding equipment.

In 2021, expeditions were conducted by boat to obtain physical, biological and archeological data to inform a management plan for the Manuel Luís Coral Bank Park off the coast of Maranhão. Since 2020, the state's Department for the Environment and Natural Resources (SEMA) has been working with a consultancy financed by GEF Mar to create the plan.

Progress was also made on the drafting of another management plan, this time for the Ponta da Baleia Environmental Protection Area in Abrolhos (Bahia), a region rich in reefs, coral banks and marine flora and fauna. The EPA, which is situated on the southernmost shore of Bahia state, occupies 346,535

hectares of the Alcobaça, Caravelas, Prado and Nova Viçosa municipalities. The region's coastal populations rely on fishing and tourism as their main sources of revenue. The management plan will strive to maximize the region's economic potential whilst ensuring its environmental sustainability.

A technical cooperation agreement was signed with the Brazilian Ministry of Agriculture, Livestock and Food Supply (MAPA) on the Tuna Ecofishing subproject. The aim is to provide greater protection to fish stocks, fishermen/women and marine biodiversity through the adoption of an ecosystemic approach to fisheries management—a shift facilitated by GEF Mar support. The method considers a gamut of social, environmental and economic aspects in weighing an effective contribution to more sustainable tuna fishing. This will also furnish data for a nationwide implementation of the Tuna Fishing Management Plan.

GEF Mar supports projects covering a combined 95.1 million hectares of marine and coastal areas across 30 Protected Areas and 7 research centers. In 2018, the project's support helped increase the percentage of marine and coastal areas under some form of protection from 1.5% to 26.3%, far exceeding the national target of 10% by 2020.

155

GRANTEES

7

RESEARCH CENTERS

SDG





SEA GARBAGE IN SP

SEA GARBAGE MONITORING AND ASSESSMENT PLAN, SÃO PAULO

ECOSYSTEM

Marine and Coastal environments



Annually, somewhere in the region of 11 million tons of plastic waste ends up in the oceans, and, according to the United Nations Environment Program (UNEP), the outlook for 2040 is bleaker still, with the figure potentially rising to 29 million metric tons. With such alarming data on the theme, in 2019 a technical-scientific cooperation initiative involving government, the private sector, civil society and academia gave rise to the project "Knowledge Against

Marine Litter: Strategic Marine Litter Monitoring and Assessment Plan for São Paulo State".

In 2021, the project published its Strategic Marine Litter Monitoring and Assessment Plan for São Paulo State, a document that will shape waste management policy and contribute toward the conservation of marine and coastal areas. [Click here for the full plan](#). Since publication, the framework has been presented

at events in Brazil and abroad as a key tool for bridging the gap between science and public policy.

The project was supported by the Norwegian Embassy in Brazil and was a partnership between FUNBIO, the Advanced Studies Institute (IEA) and Oceanographic Institute, both from the University of São Paulo, and the São Paulo Department for Infrastructure and the Environment.



One of the greatest villains in the oceans, plastic waste is found washed up on the beach at the Xixová-Japuí State Park in São Vicente, São Paulo. Photo: GerminAção



SDG





MARINE LITTER IN BRAZIL

ECOSYSTEM

Marine and Coastal environments



▼
Rubble is also a reality on Brazil's beaches. Photo: GerminAção



Recent decades have seen a global alert concerning one of the greatest villains in the oceans: sea garbage. In order to tackle the problem along our coasts, toward the end of 2021 work began on the project “Marine Litter Monitoring and Assessment in Brazil”, which will concentrate its efforts specifically in the states of Amapá, Bahia, Paraná and Rio de Janeiro. The project is based on a successful experiment carried out in São Paulo between 2018 and 2020, and uses the same technical crew, which will help stakeholders in the new target states to understand the problem, mobilize local and regional structures, and create policies and governance schemes to ensure the sustainability of their own initiatives.

The project will help generate data for sustainability indicators connected with Sustainable

Development Goal 14, which concerns the oceans and sea life. The SDG is part of the 2030 Agenda, an international agreement signed by United Nations member states.

With support from the Norwegian Embassy, the project will be carried out in conjunction with the Advanced Studies Institute, the University of São Paulo’s Oceanographic Institute and the target states. In addition to these institutions, the plan is also backed by a partnership between FUNBIO and the UNESCO Chair on Ocean Sustainability. During the plan’s three-year duration, researchers, public managers, marine-litter specialists, and concerned organizations will join forces to draw up assertive strategies. The project is expected to run from 2021 to 2024, but will be rolled out in six-month phases, pending disbursements and specific contracts. Each

semestral period will have its own set targets, though these will always be part of a wider two and a half year strategic vision.

Initially, the program will involve discussions on how to carry forth future sea-garbage monitoring, assessment and eradication plans in conjunction with the public sector. Under the proposed governance scheme, the hope is that the team can generate, share and communicate the need for co-responsibility among all the sectors and partners on the project, intimately related to other ocean-agenda structures in Brazil.

Resources will also be made available for communication, as a strategy to involve and diversify target publics and possible funding sources for actions to reduce and clean up ocean litter.



Embaixada da Noruega
Brasília



SDG



PARTNERS



THEMATIC LINES



BIOMES

Caatinga, Pampa and Pantanal



Focused on biodiversity conservation, restoration and sustainable management in three biomes (Pantanal wetlands, Caatinga scrublands and Pampa grasslands), GEF Terrestre ended 2021 with 12 new projects, bringing its total to 24 all round. A Call for Projects launched in June 2021 selected 10 new proposals for GEF Terrestre support. These initiatives include the restoration of degraded landscapes and the combatting of forest fires in Protected Areas in the Pantanal, and the strengthening of the production chain associated with the recuperation of all three biomes.

The selected projects are expected to push GEF Terrestre beyond its initially set target of restoring 5 thousand hectares of degraded areas. Today, with the 24 projects under contract, the target has been reset at 6.6 thousand hectares of recovered landscape.

Launched in 2018, GEF Terrestre is a Brazilian government project coordinated by the Ministry for the Environment. Its implementing agency is the InterAmerican Development Bank, which disburses funds from the Global Environment Facility (GEF). FUNBIO is the agency in charge of execution.

The project's main aim is to re-establish damaged ecosystems, protect endangered species and support the creation and improved management of PAs in the three biomes, which, according to National Protected Area System (SNUC) statistics, are the least protected in the nation: Pampa (2.9% of total area under some form of protection); Pantanal (4.6%); and Caatinga (9%).

Also in 2021, GEF Terrestre supported the drafting of five Degraded-Area Restoration Plans for PAs in the Caatinga, Pantanal

GEF TERRESTRE

CONSERVATION, RESTORATION AND MANAGEMENT STRATEGY FOR BIODIVERSITY IN THE CAATINGA, PAMPA AND PANTANAL BIOMES

“The GEF Terrestre Project has taken a scientific approach to restoring the Pantanal, benefitting traditional communities by generating work and income.”

ROSAN FERNANDES, Aquarela Pantanal Project Manager – MUPAN



Women help transplant saplings for Mupan at Sesc Baía das Pedras Park in Mato Grosso. Photo: Mupan/Press release



IN THE PRESS

02.07.2021 | *Noticias Agrícolas*
Project to recover degraded pastures will use a methodology developed by Embrapa



7

STATES

3

BIOMES

24

SUPPORTED PROJECTS

“GEF Terrestre’s support for the Pro-Sustainable EPA project, implemented by SAVE Brazil and the Alianza del Pastizal, is enabling the participative validation of innovative technologies for the control of invasive species, contributing to the goal of promoting effective integration between sustainable production and biodiversity conservation at the Environmental Protection Area and the Pampa Biome.”

MICHAEL CARROLL, Coordinator of the Pro-Sustainable EPA project – SAVE Brasil



Fire-fighting training for members of the community in the Chapada do Araripe region (Ceará, Pernambuco and Piauí). Photo: Emanuelle Souza/ Capan

and Pampa. It also completed its diagnostics at PAs on the Pampa plains, which assessed the need for prescribed burnings, interventions and protocols for fire-use management. If used correctly, as per techniques already adopted by some PAs, controlled burning can help avoid the occurrence of wildfires.

A new innovation also received the project’s backing. Digital maps were drawn up for different native vegetation recovery scenarios in the Caatinga and Pampa. The idea was to identify priority areas for the restoration of native vegetation through systematic spatial planning based on Integer Linear Programming (ILP), a mathematical model that

incorporates the spatial relations of each planning unit in order to ascertain target attainment under different criteria and constraints.

In addition, GEF Terrestre closed the year with the hiring of three consultancies that will devise and hone decision-tree models and restoration monitoring protocols for the three biomes.

Since 2020, the program has held 50 workshops and seminars to mobilize and train beneficiaries and key partners on restoration projects. Over 600 people have received training, and 60% of those were women. Fourteen courses were administered to project beneficiaries (200 people in

all, 58% of those women) on opportunities related to biodiversity and ecosystem services.

In partnership with the ICMBio and MMA, FUNBIO supported the editing and publication of the *Ecological Restoration Guide for Protected Area Managers*, which presents concepts, basic guidance and sources of up-to-date and detailed information on degraded-area restoration, with directives for hiring and appraising specialist services. The guide also outlines the prevailing legislation on the theme and explains the precepts for a thorough diagnosis of degraded areas and the best methods for restoration and monitoring.

WORTH A LISTEN:

the GEF Terrestre-supported project RestaurAPA, which works to restore degraded areas of the Pampas, launched a podcast to present the biome through research, actions, and interviews with specialists.



LISTEN HERE



NDC



SDG



PARTNERS



THEMATIC LINES



BIOME

Atlantic Forest



ATLANTIC FOREST

BIODIVERSITY AND CLIMATE CHANGE IN THE ATLANTIC FOREST

In 2021, “Biodiversity and Climate Change in the Atlantic Forest” selected ten projects, which, over the course of two years, will restore roughly 3 thousand hectares of forest in Bahia (three projects), Rio de Janeiro (three), Paraná (three) and São Paulo (one). The selection considered actions that can offer long-term impact and contribute towards the sustainability of the economic chains at the restored swathes, such as by fostering seed collection groups, providing technical capacity-building for at least 600 people, and setting up tree nurseries.

In Bahia, the project, coordinated by the Porto Seguro Defense Movement, will work to recover the headwaters and riparian forest around the micro-basins of the State’s Southernmost Protected Areas Mosaic. The mosaic covers the municipalities of Porto Seguro, Prado and Santa Cruz de Cabrália, where there are plans for ecological corridors involving

Private Natural Heritage Reserves (PNHRs). Ecological corridors are key to connecting forest fragments and ensuring gene flow and genetic variability among isolated populations. Today, only 12.4%* of the biome’s original forest cover of some 1.3 million km2 remains. It is home to a current population of 120 million people, generating 70% of the national GDP.

Also in Bahia, the institution Natureza Bela will implement a project to restore 410 hectares across federal Protected Areas, and adopt sustainable agroforestry systems in indigenous communities in a bid to generate jobs and income. Instituto Ciclos will support the restoration of native vegetation at 193 hectares across three Bahian municipalities, whilst also fostering the development of local agents engaged in the forest-restoration production chain.

In Rio de Janeiro, the Instituto Terra de Preservação Ambiental

< Fringes of Descobrimento National Park in Bahia, with Mount Pascoal in the background. Photo: Instituto Ciclos

*Data from SOS Mata Atlântica and the National Institute for Space Research (INPE), where forest remnants are considered intact swathes larger than three hectares





▲ Pataxó Indians return from collecting peppertree berries at the Comexatibá Indigenous Territory in Bahia. Photo: Instituto Ciclos

▼ A traditional part of indigenous culture, agroforestry systems are also used at the Comexatibá IT in Bahia. Photo: Instituto Ciclos



10

SUPPORTED PROJECTS

– ITPA (Terra Environmental Preservation Institute) will work to reconnect fragments of the Central Rio State Mosaic, creating corridors between the Tinguá Biological Reserve and some 5,200 hectares of well-preserved forest fragments. Also working in the mosaic, the International Institute for Sustainability (IIS) will link up forest fragments in the Serra do Mar, strengthening the forestry production chain and sustainable tourism by reinforcing the 4,270 km Atlantic Forest Trail along the Serra do Mar all the way south to the Serra Geral. The Central Rio State Mosaic spans 29 federal, state and municipal protected areas.

The Golden Lion Tamarin Association (AMLD), which FUNBIO supports on other initiatives (see pages X and Y), will reintroduce epiphytes to previously restored areas. Epiphytes are plants that grow on trunks, vines and creepers, creating niches and establishing unique ecological relations with various forest life forms, including the endemic golden lion tamarin. As such, they are key to environmental stability. Today,

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PAS SUPPORTED IN LAGAMAR MOSAIC

years after restoration, epiphyte colonization of the new forest is still considered incipient.

In Paraná, the Instituto de Pesquisa em Vida Selvagem e Educação Ambiental – SPVS (Wildlife and Environmental Education Research Institute) will support a wide-ranging restoration drive at the Lagamar Mosaic, in areas of converted and later abandoned buffalo pasture. The mosaic includes 40 PAs that encompass mangroves and forest remnants and are home to caçara communities with valuable traditional knowledge.

At the same mosaic, Mater Natura – Instituto de Estudos Ambientais (Environmental Studies Institute) will endeavor to enrich species diversity in restored areas by planting almost one hundred thousand saplings that will contribute to the biodiversity so essential to flora and fauna conservation.

Meanwhile, the Instituto de Tecnologia para o Desenvolvimento – LACTEC (Technological Institute for Development) will focus on an

29

FEDERAL, STATE AND MUNICIPAL PROTECTED AREAS IN CENTRAL RIO MOSAIC

old lumber ranch inside the Guaricana National Park in Morretes, an area of interest to the local Tupã Nhe'é Kretã indigenous community. The capacity-building programs in forestry and restoration techniques and in forest sapling production at nurseries will bolster the female presence within the community leadership.

In São Paulo, the Green Initiative will restore 200 hectares of forest at another mosaic: the Jacupiranga Protected Areas Mosaic (MOJAC), in the Vale do Ribeira, a region declared a Unesco natural heritage site.

The Atlantic Forest project, coordinated by the Ministry for the Environment, is part of the Brazil-Germany Cooperation for Sustainable Development partnership, a chapter of the International Climate Protection Initiative (IKI) launched by the German Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMU). The project is funded by KfW and has FUNBIO as its financial manager and executor.

NDC



SDG



PARTNERS



THEMATIC LINES



BIOME

Amazon

AMAPÁ FUND



The Amapá Fund, launched in 2015 to support the maintenance and consolidation of municipal, state and federal Protected Areas (PAs) and Indigenous Territories (ITs) across the state, issued its first Call for Projects in 2021, geared towards smallholder farmers and tradi-

tional peoples and communities. The proposals were designed to strengthen sociobiodiversity and bioeconomy value chains at the Rio Iratapuru Sustainable Development Reserve (SDR), Amapá State Forest (FLOTA Amapá) and Amapá National Forest (FLONA Amapá).

In 2022, the plan is to roll out the selected projects and launch another Call, as well as broaden the remit of the mechanism, which raises funds from a variety of sources, including donations, payment for environmental services (PES) and Consent Decrees.

Currently, Amapá has seven federal PAs (6,055,897 hectares), five state PAs (3,197,508 hectares), two municipal PAs (68,894 hectares) and five ITs (1,183,838 hectares), covering a combined 10.5 million hectares of a state in which

Amazon Rainforest accounts for 70% of the land cover.

The Amapá Fund receives resources donated by Conservation International's Global Conservation Fund (GCF). FUNBIO is its financial manager and secretary.



IN THE PRESS

26.08.2021 | G1
 'Amapá Fund' offers up to R\$ 300 thousand in funding for initiatives focused on the bioeconomy; sign up.

> Cabo Orange National Park, Amapá.
 Photo: Victor Moriyama/FUNBIO



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PARTNERS



THEMATIC LINES



BIOME AND ECOSYSTEM

Atlantic Forest and Marine and Coastal environments



ABROLHOS LAND AND SEA FUND

▼
Aerial view of the Abrolhos archipelago. Photo: Guilherme Duarte



Formed by an arc of five small islands off the southern coast of Bahia, the Abrolhos archipelago is home to the largest and most diverse coral system in the South Atlantic. In an initiative to conserve these marine and coastal ecosystems, spread over 89 million hectares, the Abrolhos Land and Sea Fund was created in 2016 to support the creation, consolidation, maintenance and institutional strengthening of the federal Protected Areas (PAs) in the south of Bahia and northernmost Espírito Santo.

One of the main actions in 2021 was the selection of a consultancy to map, select, and mentor businesses that could foster sustainable entrepreneurship in the Abrolhos Land and Sea* territory. The aim is to support the creation of a strategy to spend seven to twelve months mapping ten handpicked businesses or initiatives with positive socioenvironmental impact.

The fund will also channel resources into the restructuring

of the base of Abrolhos National Marine Park, the first of its kind in Brazil, dating back to 1983. The work will adapt the base to meet the current health requirements, such as by increasing ventilation and enlarging the windows.

Focused on protecting a region that is home to over 1.7 million people, including traditional and indigenous communities, the endowment fund (which spends only the yields on its invested capital) was designed by FUNBIO, its financial and executive manager. The fund receives technical support from Conservation International (CI) and financial backing from the Global Conservation Fund (GCF).

As a private fund with public/private governance, it can receive donations from private individuals or resources from legal obligations, such as through consent decrees or environmental offset measures as conditions for licensing.

*Name given by CI



SDG



PARTNERS



THEMATIC LINES



BIOME
Amazon



TRADITION AND FUTURE IN THE AMAZON

12

MILLION HECTARES

57

SUPPORTED INDIGENOUS
COMMUNITIES

2021 saw field activities begin on the Tradition and Future in the Amazon project, which focuses on strengthening territorial and environmental management in five Kayapó Indigenous Territories (ITs): Capoto/Jarina, in Mato Grosso, Las Casas, Kayapó and Baú, in Pará, and Menkragnoti, which straddles both states. The Kayapó live in villages scattered along the Upper Iriri, Bacajá and Fresco Rivers, among other Xingu River tributaries. All told, they inhabit an unbroken 12 million-hectare swathe of some of the best preserved forest in the Amazon.

Due to the impact of the Covid-19 pandemic, the first outing into the field took place in the second semester of 2021, and focused on the production of paintings and patterns. On the occasion, women and youths from 12 villages benefitted by the project came together to reproduce patterns and represent

their traditional activities on canvas and special papers. Much of the art was inspired by the local biodiversity and ancestral myths.

Gathered at the village of Pykany, in Pará, the women and youths produced 60 drawings and 29 paintings steeped in symbolism. The presence of more experienced Kayapó figures encouraged dialogue with the younger members, who recorded videos about the formative myths of Kayapó culture, cosmology and traditional rites.

The TFA, which is sponsored by the Petrobras Socioenvironmental Program, also concentrates on valuing the traditional knowledge of the Mêbêngôkre, as the Kayapó call themselves. In this context, the younger generations play a strategic role in perpetuating these traditions. The strategies adopted by Tradition and Future in the Amazon include the

▼
An indigenous woman paints Kayapó patterns inspired by elements of nature and the ethnicity's culture during a workshop in the Pykany village. Photo: Instituto Kabu



“The TFA project has been extremely important to the Mebêngôkre (Kayapó_ Mekrãgnoti), because it is an initiative that dialogues, complements, and is in perfect synergy with the other projects the organization has been executing in the Baú and Menkragnotí Indigenous Territories. In all the actions carried out by these other projects, whether in town in Novo Progresso or, especially, in the villages, the TFA has contributed didactic materials, logistical support, minor repairs, room and board for those needing to travel, and technical cooperation on the activities. The participative format of this mutual cooperation has set this project apart for all Kayapó west of the Xingu River.”

LUIS CARLOS SAMPAIO, coordinator of the Instituto Kabu



Workshop on planting seedlings in Kubenkôkre village. Photo: Instituto Kabu



strengthening of territorial and environmental management and related production systems, and the documentation of Kayapó traditions.

Among other roll-outs during the last year were activities in the field of environmental education with youths, women and children, the TFA’s priority publics. In addition, the project endeavored to strengthen production chains, carry out ethno-mappings and direct translations from indigenous languages, and even implement Agroforestry Systems (AFSs).

Agroforestry Systems combine and simultaneously plant assorted species to be harvested at different times (over the short, medium and long-term), or whose growth patterns and rates complement and catalyze each other. The mix of Amazonian tonka bean with lemon, orange and souari nut, among other fruits, is a good example. Long before the term AFS was even coined, the Kayapó were already using similar management techniques in their traditional agriculture. The implementation of management systems includes a number of process-related activities,

from seed collection to seedling production, planting techniques to harvesting/picking and production system management. The initiative will also include the mapping and identification of agricultural and forest species that are already part of the Kayapó diet.

One of the most keenly-awaited activities is the creation of a Territorial and Environmental Management Plan (TEMP), a document that effectively steers the way territories, heritage and natural resources are managed. These plans also take into con-

sideration the directives of the National Indigenous Territorial and Environmental Management Plan (PGNATI in the Portuguese abbreviation). With support from the TFA, the Kayapó at the Menkragnoti IT will be brought to the table for community discussions and planning concerning the present needs of the territory. The results of these talks will be incorporated into the completed TEMP in 2023.

Carbon stock measuring and monitoring are another important front of the TFA project. Carbon stocks will be

measured and priced and the economic value of standing forest also assessed.

Another component underway is the introduction of activities related to the Rights of Indigenous Peoples. The first Kayapó to graduate in Law, Maial Paiakan is translating important legal landmarks in indigenous rights, such as the United Nations Declaration on the Rights of Indigenous Peoples, International Labor Organization (ILO) Convention no. 169, on Indigenous and Tribal Peoples, and Articles

231 and 232 of the Brazilian Constitution.

Once translated, these texts will be used as source material for print, audiovisual and digital materials (including a podcast) which will be made available at Kayapó villages and used in debates especially tailored to women and youths.

The project is being developed in partnership with Conservation International Brazil and the indigenous associations Instituto Kabu, Instituto Raoni and Associação Floresta Protegida.

TRADITION AND FUTURE IN THE AMAZON



^ Ancestry, for Raoni Metuktire

^ Free will of Kayapó children, for Bepete Kayapó

^ Feeding of Kayapó, for Kokotô Kayapó

^ The importance of rivers for Kayapó, by Bepdjyre Txucarramãe

TRADITION AND FUTURE IN THE AMAZON

The **Tradition and Future in the Amazon (TFA)** project, sponsored by the Petrobras Socioenvironmental program, supports the Kayapó people at five Indigenous Territories (ITs) in the states of Mato Grosso and Pará. The ethnicity's territories span almost 12 million hectares of unbroken forest considered the best preserved in the Amazon, and a sponge for carbon stocks that are vital to reducing the effects of climate change.

Focus Area 1

Las Casas IT, Kayapó IT and part of the Menkragnoti IT
Representative organization:
Associação Floresta Protegida (AFP) – Pará

Focus Area 2

Baú and part of the Menkragnoti IT
Representative organization:
Associação Floresta Protegida (AFP) – Pará

Focus Area 3

Capoto/Jarina and the southern part of the Menkragnoti IT
Representative organization:
Instituto Raoni (IR) - Mato Grosso



650
individuals directly benefited by the project



9.072 Indigenous in the territory

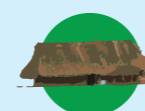
5.034 Kayapó TI

1.707 Menkragnoti TI

1.550 Capoto/Jarina TI

399 Las Casas TI

382 Baú TI



57 indigenous communities supported



ODS 5 (Gender Equality)
ODS 13 (Climate action)
ODS 15 (Life on land)
ODS 17 (Partnerships for the goals)

PROJECT FRONTS

- Strategic**
Keeping forests standing and valuing traditional knowledge.
- Tactical**
Implementation of territorial and environmental management tools.
- Operational**
Support the monitoring of carbon stocks and strengthening of sustainable production chains.

TFA ACTIONS

- Capacity-building for local agents; Strengthening of Representative Organizations.
- Territorial and Environmental Management Plan for the Menkragnoti Indigenous Territory.
- Strengthening of Sustainable Production.
- Environmental Management.

100
children up to age 11

70
teenagers aged 12 to 14

50
teenagers aged 15 to 17

50
young adults aged 18 to 29

380
adults aged 30 or over



PARTNERS



THEMATIC LINES



BIOME

Amazon



KAYAPÓ FUND



A village supported by the Kayapó Fund. Photo: Instituto Kabu



Ten years since its implementation, the Kayapó Fund (KF) reached 2021 with some major achievements under its belt. Over 10 million hectares of Amazon Rainforest in Kayapó territories across Mato Grosso and Pará have received the Fund's coverage and some seven thousand Kayapó Indians have been directly or indirectly benefited by the actions supported by this long-term financial mechanism.

In the last year, with a view to broadening the project's scope, work began on running diagnostics at new organizations active inside ITs.

Among those already onboard as new partners is the Associação Floresta Protegida (AFP), which represents some three thousand Kayapó at 31 villages in the Kayapó and Las Casas ITs in Pará, and Menkragnoti, which straddles Mato Grosso and Pará. The AFP received its first support in 2021 for the project "Concerted Strategies for Tackling Growing Threats to Kayapó Territories", which has been underway ever since.

The initiative is designed to reinforce the protection and sustainable management of

Kayapó ITs and the natural resources within them, and to promote the ethnicity's economic and political autonomy.

To further these goals, equipment was acquired to strengthen the monitoring infrastructure, including a vessel and four outboard engines for territorial surveillance, and material and equipment to supply the Beture Collective, led by indigenous filmmakers. The association also channeled resources into supporting the production activities of the beneficiary communities; hire technicians to assist on the technical and administrative management of the Kayapó Cooperative (COOBA-Y), which works with their sociobiodiversity produce; and take care of the logistics behind the 100-delegate General Assembly, in conjunction with the member communities.

The project is part of the fourth cycle of investments, which will distribute some R\$ 4.2 million in funds by 2023. The investment cycles correspond to the periods during which the Open Project Calls were issued to Kayapó representative associations.

Also in 2021, the Kayapó Fund enabled a suite of actions by



the Instituto Kabu (IK) under the scope of the project “Defense of the Mekrāgnotí Territory in the Deforestation Corridor of Southwestern Pará”. The actions, which ally traditional with technical/scientific knowledge, are supported through participative exchanges that consider the present needs of the communities, especially when it comes to technology, infrastructure, capacity-building and services that will help them shore up their territory and cultural integrity.

In one of the activities, a group of 17 Kayapó leaders took part in a workshop at Novo Progresso Town Hall in Pará to discuss public policies and exchange experiences related to indigenous rights. The expectation is that the capacity-building will contribute to the construction of a Territorial and Environmental Management Plan (TEMP) for the Baú and Menkragnoti ITs. The plan will reach completion by the end of 2023. The TEMP is being drafted by the Kayapó themselves in response to their concerns regarding such themes as territorial protection and income-generation. Plans of this kind are the main instrument informing the National Indigenous Territories Management Policy, in place since 2012.

At another workshop attended by a group of 26 Kayapó, the project also broached the theme

“Rights and Public Polices under the National Indigenous Territories Management Policy”.

Another achievement was capacity-building in the production and planting of saplings, administered to 39 Kayapó from the villages benefited by the fund. This included theoretical classes and a practical workshop. At the end of the course, the participants went out and planted souari nut trees, a native Cerrado species. The Kabu Institute revitalized a tree nursery and adapted it for increased output. The new amenities and facilities included benches, seed bins and a well to tap into underground water.

In 2021, the Instituto Raoni (IR) received support for the ‘Mê Anodjá’ project, designed to contribute to the protection of natural resources and the culture and way of life of the populations at the Capoto/Jarina IT in Mato Grosso and the Menkragnoti IT in Pará. The activities will directly benefit 283 Kayapó families.

With support from the KF and other partners, a total of 42 hectares of farmed plots and agroforestry systems at the ITs received support: enrichment of two pre-existing hectares; a 5-hectare expansion to orchards and fruit plots; maintenance and replanting of traditional

Kayapó subsistence plots in 12 communities at the Capoto/Jarina IT and a further 4 at the Menkragnoti IT, as well as community plots at the Capoto, Piraçu, Wani-Wani and Metuktire villages at Capoto/Jarina.

At these same areas, native species for human consumption, medicinal purposes or to draw in prey animals were also replanted or introduced. There was an added incentive for those planting pepper, a request from the Kayapó after the interchange with peoples of the Kinsedjê ethnicity.

Since its creation in 2011, thanks to a donation from the Global Conservation Fund (GCF) through Conservação Internacional Brasil (CI Brasil), the Kayapó Fund has channeled resources into proposals from three indigenous organizations: Associação Floresta Protegida, Instituto Kabu and Instituto Raoni. The fund is also supported by the Brazilian Development Bank (BNDES), with resources drawn from the Amazonia Fund.

FUNBIO helped design the mechanism for the fund’s functioning and acts as its financial and operational manager, executing activities in conjunction with partners in order to strengthen indigenous institutions carrying out work in the field.

➤ Brazilian Indians at an audiovisual workshop by the Pixaxá River at the Menkragnoti IT in Pará. Photo: Lucas Landau

▼ Kayapó Indians during a course on seedling production. Photo: Instituto Kabu



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PARTNERS



THEMATIC LINES



BIOME

Atlantic Forest



▲ A juvenile golden lion tamarin in Silva Jardim, Rio de Janeiro. Photo: Andréia Martins/AMLD

➤ The watchtower will afford visitors an ample view of the park. Photo: Luiz Paulo Ferraz/AMLD

GOLDEN LION TAMARIN ECOLOGICAL PARK

PARTNERSHIP FOR THE IMPLEMENTATION OF THE GOLDEN LION TAMARIN ECOLOGICAL PARK

Observing golden lion tamarins in their natural habitat is about to become easier for the general public thanks to work done throughout 2021 to structure the Golden Lion Tamarin Ecological Park, scheduled for inauguration in the second semester of 2022 at Igarapé Ranch, Silva Jardim, Rio de Janeiro. Over the last year, the implementation project also supported the acquisition of the audiovisual equipment needed to make the initiative work.

Fruit of a partnership between the Golden Lion Tamarin Association (AMLD) and FUNBIO, with funding from ExxonMobil,

the project built two fauna and flora observation decks in the region in 2021.

Among the highlights visible from the main belvedere are the eco-overpass built by the highway concessionary that allows wildlife to cross the BR-101 in safety, and the swathes of forest restored in partnership with Igarapé Ranch, the base of the AMLD. The areas where the saplings were planted are strategic to landscape connectivity via the forest corridor at the Poço das Antas Biological Reserve (Rebio). This connection is key to genetic variability, as it fosters interaction

between previously isolated groups of animals.

The second observation structure, located closer to the AMLD base, affords visitors a privileged forest panorama.

Both decks were completed in 2021, and will be strategic tools for visitors to the park, who, in the company of park monitors, will be able to explore such issues as forest connectivity, fragmentation, protected areas, environmental licensing, agriculture and restoration. The belvederes will also be used for wildlife observation and events.

CULTURAL AND EDUCATIONAL ACTIVITIES

Another move in preparation for the park's opening was the acquisition of audiovisual gear to equip an auditorium and the visitors' center for cultural and educational activities. After the necessary technical studies, this action was also delivered in 2021, with the equipment duly installed at the AMLD auditorium.

World Environment Day, June 5, marked the launch of a video on the AMLD's partnership with ExxonMobil and Funbio, with special emphasis on the forest restoration at the Igarapé Ranch.

The Covid-19 pandemic had a considerable impact on the

project's initial planning, including the cancellation of scheduled activities, such as visits by groups of ecotourists, training courses for ecotourism monitors, and the cultural events series called Mico com Arte (Tamarin with Art).



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THEMATIC LINES



BIOME

Atlantic Forest



GOLDEN LION TAMARIN ECOLOGICAL PARK PHASE II

PARTNERSHIP FOR THE IMPLEMENTATION OF THE GOLDEN LION TAMARIN ECOLOGICAL PARK PHASE II

In preparation for the inauguration of the Golden Lion Tamarin Ecological Park (Abbreviated to PEMLD in Portuguese), scheduled for the beginning of the second semester of 2022,

the partnership between the Golden Lion Tamarin Association (AMLD) and FUNBIO, financed by donations from ExxonMobil, kick started one more project in 2021: this time, the goal is to build visitor-support structures

and the Golden Lion Tamarin House.

The watchtower will be raised as part of phase two of the project "Support for the Implementation of the Golden Lion Tamarin

Ecological Park", begun in September 2021. High among the tree tops, the structure is strategically located to afford a view of the forest restored in 2019/2020 by the AMLD at Igarapé Ranch, the institution's



IN THE PRESS

02.08.2021 | *Colabora*
ExxonMobil renews its support for the Golden Lion Tamarin Association

> The endangered golden lion tamarin is endemic to the Atlantic Forest. Photo: Luiz Thiago de Jesus/AMLD



> Watchtower enables visitors to observe the park from the height of the tree canopy. Photo: Luiz Paulo Ferraz/AMLD

“Despite the pandemic and the need to readapt certain activities, the project did not stop. The most visible result of that is the new landscape observation structure: the Ecological Restoration Tower. Restoring the Atlantic Forest is fundamental not only to this particular primate, but to us and to all the species that inhabit the forest. The view the tower affords is of a vast area of pasture that has been restored to forest, and it will certainly incite the visitor to consider the importance and viability of planted forests. In addition to the belvedere, there’s also the ecological overpass that straddles the BR-101 highway, built during phase 1, and a host of environmental education and ecotourism attractions.”

LUÍS PAULO FERRAZ, Executive Secretary of the AMLD



base in Silva Jardim, Rio de Janeiro. The new tower not only provides an observational vantage point different to the other two belvederes built with ExxonMobil support, but is also a perfectly positioned watch point from which to identify forest fires.

14.5 meters tall, and reaching 12 meters off ground level, the watchtower will be able to hold 15 people at a time. In addition to tourism, it will also be used by scientific researchers observing fauna in the wild.

In 2021, plans were also approved for the construction of an installation devoted to environmental education: Golden Lion Tamarin House. The project will retrofit an existing building on the former ranch. The idea is to create an immersive, trivia-rich experience of the golden lion tamarin’s social behavior and habits through multimedia audiovisual equipment and sensorial experiences. The project’s scope includes the remodelling of the installations, and the studies for, design and set-up of the visitor experience.

Over the course of 2022, the project aims to reinforce digital and in-person communication mechanisms geared towards both golden lion tamarin conservation and the park itself in a bid to engage the public with pro-nature initiatives. In addition, there are plans to forge partnerships region-wide through capacity-building in order to consolidate the ecotourism attraction focused around this endangered primate.



PARTNERS



THEMATIC LINES



BIOMES

Amazon, Atlantic Forest and Pampa



▼ Craft cocoa-cabruca system is planted in the shade of the trees. Photo: Acervo/Tabôa



▼ Honey made from native bees under the Tabôa project. Photo: Acervo/Tabôa



PROBIO II

OPPORTUNITIES FUND OF THE NATIONAL PUBLIC/PRIVATE INTEGRATED ACTIONS FOR BIODIVERSITY PROJECT

The initiative Strengthening Agroecology — Commercialization Circuits, supported by the Probio II Opportunities Fund and wound down in 2021, brought rural technical assistance to 200 families, trained over 100 cocoa producers, and provided technical oversight in stingless beekeeping to 56 farmers. The capacity building, carried out over the course of the project’s two-year run, will afford producers the autonomy they need to forge ahead on their own, making agroecology in the South of Bahia increasingly more robust.

In addition to contributing toward a healthy diet for the farmers, the project’s aim was to conserve the natural forest cover in areas of the South of Bahia where heritage cocoa-growing methods (*cacau cabruca*) are employed, and to protect biodiversity at known hotspots—gravely endangered regions of tropical forest that house a dense concentration of species with high levels of endemism.

Cacau cabruca is a method of growing cocoa plants in the

shade of Atlantic Forest trees that has been in use in the region for over 200 years and is considered a precursor to modern agroforestry systems. It’s also an effective way to restore degraded areas, such as those previously cleared for pasture.

In 2021, 76 farmers received training in cocoa production and management. In addition to instructing these producers in more sustainable and efficient cocoa-growing methods, the program also included technical assistance on cocoa-bean processing, thus aggregating further value to the produce above commodity price. The result is an increase in income for smallholder farmers working settled land.

Part of the training administered to the cocoa producers included access to methods for the production of superior-quality chocolate, which also aggregates value and boosts revenues. In addition, the support covered logistics too, creating a distribution network to other states, including Minas Gerais, Espírito Santo and Rio de Janeiro.



TABÔA COMMUNITY STRENGTHENING

“Support from FUNBIO and Arapyauí in the creation of Tabôa Fortalecimento Comunitário was essencial to structuring its ability to forge strategic partnerships and manage socioenvironmental projects in the South of Bahia between 2014 and 2016. Later, FUNBIO backed the expansion of the rural development program, through which we managed to provide 230 farmers with technical assistance and ensure over 200 accreditations for the production and processing of cabruca-system cocoa, boosting productivity by 22%, and revenues by 28% on average, across 800 hectares, with focus on agroecology at agrarian reform settlements. FUNBIO’s support enabled us to raise resources from other supporters, such as the Instituto Humanize and Inter-American Foundation.”

ROBERTO VILELA, Executive Director



MELIPONICULTURE

The Opportunities Fund’s operations in the South of Bahia also supported meliponiculture, or stingless bee farming, by providing technical accompaniment and training to 56 producers in 2021.

The capacity-building activities were conducted in two stages. The first, rolled out in March, attended 29 producers in the Dois Riachões, São João, Serra de Areia and Dandara dos Palmares settlements. The second, in

August, trained 27 producers at Rochedo and Nova Vitória.

In May 2021, the project inaugurated a meliponary at the Instituto Federal Baiano (IFBaiano), in Uruçuca, an institution that administers courses in basic and higher education. With capacity for 400 swarms, the meliponary currently houses 62 *Melipona sp* hives.

The bee species kept at the settlements is *Melipona*

rufiventris, the tujuba, which has suffered a heavy decline in the wild in recent years due to loss of habit (native forest and jungle). Plummeting tujuba numbers will have a knock-on effect on pollination, and so on the health of the local flora. In light of this, meliponiculture has assumed a major importance in the species’ conservation.

The project Strengthening Agroecology—Commercialization Circuits was financed through

a combined model with Tabôa Fortalecimento Comunitário, an association created in 2015 by FUNBIO and the Instituto Arapyauí to boost the local economy and strengthen civil society through credit, capacity-building and consultancy. alavancar a economia local e fortalecer, além dos negócios e a sociedade civil por meio de crédito, capacitação e assessorias.

Through Tabôa, funds donated by the Instituto Humanize were



Cocoa-cabruca stand in the South of Bahia. Photo: Acervo/Tabôa

WHAT IS THE OPPORTUNITIES FUND?

The Probio II Opportunities Fund is a financial mechanism established and managed by FUNBIO designed to drive key, landscape-wide transformations in production and consumption models. The fund was developed to lend continuity to the actions undertaken by the National Project for Public/Private Integrated Actions for Biodiversity (Probio II). In all, the fund has supported eight initiatives in the states of Pará, Bahia, São Paulo, Rio Grande do Sul and Espírito Santo, all since completed.

Set up by FUNBIO using R\$ 13 million in seed funding donated by the Global Environment Facility (GEF) through the World Bank, the fund has been operational since 2014, when Probio II reached completion. The aim is to support subprojects geared towards protecting biodiversity in large-scale productive landscapes. The idea is to see the fund grow over time through deft investments and revenues from other sources so that it can be replicated in other productive landscapes and sectors. As such, the Fund does not have a scheduled depletion date.

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THEMATIC LINES



BIOME

Amazon

ONE MILLION TREES FOR THE XINGU



After reaching its initial target of planting one million trees around the degraded headwaters and springs of the Xingu River, in Mato Grosso, the One Million Trees for the Xingu Project set itself a new target in 2020: plant a further quarter of a million trees by March 2022.

Permanent parcels of landscape restored between 2016 and 2020 were monitored throughout 2021, and diagnostics were run to identify new tracts to be restored before the project's end.

The first cycle of the One Million Trees for the Xingu project was a partnership between FUNBIO, Rock World (Rock in Rio) and the Instituto Socioambiental (ISA) and resulted in 1.32 million new specimens of native Amazonian trees across a 276-hectare area of land. This phase of the project received funding directly from Rock in Rio, plus R\$ 300 thousand from Universidade Estácio and a further R\$ 149 thousand in funds raised from festival ticket sales during the period 2016-18.

The new cycle aims to plant 250 thousand trees across 52.9 hectares of degraded land, and the initiative will be funded through donations made in the act of purchasing tickets for Rock in Rio.

The project generates income for the 600-plus seed collectors that make up the Xingu Seed Network, including members of indigenous communities, smallholder farmers and extractivists.

The restoration drive employs the "muvuca" seed-bombing method. Rather than plant individual saplings, select native-species seeds are mixed into "bombs" of compost and sand that are then sown into the ground. The varying growth rates of the different species end up structuring the new forest from within, while optimizing the use of the soil and space. The technique is considered the most cost-effective and efficient method available.

✓ Saplings at the municipal tree nursery in Canarana, Mato Grosso. Photo: Rogério Assis/ISA



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THEMATIC LINES



BIOME

Amazon



Members of the community participate in the maintenance of agroforestry systems in Nova Bandeirantes, Mato Grosso. Photo: Instituto Centro de Vida

A rural producer during agroforestry system maintenance in Paranaíta. Mato Grosso. Photo: Instituto Centro de Vida



Populations from vulnerable regions have seen their daily challenges multiply in the wake of the COVID-19 pandemic. According to a study carried out by the prestigious scientific journal "The Lancet", these communities will have to bear the brunt of the economic impacts of the coronavirus for years to come, not least of these a widening gulf in health and welfare inequality. In an attempt to mitigate some of these effects in the region, the project "Concerted Strategy to Tackle Ethnoenvironmental Emergencies in the Brazilian Amazon" was created in 2021.

The initiative caters to traditional, riverine, smallholder

and indigenous communities in the Brazilian Amazon that have been affected by deforestation, landgrabs and food insecurity.

The project was established by the American Non-Governmental Organization Re: Wild (which supports biodiversity protection and restoration) and the European Union. FUNBIO is operational manager of the project and the actions will be designed and executed by the project's partners: Instituto Socioambiental (ISA), Instituto Centro de Vida (ICV) and Projeto Saúde e Alegria (PSA).

With a timeframe of 18 months and covering the states of

Amazonas, Mato Grosso and Pará, the project will draw upon geographical specificities and the sociocultural diversity of each group to roll out activities across these four focal regions.

At the Yanomami Territory, the plan is to build solutions for food security and child malnutrition at the IT and the indigenous communities of the Middle and Upper Negro River, and to generate analyses and detailed information about illegal mining going on in the territory.

In the Xingu Protected Area Corridor, work will be done to

buttress the Xingu+ Network's communication strategy. Xingu+ is a civil society initiative that works toward the social Organization of indigenous and riverine populations in the region, protecting their health, territory and rights.

The activities here also foster tighter bonds among indigenous and riverine organizations in the Xingu Corridor with a view to better defending their territories and rights and promoting the welfare of all Xingu peoples. In addition, they also enable forest fire monitoring, prevention and mitigation in the Xingu Indigenous Territory (XIT) and

emergency actions in these communities during the pandemic.

The third focal area is located in the Western Region of Pará, where forest seed collection and restoration efforts will be consolidated and expanded, with the provision of technical and material assistance to indigenous and traditional communities. Another benefit for the region will be the expansion and structuring of native beekeeping processes and provision of training and consultancy to the administrators, managers and associates of the cooperatives and associations.

In addition to all this, investments will be made in the Forest Economy EcoCenter, a socio-economic opportunities platform geared towards sustainable forest management, the processing, storage and commercialization of production-related services and the strengthening of community-based tourism initiatives.

In the Region of the Amazonian Gateway in Mato Grosso, production is being diversified on 150 hectares of land devoted to organic farming and agroforestry. Sales channels are also being explored and mentorship and monitoring are being provided on 10 community projects.



EAST AMAZON FUND

PARTNERS

ACADEMIA CIVIL SOCIETY COMPANIES GOVERNMENT INDIGENOUS POPULATIONS AND TRADITIONAL COMMUNITIES

THEMATIC LINES

CAPACITATION OF TEAMS AND PARTNERS CLIMATE CHANGE CREATION AND CONSOLIDATION OF PROTECTED AREAS FINANCIAL MECHANISMS FOREST RESTORATION SUSTAINABLE PRODUCTIVE ACTIVITIES

BIOME

Amazon



IN THE PRESS

02.09.2021 | *Estadão*
Without the Amazon Fund, Pará creates a state initiative to try to raise funds

04.10.2021 | *Agência Pará*
State Government signs a cooperation agreement with the managing entity of the East Amazon Fund

During the COP 26 Climate Conference, the Governor of Pará, Helder Barbalho (in a blue shirt), meets with Mauro O' de Almeida (on the Governor's left), Secretary of the Pará State Department of the Environment and Sustainability, and Manoel Serrão (in front of the Governor of Pará), FUNBIO's Superintendent of Programs. Photo: Press Release



The East Amazon Fund is a private financial and operational mechanism created in 2019 by Pará State Government to finance initiatives capable of driving the transition toward a carbon-neutral economy as of 2036. Set within the framework of the Amazon Now Program and climate-change directives, the Fund's aim is to strengthen the state's public policies and socioenvironmental initiatives by supporting actions that lead to permanent reductions in illegal deforestation. In addition, it also endeavors to encourage sustainable production and consumption and the construction of a new state-development model aligned with the vocations and potentialities of Pará's various regions.

Covering 1.2 million km², an area similar to that of Angola, Pará is Brazil's second-largest state, home to almost a quarter of the Amazon and a population of 8 million people. These facts and figures make it a key state when it comes to Amazon conservation. Considering Pará's size and diversity, the socioenvironmental actions carried out there have the potential to generate both environmental and social benefits on a large scale.

In 2021, FUNBIO was selected as financial and operational manager of the East Amazon Fund, and began its work by helping structure its governance and processes. Also in 2021, the Institute for Climate and Society promised to donate the sum of R\$ 1 million to the fund.



THE THREE PRIORITY ACTION FRONTS ARE

- **TARGET** of restoring 7.4 million hectares by 2035
- **GRADUAL 37% REDUCTION** in total gross GHG emissions by 2030
- **GRADUAL 43% REDUCTION** in total gross GHG emissions by 2035



FOCUSED ON AGROFORESTRY SYSTEMS, açai, cocoa, chestnut and pepper



“The FAO (East Amazon Fund) is, straight off, a concrete step in Pará’s transition toward a low-carbon economy, and it will remain a welcome presence through 2036, at least. With clear planning and targets, the fund is a private mechanism born of the need for new means of obtaining higher-impact deliverables in terms of quantity and quality, and without having to make concessions in project safety. In such a challenging conjuncture that urges for us to break paradigms, the sustained reduction of deforestation cannot be the sole end of public policy, but the natural consequence of a successful new development model based on sustainable and intelligent use of our natural assets, traditional knowledge and the transformative capacity of facts-based strategy. This is the source of our conviction that the FAO is a tool that will leverage the Amazon Now State Plan and help Pará on its mission.”

MAURO O’ DE ALMEIDA, Secretary of the Pará State Department for the Environment and Sustainability

FOCUSED ON VALIDATION TOOLS FOR THE RURAL ENVIRONMENTAL REGISTRY (CAR); 90% of the properties have already registered, but await validation. The target is to have TerraClass Pará—a forest regeneration monitoring tool—up and running.

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PARTNERS



THEMATIC LINES



BIOME

Amazon



LEGAL AMAZON CONSORTIUM

INTERSTATE CONSORTIUM FOR THE SUSTAINABLE DEVELOPMENT OF THE LEGAL AMAZON REGION

The Interstate Consortium for the Sustainable Development of the Legal Amazon Region is a joint subnational initiative involving the governors of the 9 Legal Amazon states designed to create and drive sustainable development based on shared regional

policies and strategies. The Consortium—set up as a public autarky in 2019—has established a new paradigm by uniting all 9 Amazonian governments around a shared commitment to find effective solutions to the region’s challenges.

Tied in with the Consortium are state-level region-wide actions couched in strategic programs, projects and initiatives tailored to the agreed targets.

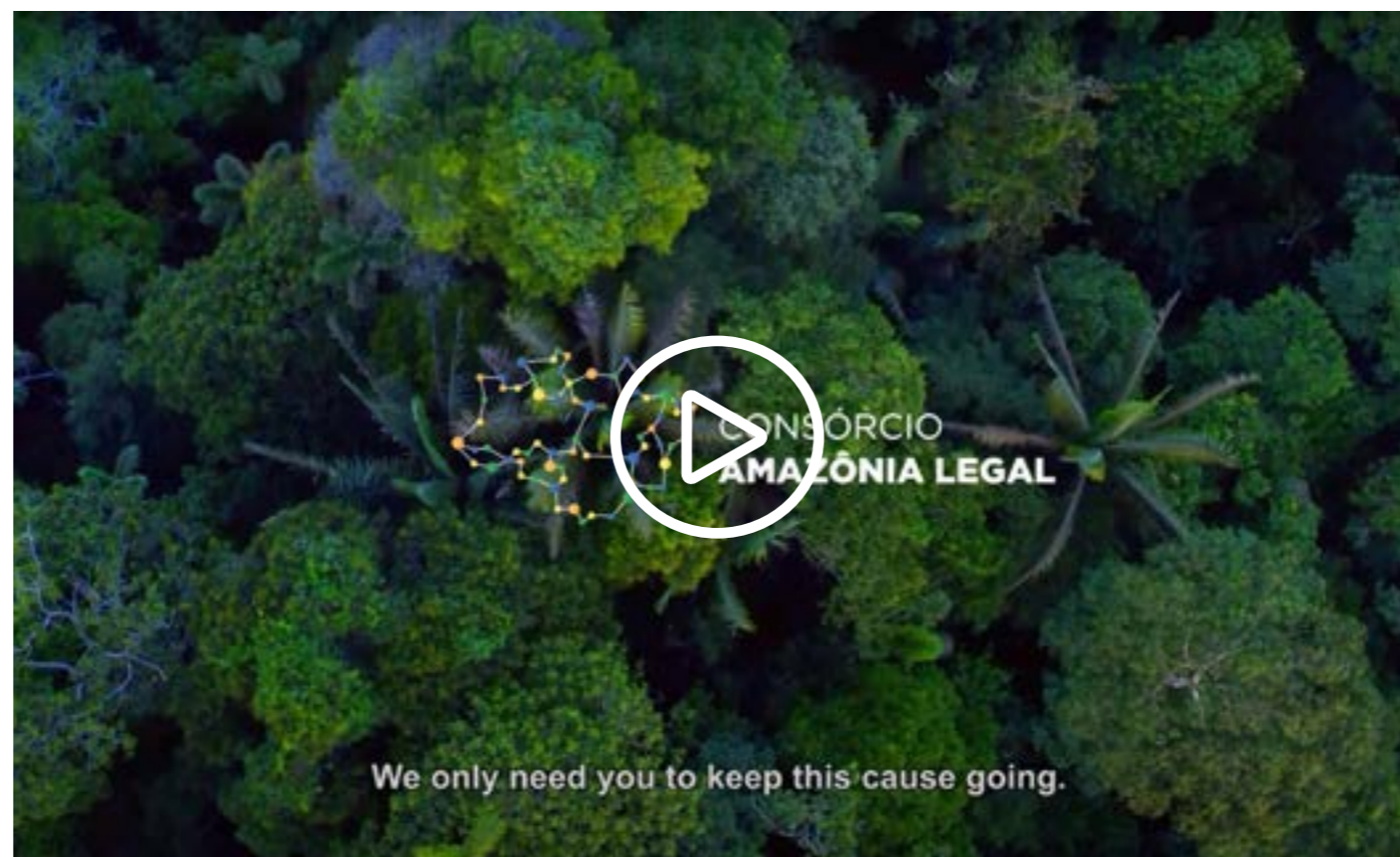
Also in 2019, FUNBIO signed a cooperation agreement with

the Consortium under which it became its privately-funded operational and financial mechanism, buoyed in its remit by the 2019-2030 Strategic Plan and the Green Recovery Plan – PRV (as abbreviated in Portuguese). Working



IN THE PRESS

16.07.2021 | *Valor Econômico*
Governors launch a plan to restore greenery and await the liberation of resources from the Amazon Fund



◀ Watch the video on the consortium





^ In July, a meeting of leaders from the states officially instated FUNBIO as the consortium's manager. Photo: Beatriz Nadler

v The Governor of Maranhão, Flávio Dino, French Ambassador to Brazil, Brigitte Collet, Rosa Lemos de Sá, FUNBIO CEO, and Waldez Góes, Governor of Amapá. Photo: Eugênio Pantoja/IPAM



in close contact with the Consortium and its partners, two projects supporting the Consortium's structuring and the implementation of the PRV are already underway.

The first of these, financed by the Instituto Clima e Sociedade (ICS), enabled the Consortium to hire the Fundação Dom Cabral, which is working to design its governance structure, configuring its institutional arrangement and improving processes and procedures. The project is a partnership with the ICS and the Arapyuá and Humanize Institutes.

The second, backed by the French Embassy in Brazil, was signed in April 2021 to shore up the front working to curb illegal deforestation. To carry this forward, the "Amazon Region Interstate Consortium's Integrated Plan for Deforestation Control" was drafted to add further robustness to the nine Amazonian states' command and control policies. The French Embassy's support also covered the production of a video on the Consortium, which screened at COP26 in Glasgow, Scotland.

The proposal is to engage in shared planning that buttresses

integrated efforts to combat deforestation in particularly sensitive areas identified by the Consortium, or where concerted action needs reinforcement, as in the so-called deforestation belt.

The Consortium's environmental component has a privately-funded financial mechanism created by FUNBIO which ensures transparency and efficiency in the use of the resources it receives. The Consortium's governance strengthens social participation in control and decision-making.



"The Interstate Consortium for the Sustainable Development of the Legal Amazon Region is a chance to build concerted solutions to the challenges the region faces. With the combined efforts of the nine state governments, strategies are being drawn up that envision the development of a new high-impact and influential regional economy that is both sustainable and low carbon. The Consortium can count on its partnership with civil society organizations in this, and has FUNBIO as its partner in executing the Financial Mechanism that underpins this pioneering intergovernmental arrangement, helping to strengthen the actions undertaken in accordance with the Strategic Plan and the Consortium's Recovery Plan."

CIRA MOURA, Executive Secretary of the Interstate Consortium for the Sustainable Development of the Legal Amazon Region

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GCF TASK FORCE

PARTNERS



CIVIL SOCIETY



GOVERNMENT



INDIGENOUS POPULATIONS AND TRADITIONAL COMMUNITIES

THEMATIC LINES



CAPACITY OF TEAMS AND PARTNERS



CLIMATE CHANGE



FOREST RESTORATION



SUSTAINABLE PRODUCTIVE ACTIVITIES

BIOME

Amazon



“Paving the way toward a new low-emission development model aligned with the social and economic demands of the Amazon is not a simple task, nor one restricted to the State and a handful of partners. It requires a broader building drive and political, technical and social mobilization. The environmental sector is striving to serve as a springboard in these transformations. With the backing and support of key partners, the Governors’ Climate and Forests Task Force is working towards this end.”

CARLOS ARAGON, Executive Secretary of the Governors’ Climate and Forests Task Force – GCF-TF Brazil



State Environmental Department Secretaries attended COP 26 in Glasgow, Scotland. Photo: GCF Task Force Archive



The Governors’ Climate and Forests Task Force (GCF Task Force) is a global network of 38 subnational governments from ten countries working toward forest conservation and the reduction of carbon emissions caused by illegal deforestation. In 2021, the GCF Task Force supported the Environmental Secretariat Forum in developing the Manaus Action Plan, a suite of subnational mechanisms to design and implement actions focused on low GHG-emissions

development and strategies to tackle deforestation and fires.

The forum consists of representatives from the 9 Amazon-region States: Acre, Amapá, Amazonas, Mato Grosso, Pará, Rondônia, Roraima, Tocantins and Maranhão, which received support and information on how to qualify for the REDD+ carbon market. The mechanism grants economic incentives to developing countries based on greenhouse gas emissions reductions

through curbed deforestation and forest degradation.

Based on these inputs, 8 of the 9 Amazonian states submitted proposals under the LEAF (Lowering Emissions by Accelerating Forest Finance) Coalition’s call for projects. At the COP26 Climate Conference in the UK, the Coalition, initially launched in 2021 by a group of governments and companies, announced the plan to make USD 1 billion available to nations and states com-

mitted to taking more ambitious steps toward protecting tropical and subtropical forests.

With FUNBIO as the executor of a slice of the resources earmarked for Brazil, the GCF Task Force engaged indigenous representatives in dialogue and launched forest maintenance training for indigenous peoples. Support was provided for the meetings of the Regional Committee on Indigenous Peoples and Local Communities,

and significant institutional advances were made, including the Committee’s participation in discussions on national and international policy, in which it was able to offer its assessment of the main challenges and opportunities.

The GCF Task Force, steered by the University of Colorado, secured the participation of Environmental Secretariats at the Bioeconomy Forum held in Pará and at meetings of the Interstate

Consortium for the Legal Amazon. There is also the chance of further meetings with potential donors.

In light of this success, the initiative’s initial one-year mandate was renewed in January 2022. The aim is to continue promoting meetings between subnational governments and partners and to make further headway in conversations on solutions to climate change.



NDC

SDG

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LEGAL OBLIGATIONS UNIT

PARTNERS



THEMATIC LINES



ECOSYSTEM

Marine and Coastal environments



ENVIRONMENTAL EDUCATION

IMPLEMENTATION OF ENVIRONMENTAL EDUCATION AND INCOME-GENERATION PROJECTS GEARED TOWARDS PROMOTING ENVIRONMENTAL QUALITY IN FISHING COMMUNITIES IN RIO DE JANEIRO STATE

✓ In Arraial do Cabo, Rio de Janeiro, a group takes part in a workshop on craft fishing. Photo: Mulheres Nativas



12

SUPPORTED INSTITUTIONS

12

SUPPORTED PROJECTS

4

CALLS FOR PROJECTS

The Environmental Education project supports education and income-generation initiatives geared towards promoting environmental and socioeconomic quality in fishing communities in Rio de Janeiro State. The aim is to contribute toward biodiversity conservation, the sustainable use of fisheries resources and the resilience of craft fishing practices. Launched in 2016, the project has brought to fruition 12 proposals presented by civil society organizations, nine of which were selected through an emergency call for projects in 2020 and rolled out in 2021. These calls were in response to the income shortfalls caused by the Covid 19 pandemic, especially in areas that depend on tourism. The support ensured economic activity could soldier on, even during the most critical period of the pandemic.

and women in Brazil. In the state of Rio de Janeiro, the activity is the main source of income for large contingents of the population in the 30-plus municipalities that dot the 635km coastline. In Greater Rio alone, craft fishing provides the livelihood of some 20 thousand families.

The theme of gender and age diversity was very present among the selected projects, which each lasted six months and were spread across three thematic lines: income-generation; support for local institutions; and mental health. The activities included female empowerment in craft fishing, with women accounting for 70% of the participants; the construction of a traditional fish market led by young fishermen/women; the opening of a surfing school; and the purchase of equipment for a local municipal school in an isolated and economically underprivileged community.

According to the Ministry for Fisheries and Agriculture, there are over a million craft fishermen



TO KNOW MORE ABOUT THE PROJECTS SUPPORTED BY THE ENVIRONMENTAL EDUCATION PROGRAM, CLICK HERE.

ENVIRONMENTAL EDUCATION

The excellent results obtained helped cushion the negative impact of Covid 19 and spoke to the concrete benefits of extending support. In light of that, all nine projects will continue into 2022, which will help consolidate the results and facilitate the strategic planning of the beneficiary institutions. The advantages

go beyond income-generation: recognition of the value of these traditional activities boosts local self-esteem, and contributes towards the maintenance of local knowledge and know-how.

In mid-2021, a new call was issued, this time for institutions with a low degree of formal

consolidation—something quite prevalent along the craft fishing production chain. Three projects were selected, and these will help structure 13 community associations and institutions. The actions, which will begin in 2022, will focus on income-generation and the institutional strengthening of fishing organizations.



GHOSTS GO SHOPPING

Ghost nets are a major environmental problem: lost or discarded in the ocean, they become a fatal trap for sea life that gets caught up in their drift. At the Provetá and Matariz caiçara fishing communities in Ilha Grande, the project “Caiu na Rede é... impacto socioambiental positivo” (Caught in the net means... positive socio-environmental impact) is turning bitter lemons into sweet lemonade. Drawing upon the eight decades of experience of Honorato Gonçalves de Castro, a fisherman since the age of 13, the Institute for Marine Research, Architecture and Renewable Resources (IPEMAR) and the micro-company Marulho are transforming ghost nets into eye-catching reusable shopping bags to replace the customary plastic.

Filinho, as Honorato is best known, had to quit fishing because of his labyrinthitis, but he has channeled his technique into the manufacture of net bags. Support from the Environmental Education Program enabled him to refit a boat to catch nets instead of fish, and visit other communities to promote the workshops that are now seeing the transformation replicated elsewhere.

Today, catching only groceries at stores and markets, these nets

are no longer menacing ghosts, but have become visible symbols of caiçara tradition that dialogue with sustainable solutions and build bridges between publics and generations.

The Environmental Education project is a compensatory measure established under the Conduct Adjustment Agreement signed between the company PetroRio and the Federal Public Prosecutors’ Office of Rio de Janeiro. FUNBIO is its financial manager.



CHECK THE BAGS OUT ONLINE



WOMEN TAKING THE LEAD

Among the nine projects selected in 2021 was “Active Women”, which recognizes the important role women play in income-generation and as guardians of the traditions of caiçara, quilombola (maroon colony) and shellfishing communities. At the Arraial do Cabo Extractive Reserve, support for Native Women – Cooperative of

Craft Fisherwomen and Native Plant Gatherers in the Lake District ensured the continuity of daily activities through adequate sanitary conditions (especially improved ventilation and installations, and the acquisition of PPEs) and workforce professionalization, thanks to the support of an administrative consultancy.

Created in 2017, the co-op represents fisherwomen who faced initial prejudice for working an all-woman vessel. Almost five years on, the “girls’ boat”, as it is known, has earned the respect of its peers and now turns 60kg of fish into finger food each day, generating income for the women’s families.

SDG



PARTNERS



THEMATIC LINES



ECOSYSTEM

Marine and Coastal environments



MARINE AND FISHERIES RESEARCH

PROJECT TO SUPPORT MARINE AND FISHERIES RESEARCH IN THE STATE OF RIO DE JANEIRO



▼
Brown booby in Guanabara Bay, Rio de Janeiro. Photo: João Paulo Torres

In order to foster the generation and dissemination of scientific knowledge on the biology, ecology and population dynamics of species targeted by craft and commercial fisheries, the Project to Support Marine and Fisheries Research in the State of Rio de Janeiro selected 29 initiatives from 4 Project Calls between 2015, the year the project was launched, and 2021. Of the ten projects rolled out in 2021, 6 focus on the

conservation and sustainable use of mangroves in Rio de Janeiro state and 4 on the conservation of endangered sharks and rays. While most of the selected proposals are scientific in nature, they also dialogue with key stakeholders in the fisheries production chain, as well as social aspects that have a bearing on the conservation of fish stocks and marine and coastal environments.



CLICK HERE TO FIND OUT MORE ABOUT THE PROJECTS SUPPORTED BY THE MARINE AND FISHERIES RESEARCH PROJECT

367

GRANTEES

20

SUPPORTED INSTITUTION

29

SUPPORTED PROJECTS

5

CALLS FOR PROJECTS





◀ Researchers interview fishermen and members of the São Francisco de Itabapoana community in Rio de Janeiro. Photo: Tatiana Walter

▼ Façade of the National Museum in Rio de Janeiro, undergoing restoration after the blaze in 2018. Photo: Diogo Vasconcellos

Last year, when a successful cycle of 17 initiatives geared towards the sustainable use of fisheries resources drew to a close, the Project sealed a cooperation agreement with the Federal University of Rio de Janeiro State on the execution of a component to kit out the research vessel Ocean Science III, and a support contract with the Friends of the National Museum Association to help the institution (gutted by fire in 2018) resume its exhibitions on marine biology, and acquire a new scientific collection of didactic specimens.

Support for the 29 initiatives covered 367 grant holders and 20 institutions. In addition to stressing the importance of investment in research and development for scientific advancement, it generated significant positive impact through discoveries and

change. For example, studies that showed that the Brazilian sardine mainly spawned in the Southeast and South during the summer months led to the species' seasonal protection period being moved. Now, the Brazilian sardine is off-limits to fishermen during the months of October and February, but not during winter, as before. The species is considered one of the main commercial fish species in Brazil and has suffered from sustained alterations in its environment due to climate-change, especially during spawning season.

Another novel piece of research that yielded results of major importance to the conservation of marine biodiversity was the GPS monitoring of parrotfish, a family of herbivorous fish that includes many vulnerable and endangered species. With implanted chips plying the

researchers with telemetry, the "Rocky Shores: Research for the Arraial do Cabo Marine Extractivist Reserve Management Plan" was able to track the fishes' movements and identify their haunts and foraging grounds along the Rio coast. This mapping and a more concrete picture of parrotfish distribution will provide parameters against which to monitor environmental quality, as parrotfish are an indicator of alga-control on reefs and rocky coasts. With this data in-hand, scientists now know which regions are in greatest need of protection, and can thus inform public policy accordingly.

The Marine and Fisheries Research project is a compensatory measure established under the Conduct Adjustment Agreement signed by PetroRio with the Federal Public Prosecutors' Office.

SUPPORT FOR THE NATIONAL MUSEUM

The footage of the inferno that engulfed the National Museum on September 2, 2018, destroying 85% of the collection remains fresh in everyone's memory. The main building, known as Palácio de São Cristóvão, listed by the Brazilian Heritage Board (IPHAN) in 1993, contained over 20 million items representing the natural and anthropological history of Latin America and the world. In addition, the Museum housed one of the largest specialist libraries on the Natural Sciences in Brazil, with over 470,000 volumes and 2,400 rare books.

Affiliated with the Federal University of Rio de Janeiro (UFRJ), the National Museum, considered the fifth-largest institution of its kind in the world, is working to reopen as soon as possible. In 2021, the Support for Marine Fisheries Research agreed a contract with the Friends of the National Museum Association to help replace the institution's marine biology collection, highlights from which included a humpback whale (*Megaptera novaeangliae*) skeleton hundreds of years old.

Funds from the project will go towards creating a new

taxidermy laboratory, where animals can be prepared for exhibition or study. Work is already underway.

Other deliverables are the rewiring of the electrical installations in the annex, the Alípio de Miranda Ribeiro building, and the creation of an executive project for the reconstruction of the visitors' center. The partnership will enable the museum to recommence its work preparing new generations of researchers and informing society through exhibitions and other educational activities.





Blue land crab on the mangrove shore. Photo: Eduardo Almeida

Beach at Arraial do Cabo with craft fishing boats. Photo: Tatiana Walter



PROTECTING MARINE NURSERIES

As the result of a Call for Projects issued toward the end of 2020, the Marine and Fisheries Research project began work on six initiatives geared exclusively toward the conservation of Rio de Janeiro's mangroves—which occupy a total of 14.2 thousand hectares. The work involves strengthening actions identified as key to the National Action Plan for the Conservation of the Mangrove Ecosystem (NAP Mangrove). Among these actions is the reduction of the system's degradation, loss of habitat and the impact caused by the introduction of exotic species.

Known as the ocean's nurseries, mangroves are pivotally important to the fisheries production chain and to the social wellbeing of the local communities that make a living from craft fishing and shellfishing activities inside the mangals, which provide several essential ecological services, such as protecting the coastline by avoiding erosion and silting; filtering and retaining chemical and metal pollutants; and serving as a high-capacity carbon sink.

“The Marine Research and Fisheries Project represents a new milestone in marine research and conservation, especially in the north of Rio de Janeiro state. The financial support channeled through FUNBIO has allowed us to significantly broaden our studies in the areas of biodiversity, conservation, marine biology and fisheries. The project not only contributed toward scientific research with an unquestionable level of excellence, but also toward the formation of qualified human resources through its research grants, the acquisition of equipment, and construction of buildings with fully equipped research labs and biological collections. The project has been vital to expanding the knowledge and conservation of marine biodiversity at a time when universities and research agencies are being left to rot for lack of funding, to the irreparable detriment of Brazilian research.”

LUCIANO FISCHER, coordinator of the initiative Multifisheries: Science for sustainable fisheries, fishes and fishing communities in Rio de Janeiro



MARINE AND FISHERIES RESEARCH



FIRST STEP TOWARD PROTECTING SPECIES AND TRADITIONS

Brazilian waters are home to 59 species of endangered shark and ray. In addition to the threat posed by accidental by-catch, this group reaches sexual maturity late, produces few young, which are slow to grow and inhabit only specific nursery grounds that are highly susceptible to pollution. All these factors contribute to the intrinsic vulnerability of elasmobranchii as a whole. As these animals play a fundamental role in nutrient cycling and ecosystemic balance, the Marine and Fisheries Research project launched a call for projects in 2021 to select and implement initiatives along Rio state's coasts. Four sub-projects with three-year timeframes were chosen, including research projects and actions related to

sustainable fishing and social awareness of the importance of these species.

In addition to shark conservation, the design for a new component was approved that will provide support to mariculture—the cultivation of aquatic organisms, including vertebrates (fish), invertebrates (mussels, scallops, and oysters) and seaweeds. Considered a sustainable economic alternative to predatory fishing, the aim is to provide technical assistance to small businesses and structure a strategic control and sanitary monitoring plan for the mariculture production chain in promising regions of Rio de Janeiro.



OCEAN RESEARCH

Also in 2021, a cooperation agreement was signed with the Federal University of the State of Rio de Janeiro for the acquisition of equipment for the Ocean Science Research Vessel III. The ship was built in Ceará as part of a Ministry of Education project, and it was designed to serve as a floating laboratory to support Ocean Science research in the Southeast of the country. Among the equipment needed to kit the vessel out

are ultrasound probes, underwater robots and tools to collect samples of the seabed, seawater, and assorted biological and geological materials.

Pretty soon, students on the Ocean Science course and related subjects will be able to conduct marine expeditions aboard the 105-foot crew boat with onboard structure for dry, wet and hydro-acoustic labs.



Caribbean reef shark (*Carcharhinus perezii*). Photo: Natália Roos



The Ocean Science Research Vessel *Ciências no Mar III*, anchored in Ilha Grande Bay. Photo: Marcus Rodrigues



SDG



PARTNERS



THEMATIC LINES



ECOSYSTEM

Marine and Coastal environments



Access the playlist with videos on the species



FRANCISCANA CONSERVATION

CONSERVATION IN FRANCISCANA MANAGEMENT AREA I

Five years after beginning its research into Brazil's most endangered dolphin species, the Franciscana Conservation Project completed its cycle in 2021 consolidated in its position as the country's largest coordinated scientific initiative on the species. A lot of progress and numerous discoveries have been made about the franciscana in recent years, from its ecology, genetics, and population dynamic to its distribution along the nation's coast and main causes of death, and all that is thanks to a team of researchers from Espírito Santo, Rio de Janeiro, São Paulo, Paraná and Rio Grande do Sul.

The rare small-sized dolphin *Pontoporia blainvillei* is endemic to the South Western Atlantic Coast, and is found only in Argentina, Uruguay and Brazil, where its range is limited to the stretch from Espírito Santo down to Rio Grande do Sul. The production and dissemination of technical and scientific knowledge about the franciscana will hopefully contribute toward the creation and implementation of public policies to support its conservation, and supply hard data for the National Action Plan devoted to its management.



"The project took the franciscana and the challenges facing its conservation to various spheres of territorial management, and opened doors for participative solution-building on threats to the ocean and its biodiversity. We have not yet brought the franciscana back from the brink of extinction, but we have sensitized and engaged stakeholders and players from different backgrounds so that this network, strengthened inside and out, can continue to make progress toward scientific, social and environmental development."

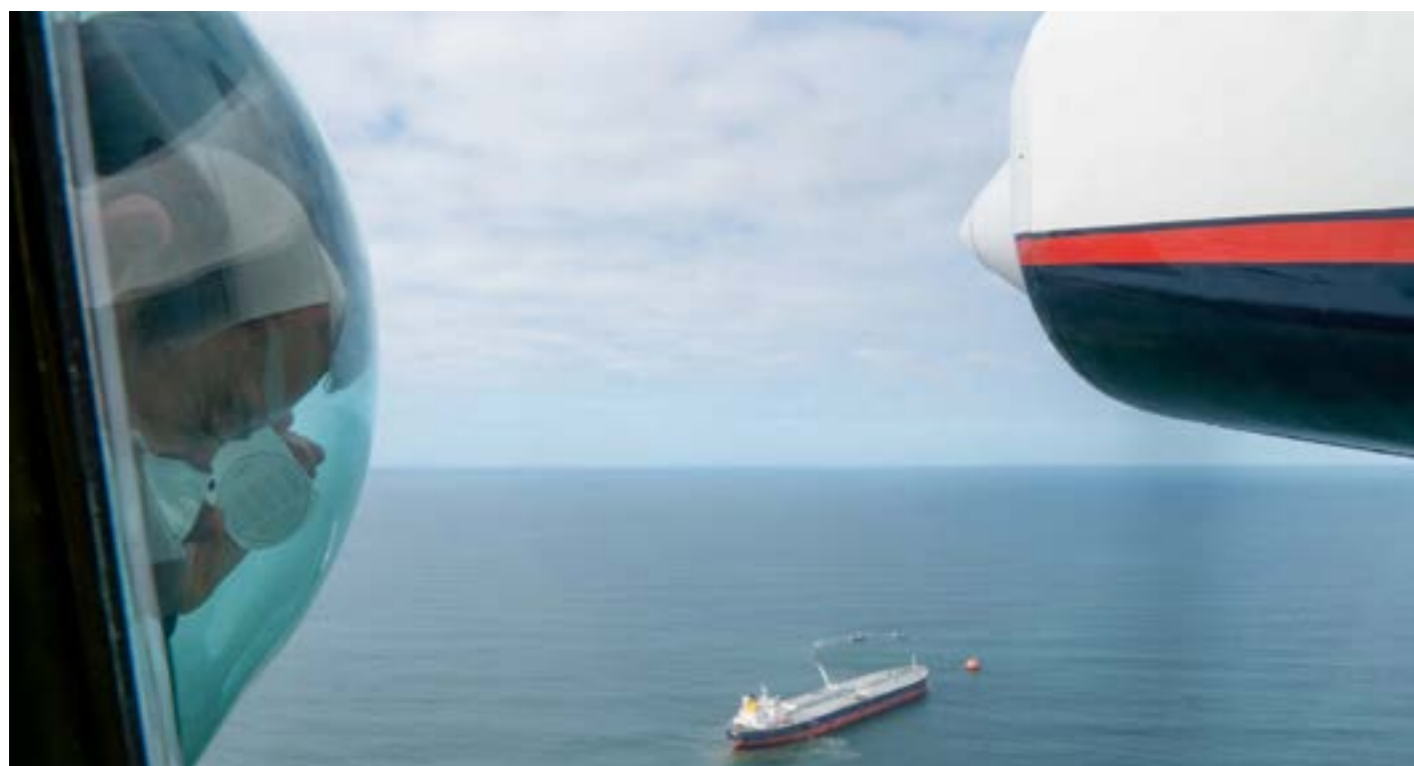
CAMILA DOMIT, Ph.D in Zoology and researcher with the Mar Brasil Association





▲ GEMARS researchers prepare for a franciscana monitoring flyover in southern Brazil. Photo: Nilsson Barros

▼ Monitoring to evaluate franciscana distribution and areas of high concentration. Photo: Nilsson Barros



78	5
GRANTEES	SUPPORTED INSTITUTIONS
6	4
SUPPORTED PROJECTS	CALLS FOR PROJECT

“Without a shadow of doubt, this project is a conservation milestone that has ignited a glimmer of hope that we can save the franciscana, which is such a charming animal. Today, thanks to the work done with FUNBIO support, we have lots of footage of franciscana swimming, and displaying a range of behaviors that had never been recorded before. This is information that will help us understand the franciscana better and make it more present to the general public.”

JOSÉ LAÍLSON, oceanographer, Ph.D in Biophysics and researcher at the State University of Rio de Janeiro’s Aquatic Mammals and Bioindicators Laboratory (Maqua)



The researchers plan to share their findings in such a manner as shores up possible strategies to minimize the impact of interactions between the small cetacean and craft fishermen. Death by accidental by-catch, where dolphins get tangled in fishing nets and drown, is the main threat facing the species today.

2021 saw numerous communication actions celebrating and disseminating an important discovery made on Rio

de Janeiro’s southern coast in November 2020. In Ilha Grande Bay, near Paraty, researchers from the Rio de Janeiro State University (UERJ) managed to corroborate long-standing academic suspicions as to the presence of a franciscana pod in the area.

The first evidence of the species in the Paraty area turned up 20 years ago, when a Pontoporia blainvillei skull was found. Later sightings were made, but none

could be caught on film, and the speculation was that the franciscana in question were visitors from nearby Ubatuba. In order to finally prove the existence of a local pod in the bay, scientists drew on help from fishermen and employed drones and underwater microphones. Thanks to this support, the very first footage of the Ilha Grande pod was released early this year.

Also with the use of drones, which have proved powerful

FRANCISCANA CONSERVATION

allies in the study of the franciscana, GEMARS – Marine Mammal Study Group of Rio Grande do Sul released videos showing previously unseen mother and calf interactions. The footage, recorded in Ubatuba—where water clarity allows for far better observation than in turbid estuaries—shows the team at work in the field.

In addition to these visual scoops, the project also released the podcast Nas Ondas da Toninha, with scientific

information for craft fishermen. Researchers at the Federal University of Rio Grande (UFRG) prepared eight episodes packed with facts with a direct bearing on fishing activities, the coastal/estuary environment where they take place, and—naturally—the franciscana. The program is seen as a way of filtering this new knowledge back into society.

Another important action toward preserving Brazil’s most severely endangered dolphin was the ToninhaThon,

a hackathon at which groups came together to brainstorm on presented problems. The hackathon yielded some innovative ideas that address the main threats to the franciscana, whether interaction with fishing activities or habitat loss.

The Franciscana Conservation Project is a compensatory measure provided for under the Consent Decree signed between PetroRio and the Federal Public Prosecutors’ Office of Rio de Janeiro. FUNBIO is the project’s executor.

“The Franciscana Conservation Project facilitated a number of fundamental advances in the species’ conservation, as it enabled us to ascertain the sizes of the franciscana pods found along the Brazilian coast and to do so in a short period of time. It also made it possible for us to rekindle, and in some case form for the very first time, connections between researchers and the fishing community. I believe an important legacy this project will leave is the challenge it set for others to continue the discussion with the fishing community about franciscana conservation.”

FEDERICO SUCUNZA, biologist, Ph.D in biodiversity and GEMARS researcher



TAKE A VIRTUAL PLUNGE INTO AN UNKNOWN UNIVERSE

Seeing a shy, discreet franciscana in the wild is no easy task, even for trained researchers who know the species better than anyone. But, to eke out a space for this little dolphin in hearts and minds, researchers from the State University of Rio de Janeiro’s Aquatic Mammals and Bioindicators Laboratory (Maqua), supported by the Franciscana Conservation Project, inaugurated the virtual Franciscana Museum in November 2021.

This fun virtual experience allows the user to interact with franciscana through a mix of real-life footage of the species in the wild and specially created 3D models. Visitors can take a trip back through the species’ evolution and explore its anatomy, ecology



[VISIT THE MUSEUM](#)

and reproductive habits. The initiative also aims to educate the population about the main threats faced by this diminutive South-Atlantic dolphin, as well as showcase the work different institutions have been doing to protect it.

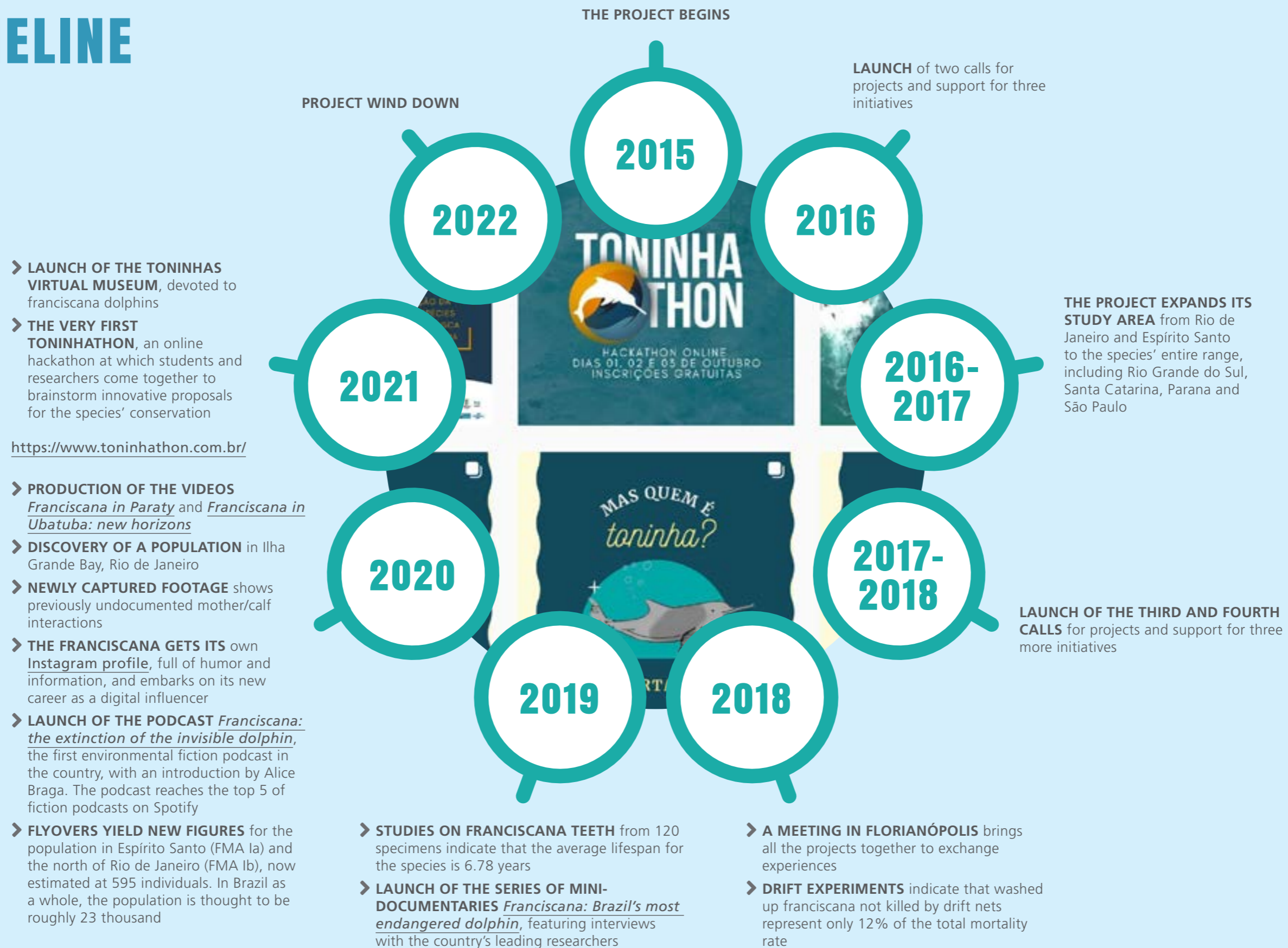
The virtual museum trip reproduces the colors and features of the coastal waters of Ilha Grande Bay, Rio de Janeiro, where a new pod was recently discovered, and affords the visitor a glimpse of what it’s like to see these mammals swimming with their calves.

It also identifies the fish and mollusk species that make up the franciscana’s diet.

To get the young public onboard and spread information about this little cetacean, the museum includes some fun social-media photo filters, so the user can pose for a selfie with a franciscana. Virtually, of course. The idea for the museum came in response to the need to make the franciscana better known to the general public, on the grounds that familiarity is a key driver of species conservation.



TIMELINE



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PARTNERS



THEMATIC LINES



ECOSYSTEM

Marine and Coastal environments



“The Support for PAs Program plays a key role in the management of the Ilhas Cagarras Natural Landmark, because, thanks to its assistance, for the first time, the PA now has a vessel at its disposal, so it can maintain a constant institutional presence, conducting inspections and monitoring sorties, and other protection measures.”

TATIANE RIBEIRO, manager of the Ilhas Cagarras Natural Landmark



SUPPORT TO PAS

CONSERVATION AND SUSTAINABLE USE OF BIODIVERSITY AT FEDERAL COASTAL AND ESTUARINE PROTECTED AREAS IN THE STATES OF RIO DE JANEIRO AND SÃO PAULO

FUNBIO supports biodiversity conservation in Brazil’s coastal and marine environments through the project “Conservation and Sustainable Use of Biodiversity at Federal Coastal and Estuarine Protected Areas (PAs) in the States of Rio de Janeiro and São Paulo—Support for PAs Phases I and II”, designed to promote the sustainable use of fisheries resources and ecosystem conservation in these key states.

was completed on a vessel specially-equipped to carry out monitoring and inspections in the Tamoios Ecological Station, located between Paraty and Angra dos Reis on the Rio de Janeiro coast. The boat will bolster the research, inspection and environmental education drive in the marine environments around the Ilha Grande Bay islands.

Underway since 2016, the project’s focus is on honing environmental protection area management and supporting the physical structure of nine Federal PAs. The resources used to finance the project come from offset measures arranged with the operator PetroRio under the terms of a Conduct Adjustment Agreement (CAA) established by the Federal Public Prosecutors’ Office of Rio de Janeiro.

In Arraial do Cabo, also in Rio state, new equipment was acquired—diving gear, jet-skis, a car, a trailer, etc.— to structure the team at the Arraial do Cabo Marine Extractive Reserve and kit them out for their inspection and monitoring, research and PA maintenance work. A drone operator course was also administered to five members of the extractive reserve team so that they could record and edit quality photos and footage for their external communications campaigns.

FUNBIO is responsible for the project’s implementation, including a suite of actions such as the drafting of a management plan and the organizational strengthening of the PAs. In 2021, construction

Also in 2021, both the Extractive Reserve and Jurubatiba Sandbank National Park—in the municipalities of Macaé, Carapebus and Quissamã on the northern Rio coast—



9

SUPPORTED PROTECTED ÁREAS

9

SUPPORTED PROJECTS

> The vessel underwent tests prior to arriving at the Tamoios Ecological Station. Photo: SEC Boats



SUPPORT TO PAS

were selected for specially-commissioned communication plans.

In addition, the executive project was completed for the construction of a trail and stilted walkway through the mangroves at the PAs located in the Guapi-Mirim Environmental Protection Area and Guanabara Ecological Station, straddling the municipalities of Magé, Guapimirim, Itaboraí and São Gonçalo. The Guanabara ES is considered the best-conserved part of Guanabara Bay, with mangroves wholly untouched by human intervention.

Also in 2021, FUNBIO hired a developer to create an app for visitors to the Ilhas Cagarras

Archipelago Natural Landmark in Rio de Janeiro, a PA created in 2010. The Landmark, a stunning view that can be seen from Ipanema Beach, preserves some isolated fragments of Atlantic Forest and serves as an important refuge and nesting site for seabirds. Still in development, the aim is that the app will present information about the PA, boosting the public's engagement with the protection effort.

The Support for PAs project is an offset measure established under the Conduct Adjustment Agreement between PetroRio and the Federal Public Prosecutors' Office. FUNBIO is responsible for the initiative's implementation.

WELCOME TO CAGARRAS!

Anyone who has taken a dip off the famous Ipanema Beach in Rio de Janeiro will have gazed out at the stunning islands floating in the off-shore haze. Though seen daily by thousands, few know the treasures that lie concealed at the Ilhas Cagarras Natural Landmark. It was precisely to present the islands' rich

biodiversity that ICMBio put on the exhibition *On the Wings of Science—A Flight over Ilhas Cagarras* in December 2021 at Rio's Santos Dumont airport.

Curated by the Federal University of Rio de Janeiro's National Museum, the exhibition displays part of

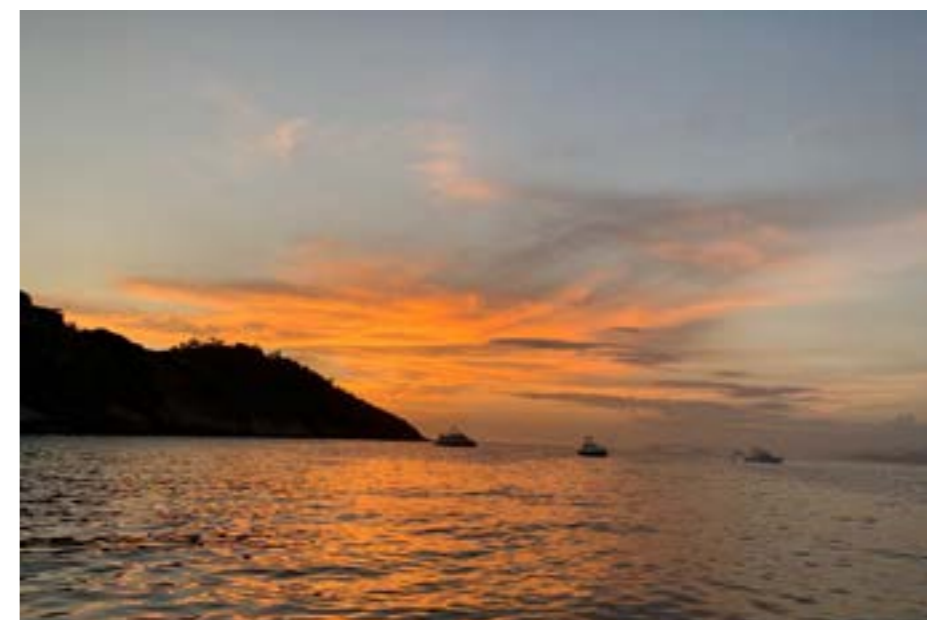
the institution's biological collection that offers a taste of the archipelago's biodiversity. In addition, the show was also packed with photographs, videos, a mannequin kitted out for a scientific dive, and models of the four islands and two islets that comprise the Protected Area.



Visit to the Ilhas Cagarras Natural Landmark, Rio de Janeiro. Photo: Tatiana Ribeiro



Group visits the Ilhas Cagarras Natural Landmark in Rio to identify the potential of each PA. Photo: Tatiana Ribeiro



“The Support for Federal Protected Areas Project plays a central role in PA management in the Brazilian southeast by carrying out key protection actions, such as the acquisition of vessels that enabled the institutions to maintain a constant presence through inspection and monitoring.”

ANDRÉ SOARES DE MELLO, Regional Manager for the Southeast – GR4 Sudeste do ICMBio



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SDG



PARTNERS



THEMATIC LINES



BIOME AND ECOSYSTEM

Atlantic Forest and Marine and Coastal environments



Ilhas dos Currais Marine National Park, Parana. Photo: Rodrigo Torres



TAJ PARANAGUÁ

THE BIODIVERSITY CONSERVATION ON THE PARANÁ COAST PROGRAM

The Biodiversity Conservation on the Paraná Coast Program was created through a Consent Decree established between Petróleo Brasileiro S.A. – Petrobrás and the state of Paraná and federal public prosecutors' offices in August 2021, with the Brazilian Biodiversity Fund – FUNBIO as technical and financial manager.

The civil lawsuit that led to the Consent Decree concerned an oil derivatives leak that spilled over 52,000 liters of diesel oil into the environment, directly affecting towns along the Paraná coast. The Consent Decree was entered into as a means of settling other lawsuits pending at the Paranaguá federal district court.

The main end to which the resources are destined is the structuring of Protected Areas along the Paraná coast and the promotion of sustainable development in local communities in or around these PAs. As such, the program should exclusively support actions related to biodiversity conservation priorities along the Paraná coastline, especially structural actions that lead to effective re-

sults on pre-established thematic fronts. The coast of Paraná is of considerable ecological importance to Atlantic Forest preservation and the protection of the marine and coastal system.

Initially, the Biodiversity Conservation Program will be capitalized using funds from the Consent Decree, executed through a private financial and operational

mechanism managed by the Brazilian Biodiversity Fund (FUNBIO). The minimum timeframe is ten years, though an extension could be negotiated depending on the agreement of the parties, the positive outcomes of the actions, and fresh funding and/or involvement of other biodiversity conservation and sustainable-development portfolios focused on the Paraná coast.

In 2021, the program issued a call for manifestations of interest in the formation of a Managing Council, the initiative's deliberative board. The aim was to identify institutions interested in filling two permanent seats on the board, plus supplants, earmarked for representatives of civil society, and two other seats, plus supplants, open to higher learning institutions.



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THEMATIC LINES



BIOME AND ECOSYSTEM

Atlantic Forest and Marine and Coastal environments



▼
Northern shore of Ilhéus, Bahia.
Photo: José Nazal



TCSA PORTO SUL

SOCIOENVIRONMENTAL CONSENT DECREE (SDC) PORTO SUL

The South of Bahia is home to some important remnants of Atlantic Forest, and planning, knowledge and integrated management are key to the region's sustainable development. Between the municipalities of Ilheus and Itacaré, on the fringe of the Lagoa Encantada and Rio Almada Environmental Protection Area (EPA) and the Itacaré-Serra Grande EPA— areas affected by the Porto Sul Port Complex—, the Porto Sul SDC project plans to carry out a series of integrated actions to prevent avoidable environmental damage and mitigate the impact caused by the installation of the port.

The project is the result of the Socioenvironmental Consent Decree (SDC) Porto Sul agreed in 2019 between the Federal and Bahia state

Public Prosecutors' Offices and the following signatories: the State of Bahia, through the Department of the Environment and Chief of Staff's Office; the Institute for the Environment and Water Resources (INEMA); the municipality of Ilhéus; and the mining company Bahia Mineração S/A (BAMIN). The SDC expects to receive something in the region of R\$ 45 million from BAMIN by June 2026. FUNBIO has been the financial manager of the initiative since 2020.

The project will adopt actions in the areas of territorial management, monitoring, control, prevention and inspection in order to ensure sustainable development, environmental integrity, ecological functions and the provision of ecosystem services in the region.



Region where the project operates concentrates important Atlantic Forest remnants. Photo: José Nazal



Work began on these lines of action in 2021 with the hiring of specialist Information Technology (IT) services to fine tune the State Environmental Information System (SEIA) and perfect the geospatial platforms, such as GeoBahia, a web-based Geographic Information System (GIS) used by the various INEMA technical departments in their inspection, monitoring

and protected areas (PAs) management activities, among others. Honing these digital data systems includes the development of an Environmental Dashboard, which will be integrated into the SEIA monitoring module so it can issue rapid alerts on critical situations across Bahia state and enable decision makers and civil society organizations to act promptly.

Also in 2021, some of the resources were earmarked for the HARPIA Native Vegetation project, focused on the Atlantic Forest. Created by INEMA and aligned with international deforestation and native land-cover restoration targets, HARPIA is a tool used to combat deforestation in Bahia state through the monitoring of all its biomes.

In addition to the contracts to improve IT systems and land-cover monitoring, SDC resources were also channeled into the acquisition of assets to help shore up the hardware and software infrastructure that will service the systems under improvement and lend greater robustness to the environmental organs operating within the project's

range. The equipment will be used in environmental monitoring and control and in inspection operations, as per the Integrated Inspection Protocol agreed with the state.

In parallel with all this, support was also provided to the Socioenvironmental Observatory, the NGO responsible for tracking

results, developing/ fostering research and academic studies using the collated data, and giving interested public organs and stakeholders liberal access to SDC activities. With its share of the SDC funds in 2021, the Observatory was able to do renovations and make structural improvements to its headquarters, as well as acquire essential software.

NDC



SDG



PARTNERS

ACADEMIA COMPANIES GOVERNMENT INDIGENOUS POPULATIONS AND TRADITIONAL COMMUNITIES

THEMATIC LINES

CREATION AND CONSOLIDATION OF PROTECTED AREAS SUSTAINABLE PRODUCTIVE ACTIVITIES

ECOSYSTEM

Marine and Coastal environments



Supporting social and environmental actions with the state of Rio de Janeiro as priority is the aim of the project carried out under the terms of a Conduct Adjustment Agreement signed in 2021 between the Federal Public Prosecutors' Office and Petrobras, with FUNBIO as financial and operational manager.

Over the course of the next four years, the project will support the consolidation of federal and State Protected Areas (PAs), sustainable production, income-generation and life-quality improvements for fishing

communities. In addition, it will also make contributions to marine research, especially projects geared towards biodiversity conservation and the control of sea-pollution.

In its first year, the Underwater Warehousing CAA launched two calls for expressions of interest in order to identify social agents interested in receiving support and to understand their demands before earmarking project resources.

The first of these, focusing on the craft fisheries chain, sought

out community institutions—fishing settlements and local associations. The selected focus areas were projects geared towards income-generation, sustainable production and craft mariculture along the Green Coast of Rio de Janeiro.

The second call targeted marine and coastal protected areas (federal and state) in Rio de Janeiro that might be interested in receiving goods and services that could further their consolidation, maintenance and institutional strengthening.

WAREHOUSES ON THE OCEAN FLOOR

For decades, Petrobras stored equipment on the seafloor in the Campos Basin region on Rio's northern coast. Flexible piping

and anchor systems components were among the items stored there. This procedure, executed without due environmental

licensing, led to the ordering of offset measures for possible environmental damage caused by these underwater warehouses.

TAC ALSUB

UNDERWATER WAREHOUSING CONDUCT ADJUSTMENT AGREEMENT (CAA)



Mariculture in Ilha Grande Bay, Rio de Janeiro. Photo: Pedro Paulo Ribeiro Vieira

The project will benefit craft fishermen/women and shellfishermen/women in Ilha Grande Bay. Photo: Pedro Paulo Ribeiro Vieira

Underwater Warehousing CAA targets the Green Coast of Rio de Janeiro. Photo: Pedro Paulo Ribeiro Vieira



IN THE PRESS

02.05.2021 | *O Globo Rio*
Petrobras signs a CAA with Public Prosecutors on the removal of equipment abandoned on the seafloor in the Campos Basin

SDG

8 DECENT WORK AND ECONOMIC GROWTH
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 12 RESPONSIBLE CONSUMPTION AND PRODUCTION
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PARTNERS



ACADEMIA



CIVIL SOCIETY



COMPANIES



GOVERNMENT

THEMATIC LINES



INSTITUTIONAL STRENGTHENING OF OUR PARTNERS



SPECIES MANAGEMENT

ECOSYSTEM

Marine and Coastal environments



TAC CORAL-SOL

SUN CORAL CONDUCT ADJUSTMENT AGREEMENT (CAA)



▲ The first sightings of the sun coral in Brazil date to the 1980s. Photo: Edson Faria Júnior

➤ The invasive species is a prolific reproducer. Photo: Edson Faria Júnior

Known for its eye-catching yellow and orange tones, the sun coral is an invasive species first detected in Brazil back in the 1980s, growing on oil and gas platforms in the Campos Basin, Rio de Janeiro. Prolific reproducers, corals of the genus *Tubastraea spa.* swiftly come to dominate regions they are introduced to, outcompeting endemic species and threatening the equilibrium of the marine ecosystem and its functions.

To compensate for the impacts on marine biodiversity, especially in Ilha Grande Bay, Rio de Janeiro, the Federal Public Prosecutors' Office signed a Conduct Adjustment Agreement (CAA) to the tune of R\$ 18 million. The signatories, Petrobras, Transpetro, Estaleiro Brasfels, Vale and TPAR Operadora Portuária, all operate in the area and are directly implicated in the sun coral's introduction to the region.

The Sun Coral CAA Program involves monitoring and diagnostic actions targeting the species *Tubastraea coccinea* and *Tubastraea tagusensis*, and the

implementation of early-detection procedures for these invasive species. In order to execute the activities, the program set up two initiatives: the Supplementary Project to Assess and Monitor the Sun Coral Dynamic in Ilha Grande Bay, and the Sun Coral Management Project at the Ecological Station in Tamoios. The initiatives will steer the necessary measures in a manner that takes the specificity of each area into account.

Ilha Grande Bay is part of Rio de Janeiro's Green Coast and is famous for its natural beauty and rich marine biodiversity. The Bay is home to the Tamoios Ecological Station, a federal strict-use Protected Area spanning 29 islands, islets, rock platforms and rocky shores that reach across to nearby Ribeira Bay.

The Sun Coral CAA's stakeholders include the Instituto Chico Mendes de Conservação de Biodiversidade (ICMBio), Terminal Portuário de Angra dos Reis S.A (TPAR) and Rio de Janeiro State Institute for the Environment (Inea). FUNBIO is its executor.

SDG



PARTNERS



THEMATIC LINES



BIOME

Atlantic Forest



➤ Teresópolis Mountains Municipal Natural Park, Rio de Janeiro. Photo: José Caldas

Designed by FUNBIO in 2006 in response to a request from the then-Secretary for the Environment of Rio de Janeiro, the Atlantic Forest Fund – FMA/RJ ensures the effective use of resources deriving from environmental conservation payments in Rio's federal, state and municipal Protected Areas (PAs). FUNBIO was financial and operational manager of the first phase of the financial mechanism

(covenant), which reached completion in 2016. Once Phase I wound down, the government issued a public call, through which FUNBIO was chosen and instated as operational manager of Phase II (Agreement), a role it has fulfilled since September that year. Bradesco is the financial manager.

In 2021, an amendment was signed that made FUNBIO

executor of the biome's forest-cover recomposition component under the Forests For Tomorrow program. The aim is to benefit a minimum of five thousand hectares, an area equivalent to five thousand football pitches. FMA/RJ, which FUNBIO designed, will operate in Protected Areas and their environs, creating ecological corridors, bringing rural smallholdings into consonance

with the reforestation drive, and tending to areas that are key to water-resources provision.

Environmental offsets are covered under Federal law nº 9.985/2000, which established the National Protected Areas System, known as SNUC in the Portuguese acronym. It is an important source of complementary funding for biodiversity conservation in Brazil. Offset

measures are stipulated during the environmental licensing process, a public management instrument designed to control the impact of human activities on the environment. In the state of Rio de Janeiro, companies apply for licensing to the State Institute for the Environment (Inea), which then carries out environmental impact studies to ascertain the sum to be paid in compensation.

By the end of the covenant in November 2016, FMA/RJ had supported 99 projects across 50 federal, state and municipal Protected Areas—a total of 506 thousand hectares. The 99 undertakings that signed up for the FMA/RJ totalled a combined R\$ 295 million in funding, of which R\$ 285 million was received, R\$ 183 million allocated, R\$ 163 million solicited, and R\$ 114 million executed (84% of the total).



FMA/RJ

BIODIVERSITY CONSERVATION MECHANISM IN THE STATE OF RIO DE JANEIRO

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PARTNERS



CIVIL SOCIETY



COMPANIES



GOVERNMENT

THEMATIC LINES



FOREST RESTORATION



INSTITUTIONAL STRENGTHENING OF OUR PARTNERS

BIOME

Atlantic Forest



GREEN AGAIN

VOLTA REDONDA NATURE CONSERVATION PROGRAM

With activities including the substitution of exotic species for native alternatives on Ilha de São João and a botanical garden that affords the visitor a taste of the Atlantic Forest, Amazon, Cerrado and Caatinga biomes, the Volta Redonda Nature Conservation Program (Volta Verde) wound down in 2021, having made southern Rio state's largest municipality that much greener.

A Municipal Department for the Environment initiative, Volta Verde was financed through an Environmental Commitment Agreement with the Federal and State Public Prosecutors' Offices, and Volta Redonda City Hall. FUNBIO is the program's manager.

Covering roughly 180 km², Volta Redonda, which has a

population of approximately 270 thousand, saw its green area considerably increased with the program's support. In addition to reforesting the river island Ilha de São João, material was purchased to plant trees along 100 kilometers of public streets and roads. The Antonieta Barreira Cravo Municipal Botanical Garden received

numerous improvements too, including a cycle track, children's park, open-air gym, trails for walking, barbecues, and an interactive fountain (visitors step on a mechanism to trigger it).

Begun in 2018, the program received R\$ 5.4 million in funding and its targets were met as early as 2020.



> Visitors to the Antonieta Barreira Cravo Botanical Garden will be given a representative taste of the Atlantic Forest, Amazon, Cerrado and Caatinga. Photo: Denis Monteiro

> Antonieta Barreira Cravo Botanical Garden in Volta Redonda, Rio de Janeiro. Photo: Denis Monteiro



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PARTNERS



THEMATIC LINES



BIOME AND ECOSYSTEM

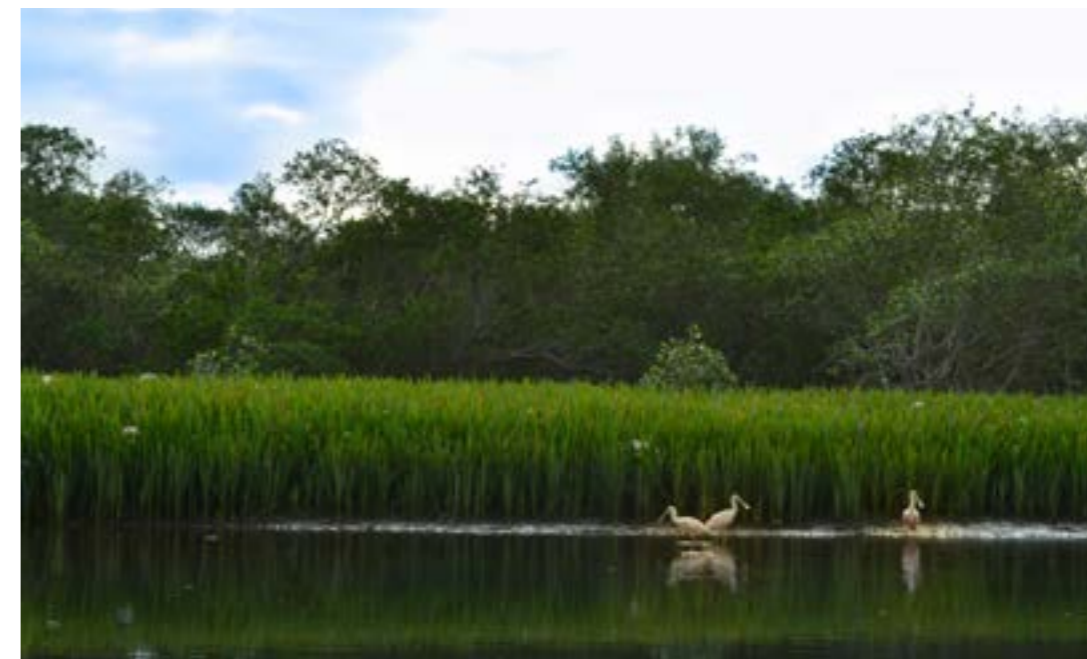
Atlantic Forest and Marine and Coastal environments



- > Bertioga Sandbank State Park, São Paulo. Photo: Francisco Cammarota Paulino
- > The PA was set up in 2010 to protect the local biodiversity. Photo: Francisco Cammarota Paulino



WINDOWS ONTO THE RESTINGA DE BERTIOGA STATE PARK



Over the course of two years, the project Windows on the Bertioga Sandbank State Park supported initiatives to generate income and improve quality of life at three communities in the vicinity of the park— Vila da Mata, the environs of the Guaratuba River (Carvalho Pinto, Barreira do Itaguá and Porto da Aracy foci) and Chácaras do Balneário Mogiano—all located on the northern coast of São Paulo state.

Created in 2010, this Protected Area (PA) preserves the biodiversity along the ecological corridor that connects the Serra do Mar mountain range with coastal and marine environments. In all, that's nine thousand hectares encompassing 98% of the sandbank forest in the Santos Lowlands.

The project was implemented in partnership with the Foundation for Forestry Conservation

and Production in the State of São Paulo, part of the Department for Infrastructure and the Environment, created to contribute to the protection, management and multiplication of productive forests and PAs across the state.

In 2021, the last assets the project had planned for were acquired and delivered, including an FRP speedboat, a boat trailer, masks, signage, two-way radios

and other equipment that will assist in park management.

In addition, twelve onsite workshops were held, four in each of the three beneficiary communities, with a view to rescuing and valuing local knowledge, identifying community aspirations, encouraging the development of sustainable activities and helping generate local income.

The workshops promoted a participative process for the creation of action plans focused on three main fronts: community-based tourism, meliponiculture (keeping of stingless bees), and the production and processing of non-timber forest products ('backyard' produce). At the end of the workshops, nine action plans (three per front per community) were delivered

outlining specific aims, activities, and sub-activities, timeframes and targets, project leads and potential partners, as well as the resources needed.

The project's funding came from a Consent Decree signed by the company L. Figueiredo Empreendimentos Imobiliários LTDA. and the Federal Public Prosecutors' Office of São Paulo. FUNBIO is financial and operational manager.

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102 PRO-SPECIES

GEF

AGENCY

FUNBIO

PARTNERS

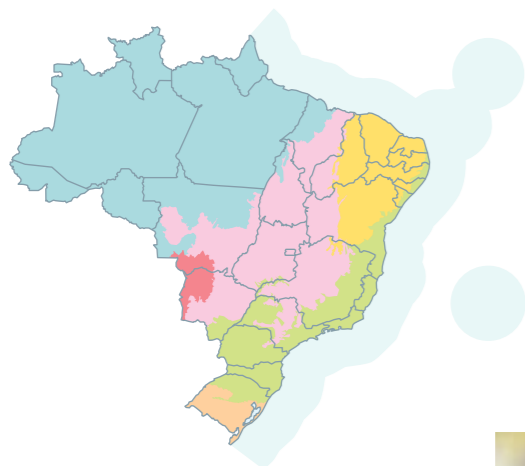


THEMATIC LINES



BIOMES AND ECOSYSTEM

Amazon, Atlantic Forest, Caatinga, Cerrado, Marine and Coastal environments, Pampa and Pantanal



PRO-SPECIES

NATIONAL STRATEGIC PROJECT FOR THE CONSERVATION OF ENDANGERED SPECIES

▼
Bombus terrestris. Photo: Ola Jennersten



ERRATA: In the Pro-species section of the 2020 Annual Report (page 89), it was stated that the Xingu TAP, home to one of the two critically endangered species covered by the project, is in Mato Grosso. In fact, the Xingu TAP is located in Pará, and the species mentioned, *Caluromysiops irrupta*, is actually found in Rondônia.

In 2021, thanks to the National Strategy for the Conservation of Endangered Species Project – Pro-Species, work began on implementing eight Territorial Action Plans (TAPs) for the Conservation of Endangered Species, key instruments in saving animals and plants on the brink of extinction. The TAPs focus on five biomes across thirteen states, all with the same core aim: to tackle threats of imminent extinction.

The first initiative implemented by the FUNBIO GEF Agency, the project focuses on 290 of the 3,286 animal and plant species officially listed as Critically Endangered (CR). These species were chosen specifically because they are not found inside Protected Areas (PAs) and are not covered by a National Action Plan for the Conservation of Endangered

Species, “a participatively-built management tool to organize and prioritize actions to conserve biodiversity and natural environments by pursuing a set goal over an established timeframe”, according to the Ministry of the Environment.

The Ministry coordinates Pro-Species, with FUNBIO as its implementing agency, WWF-Brazil as executor, and the Global Environment Facility Trust Fund as its financial backer. The project also receives technical support from the Brazilian Institute for the Environment and Renewable Natural Resources (IBAMA), the Botanical Gardens of Rio de Janeiro’s Research Institute (JBRJ), the Chico Mendes Institute for Biodiversity Conservation (ICMBio), and the State Environmental Organs.

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STATES

5

BIOMES





▲
Pituna xinguensis. Photo: Leandro Melo de Sá

FOUR NEW TAPS

In 2021, four new TAPs were published: Southern Fields and Southeastern Mountains (Rio Grande do Sul); Xingu (Pará); Espírito Santo and Minas Gerais; and Northern Lands (Pará, Maranhão and Tocantins). This brings the total to eight 5-year TAPs already under implementation. The plans are national instruments that identify and prioritize conservation actions for species and their environments with a view towards meeting national and international biodiversity targets.

The Chapada Diamantina-Jiboia Mountains TAP launched the first of two scientific expeditions to map the territory and its endangered species, as

well as collect over 400 plant specimens. The focus of this TAP is to protect 27 endangered species of flora and fauna and benefit a further 399 in Bahia's Caatinga and Atlantic Forest. The expedition also worked to inform the local communities about the plan in order to drum up support on the ground.

In Rio Grande do Sul and Santa Catarina, the Southern Plains TAP will benefit 22 Atlantic Forest species, and expeditions were conducted in 2021 that resulted in the discovery of a new population of the endangered cactus *Parodia rechensis* in Caxias do Sul. Another TAP focused on the plains, as well as the Caatinga

and Cerrado of Minas Gerais, is the Espinhaça Mineiro. Covering 24 species of flora and fauna, this TAP will offer incentives for the commercialization and sustainable extraction of non-endangered ornamental plants as a way of relieving some of the pressure on species threatened with extinction. The Espinhaça Range, with formations dating back 2.5 billion years, is rich in biodiversity and draws large numbers of tourists to such attractions as the Cipó and Caraça mountains.

The Espírito Santo-Minas Gerais TAP is 99% Atlantic Forest, with the remaining 1% transitioning into savanna. With a diversity of environments spread across

A RARE PLANT IS REDISCOVERED AFTER 38 YEARS

After 38 years without being seen in nature, the rare species *Pleroma hirsutissimum*, which can only flower in Cabo Fio and Arraial do Cabo, both in Rio de Janeiro state, was rediscovered at the Costa do Sol State Park in Cabo Frio, a PA run by the State Institute for the Environment (INEA). The find was the result of a series of expeditions carried out toward the end of 2020, and the final confirmation came early in 2021.

The species, a member of the glory bush family, was found by the team working on the National Action Plan

for the Conservation of Endangered Endemic Flora in Rio de Janeiro, coordinated by the State's Department of the Environment and Sustainability (SEAS), in partnership with INEA, and the Research Institute of the Botanical Gardens of Rio de Janeiro—through the National Flora Conservation Network (CNCFlora).

Over the course of a year, the Endemic Flora of Rio de Janeiro NAP ran studies on how to produce saplings of *Pleroma hirsutissimum*, a Critically Endangered (CR) plant that is endemic to the

sandbanks at the Costa do Sol State Park. It was last registered in the wild in 1982.

In addition, the Endemic Flora NAP conducted activities in the Vale do Paraíba between February and July to locate CR-category species not covered by conservation structures, and other endangered endemic species in Rio de Janeiro. The field trips, which were carried out in the Santos Lima Central Forest Gardens (HCFSL), Morro da Torre, Pedra Dubois and the Santo Antônio do Imbé district, collected specimens of 41 species for cultivation and 55 species for the herbarium.



▲
Pleroma hirsutissimum. Photo: Inara Batista



8
TERRITORIAL ACTION PLANS FOR THE CONSERVATION OF ENDANGERED SPECIES

290
ANIMAL AND PLANT SPECIES OFFICIALLY LISTED AS CRITICALLY ENDANGERED

1
RARE SPECIES REGISTER

◀ *Aechmea caesia*. Photo: Inara Batista

river basins in the two states, as well as native forest, savannic, and rocky landscapes and areas of transition, the territory is home to 216 target species of flora and fauna, including amphibians, birds, invertebrates, fish and reptiles.

In the Pampas, the Southern Fields and Southeastern Mountains TAP in Rio Grande do Sul looks to improve the conservation of 30 Critically Endangered species of flora and fauna across the state. The plan includes actions to promote best practices in the management and control of invasive species and to strengthen monitoring and research. In 2021, the TAP launched an interactive e-zine that tells the story of Vera, a

local girl who is deeply proud of the natural riches of the southern Pampas. The action has helped galvanize local engagement.

The Xingu TAP endeavors to protect eight endangered species in the Amazon of Pará, where increasing habitat loss due to farming and livestock expansion, hydroelectric dam-building and mining operations are a constant threat. The TAP aims to defend some well-known plant species, such as jatobá (*Hymenaea sp*) and the evergreen *Dicypellium caryophyllaceum*, believed extinct until 2002.

The Northern Lands TAP, for its part, is focused on the Amazon and a region transitioning into Cerrado that covers parts of

Maranhão, Pará and Tocantins. In 2021, the TAP defined the actions it plans to carry out in the areas of research, capacity-building, conservation and environmental legislation. The TAP has elected three species of flora and nine of fauna as its key targets, including the Belem curassow (*Crax fasciolata pinima*), a bird rediscovered in 2017 after 40 years without sign of continued existence, and a species of cichlid (*Crenicichla cyclostoma*) that inhabits the bottom of tropical streams on the Lower Tocantins River. This benthopelagic fish is highly sensitive to the devastation of the region's riparian forest.

Also in 2021, the Cerrado Tocantins TAP, launched in 2020,

made solid headway. The plan aims to conserve nine species of flora and fauna with indirect benefit for another 65, such as the harpy eagle, maned wolf, and jaguar. Additionally, specimens of the target species were collected for laboratory monitoring and propagation. An example was the first laboratory cultivation of *Bromelia braunni*, a rare species in the Cerrado, with only five specimens ever found in southern Tocantins and northern Goiás.

In addition to the TAPs, Pro-Species approved ICMBio support for the implementation of a pilot plan that will devise actions to combat invasive species, such as the lionfish, a predator originally from the

Indo-Pacific Ocean that is exotic to the Atlantic. A common import by the aquarium trade, due to its striking appearance, this venomous fish has no natural predators in the region and causes severe damage to the biodiversity wherever it invades—the Caribbean is a prime example. The first signs of lionfish presence in Brazil came toward the end of 2021, at the Fernando de Noronha archipelago. Over the course of that year, Pro-Species received support from ICMBio Noronha to roll out a pilot lionfish early-detection and rapid-response project in the island's waters. This contribution includes capacity-building and awareness campaigns among the islanders, and, with backing from the

United Nations Development Program (UNDP) and Ministry of the Environment, control and monitoring of the species in the region and communication with other PAs.

Still on the same theme, Pro-Species lent its support to preliminary consultancy with specialists on an updated version of the list of invasive exotic species in Brazil, and on the compiling of a second list of exotic species that are not yet established here, but are early detection/rapid response priorities. A survey was also conducted to gather information for a National Invasive Species Alert, Early-Detection and Rapid-Response Program.



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Cover

Dragonfly, Amanã Sustainable Development Reserve, Amazonas. Photo: Victor Moriyama/FUNBIO

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PHOTO 1: São João da Ponta Extractive Reserve, Pará. Photo: Victor Moriyama/FUNBIO
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Litter found along the Brazilian coast. Photo: GerminAção

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Amanã Sustainable Development Reserve, Amazonas. Photo: Victor Moriyama/FUNBIO

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Pseudolaelia cipoensis. Photo: Filipe Soares de Souza



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