



Fundação Florestal



São Paulo State Fundação Florestal (FF), an indirect administration institution linked to the Secretariat of Environment, Infrastructure and Logistics (Semil), is responsible for the administrative, territorial and technical management of 151 protected areas that together total almost 4.7 million hectares.

Management guidelines In the last 12 months, the Forest Foundation has consolidated its management guidelines. The processes, routines, infrastructure, projects, public policies, and concrete results presented in this report reflect these guidelines, which have been intensified year after year:

- Conservation Units as environmental, social, cultural, and economic assets for regional development and social inclusion;
- Financial sustainability;
- Innovation and transparency;
- Training and appreciation of teams;
- Public-private, public-community, and institutional partnerships; and
- Streamlined and focused, integrated, and synergistic action.

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151 AREAS UNDER FUNDAÇÃO FLORESTAL ADM (4.696.372,43 HA)		
119 PROTECTED AREAS 4.662.207,17 hectares		32 PRODUCTION AREAS 34.165,26 hectares
AREAS OF STRICT PROTECTION	AREAS OF SUSTAINABLE USE	PRODUCTION AREAS
66 AREAS 951.224,45 hectares	53 AREAS 3.710.982,72 hectares	33 AREAS 34.241,39 hectares
34 State Parks* 814.769,31 hectares	33 Environmental Protection Areas 3.665.999,21 hectares	18 Experimental Stations 23.506,50 hectares
25 Ecological Stations 116.593,72 hectares	7 Sustainable Development Reserve 18.200,89 hectares	11 Forests 10.627,15 hectares
3 Natural Monuments 16.814,22 hectares	6 State Forests 7.380,66 hectares	2 Forest Gardens 19,72 hectares
2 Biological Reservations 842,00 hectares	5 Areas of Relevant Ecological Interest 16.611,08 hectares	1 Forest Nurseries 11,90 hectares
2 Wildlife Refuges 2.205,20 hectares	2 Extractive Reserves 2.790,88 hectares	

Sustainable Development Goals

The Sustainable Development Goals address global challenges, including poverty, inequality, climate change, environmental degradation, peace, and justice, that must be faced to build a better planet for all.



Fundação Florestal, as the institution responsible for managing the protected areas of the state of São Paulo, develops projects and programs that seek to meet one or more of the above Sustainable Development Goals. Throughout this document, we use icons to identify which objective(s) each program can be included in.

São Paulo Sem Fogo



Firebreak Operation - State System for Prevention and Control of Forest Fires - aims to reduce the number of fires in the state and stimulate the development of alternatives to the use of fire for agricultural, pastoral, and forestry management. This system includes the State Coordination of Protection Civil Defense (CepDec), the Fire Department, the Environmental Military Police, the Environmental Company of the State of São Paulo (Cetesb), and the Forest Foundation, coordinated by the Coordination of Inspection and Biodiversity (CFB), of the Secretariat of Infrastructure and Environment (Sima).

The Conservation Units received an injection of R\$ 8 million (R\$ 2 million from own resources and R\$ 6 million from the Environmental Compensation Chamber), which were allocated to the purchase of personal protective equipment, as well as the maintenance of firebreaks, trails, and roads used to access the parks and respond to incidents. In 2022, the state of São Paulo recorded a 67% decrease in the number of forest fire incidents.

Future investments

The 1.5°C reduction target represents the way to decrease intensity of forest fires in Sao Paulo. During 2023 two heat waves cause extreme loss of soil water, which directly effects forest fires intensity and impacts on biodiversity. Continuous training and financing is needed to face major impacts on biodiversity and to avoid GHG emission from forest fires in Sao Paulo, aimed in IoT heat sensors for automatized alerts, Lidar scanning and all remote sensing tools, and new Forest Fire Fighting Trucks.

Ecosystem Restoration

Between 2019 and 2022, 2,276 hectares were made available in the area bank of the Nascentes Program, and 52 restoration projects were approved, totaling an area of 2,354 hectares.

The strategic role of FF in structuring businesses in the forest restoration supply chain:

- Joint and coordinated action with the Secretariat of Environment, Infrastructure and Logistics, within the Secretariat of Agriculture and Supply to ensure the maximum sustainable use of rural properties, enhancing the effects of ecosystem services for production and water security.
- Seed bank: provision and enrichment of new areas in Conservation and Production Units for seed collection and genetic database research.
- Permission Contracts with private sector for carbon credits projects, both green and blue, through forest restoration and conservation;
- Team training and development of basic restoration projects.
- Blue Carbon inventory and certification, with incomings directly in benefits for local communities.
- Payment for environmental services for the early fulfillment of measures related to the environmental land regularization of rural producers in order to enhance production through ecosystem services.

The restoration of degraded ecosystems is a priority, becoming an increasingly prevalent topic in global guidelines. The subject is aligned with the United Nations Sustainable Development Goals (SDGs), bearing relevance to climate change, poverty eradication, food security, and the conservation of water and biodiversity. Recently, in the face of the environmental crisis, the UN General Assembly declared the period from 2021 to 2030 as the Decade of Ecosystem Restoration with the goal of preventing, halting, and reversing ecosystem degradation across all continents and oceans. In addition to being a means of creating jobs, ensuring food security, addressing climate change, conserving biodiversity, and providing water.

Future investments

Forest recovery and ecosystem restoration are seamlessly integrated with land use planning and green infrastructure as primary measures to combat the impacts of climate change in Sao Paulo. The necessity for expanding forest cover encompasses ecosystem services that directly counter the effects of rising temperatures. Scaling up restoration involves collaborative efforts between the public and private sectors, providing land and forest owners with opportunities to restore while simultaneously enhancing rural production.

Ecosystem Restoration

The recently launched Integrated Mangrove Management Program for Protected Areas in the state of São Paulo aligns with the United Nations Sustainable Development Goals 13 (Action against climate change) and 14 (Life below water). The program aims to operate in 15 marine and coastal Protected Areas (PA) within the state.

Participatory Development and Implementation Commencement

Mangroves are estuarine ecosystems subject to periodic flooding caused by tidal movements. Recognized for the breadth and importance of their ecosystem services, such as coastal protection, marine life nursery, and significant carbon sequestration and storage capacity, mangroves, along with marine marshes and seagrasses, constitute Blue Carbon environments. Due to their notable significance, mangroves are considered crucial allies in addressing the climate crisis. Furthermore, the conservation, management, and restoration of these ecosystems represent Nature-Based Solutions initiatives for adaptation and mitigation to the global climate crisis. These initiatives not only contribute to meeting Nationally Determined Contributions but also yield social and environmental benefits for local communities.

Diagnosis... Recovery... Monitoring... Environmental Education and Public Use... Sustainability and Climate Change... Continued Coordination

Given this context, the program proposes, through integrated action among science, management, and community involvement, to understand the current conservation status of mangroves within São Paulo's state Protected Areas. This includes assessing their relevance to the local population in order to develop location-specific action plans for local socio-environmental development.

Based on preliminary results, additional needs may arise, such as the potential establishment of new protected areas in response to specific vulnerabilities. Simultaneously, the program is developing monitoring protocols and potential environmental recovery measures to be implemented in the PAs. The program also aims to optimize commercial and subsistence activities in this ecosystem, as well as environmental education and public use activities, with a focus on promoting sustainable development.

Stages and Progress

Diagnosis: This stage aims to assess the current situation of mangroves in Protected Areas, identifying threats, vulnerabilities, and potentialities. Through evaluating management, mapping the perception of society members interacting with this ecosystem, assessing the environmental quality of mangroves, remote sensing analysis of the areas, and measuring the carbon stock of state PAs' mangroves, this stage allows a comprehensive understanding of mangrove conservation status, uses, and potential pressure vectors, forming the basis for future actions. The progress in

this stage will be described in this document. The human perception assessment of the ecosystem, both from the management side (through questionnaires applied to managers and monitors) and from the civil society interacting with PA mangroves (mostly Traditional Peoples and Communities, TPC), through in-person interviews, is in execution. The questionnaire assessment of management has been fully applied, and interviews with society members have taken place in units of the north and south coasts. The report summarizing the questionnaire responses from unit managers is scheduled for publication in December of this year on the program's website, with some relevant results presented in the graphs on the following page.

For the carbon stock measurement phase of São Paulo's PA mangroves, a terms of reference was drafted for the purchase of necessary materials, and the internal training material for the technical team conducting field data collection has been completed. For the remote sensing phase, the Foundation established a technical cooperation agreement with researchers with expertise in this type of mangrove analysis. Regarding the technical assessment, the program's responsible team at the Forest Foundation has conducted field visits.

Monitoring: This stage involves establishing monitoring protocols, training biodiversity monitors at the Forest Foundation, and implementing monitoring for continuous ecosystem health tracking. This stage is part of the MonitoraBioSP Program (Normative Ordinance 369/2022), in the Mangrove Monitoring Subprogram. For defining target species and applicable environmental indicators, in addition to extensive bibliographic research, the Forest Foundation collaborated with the Chico

Mendes Institute for Biodiversity (ICMBio) to align state-level monitoring with that conducted federally. Subsequently, the protocol was adapted to the reality and needs of state CUs, with the following targets defined for the Forest Foundation's minimum protocol: Mangrove Crab, Vegetation, Oysters, Avifauna. The protocol is under review and, upon completion, will be attached to the program's website on the Forest Foundation portal.

The strategic stages of **Recovery, Environmental Education and Public Use, Sustainability and Climate Change, and Continued Coordination** are currently in the process of review and planning, with the intention of implementation in the coming year. These stages aim to promote the sustainable use of mangroves, considering human activities allowed in Conservation Units and the need for preservation of these ecosystems. This includes developing recovery protocols, implementing these protocols in areas with demand, promoting environmental education, and encouraging responsible use of these environments. Additionally, the strategy involves integrating specific actions to address challenges posed by climate change in mangroves, including adaptation and mitigation measures for both the mangroves themselves and local communities. The program also seeks to consolidate a São Paulo network for integrated mangrove management, involving representatives from academia, public managers, and civil society members. The conclusion and effective implementation of this program, adapted to the needs and peculiarities of state Conservation Units, will represent a significant example of mangrove environmental conservation. This effort demonstrates a commitment to preserving this ecosystem and maintaining its services.





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