Eletrobras

THEMATIC BOOKLET | 2023

Biodiversity and ecosystem services



Eletrobras

Contents

1. Foreword

About this booklet 04

About Eletrobras 05

Geographic distribution 06

Contribution to the 2030 Agenda 07

2. Biodiversity management

Guidelines for biodiversity management 09

Biodiversity management structure 10

Impact management 15

3. Conservation and restoration programs and projects

Protected and restored areas 19

Endangered species 20

Contents

Foreword

Biodiversity management

Conservation and restoration programs and projects

CHAPTER 1

Foreword



Arara Canindé

About this booklet

Welcome to the Biodiversity and Ecosystem Services Thematic Booklet. This document complements the Company's **2023 Annual Report,** providing more in-depth information on the subject.

The Biodiversity and Ecosystem Services theme is material for Eletrobras and our management approach and main indicators are covered in the Annual Report, following the Global Reporting Initiative (GRI) guidelines.

Through this document, we provide a more comprehensive and in-depth report on the management, strategy, initiatives and actions related to the topic, demonstrating how we seek to boost biodiversity conservation and recovery actions, with a view to having a positive impact on the regions where our operations are located.

The report includes information on our four operating subsidiaries (Eletrobras CGT Eletrosul, Furnas, Chesf and Eletronorte).

If you have any questions or comments about the content presented, please contact our sustainability team: **sustentabilidade@eletrobras.com**

Enjoy your reading!

Delivering value

Over the course of 2024, we will report a number of reports regarding our sustainability strategy and performance, with content that complements and deepens the Annual Report:

- Hotsite and Executive Summary.
- Indicators Booklet, reporting the GRI indicators of Eletrobras and SPEs.
- Thematic Booklets, which provide in-depth reports on our management and initiatives in specific areas such as Community Relations and Biodiversity.
- SASB, TCFD and Sustainable Finance reports, in compliance with other guidelines.
- SDG Supplement.

These documents can be accessed on the Eletrobras Portal's Sustainability page. We have also made thee Energia a Limpo, which addresses and provides answers to the most sensitive topics in our activities.

Contents

Foreword

Biodiversity management

Conservation and restoration programs and projects

Contents

Foreword

Biodiversity management

Conservation and restoration programs and projects

About Eletrobras

We are Eletrobras (Centrais Elétricas Brasileiras S/A), leader in electricity generation and transmission in Brazil.

We operate throughout the national territory, based on the generation and transmission operations of Eletrobras CGT Eletrosul, Chesf, Eletronorte and Furnas. In addition to these, we control a holding company, Eletrobras Eletropar, which operates in the financial sector.

Our generation and transmission activities are carried out in terrestrial and aquatic ecosystems located in five Brazilian biomes: Atlantic Rainforest, Pampa, Caatinga, Cerrado and Amazon.

For more information on the structure and profile of Eletrobras, see our Annual Report.

292.6 hectares

of protected and forested areas

87 endangered

species in conservation projects

2.1 million hectares

with protection and restoration projects carried out by the company or its partners

Low emission

of greenhouse gases, helping to mitigate climate change effects

R$ 4.6 million

voluntarily invested in biodiversity conservation projects

Geographic distribution

Generation

100 plants in operation, of which:
- 47 hydroelectric;
- 43 wind;
- 9 thermoelectric;
- 1 solar.

44,654.5 MW of installed capacity, of which:
- 67% corporate ventures and shared ownership*;
- 33% in SPEs.

146,946.6 GWh generated, of which:
- 95% hydro;
- 1.5% wind;
- <1% solar;
- 3.5% thermoelectric.

44,654.5 MW
of installed capacity

22%
of Brazil's total 199,325 MW

Transmission

73,788 km of lines at all voltage levels, of which:
- 66,539 km of corporate lines;
- 7,249 km of participation in SPEs.

37% of the total transmission lines in Brazil**

Distribution of corporate assets

Presence in five Brazilian biomes



** Serra da Mesa HPP, Manso HPP and Governandor Jayme Canet Junior HPP (formerly Mauá HPP).*
*** Compared to data from the National Interconnected System (SIN) for November 2023.*

Contribution to the 2030 Agenda

Contents

Foreword

Biodiversity management

Conservation and restoration programs and projects

The Sustainable Development Goals (SDGs) are 17 objectives that make up the 2030 Agenda, defined by the United Nations (UN) with the purpose of engaging organizations around the world in overcoming the main challenges of development and sustainability.

Covering a wide range of topics, such as eradicating poverty, fighting climate change and preserving natural resources, the SDGs connect business strategy with the global agenda.

In 2020, we defined Eletrobras' nine priority SDGs, which are those in which we have the greatest potential to contribute to achieving the goals proposed by the UN. Of this list, SDG 15 - Life on Land is directly related to biodiversity.



Contents

Foreword

Biodiversity management

Conservation and restoration programs and projects

CHAPTER 2

Biodiversity management



Arara Canindé

Contents

Foreword

Biodiversity management

Conservation and restoration programs and projects

Guidelines for biodiversity management

By operating in ecologically relevant areas, we are aware of our responsibility to conserve biodiversity and ecosystem services. For this reason, we strive to enhance biodiversity conservation and recovery actions, with a focus on producing a positive impact in the regions where we operate, whether during the planning, construction or operation of our assets.

Here are the main themes and guidelines related to biodiversity addressed in Eletrobras companies' policies.

Code of Conduct

Reducing environmental impacts

The company complies with the principles of prevention and precaution, aiming to avoid and minimize the socio-environmental impacts of its activities on the environment and communities.

In line with its activities, it carries out actions aimed at conserving ecosystems and protecting biodiversity and historical and natural heritage.

Environmental Policy

Minimizing impacts

Minimize impacts on biodiversity and ecosystem services in the planning, implementation and operation of projects.

Conservation and restoration

Promote actions to conserve and restore biodiversity and ecosystem services in the regions where the companies operate.

Aligned incentives

Align incentive mechanisms for the conservation and restoration of biodiversity and ecosystem services with socio-environmental business commitments, generating new business opportunities.

Environmental indicators

Use indicators related to biodiversity and ecosystem services in the planning and environmental management of projects.

Cooperation and research

Encourage cooperation among Eletrobras companies to prepare studies, research projects, technological development and innovation that contribute to the conservation of biodiversity and ecosystem services.

Knowledge dissemination

Disseminate knowledge related to biodiversity and ecosystem services in its activities.

Raising awareness among stakeholders

Seek to raise awareness among stakeholders about their responsibilities towards biodiversity and ecosystem services.

Contracting criteria

Whenever possible, adopt biodiversity-related criteria in the supplier procurement and contract control processes.

Biodiversity management structure

Managing and minimizing impacts on biodiversity are priority issues in our sustainability strategy, and we have dedicated corporate structures for this purpose.

To strengthen our environmental management, in 2023 we created the Climate Strategy and Biodiversity Department, linked to the Sustainability Department.

The area's creation underlines our position on the relevance and importance of the topic and demonstrates our understanding that biodiversity and climate change must be dealt with together.

For more information, visit the Biodiversity page here.

We also participate and co-lead the Biodiversity Thematic Chamber of the Brazilian Business Council for Sustainable Development (CEBDS), contributing to business discussions, addressing business opportunities, disseminating best practices and engaging in biodiversity conservation and recovery actions.

Working group

We have a Biodiversity Working Group, responsible for facilitating debates, carrying out studies and proposing strategies to improve our environmental management.

The group was responsible for drafting and updating the biodiversity guidelines of the Environmental Policy, developing specific indicators and targets and carrying out studies on the subject, as well as actively participating in discussions in external forums on biodiversity.

Contents
Foreword
Biodiversity management
Conservation and restoration programs and projects

Contents

Foreword

Biodiversity management

Conservation and restoration programs and projects

Evolution of biodiversity management at Eletrobras

1988
We began coordinating the Energy Sector Environment Committee (Comase).

2003
Comase becomes the Environmental Committee of Eletrobras Companies.

2006
We created the Working Group to deal with issues related to Aquatic Resources and Biodiversity.

2012
We have included specific biodiversity guidelines in the Eletrobras Companies' Environmental Policy.

2012
We included indicators for biodiversity management in the IGS System.

2019
We joined the CEBDS Brazilian Business Commitment to Biodiversity.

2020
15 LIFE ON LAND
We prioritized the Sustainable Development Goal - Life on Land.

2020
We joined Business for Nature's Call to Action, a call for collective action to overturn the loss of nature by 2030.

2021
We launched the first Eletrobras Public Bid for Socio-Environmental Projects, which selected 10 projects that contribute to the generation of value for communities and the preservation and recovery of biodiversity.

2021
We have set goals to expand our biodiversity conservation and restoration actions.

2022
We joined the CEBDS Action for Nature Platform, in partnership with the World Business Council for Sustainable Development (WBCSD) and the Taskforce on Nature-related Financial Disclosure (TFND), in order to manage our dependencies and impacts on biodiversity through new structures, scientific targets and international legislation.

2023
We became Ambassadors of the Amazon Impact Movement.

Brazilian Business Commitment to Biodiversity

Since 2019, we have been signatories to the Brazilian Business Commitment to Biodiversity, launched by the Brazilian Business Council for Sustainable Development (CEBDS).

This commitment emphasizes the importance of biodiversity and ecosystem services for companies, highlighting the critical role they can play in the conservation and sustainable use of these resources through sustainable consumption and production patterns. We start from the premise of acting in harmony with national and global biodiversity strategic plans, contributing to their objectives and targets.

By signing the commitment, we adhere to the nine goals proposed by the organization. Find out more on the Commitment website.

Contents

Foreword

Biodiversity management

Conservation and restoration programs and projects



Amazon Impact Movement

We are ambassadors of the Amazon Impact Movement, a UN initiative aimed at guaranteeing the preservation of the forest.

The movement's goal is to accelerate the 2030 Agenda by mobilizing the Brazilian business sector in individual, sectoral and intersectoral actions to achieve two pillars: combating deforestation and keeping the forest standing.

The Amazon Impact is the ninth Movement of Ambition 2030, a strategy created to address priority SDGs linked to Brazil's most pressing issues.

The movement was launched in September 2023, at UN headquarters, during the Sustainable Development Goals (SDGs) in Brazil event, sponsored by Eletrobras.

By becoming ambassadors for the initiative, we will act to move the Brazilian business sector towards combating deforestation in the Amazon, as well as encouraging the bioeconomy and the sustainable development of native peoples.

For more information on the Movement, visit the link.

Contents

Foreword

Biodiversity management

Conservation and restoration programs and projects

Risks and opportunities

To leverage our business risk and opportunity management in relation to biodiversity, in 2022 we joined the CEBDS Action for Nature Platform. The initiative was created in partnership with the World Business Council for Sustainable Development (WBCSD) and the Taskforce on Nature-related Financial Disclosure (TNFD), aiming to help companies identify and manage their impacts and dependencies, speeding up business solutions that preserve nature.

As part of this commitment, as of 2023 we have been participating in a CEBDS pilot project to apply the Locate stage of the TNFD in the energy and infrastructure sector.

In 2024, we started assessing our material impacts, dependencies, risks and opportunities associated with nature, taking into account the TNFD guidelines and the LEAP approach.

The four stages of the LEAP approach

L **Locate** its interface with nature

E **Estimate** its dependencies and impacts

A **Assess** its risks and opportunities

P **Prepare** to respond to nature-related risks and opportunities and report to investors

The work is divided into the following stages:

- Identification of the most relevant priority sites in terms of how direct operations interface with nature-related issues. Considers, where applicable, the upstream and downstream value chain.
- Qualitative diagnosis of impacts on biodiversity at corporate level, focusing on direct operations defined as more material and adherent to the TNFD.
- Calculation of the Biodiversity Footprint at site level for the priority sites defined in the Locate stage and in the qualitative diagnosis of impacts.
- Qualitative diagnosis of dependencies on biodiversity and ecosystem services.
- Diagnosis of nature-related risks and opportunities.
- Drawing up a biodiversity action plan defining the short-, medium- and long-term corporate biodiversity strategy. The plan includes guidelines for consolidating biodiversity in the business and governance model, so as to steer the company on an ecological path, in line with best practices and optimizing the measures already in place.
- Stakeholder engagement plan and supplier evaluation plan.

The study is scheduled for completion in 2025.

Contents

Foreword

Biodiversity management

Conservation and restoration programs and projects

Biodiversity targets and indicators

We monitor the biodiversity indicators and variables of all Eletrobras companies through the Corporate Sustainability Management Indicators System (IGS System) - Environmental Dimension.

In 2021, we set five-year targets for biodiversity management, in line with our commitment to environmental sustainability.

The progress of the targets is monitored by the IGS system and periodically followed up by the leadership at the appropriate levels of the organizational structure.

INDICATOR	TARGET	2021	2022	2023
Total areas protected and/or forested by the company	Zero loss of forest areas that have been protected and/or forested by the company	**134,197 ha** of forested areas	**269,704 ha** of forested areas	**292,556 ha** of forested areas
Species included in the IUCN Red List and in national conservation lists included in projects carried out for the conservation of endangered species	Annual inclusion of at least one new endangered species in the conservation projects carried out by the companies	**34 endangered species** in Eletrobras companies' conservation projects	**85 endangered species** in Eletrobras companies' conservation projects	**87 endangered species** in Eletrobras companies' conservation projectss
Voluntary investment in projects that contribute to biodiversity management	Increase investment in projects that contribute to biodiversity by 1% per year, compared to the base year, in relation to total investment in research and environmental projects	**RS 1,673,712 voluntarily invested** in biodiversity conservation projects, 1.2% of total environmental investment	**R$ 1,321,919 voluntarily invested** in biodiversity conservation projects, 2.8% of total environmental investment	**R$ 4,571,964 voluntarily invested** in biodiversity conservation projects, 2.8% of total environmental investment
Carbon sequestration in biomass (tons)	Increase carbon sequestration in biomass in areas forested by the company by 5% per year compared to the previous year	Sequestration of **75,180 tCO_2e** in biomass	Sequestration of **94,530 tCO_2e** in biomass	Sequestration of **73,304 tCO_2e** in biomass

Impact management

Throughout our projects' planning stages, we carry out environmental impact studies to identify and assess how their construction and operation might impact local biodiversity.

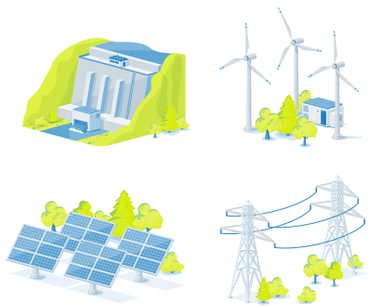
For each negative impact identified, we propose mitigation and compensation actions, which are submitted to the institutions in charge of licensing. During the operation of the projects, monitoring may indicate the need to revise the actions.

Contents

Foreword

Biodiversity management

Conservation and restoration programs and projects



Hydroelectric, wind and solar power plants and transmission systems

Direct impacts	Duration	Reversibility	Indirect impacts	Duration	Reversibility	Actions/programs to avoid, reduce and/or compensate for impacts
Loss of vegetation cover	Permanent in the plant's area of implantation	Irreversible in the plant's area of implantation	**Forest fragmentation**	Permanent	Irreversible	Recovery Program for Degraded Areas, maintenance of germplasm banks, reforestation in areas surrounding the plant
			Loss of terrestrial habitats	Permanent	Irreversible	Monitoring and recovery actions
			Loss of flora and fauna diversity	Permanent	Irreversible	Fauna and flora monitoring and management programs
			Reduction of terrestrial fauna populations	Temporary	Reversible	Reproduction and repopulation actions
Alteration of ecosystems/ habitats	Permanent	Irreversible	**Decrease in flora and fauna diversity**	Permanent	Irreversible	Support for the creation and/or maintenance of protected areas, fauna and flora monitoring programs, fauna and flora management actions, endangered species conservation program



Transmission lines and wind farms



Hydroelectric plants

Direct impacts	Duration	Reversibility	Indirect impacts	Duration	Reversibility	Actions/programs to avoid, reduce and/or compensate for impacts
Occurrence of bird and bat collisions	Permanent	Reversible	**Occurrence of bird and bat deaths**	Temporary	Reversible	Placement of plants outside the area of migratory routes, installation of signaling equipment to avoid collision
Change in river system from lotic to lentic	Permanent in the reservoir area	Irreversible in the reservoir area	**Change in water quality**	Temporary	Reversible	Water quality monitoring program
			Loss of aquatic habitats	Permanent	Irreversible	Monitoring and recovery actions
			Macrophyte proliferation	Temporary	Reversible	Water quality monitoring, macrophyte monitoring, macrophyte removal
			Loss and/or replacement of aquatic species	Permanent	Irreversible	Aquatic fauna monitoring and management programs
			Reduction of aquatic fauna populations	Temporary	Reversible	Breeding and repopulation actions
Interference with ichthyofauna migratory routes	Permanent	Irreversible	**Isolation of fish populations**	Temporary if management measures are adopted	Reversible if management measures are adopted	Ichthyofauna monitoring, fish transposition mechanism, ichthyofauna management actions
			Loss and/or alteration of ichthyofauna species	Permanent	Irreversible	Ichthyofauna monitoring, fish transposition mechanism, ichthyofauna management actions

Ichthyofauna Monitoring Programs

The implementation of hydroelectric plants causes changes in aquatic environments, which in turn can have an impact on fish communities. By understanding the structural and functional patterns of fish communities, we can assess environmental changes and implement management measures that most contribute to conservation.

We have implemented a number of monitoring programs and conservation actions for the ichthyofauna in the reservoirs of our hydroelectric plants. These initiatives include comprehensive studies before and after the construction of the hydroelectric plants, aimed at assessing the impact on the biology and ecology of native species.

At the São Domingos HPP (MS), the ichthyofauna program is made up of four sub-programs: Transposition of Migratory Fish, Ichthyofauna Monitoring, Ichthyoplankton Monitoring and Genetic Monitoring. Since the start of the Migratory Fish Transposition sub-program, approximately 22,000 animals have been transposed.

At the Passo São João HPP (RS), we have developed the Community Monitoring, Ichthyoplankton Monitoring and Manual Transposition Programs. Approximately 23,000 animals have already been transposed.

For the reservoirs of the São Francisco River basin, we carry out the Ichthyofauna and Fisheries Biology Monitoring Program, which aims to monitor and evaluate the ichthyofauna, its reproductive and feeding biology, as well as the dynamics of populations, over time and geographical space.

In the northern region, we monitored an area exceeding 3,717 km² of water bodies, sampling the different environments in the reservoirs and river environments downstream of the dams at the Tucuruí (PA), Samuel (RO), Coaracy Nunes (AP) and Curuá-Una (PA) HPPs. More than 17,819 specimens were analyzed at Samuel HPP and 21,518 specimens at Tucuruí HPP.



Contents

Foreword

Biodiversity management

Conservation and restoration programs and projects

Contents

Foreword

Biodiversity management

Conservation and restoration programs and projects

CHAPTER 3

Conservation and restoration programs and projects



Protected and restored areas

Contents

Foreword

Biodiversity management

Conservation and restoration programs and projects

Support for implementing and maintaining nature conservation projects has proved to be an effective way of contributing to the protection of biodiversity in the country.

All the operating units of Eletrobras companies that interact with the environment hold biodiversity management plans for the regions in which they operate. Often the location of projects close to protected areas favors support for these sites.

We also support Conservation Units of various kinds, such as Permanent Preservation Areas (APP), State Parks, Biological Reserves and Ecological Stations, located in the main Brazilian biomes (Cerrado, Atlantic Rainforest, Amazon, Caatinga and Pampa).

Brazilian legislation provides for support for these Conservation Units as a way of compensating for the environmental impacts resulting from the deployment of projects. We also support protected areas on a voluntary basis, in line with our sustainability strategy.



Contents

Foreword

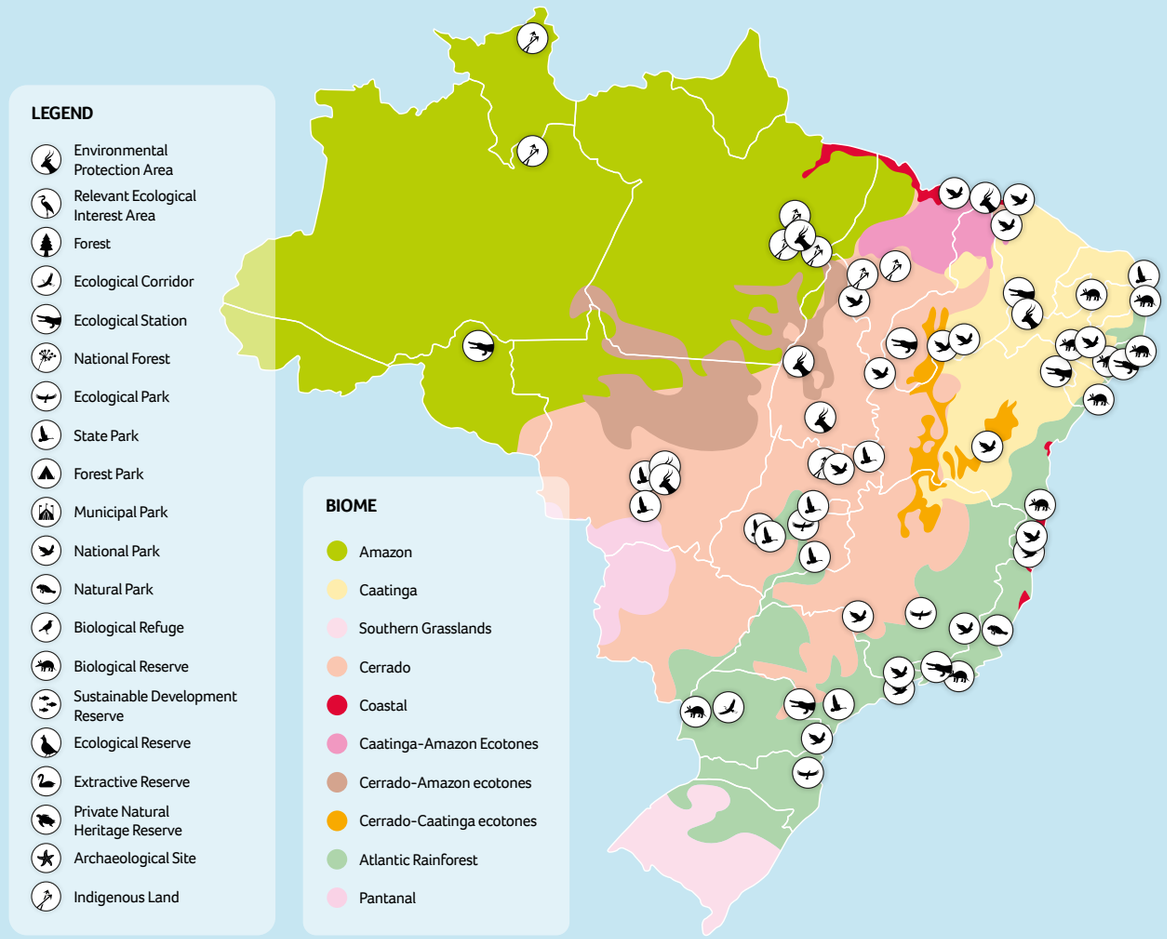
Biodiversity management

Conservation and restoration programs and projects

In 2023, we had habitat protection and restoration projects in 16 areas across the country, totaling 2.1 million hectares under preservation by the company and its partners.

Protected areas owned by Eletrobras companies were created with the aim of contributing significantly to the conservation of regional biodiversity. They also promote scientific research and foster environmental education, offering a valuable space for the development of studies and public awareness about the importance of environmental preservation.

Discover the areas protected and restored by Eletrobras on page 161 of the Annual Report.



Contents

Foreword

Biodiversity management

Conservation and restoration programs and projects



Eletrobras Chesf

Case

Support for agro-ecological centers in Chapada Diamantina

The project “Sowing Resilience in the Chapada Diamantina Territory: Implementation of Agroecological Nuclei for Environmental Restoration” aims to implement agroecological production units in the region, using regenerative organic farming practices.

These practices aim to restore soil fertility, reduce production costs, increase soil water retention, restore biological balance, empower farmers and generate income.

In 2023, the project promoted an exchange event with family farmers and quilombolas, with the aim of sharing technological innovations for the reuse of grey water from household chores, as well as carrying out technical visits.

The experiences shared proved valuable for application on small farms, using techniques adapted to the region. This has resulted in the improvement of family farming and the encouragement of greater autonomy for the communities involved.

Selected in the 2021 Eletrobras Companies Socio-Environmental Projects Call for Proposals, the project is funded by Eletrobras Chesf.

Contents

Foreword

Biodiversity management

Conservation and restoration programs and projects



Eletrobras
Eletronorte

Case

Amazon Forest Germplasm Program

The Forest Germplasm Program, developed at the Tucurí HPP (PA) in the Amazon rainforest, is dedicated to the management and conservation of the region's native forest species. Its aim is to conserve forest seed collection areas and provide seeds and seedlings for reforestation in the region, as well as quantifying the production and distribution of these materials.

The project actively promotes the restoration of degraded areas, increasing the number of trees planted and contributing to the mitigation of carbon emissions through carbon sequestration.

In 2023, 1,116,457 seeds and 61,329 seedlings were donated, equivalent to reforesting an area of approximately 186 hectares in the Amazon biome.

The Germoplasm Program has also been instrumental in improving nutritional quality and generating income for the communities near the Tucuruí HPP. It provides both theoretical and practical subsidies for training, encouraging the installation of community gardens and the production of seedlings for projects to recover degraded areas and reforestation.

Contents

Foreword

Biodiversity management

Conservation and restoration programs and projects

Eletrobras

Case

Green Ant

The project was supported by the Eletrobras Companies' Socio-Environmental Projects Public Notice, in partnership with the Permaculture Lab Institute.

This is a community-based environmental education program that took place in Morro da Formiga, in the northern region of the city of Rio de Janeiro (RJ), throughout 2022 and 2023.

The initiative focused on reducing the impact on the flora and fauna of the Tijuca National Park through socio-environmental actions, joining environmental conservation with a positive social impact on the community:

- At least ten children participating continuously in the training space promoted by the project;
- Training workshops for young people and adults, in partnership with the Hortas Cariocas program, to develop low-cost sustainable technologies and practices, linking agroecology and permaculture knowledge;
- Over 2,000 seedlings were planted under the project.



Contents

Foreword

Biodiversity management

Conservation and restoration programs and projects

Eletrobras Chesf

Case

Voluntary Reforestation Program

Eletrobras Chesf's Voluntary Reforestation Program aims to complement the company's mandatory forest restoration programs by incorporating a voluntary margin into the projects developed.

The program expands the plantings and areas covered by mandatory projects, taking advantage of the physical and budgetary structure to restore the biomes where the company's operations are located.

In 2022, Eletrobras Chesf started a forest replacement and a voluntary planting project in a 2-hectare area of Atlantic Rainforest in the Dunas do Natal State Park (RN). As part of this project, in 2023 the company reforested an area of 0.9 hectares, planting 2,738 seedlings of species native to the region.

Eletrobras

Case

Alimergia Continuity

Supported by the Eletrobras Companies' Socio-Environmental Projects Call for Proposals, in partnership with Mixed Cooperative of Production, Industrialization and Commercialization of Biofuels of Brazil Ltda (Cooperbio), the project is taking place in the municipality of Seberi (RS), a region of the Atlantic Rainforest.

By bringing together the reforestation of degraded areas with native species and low-carbon agricultural, livestock and forestry practices, the project contributes to increasing biodiversity and carbon capture in the region.

Activities focused on the recovery of 20 hectares of degraded areas on family farmers' properties with areas of up to four fiscal modules, promoting income generation and quality of life.

During the two-year project, 900 people benefited directly and 1,200 indirectly. A total of 96 hours of activities were carried out and more than 5,000 seedlings of native species were planted.

Contents

Foreword

Biodiversity management

Conservation and restoration programs and projects



Eletrobras

Case

Fauna conservation at the Serra da Mesa Hydroelectric Power Plant

The Serra da Mesa Hydroelectric Power Plant Fauna Monitoring and Conservation Program, located in the Upper Tocantins Basin (GO), was designed to increase knowledge about wildlife in the region of influence of the HPP and provide data to support its recovery.

The initiative is part of the Reservoir Filling Resumption Program, aimed at mitigating the environmental impacts of filling the plant's reservoir.

Among the actions carried out are the rescue and relocation of animals affected by rising water levels, as well as monitoring to assess the hydroelectric dam's effects on local species.

The program operates under strict guidelines laid down by Ibama to ensure the protection of native species and maintain the region's biodiversity. Monitoring activities include regular field studies, the use of tracking technologies and collaboration with fauna specialists to ensure that all conservation measures are effective and comply with any environmental requirements.

Contents

Foreword

Biodiversity management

Conservation and restoration programs and projects

Eletrobras
Furnas

Case

“Springs” project

Since 2021, in partnership with Ingá Engenharia company, we have been developing the Nascentes Project, which aims to research and implement innovative methodologies for the recovery and protection of springs and degraded areas in the region of the water bodies that contribute to the reservoirs of the Furnas and Mascarenhas de Moraes hydroelectric plants (MG). One highlight is the use of Artificial Intelligence (AI) tools to process the data.

Since the start of the project, over 200 springs and approximately 160 hectares have been restored in 37 municipalities in the state of Minas Gerais, mainly using traditional native species and species of economic interest.

In 2023, training activities were carried out on the sustainable use of the species of economic interest used in the project. Over 500 people benefited from the activities, including students, teachers, members of civil society and representatives of public authorities.

As part of the project, the “Regenerascentes” mobile app was developed to help and guide rural producers and owners of degraded areas in recovering springs and the riverbanks.



Endangered species

All our projects that interact with the local biome have biodiversity management plans, designed to promote the recovery and conservation of endangered species. These plans include actions such as the restoration of degraded habitats, the creation of ecological corridors and continuous monitoring of native fauna and flora populations.

Apart from the mandatory initiatives, we have implemented voluntary protection programs in line with our sustainability strategy. These programs involve partnerships with NGOs, research institutions, local communities and environmental agencies such as ICMBio, with the aim of expanding the impact of conservation actions.

We also promote environmental education, training communities in sustainable practices and encouraging active participation in environmental protection.

Contents

Foreword

Biodiversity management

Conservation and restoration programs and projects

Contents
Foreword
Biodiversity management
Conservation and restoration programs and projects

Company	Endangered Species	IUCN Status	ICM BIO-MMA Status	Conservation Program	Program origin
Eletrobras Furnas	**Lobo Guará** - *Chrysocyon brachyurus*	Near Threatened	Near Threatened	Fauna Monitoring and Conservation Program - Lobo Guará	Serra da Mesa HPP
	Mutum de penacho - *Crax fasciolata*	Near Threatened	Endangered	Mutum de penacho and aracuã paulista Conservation Program	Marimbondo HPP
	Aracuã Paulista - *Ortalis remota*	-	Endangered		
	Gato do Mato - *Leopardus tigrinus*	Vulnerable	Vulnerable	Small Feline Conservation Program	Batalha HPP
	Gato Palheiro - *Leopardus colocolo*	Near Threatened	Near Threatened		
	Jaguatirica - *Leopardus pardalis*	Least Concern	-		
	Gato-mourisco - *Puma yagouaroundi*	Least Concern	Near Threatened		
	Dourado - *Salminus brasiliensis*	-	Near Threatened	Fish Restocking Program	Marimbondo and Porto Colômbia HPPs
	Pacu Caranha - *Piaractus mesopotamicus*	-	Endangered		
	Piracanjuba - *Brycon orbignyanus*	-	Vulnerable		
	Cuitelão - *Jacamaralcyon tridactyla*	Near Threatened	-	What really matters in the landscape? A study of habitat selection and management for the persistence of the endemic and endangered bird Jacamaralcyon tridactyla (Birds: Galbulidae)	Voluntary support within the scope of the Eletrobras Companies Socio-Environmental Public Notice
	Suçuarana - *Puma concolor*	Least Concern	-	Pumas in the backyard: Coexistence and engagement in biodiversity conservation in southeastern Goiás	
	Pato-mergulhão - *Mergus octosetaceus*	Critically Endangered	Critically Endangered	Preventing the extinction of the Pato-mergulhão (Mergus octosetaceus) in the Veadeiros-Pouso Alto-Kalunga Corridor, Chapada dos Veadeiros - Goiás (GO)	
	Anta – *Tapirus terrestris*	Vulnerable	Vulnerable	Antology	
	Macuco - *Tinamus solitarius*	-	Vulnerable (state list)	Bird Conservation Program	Itaberá - Tijuco Preto III
	Jaó-do-sul - *Crypturellus noctivagus*	Endangered	Vulnerable		
	Perdiz - *Rhynchotus rufescens*	-	Near Threatened (state list)		
	Uru - *Dontophorus capueira*	-	Near Threatened (state list)		
	Bacurau-tesoura - *Hydropsalis forcipata*	-	Near Threatened (state list)		
	Beija-flor-rajado - *Ramphodon naevius*	Near Threatened	Near Threatened (state list)		
	Trinta-réis-real - *Thalasseus maximus*	-	Endangered		

Least Concern Near Threatened Vulnerable Endangered Critically Endangered

Contents

Foreword

Biodiversity management

Conservation and restoration programs and projects

Company	Endangered Species	IUCN Status	ICM BIO-MMA Status	Conservation Program	Program origin
Eletrobras Furnas	**Gavião-pega-macaco** - *Spizaetus tyrannus*	-	⚠ (state list)	Bird Conservation Program	Itaberá - Tijuco Preto III
	Garça-real - *Pilherodius pileatus*	-	⚠ (state list)		
	Martim-pescador-miúdo - *Chloroceryle aenea*	-	⚠ (state list)		
	Araçari-poca - *Selenidera maculirostris*	-	⚠ (state list)		
	Papagaio-verdadeiro - *Amazona aestiva*	⚠	⚠		
	Sabiá-cica - *Triclaria malachitacea*	⚠	⚠		
	Choca-de-dorso- vermelho - *Drymophila ochropyga*	⚠	-		
	Papo-branco - *Biatas nigropectus*	-	⚠		
	Tapaculo-pintado - *Psilorhamphus guttatus*	⚠	-		
	Entufado - *Merulaxis ater*	⚠	-		
	Macuquinho - *Eleoscytalopus indigoticus*	⚠	-		
	Chibante - *Laniisoma elegans*	⚠	⚠		
	Corocoxó - *Carpornis cucullata*	⚠	-		
	Pavó - *Pyroderus scutatus*	-	⚠ (state list)		
	Araponga - *Procnias nudicollis*	⚠	⚠		
	Pixoxó - *Sporophila frontalis*	⚠	⚠		
	Cigarra-verdadeira - *Sporophila falcirostris*	⚠	⚠		
	Saíra-sapucaia - *Stilpnia peruviana*	⚠	⚠		
Eletrobras CHESF	**Coroa-de-frade** - *Melocactus azureus*	⚠	⚠	Research aimed at developing and applying a methodology for the reproduction on a large scale of the specie **coroa-de-frade** (***Melocactus azureus***) in line with ICMBio's National Plan for the Conservation of Cacti.	Xingó HPP
Eletrobras CGT Eletrosul	**Dourado** - *Salminus brasiliensis*	-	⚠ (state list)	***Salminus brasiliensis*** monitoring and transposition program	Passo São João HPP/ São Domingos HPP
	Piracanjuba - *Brycon orbignyanus*	-	⚠	***Brycon orbignyanus*** monitoring and transposition program	São Domingos HPP

⚠ *Least Concern* ⚠ *Near Threatened* ⚠ *Vulnerable* ⚠ *Endangered* ⚠ *Critically Endangered*

Contents

Foreword

Biodiversity management

Conservation and restoration programs and projects

Company	Endangered Species	IUCN Status	ICM BIO-MMA Status	Conservation Program	Program origin
Eletrobras Eletronorte	**Peixe-boi-da-Amazônia** - *Trichechus inunguis*	⚠	⚠	Peixe-boi-da-Amazônia Reintroduction Project / Peixe-boi-da-Amazônia Population Assessment Project	Balbina HPP/Curuá Uma HPP
	Papagaio-do-mangue - *Amazona amazonica*	-	⚠	Wild Animal Research and Rehabilitation Center – CEPRAS	Balbina HPP
	Loro-cachete-amarillo - *Amazona autumnalis*	⚠	-		
	Papagaio-moleiro - *Amazona farinosa*	⚠	-		
	Papa-cacau - *Amazona festiva*	⚠	-		
	Arara-canindé -*Ara ararauna*	⚠	-		
	Arara vermelha - *Ara chloropterus*	⚠	-		
	Arara-canga - *Ara macao*	⚠	-		
	Jabuti-piranga - *Chelonoidis carbonaria*	-	⚠		
	Jabuti-tinga - *Chelonoidis denticulata*	⚠	⚠		
	Capivara - *Hydrochoerus hydrochaeris*	⚠	-		
	Veado-mateiro - *Mazama americana*	-	Insufficient data		
	Caititu - *Pecari tajacu*	⚠	-		
	Tracajá-do-rio-negro - *Podocnemis erythrocephala*	⚠	-		
	Tartaruga-da-amazônia - *Podocnemis expansa*	-	⚠		
	Aiacá - *Podocnemis sextuberculata*	⚠	-		
	Tracajá - *Podocnemis unifilis*	⚠	-		
	Tucano-de-peito-branco - *Ramphastos tucanus*	⚠	-		
	Tartaruga de água doce sul-americana - *Rhinoclemmys punctularia*	-	⚠		
	Anta - *Tapirus terrestris*	⚠	⚠		
	Socó-boi - *Tigrisoma lineatum*	⚠	-		
	Tartaruga-tigre-d'água - *Trachemys dorbigni*	-	⚠		

⚠ *Least Concern* ⚠ *Near Threatened* ⚠ *Vulnerable* ⚠ *Endangered* ⚠ *Critically Endangered*

Contents

Foreword

Biodiversity management

Conservation and restoration programs and projects

Company	Endangered Species	IUCN Status	ICM BIO-MMA Status	Conservation Program	Program origin
Eletrobras Eletronorte	**Abiu vermelho** / Abiu-grande - *Pouteria macrocarpa*	⚠	-	Protected Areas Program	Tucuruí HPP
	Acapú - *Vouacapoua americana*	⚠	⚠		
	Amarelão / Garapeira / Grapia - *Apuleia leiocarpa*	⚠	⚠		
	Castanha do Pará - *Bertholletia excelsa*	⚠	⚠		
	Cedro Vermelho / Cedro-cheiroso - *Cedrela odorata*	⚠	⚠		
	Itaúba / Itaúba-verdadeiro - *Mezilaurus itauba*	⚠	⚠		
	Jatobaí / Jutaí - *Hymenaea parvifolia*	⚠	⚠		
	Mogno - *Swietenia macrophylla*	⚠	⚠		
	Pau brasil - *Caesalpinia echinata*	⚠	⚠		
	Ucuúba / Ucuúba-cheirosa - *Virola surinamensis*	⚠	⚠		

⚠ *Least Concern* ⚠ *Near Threatened* ⚠ *Vulnerable* ⚠ *Endangered* ⚠ *Critically Endangered*

Contents

Foreword

Biodiversity management

Conservation and restoration programs and projects

Eletrobras
Furnas

Case

Pumas in the Backyard Project

Selected by Eletrobras Furnas' 2021 Socio-Environmental Call for Proposals, the Pumas in the Backyard project aims to support the conservation of endangered species in southeastern Goiás, with a special focus on the puma.

Its purpose is to promote harmonious coexistence between people and animals in productive landscapes and protected areas in the region. Among the actions carried out are:

- **Monitoring and research:** Carrying out studies and monitoring puma populations to understand their habits, territories and interactions with the environment and human beings.
- **Environmental education:** Awareness campaigns and educational programs for local communities, to raise awareness of the importance of puma conservation and to promote practices that minimize conflicts.
- **Conflict mitigation:** Developing and implementing strategies to reduce conflicts between pumas and human activities, such as creating solutions to protect livestock and crops.
- **Partnerships and cooperation:** Building partnerships with research organizations, NGOs and government agencies to strengthen conservation actions and broaden the project's impact.
- **Capacity building and community involvement:** Offering training and workshops to educate local communities in sustainable practices and techniques for peaceful coexistence with wildlife.

Sharing knowledge - Fauna Guides

The Fauna Guides produced by Eletrobras Furnas aim to contribute to the dissemination of technical-scientific information derived from the studies carried out by the company around its projects. These books contain relevant information on the main biological and ecological features of the species recorded and are a valuable tool for making society aware of the importance of preserving biodiversity and natural resources, including the **recovery of springs and the banks of water bodies.**



For more information on the guides click here.

Contents

Foreword

Biodiversity management

Conservation and restoration programs and projects

Eletrobras
CGT Eletrosul

Case

Heart of Palm Project

The Heart of Palm Project is an urgent response to the gradual disappearance of the juçara palm in the Atlantic Rainforest. Considered a national symbol, this species is endangered due to the over-extraction of heart of palm and the reduction in the preserved area of this biome.

The juçara palm tree provides habitat and food for a variety of species, including birds, mammals, insects and plants, helping to maintain the forest's food chain. Furthermore, they help stabilize the soil and prevent erosion. Mentioned in Pero Vaz Caminha's first letter, the tree's fruit and heart of palm are used as a source of food and income by indigenous and traditional communities.

Led by researchers from the SATC Technology Center (CTSatc), the Heart of Palm Project plans to produce and plant 10,000 seedlings in areas where they have been found to be lacking in the municipalities of Morro Grande, Nova Veneza and Siderópolis (SC). The project also includes raising awareness in the surrounding communities.

Selected in the 2021 Eletrobras Companies Socio-Environmental Projects Call for Proposals, the project is financed by Eletrobras CGT Eletrosul.





Eletrobras Furnas

Case

ANTology Project

The ANTology Project, carried out by the Institute for Socio-Environmental Action in Cachoeiras de Macacu (RJ), aims to integrate conservation actions for the tapir (***Tapirus terrestris***), Brazil's largest terrestrial wild mammal, with professional training for young monitors and students from local public schools.

The project intends to increase and monitor the population of tapirs in the wild, as well as promoting their preservation through environmental education and social communication.

Since it began in 2017, ANTology has reintroduced 14 tapirs to the region of Cachoeiras de Macacu (RJ), including four that were born in the wild. Recently, the project reintroduced a couple of tapirs, Jequitibá (male) and Aurora (female), who were donated by the Ilha Solteira Fauna Conservation Center (SP). Jequitibá was born in a zoo, while Aurora was rescued from a fire in 2021.

ANTology is aligned with the National Action Plan for the Conservation of Ungulates.

Contents

Foreword

Biodiversity management

Conservation and restoration programs and projects

Eletrobras
Furnas

Case

Small Feline Conservation at the Batalha HPP

The Batalha HPP Small Feline Conservation Project, located on the São Marcos River, between the municipalities of Cristalina (GO) and Paracatu (MG), aims to carry out a comprehensive three-year study on four species of small felines threatened in the region: ***Leopardus pardalis*** (ocelot), ***L. braccatus*** (wildcat), ***L. tigrinus*** (bobcat) and ***Puma yagouaroundi*** (jaguarundi). The four species were identified in the Plant's surroundings.

The project uses strategically placed camera traps and radio transmitter collars to monitor the movements and behavior of these felines. This data is pivotal to updating knowledge about their geographical distribution, habitats used and interactions with the local environment, especially in the cerrado biome.

Based on the results obtained, the project intends to subsidize effective actions for the conservation of these small felines, contributing to the protection of regional biodiversity and the promotion of sustainable practices in the Batalha HPP region.

Eletrobras
Chesf

Case

Xingó Forest Nursery

The Xingó Forest Nursery is located in the São Francisco River Basin region, in the municipality of Piranhas (AL), and its purpose is to meet the demands of Eletrobras' environmental actions in the region. Founded in 1987, the nursery is committed to producing 100,000 seedlings of native caatinga species every year.

One of the highlights is the research geared towards the reproduction on a large scale of the species coroa-de-frade (***Melocactus azureus***), some of which are classified as endangered. In 2023, the project continued focusing on the care and maintenance of the coroa-de-frade seedlings, which are in the process of being completed, with 28 matrix units.

Contents

Foreword

Biodiversity management

Conservation and restoration programs and projects

Eletrobras
Furnas

Case

Bird Conservation in the Atlantic Forest

The Atlantic Rainforest Endemic and Threatened Species Conservation Program aims to identify the areas where bird species occur along the corridor of forest remnants in the region of the 750 kV Itaberá - Tijuco Preto III Transmission Line, as well as raising possible causes of threats and proposing measures to maintain and recover these populations.

The program complies with the National Action Plan for the Conservation of Birds of the Atlantic Rainforest guidelines, using an integrated approach that includes detailed mapping of the target species' areas of occurrence.

The initiative entails implementing strategies to mitigate the main threats identified, such as habitat loss, fragmentation of forest areas and other anthropic pressures.

As such, the program strives to ensure not only the survival of endemic and threatened bird species, but also the recovery of their populations over time, contributing to the preservation of the Atlantic Rainforest's unique biodiversity.

The Monitoring Project for the mutum-de-penacho (*Crax fasciolata*) and the aracuã-paulista (*Ortalis remota*) aims to contribute to the knowledge and conservation of these threatened species in the region of the Marimbondo HPP, located on the Grande River, between the towns of Icém (SP) and Fronteira (MG). The initiative is part of the National Action Plan for the Birds of the Atlantic Forest.

Field expeditions are carried out to confirm the presence of the species in the habitats identified, updating their known distribution area and providing crucial data to support future conservation actions.

For the aracuã-paulista, specific campaigns are carried out to recognize suitable habitats, which have previously been mapped by mathematical modeling.



Contents

Foreword

Biodiversity management

Conservation and restoration programs and projects

Eletrobras
Eletronorte

Case

Eletrobras Chelonian Release Project

The Eletrobras Chelonian Release Project is an initiative dedicated to the conservation and restoration of chelonian populations (turtles, tracajás, among others) in areas impacted by the company's projects. Its aim is to promote captive breeding, monitor the species and release the young into their natural habitat.

Actions include:

Captive breeding
Breeding centers for chelonians, with the aim of increasing the reproductive success rate and ensuring the genetic diversity of populations.

Species monitoring
Use of monitoring techniques to track the health, behavior and movement of chelonian populations before and after release.

Environmental education
Educational programs for local communities on the importance of conserving turtles and their habitats.

Controlled release
Planned and monitored releases, with an emphasis on choosing appropriate areas and protecting them from natural predators and human impacts.

Scientific research
Conducting scientific studies to evaluate the project's success, post-release survival rates and the impact of conservation actions on chelonian populations.

The project not only aims to recover local populations of chelonians, but also to contribute to the preservation of aquatic biodiversity in areas where Eletrobras operates, fostering sustainable and responsible practices.



Contents

Foreword

Biodiversity management

Conservation and restoration programs and projects

The experts' view on the subject

According to Débora Luísa Silva, environmental engineer and biodiversity manager at I-Care Brasil, the Biodiversity and Ecosystem Services theme is highly relevant for companies in the country's electricity sector, not only because of the need to mitigate the environmental impacts of power plants, but also to ensure their continued operation.

“Managing biodiversity and ecosystem services is essential for these companies because of the vital natural resources they offer, such as climate regulation and water purification,” she says.

Also, in a world of growing pressure for responsible and innovative practices, investing in biodiversity is becoming a key strategy for long-term business success.

“Biodiversity conservation not only increases business resilience against climate change and environmental risks, but also promotes sustainable practices, strengthens reputation and facilitates compliance with environmental regulations,” she says.

The expert also emphasizes the importance of addressing the issue together with climate change, given the increasing frequency of extreme weather events that directly impact biodiversity and the business model of companies, especially those based on hydroelectric plants.

This is in line with Eletrobras' transformations, since in 2023 we created the Climate and Biodiversity Strategy Management, which addresses the issues jointly.

> “Efforts towards a sustainable energy matrix require a holistic approach that integrates biodiversity and climate change management, going beyond reducing carbon emissions,” she says.

Another matter of concern is that the topics of decarbonization and biodiversity protection need to be increasingly regulated in Brazil and around the world. “Currently, most initiatives are voluntary, but pressure from investors, the international community and consumers should drive regulation by 2030. Companies that adopt these practices early will be able to gain a competitive advantage.”


Eletrobras