

Activity Report

2023



# VALE NATURAL RESERVE

Photo by Pedro Cattony.

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## Presentation

Hello! It is with great pleasure that we present the 2023 activity report, featuring the main actions developed by the Vale Natural Reserve (VNR).

You will have access to the achieved results, the expressive numbers related to endemic biodiversity, indicators of ecosystem protection, events we organized and attended, as well as highlights in media and communication campaigns.

We also detail the developed and supported actions that go beyond the physical-geographical limits of the Vale Natural Reserve, through projects carried out in partnership with various institutions, contributing to Vale's global sustainability commitments, such as Forest Goal (*Meta Floresta*).

The results highlight the Management's involvement in local, regional, and national actions, guided by global goals, such as Sustainable Development Goals (SDGs) and Kunming-Montreal Global Biodiversity Framework (GBF).

We thank all our employees and partners for their professionalism and dedication.

**We wish you an excellent read!**



Blue-breasted parrot (*Pionus reichenowi*). Photo by Gabriel Bonfa.

### The Vale Natural Reserve and its activities beyond its boundaries!



## About Vale

We exist to improve life and transform the future, together! Vale's current purpose reflects a renewed approach to the company's positioning and engagement with the community, guided by principles that strengthen the company's commitment to prioritize what matters most to people and the future, always placing the collective good first.

We are one of the world's largest mining companies, leading in the production of iron ore, pellets and nickel. We also work with manganese, ferroalloys, copper, gold, silver and cobalt. Our presence reaches various locations, spread throughout Brazil and the world.

Why do we exist? Mining is the foundation of a chain that contributes to society's development and is present in essential products for people's well-being, whether in construction, innovations in healthcare, new technologies, car manufacturing or even home appliances.

## Let's make a difference together!



Learn more about the initiatives undertaken in Espírito Santo. Point your phone's camera and access the website.

### Vale in Espírito Santo (ES)

#### Vale Natural Reserve

Located in Linhares, ES, it has been an official conservation and scientific research area since the 1970s, offering ecological tourism, environmental awareness, and leisure.

#### Tubarão Unit

Located in Vitória, ES, it has three operational units: railway, port, and pelletizing plants.

#### Vale Botanical Park

Features various activities focused on the environment, education, and culture. Located in Vitória, ES.

#### Passenger Train

Daily train connecting Cariacica, in Greater Vitória, ES, to Belo Horizonte, Minas Gerais (MG), passing through various stations.

#### Knowledge Station

Located in Serra, ES, it's a space that offers activities for social, cultural, sports, and educational development.

#### Vale Museum

Extramural activity that promotes exhibitions in different cultural spaces, as well as educational activities in Vale Botanical Park, schools and squares in Greater Vitória.

# About the Vale Natural Reserve





## Who we are

The Vale Natural Reserve (*Reserva Natural Vale*), covering an area of approximately 23 thousand hectares, is located in Linhares, Espírito Santo, and stands out as Vale's main environmental asset.

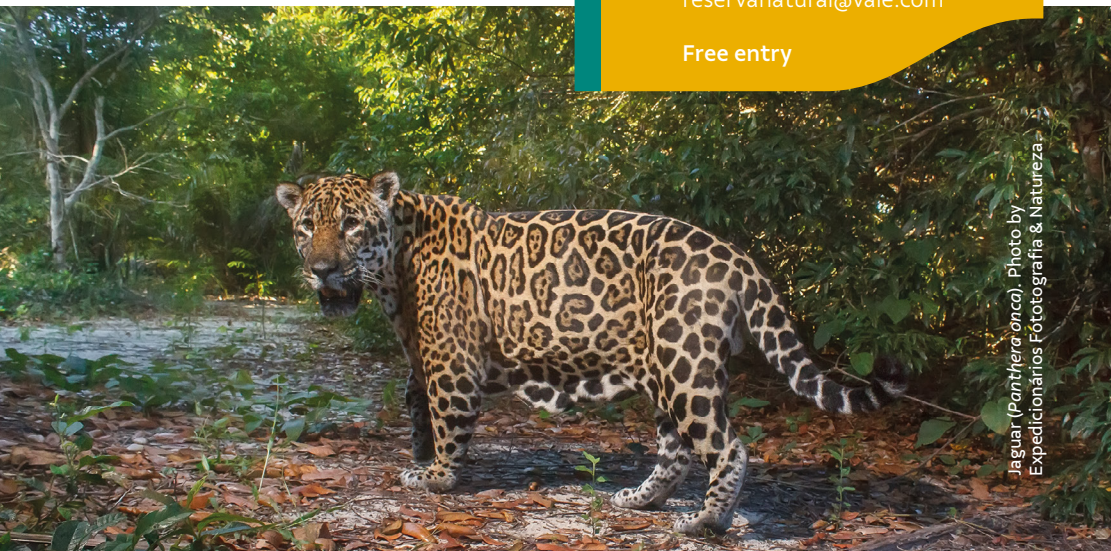
As part of the Green and Water Route, the Vale Natural Reserve is an ecotourism destination with stunning landscapes. It offers ecological trails, an observation tower, living scientific collections such as palm gardens, arboretum and orchard, and dry scientific collections of woods, fruits, seeds, insects, and a herbarium that is a reference in the identification of ES state flora species. It also promotes Environmental Education actions to strengthen local knowledge about sustainability, presenting great potential for discoveries and learning.

It has a seedling nursery with an annual capacity to produce 2.5 million native seedlings for forest restoration actions. It is a pioneer in experimenting with silviculture of native species in Brazil and conducts research in agroforestry systems, focusing on bioeconomy and community development.

### Where we are

-  **Location**  
BR 101 highway, KM 122  
Linhares, Espírito Santo, Brazil
-  **Distance from the main capital cities**  
162,3 km from Vitória, ES  
686 km from Rio de Janeiro, RJ  
632 km from Belo Horizonte, MG
-  **Opening hours**  
Tuesday to sunday, from 8:30 a.m. to 4 p.m.
-  **Contacts**  
+55 (27) 3371-9702  
+55 (27) 99583-4159 (call number)  
+55 (27) 99835-4360 (Whatsapp)  
reservanatural@vale.com

Free entry



Jaguar (*Panthera onca*). Photo by Expedicionários Fotografia & Natureza.



## We are recognized as

Biodiversity hotspot – An area of extreme importance for biodiversity conservation;

World Heritage Site of the Discovery Coast (1999) – UNESCO;

Advanced Post of the Atlantic Forest Biosphere Reserve (RBMA) under the Man and the Biosphere Program (MaB) – UNESCO: Biodiversity protection, sustainable development, and scientific knowledge;

Located within the coverage area of the Protected Areas Mosaic of the Doce River Mouth;

Part of the Linhares–Sooretama Forest Complex, spanning 50 thousand hectares (Sooretama Biological Reserve, Recanto das Antas and Mutum Preto Private Natural Heritage Reserves), representing 11% of the Atlantic Forest in the state of Espírito Santo;

Classified by BirdLife International as an Important Bird and Biodiversity Area (IBA);

Museum of Natural Sciences and Natural History, registered in the MuseumBR database of Ibram (Brazilian Institute of Museums).



Collection of seeds. Photo by Bruno Coelho.

# Theory of Change

The Vale Natural Reserve has identified the need to define its future vision aligned with Vale's nature preservation strategy. This initiative aims to set the company as a global reference in practices that promote positive impacts for nature and people, with biodiversity as a cross-cutting theme.

The Vale Natural Reserve is not just a physical location, but also an entity that extends its influence into projects and actions beyond its boundaries, strengthening Vale's global sustainability commitments. In 2023, to deepen the understanding of the trajectory, potential, and challenges of the Vale Natural Reserve, the Theory of Change (*Teoria da Mudança*) was developed. This initiative allowed for a comprehensive immersion in the context of the Reserve.

The impact narrative of the Vale Natural Reserve, now developed drawing on the Theory of Change, resulted from a collaborative construction involving the team, partners, Vale leadership and experts, facilitated by Move Social. This narrative is guided by the extensive experience of the Reserve, aligned with the guidelines of the maintaining institution in the context of Nature-based Solutions, and responds to the urgent need for effective strategies for conservation, restoration, generation and sharing of knowledge, and bioeconomy.

## Main SDGs



Cross-cutting SDGs

## Assumptions

The Atlantic Forest is the Vale Natural Reserve's expertise, and the knowledge produced is replicable to other biomes;

The articulation in networks, alliances, and coalitions, including Vale's areas and organizations, is fundamental to the Vale Natural Reserve's operations;

The knowledge produced through the Vale Natural Reserve adds value to society and the maintaining institution.

Communities are valued and appreciated in the processes of conservation, restoration and knowledge building;

The Vale Natural Reserve's actions contribute to Vale's positive reputation.

## Areas of Activity

- Biodiversity conservation;
- Management of protected natural areas;
- Restoration of ecosystems;
- Generation and sharing of knowledge;
- Promotion of bioeconomy projects.

## Activities

- Production of flora species with quality and diversity for restoration and conservation;
- Conservation of threatened species;
- Development of courses, training groups, studies and scientific research;
- Implementation of environmental education programs, ecotourism initiatives and scientific tourism;
- Prototyping of economic incentive mechanisms for conservation and bioeconomy, such as biodiversity and carbon credits and bioprospecting.

## Impact Strategies

Prospect and implement innovative solutions for restoration, conservation, and bioeconomy;

Strengthen the management of Vale's and other actors', both public and private, protected natural areas;

Drive collective construction, systematization and sharing of knowledge;

Provide meaningful experiences of interaction with nature;

Engage in networks, coalitions, and strategic partnerships.

## Results for 2028

Protected natural areas with effective management and conservation;

Local communities engaged in environmental restoration and conservation efforts within the territories where the company operates;

Decisions made by Vale and external actors are informed by the knowledge generated through the Vale Natural Reserve;

Representation in global nature forums;

Enhanced economic mechanisms for valuing environmental conservation.

## Results for 2033

Reduction of the risk of extinction of flora and fauna species in the operating territories;

Biodiversity indicators and ecosystem services evolving positively in the operating territories;

Collaborative and shared learning in new approaches, technologies, and strategies for restoration and conservation;

Influence on public agendas focused on biodiversity conservation, promotion of ecotourism, fostering of bioeconomy and improvement of forest management;

The Vale Natural Reserve initiatives in the Atlantic Forest and Amazon Rainforest present in global markets of nature-based solutions (carbon, biodiversity, and bioeconomy).

## Public

- Vale (strategic and operational areas);
- Communities, especially those in the territories where the Reserve and Vale operate;
- Networks and alliances linked to the environmental sector;
- Government agencies;
- Industries, companies, and impact businesses;
- Educational, research and extension institutions;
- Civil society organizations.

## Impacts

Protected and restored natural ecosystems, coupled with the provision of ecosystem services;

Atlantic Forest serving as a reference for global commitments, contributing to climate change mitigation and community resilience;

Natural capital as the foundation of sustainable business ecosystems and production processes;

Communities engaging sustainably in their production processes, balancing revenue generation and conservation.

# 2023 Highlights



**143,000 hectares**  
of conserved and protected areas through cooperation agreements in the Atlantic Forest and Cerrado biomes;



**118,050 people**  
visited the Vale Natural Reserve and partner Protected Areas;



**454 events and actions**  
of environmental awareness developed by the Vale Natural Reserve and partner Protected Areas;



**394 media**  
transmitted about our projects and actions;



**358 plant samples**  
deposited in the the Vale Natural Reserve herbarium;



**124 new records**  
of fauna species occurrences in protected areas;



**665 occurrences**  
of environmental incidents recorded during ecosystem protection actions.

## Nature



Crested capuchin monkey (*Sapajus robustus*). Photo by Gabriel Bonfa.

The Vale Natural Reserve is one of the last major remnants of the *Tabuleiro* Forests, currently one of the most threatened formations in the Atlantic Forest biome.



Photo by Viviane Fassarella.

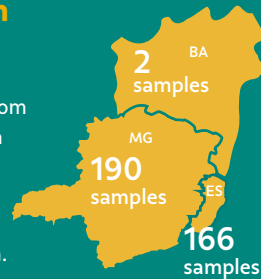
## Herbarium

The Herbarium of the Vale Natural Reserve, internationally recognized as CVRD Herbarium since 1979, aims to document the plant biological diversity for research purposes, serving as a depository for the vouchers from works developed in the Vale Natural Reserve and in various projects of Vale and its partners, in different states.

Among the species in the botanical collection of the Vale Natural Reserve, a previously unknown finding for the flora of Espírito Santo stands out: the tree popularly known as *guapeba* (*Chrysophyllum imperiale*), a rare and endangered species of the Brazilian flora, with fewer than 50 identified adult individuals in nature. This record was made in the Duas Bocas Biological Reserve, managed by the State Institute of Environment and Water Resources (IEMA-ES), and is of utmost importance for a better understanding of native biodiversity and to support conservation and preservation policies, such as the partnership between Vale and IEMA-ES through the Forest Goal.

### The Vale Natural Reserve's botanical collection

In 2023, 358 plant samples (exsiccatae) from three Brazilian states were collected and accessioned in the herbarium.



17,700 records of the Brazilian flora, encompassing nearly 3,600 species.



Exsiccata of the species *Chrysophyllum imperiale*, known as *guapeba*. Photo by Geovane Siqueira.

## Seedling Nursery

The Vale Natural Reserve's seedling nursery specializes in producing native species from different biomes, primarily from the Atlantic Forest. Over the past 10 years, the nursery has cultivated over 1 million seedlings, with 951,551 of them being sent to meet requirements for mining and railway areas, sales and socio-environmental projects beyond the company's boundaries, through seedling donations.

In 2023, 20,997 seedlings were dispatched, of which 7,300 (36.9%) were allocated to meet the railway requirements. To promote socio-environmental actions, 13,207 seedlings were donated for the restoration of areas in Protected Areas and to small rural producers who are recovering permanent preservation and water recharge areas, through productive arrangements that allow income generation to be combined with conservation.

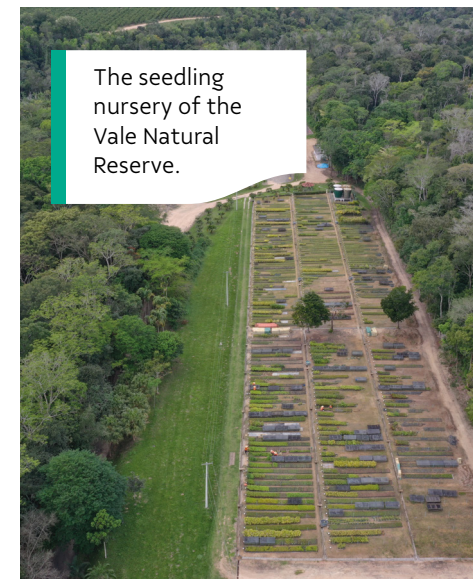


Photo by Mariana Senna.

The seedling nursery of the Vale Natural Reserve.

Currently, the nursery's stock includes around 200 native species from the Atlantic Forest and Cerrado biomes, including some that are considered rare and endangered, such as the *jueirana-facão* (*Dinizia jueirana-facao*).

### Seedling Production for Brumadinho

Since 2019, the Vale Natural Reserve has supported the restoration of degraded areas in Brumadinho, Minas Gerais, by providing technical support and native species seedlings produced in our nursery. For seedling production, seeds are collected from the forests in the Brumadinho region and sent to the nursery. Once they reach a sufficient size for dispatch, they are returned to their place of origin to contribute to the restoration of degraded areas.

Throughout 2023, 22 kg of seeds from 46 species were delivered. A portion was preserved in cold storage, while the rest was used for the production of 6,965 seedlings.

production of 6,965 seedlings.



Photo by Diego Balestrin.

## Monitoring of the Linhares–Sooretama Forest Complex

The historical database of ecosystem protection records a total of 4,754 neutralized occurrences. This initiative, which has been ongoing for over 45 years, aims to combat the main threats to biodiversity and conservation:



- Hunting;
- Wildlife trafficking;
- Entry of non-native animals;
- Forest fires, etc.

The monitoring of this data is carried out through the Integrated Protected Areas Management System (SGIAP), based on the pillars of traceability, transparency, and information management.

### 2023 Data

#### Vale Natural Reserve

- 298 neutralized occurrences;
- 101 other occurrences\*;
- 09 fire occurrences.

#### Sooretama Biological Reserve (SBR)

- 239 neutralized occurrences;
- 56 other occurrences\*;
- 10 fire occurrences.

\*Wildlife poaching, preventive blitzes, theft, search warrants, reports, etc.



Photo by Bruno Coelho.



Photo by Bruno Coelho.

### Monitoring in 2023

The Vale Natural Reserve is responsible for monitoring. In its efforts, it collaborates with the Environmental Military Police (PMA), the Chico Mendes Institute for Biodiversity Conservation (ICMBio), and the Brazilian Institute of Environment and Renewable Natural Resources (IBAMA).



**117 joint actions** with public oversight agencies, resulting in the rescue and seizure of wild animals;



**1,039 preventive patrols** to identify and deter environmental crimes;



**19 fire outbreaks** around the Linhares–Sooretama Forest Complex. Thanks to firefighting efforts, no area within the Vale Natural Reserve or the Sooretama Biological Reserve was affected. However, 71.44 hectares were burned on properties near the Complex, affecting secondary forests, eucalyptus plantations, pastures, and agricultural areas.



## External Engagement

### Technical Visits

The Vale Natural Reserve is a reference for technical visits, offering unique opportunities for professionals and partners from various fields to explore and understand the interconnection between species conservation, protected area management, knowledge generation, ecosystem restoration, and bioeconomy.

These visits provide a deeper understanding of the importance of the Vale Natural Reserve projects for biodiversity conservation and natural areas protection. Visitors highlight the relevance of these initiatives and the potential of the knowledge gained for application in their areas of expertise, across different institutions. These results contribute to the Vale Natural Reserve's commitment to continue generating knowledge and enriching experiences for professionals and partners in environmental conservation and sustainable development.

In 2023, we received several technical visits, and among them, we highlight the presence of the "Reconnecting Forests Project" (*Projeto Reconnectando Florestas*), within the scope of the "Biodiversity and Climate Change in the Atlantic Forest" project, coordinated by the Ministry of the Environment (MMA) with the Brazilian Biodiversity Fund (FUNBIO). This meeting aimed primarily at exchanging experiences with our projects in silviculture, forest restoration, nursery, herbarium, scientific collections and agroforestry systems.

The team from the National Museum of Brazil also visited the Vale Natural Reserve, participating in a comprehensive immersion in our scientific collections, public spaces,

and species conservation projects. During the visit, we identified areas for potential future collaborations, such as exchanging scientific knowledge and sharing resources for studies.

Students from the undergraduate course in Forestry Engineering at the Federal University of Espírito Santo (UFES) had a field trip at the Vale Natural Reserve and explored the public area, scientific collections, experimental plots and projects related to Vale's Forest Goal. The initiative aimed to provide students with a practical understanding of how science supports biodiversity protection and conservation in the region.



The team from the National Museum of Brazil with the *jueirana-facão*.

Photo by Fernanda Cravo.



The Federal University of Espírito Santo Forestry Engineering students on a field trip.

Photo by The Federal University of Espírito Santo Archive.

## Participation in Third-Party Events



Photo by the IUCN Archive.

### Green List Forum - IUCN (International Union for Conservation of Nature)

The Green List is a voluntary certification process for protected and conserved areas, created over ten years ago with the aim of strengthening the management and governance of these spaces. It seeks to obtain transparent and coherent commitments based on four pillars: good governance, effective management, design and planning, and significant conservation outcomes. The process of applying an area to the Green List establishes a commitment to effective management, serving as a tool to support the achievement of Target 3 of the Kunming-Montreal Global Biodiversity Framework, to which it is aligned, through actions towards the effectiveness of protected areas. This new target replaces Aichi Target 11, which addressed the conservation of terrestrial and marine ecosystems and was met by 2020. Target 3 establishes the protection of 30% of these ecosystems by 2030, placing effectiveness at

This first Forum was a significant milestone for the Green List program, providing a unique platform for sharing ideas and reviewing processes and standards to establish short and medium-term priorities.

its core.

From December 11 to 14, 2023, the Vale Natural Reserve participated in the IUCN Green List Forum in Cape Town, South Africa. The representation of the private sector in these discussions is essential for leveraging the implementation of the Green List worldwide, including in Brazil.



Photo by Sayonara Cometti.



Integration workshop with production chains.

Photo by Sayonara Cometti.

### 3rd Sustentabilidade Capixaba fair

The Vale Natural Reserve was present at the 3rd *Sustentabilidade Capixaba* Fair (3ª feira Sustentabilidade Capixaba), at Praça do Papa, in Vitória, ES, accompanying the exhibition of environmental awareness equipment and materials, developed through a partnership with the State Institute of the Environment and Water Resources, in support of the Duas Bocas Biological Reserve and the Serra das Torres State Natural Monument, as part of the Forest Goal, at an integrated booth with the State Secretariat for the Environment and Water Resources (Seama).

The environmental monitors, hired through the partnership, were also present to discuss the work being carried out in the two Protected Areas.

We also participated in the integration workshop with production chains for the creation of the Strategic Plan for the Development of Capixaba Agriculture – PEDEAG 4. We discussed native forestry at the meeting on Native Forestry, Non-

Timber Forest Products, and the State Environmental Reforestation Program (PRA), at the invitation of the State Secretariat for Agriculture, Supply, Aquaculture and Fisheries (SEAG). The workshop was attended by the State Secretary of the State Secretariat for the Environment and Water Resources, Felipe Rigoni, and the President Director of the Institute of Agricultural and Forestry Defense of Espírito Santo (IDAF), Leonardo Monteiro.



Photo by Sayonara Cometti.

## Environmental Awareness and Ecotourism



Observation tower at the Vale Natural Reserve. Photo by Kelvis Biancardi.

The Vale Natural Reserve's Environmental Education projects aim to contribute to the process of awareness, learning, and socio-environmental development through the interaction between humans and nature, inspiring a desire to protect and conserve biodiversity.

## Sustainable Reserve

The Sustainable Reserve Program (*Programa Reserva Sustentável*) fosters knowledge by offering courses to the local community to create new opportunities for income generation and diversification.

In 2023, 5 notable courses were conducted, involving 77 attendees who were immersed in a range of topics, from clay modeling to the artisanal production of fruit jams, soaps and scented candles, all made with products from our agroforestry system.

In addition to the aforementioned courses, we offered, in partnership with SENAR (National Rural Learning Service), a culinary course featuring brazilian peppertree (*aroeira*), a local spice. The training covered techniques for preparing dishes, from appetizers to desserts. Attendees learned about the properties of Brazilian peppertree and were encouraged to reflect on the importance of collaborative actions for sustainable development and appreciation of regional biodiversity.

The program highlights the synergy between environmental conservation and the creation of value-added products, promoting the bioeconomy and self-sufficiency within the community.



Photo by Fernanda Cravo.

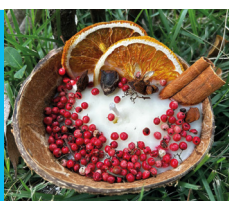
*"I loved the candle-making course, because it offers enrichment, a business opportunity for those looking to invest, start something new. It was worth it, and I look forward to more courses like this, because it was wonderful."*

Maria de Lurdes Pandolfi, from Linhares, ES, an attendee in one of the courses.





*Bioeconomy and self-sufficiency in the community.*

Photos by Fernanda Cravo.



**The results go beyond numbers, bringing tangible transformation to the lives of the attendees, sowing opportunities, and nurturing entrepreneurship in each individual.**

 5 courses conducted;

 77 attendees.

## Reserve in the Community

The Reserve in the Community Project (*Projeto Reserva na Comunidade*) promotes education, awareness, and environmental conservation, aiming to improve habits and develop conscious citizens while strengthening our community ties. The goal is to inspire practices and reflections on environmental education as a crucial tool for biodiversity conservation, engaging various stakeholders and addressing topics relevant to the community.

This project aligns with the Vale Natural Reserve's principles of generating knowledge and strengthening partnerships with local stakeholders, rural producers, and traditional communities.

In 2023, an environmental awareness blitz was held around the Vale Natural Reserve and the Sooretama Biological Reserve. The goal was to raise awareness among residents and visitors in the region, discouraging practices like hunting, promoting proper waste disposal and preventing fire outbreaks in surrounding areas. The action highlighted the Atlantic Forest biome and the importance of its conservation due to its rich biodiversity, reaching 154 people in 74 vehicles.

In collaboration with the Sooretama Labor and Social Assistance Department, a mobilization of healthcare professionals was also conducted to address the topic of Brazilian spotted fever, offering care and guidance on the disease to the community. Recreational activities were organized, such as workshops on making shuttlecocks from recyclable materials and games about selective waste collection.



Environmental awareness blitz around the Vale Natural Reserve and the Sooretama Biological Reserve  
**154 people** in **74 vehicles.**



Event in collaboration with the Sooretama Labor and Social Assistance Department  
Approximately **100 people** attended the event.



Photo by Lais Pêgo.

**Generate knowledge and strengthen partnerships.**



Photo by Fernanda Cravo.

## Environmental Attitude

The Environmental Attitude (*Atitude Ambiental*) project aims to develop and promote environmental education with students from schools near the Vale Natural Reserve. In 2023, the Zeferino Batista Fiorot Municipal Elementary School, affiliated with the Municipal Department of Education of Linhares, ES, participated with around 100 students.

### Topics covered:

- Water;
- Biodiversity;
- Air;
- Energy;
- Waste.

### Modules covered:

- Building concepts;
- Situation in Brazil and the World;
- Applicability;
- Our Role and Responsibility.

*"I would like to thank for the execution and collaboration of the Environmental Attitude project. Our school was very happy with the invitation! The students are thrilled with everything they learned and experienced during these days here at the Reserve. Our gratitude comes with a desire for more."*

Merelize Santos Freire – Teacher at Zeferino Batista Fiorot Municipal Elementary School.

## I Researcher

The goal of the I Researcher (*Eu Pesquisador*) project is to strengthen relationships with local school communities around the Vale Natural Reserve and promote scientific outreach, increasing attendees environmental and

social awareness.

The project achieves this by partnering with researchers who study the local fauna and flora, sharing their research methodologies with attendees. This year, we used the iNaturalist app as a field tool, allowing students to record their discoveries, act as researchers, and engage in Citizen Science.

## The Vale Natural Reserve as a Nature Museum

The Vale Natural Reserve is officially recognized by the Brazilian Institute of Museums (Ibram) as a Nature Museum, distinguished by its preserved biodiversity and its deep connections to stories, memories, and diversity. Additionally, it is acknowledged for its scientific collections and its essential activities in research and environmental education.

In 2023, the Vale Natural Reserve participated in prominent events organized by Ibram, such as the 21st National Museum Week and the 17th Museum Spring, which provided significant opportunities to promote the Reserve's mission and values.

During the 21st National Museum Week, the Vale Natural Reserve actively participated by offering guided tours of its scientific collections, specialized workshops in naturalist illustration, insect study techniques in its area, and collaborating with the Vitória Botanical Park through environmental education activities and exhibitions of the Vale Natural Reserve's scientific collection samples.

During the 17th Museum Spring, with the



Photo by Fernanda Cravo.

theme 'Memories and Democracy: LGBT+, Indigenous, and Quilombola People,' the Vale Natural Reserve hosted the Krenak indigenous group from Resplendor, MG in its agroforestry system, nursery, trails, meliponiculture farm, and living collections. The group gave a cultural presentation followed by a screening of the short film "O T-Rex e a Pedra Lascada" ("The T-Rex and the Chipped Stone"). By engaging over 4,000 people in these activities, the Vale Natural Reserve fostered reflections on the role of museums in valuing biodiversity and strengthening sustainability. Its active participation reinforced its commitment to knowledge and environmental conservation, promoting an inclusive and democratic society.

The Vale Natural Reserve remains committed to its mission of conserving species, natural areas, and knowledge, reinforcing its role as a Museum of Nature that actively contributes to a more conscious and sustainable future.



Photo by Bruno Coelho.

## 2023 Events

In 2023, the Vale Natural Reserve played a significant role in promoting and conserving biodiversity by organizing events and activities that reinforced its commitment to sustainability and environmental awareness. These initiatives left a positive legacy for the environment.

### Atlantic Forest Day

2 events celebrated with activities at the Vale Natural Reserve and at the National Institute of the Atlantic Forest (INMA):



**Vale Natural Reserve**  
Advanced Posts of the Atlantic Forest Biosphere Reserve;

### National Institute of the Atlantic Forest

The National Institute of the Atlantic Forest and the Augusto Ruschi Biological Reserve (ARBR) participated in the "Sounds, Colors, and Flavors of the Atlantic Forest" (Sons, Cores e Sabores da Mata Atlântica) circuit, which took place at the Mello Leitão Museum park in Santa Teresa, ES.



Photo by Jackeceli Falqueto.



Event banner.



Photo by Fernando Calheiros.

### World Environment Day

On June 13, 14, and 15, the Vale Natural Reserve, in partnership with the Institutional Relations department, hosted the Atlantic Forest Exhibition at the Legislative Assembly of Espírito Santo (Ales) in Vitória.

Audience reach:  
**220 people.**



Photo by Iema Archive.

### A Day in the Park Vale Natural Reserve and partner Protected Areas

On July 23, the event A Day in the Park 2023 (*Um Dia no Parque*, UDNP) took place, organized by the Pro-Protected Areas Coalition (Coalisão Pró-UCs), with the theme "It's Time to Care for Our Home!".



Photos by Sayonara Cometti.

### 20th National Week of Science and Technology in Santa Teresa, ES

Audience reach:  
**1,038 people.**

In the context of the National Week of Science and Technology, the Vale Natural Reserve and the Augusto Ruschi Biological Reserve participated, in October, at the headquarters of the National Institute of the Atlantic Forest, the Mello Leitão Museum in Santa Teresa, ES, playing a crucial role through environmental education activities and the exhibition of scientific materials that highlighted Brazil's extraordinary biodiversity.



Photo by Deive José Poltronieri.

### Private Reserves Workshop

On November 8 and 9, the Private Reserves Workshop was held at the Vale Natural Reserve, in partnership with Votorantim Reserves and the Brazilian Business Council for Sustainable Development (CEBDS).

The workshop aimed to foster dialogue between sectors, encouraging the exchange of knowledge and experiences to strengthen protected areas, as well as integrate conservation strategies to contribute to global biodiversity goals and facilitate the creation of a network of private reserves.



Photo by Deive José Poltronieri.

*"I wanted to say thank you for inviting me to this workshop. It was an incredible experience to share and learn about the private sector's experience with protected areas. I believe this is how we create better work – by being more positive about the actions we can develop together. It's a great example of how to collaborate with the private sector."*

Statement by Zornitza Aguilar M. – Senior Officer of Protected and Conserved Areas at the IUCN.



**40 representatives** attended the event.

## Birdwatching

The Vale Natural Reserve is a highly popular destination for birdwatchers from around the world, drawn by the rich avifauna of the Atlantic Forest. The Reserve is home to 60% of the bird species in Espírito Santo and 20% of the species listed for Brazil. Birdwatching is a form of sustainable, low-impact tourism that promotes citizen science, contributes to biodiversity inventories and conservation, and serves as an alternative source of income.

Three of the five authorized guides for the restricted area are residents of local communities. Along with the Sooretama Biological Reserve, the Vale Natural Reserve is classified as an Important Bird Area (IBA) by BirdLife International, due to the presence of endemic and threatened species.

Accessibility via trails and roads, along with observation towers, enhances the birdwatching experience.

### 6th edition of the Birding Photo Challenge

Held at the Vale Natural Reserve for 5 years, the traditional Birding Photo Challenge is now extended to 4 additional protected areas in the country managed by Vale.

In addition to the award-winning photos, competitors documented two species previously unrecorded at the Vale Natural Reserve: the cinnamon tanager (*Schistochlamys ruficapillus*) and the Harri's hawk (*Parabuteo unicinctus*).



Filipe Ventura, winner of the "Best bird photo" category. Photo by Gabriel Bonfa.

*"This was the most well-organized edition of the Birding Photo Challenge. It was really great, because there was a lot of information exchange with people from different states who had a lot to share. I was very happy to win first place, but even just participating was an amazing experience..."*

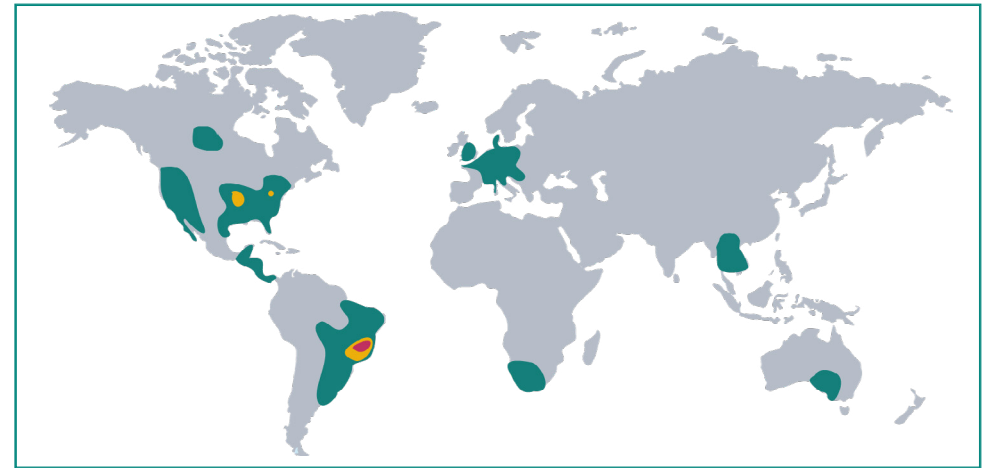


Statement from Rodrigo Agostinho, nature photographer and president of Brazilian Institute of Environment and Renewable Natural Resources, who participated in the event as a judge. Photo by Gabriel Bonfa.

*"Photography helps in the process of environmental awareness and education. Involving society in the production of images that will later be used in various activities by Vale and in the dissemination of the Reserve's biodiversity is really nice. I am pleased with the result. I believe it fulfilled its role and I suggest that other private reserves in the country take on similar commitments to engage with society in some way. Brazilian society needs to value this conservation work, which, among others, is being carried out here."*



Statements



Map showing the origins of visitors in 2023 for birdwatching at the Vale Natural Reserve, Linhares, ES.

In 2023, we welcomed:

**112** birdwatchers;

**58** foreigners;

**13** countries.



Photo by Gabriel Bonfa.

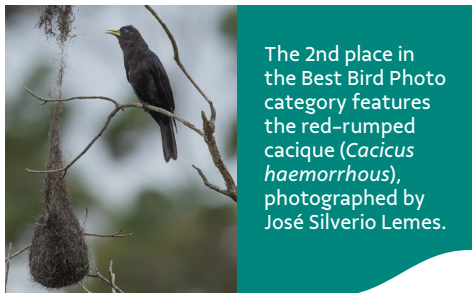


Initiatives like this enable the identification of new species in the areas and contribute to new records for those already cataloged, including rare and endangered species.



The winning photograph of the 6th edition of the Birding Photo Challenge, in the Best Bird Photo category, features the red-headed manakin (*Ceratopipra rubrocapilla*).

Photo by Filipe Ventura.



The 2nd place in the Best Bird Photo category features the red-rumped cacique (*Cacicus haemorrhous*), photographed by José Silverio Lemes.

Photo by José Silverio.



The 3rd place in the Best Bird Photo category features the blue-chinned sapphire (*Chlorestes notata*), photographed by Luiz Fernando Matos.

Photo by Luiz Fernando.



The 1st place in the Best Nature Photo category features the collared peccary (*Pecari tajacu*), photographed by Ademir Carletti.

Photo by Ademir Carletti.



The 2nd place in the Best Nature Photo category features the sand wasp (*Stictia signata*), photographed by Renan Betzel.

Photo by Renan Betzel.



The 3rd place in the Best Nature Photo category features the longhorn beetle (*Juiaparus mexicanus*), photographed by Luiz Fernando Matos.

Photo by Luiz Fernando Matos.



Species previously unlisted at the reserve, the cinnamon tanager (*Schistochlamys ruficapillus*), photographed by Filipe Ventura.

Photo by Filipe Ventura.

## Citizen Science

### Leveraging Conservation and Expanding Knowledge

Through cooperation agreements with Protected Areas, Vale contributes to the protection of approximately 143,000 hectares of forests beyond the boundaries of the Vale Natural Reserve. The company has also developed a project on the iNaturalist platform with the aim of supporting citizen science in these protected areas.

iNaturalist is a platform created to map biodiversity worldwide. Users of this system assist in identifying fauna and flora by evaluating photos shared on the network. The iNaturalist community consists of amateurs, experts, and scientists who contribute with data for science and conservation.

Through images posted on this platform, researchers identified the arachnid *Cajango pestifer* in the Mata Escura Biological Reserve, a species of harvestman last recorded in the 1940s in Ilhéus, Bahia (BA). They also discovered one of the largest praying mantises in Brazil, belonging to an Amazonian lineage previously unknown in the Atlantic Forest, present in the regions of Linhares and Sooretama.



Harvestman *Cajango pestifer*. Photos by Ednardo Martins.

## iNaturalist



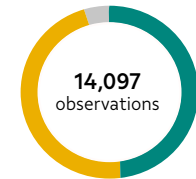
### Overview

**14,097** observations;

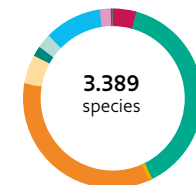
**3,389** species;

**1,485** identifiers;

**249** observers.



- Research grade
- Needs identification
- Casual



- Insects
- Plants
- Birds
- Arachnids
- Fungi
- Mammals
- Reptiles
- Amphibians
- Mollusks
- Other animals



Learn more about our project on iNaturalist. Point your phone's camera and access the website.

## Interactive Forest Room

The Vale Natural Reserve inaugurated the Interactive Forest Room (*Sala Floresta Interativa*), a technological and interactive environment that provides an immersive experience in the forest, stimulating visitors' senses. Upon entering this space, visitors are transported to a playful world.

The highlight of the room is a jaguar sculpture covered in plush fabric, giving visitors the opportunity to interact and experience the sensation of touching a real animal. The predominance of blue highlights the jaguar, while the gradual transition to green in the foliage guides the audience through different areas of the room.

The sense of smell is stimulated by natural essences from native Atlantic Forest trees, sprayed throughout the area.

The experience includes immersive audio that allows visitors, with their eyes closed, to hear the calls and vocalizations of various species, such as the curassow, toucan, red-browed amazon, puma, jaguar, and various amphibians.



Photo by Mariana Senna.

Using 3D glasses, visitors are invited to experience a virtual tour of the Vale Natural Reserve, exploring restricted-access areas, such as native fields, the Barra Seca River, and the giant *jueirana-facão*, among others.



Photo by Mariana Senna.



Learn more about this interactive space. Point your phone's camera and access our Instagram.

## Partnerships for Conservation and Society



Stururucujá (*Passiflora margaritae*). Photo by Geovane Siqueira.

The partnerships at the Vale Natural Reserve represent an essential link between environmental conservation and society. By joining forces, these collaborations play a crucial role in building a future where the preservation of nature and the well-being of society go hand in hand.



# Forest Goal

In 2018, Vale announced its Forest Goal of Restoration and Protection of 500,000 hectares beyond its boundaries by 2030. Of this total, 400,000 hectares are designated for protection through partnerships with Protected Areas, developed by the Vale Natural Reserve team in collaboration with the managing environmental agencies: State Environmental Institute (Inea-RJ), Chico Mendes Institute for Biodiversity Conservation, and State Institute of Environment and Water Resources.

Given the significant climate changes, in land use, and forest fragmentation, there has been a loss of habitats and biodiversity. The Global Biodiversity Framework sets the goal of protecting 30% of terrestrial and marine areas by 2030, with an emphasis on the effectiveness of these areas.



**Over 115,000 hectares of forests** are being protected through partnerships established in 2020 and 2021, under the coordination of the Vale Natural Reserve.

Protected Area	Management Authority	Validity	Area (ha)
<b>Protected Areas 2020</b>			
1 – Goytacazes National Forest	ICMBio, ES	10/14/2025	1,426
2 – Duas Bocas Biological Reserve	Iema, ES	12/09/2025	3,000
3 – Serra das Torres State Natural Monument	Iema, ES		10,459
4 – Cunhambebe State Park	Inea, RJ	12/14/2025	38,053
<b>Protected Areas 2021</b>			
5 – Augusto Ruschi Biological Reserve	ICMBio, ES		3,598
6 – Mata Escura Biological Reserve	ICMBio, MG	12/16/2026	50,852
7 – União Biological Reserve	ICMBio, RJ		7,757
<b>Total</b>			<b>115,145</b>

\*The agreements have a validity period of 5 years.

**1**  
Aerial view  
**Goytacazes National Forest**



Photo by Mariana Senna.

**2**  
Reservoir  
**Duas Bocas Biological Reserve**



Photo by Lauro Narciso.

**3**  
Lighthouse Rock (Pedra do Farol)  
**Serra das Torres State Natural Monument**



Photo by Terence Jorge Nascentes.

**4**  
Bridal Veil Waterfall (Cachoeira Veu de Noiva)  
**Cunhambebe State Park**



Photo by Ivan Cobra.

**5**  
Cherry-throated tanager  
**Augusto Ruschi Biological Reserve**



Photo by Gustavo Magnago.



Photo by Ednardo Martins.

**6**  
Northern muriqui  
**Mata Escura Biological Reserve**



Photo by Andreia Fonseca Martins.

**7**  
Golden lion tamarin  
**União Biological Reserve**

Through the partnerships, the monitoring activities enabled the recording of **122 wildlife species**.

Based on the Cooperation Agreements, ecosystem protection and biodiversity conservation actions are carried out, including the systematic monitoring of rare and endangered species, as well as environmental awareness initiatives that foster a connection with nature, thereby strengthening the effectiveness of Protected Areas in promoting conservation. These actions include training for communities and teams on topics such as agroforestry systems, forest restoration, meliponiculture, wildlife management, and drone piloting.

To carry out these actions, 30 professionals, including environmental monitors and a fire brigade, were hired and are distributed across 6 Protected Areas.

## Photography Exhibition

*Das Lentes do Meu Céu*  
(From the Lenses of My Sky)



20th Anniversary of the Mata Escura Biological Reserve  
June 1 to 5

Managed by the Chico Mendes Institute for Biodiversity Conservation, along with the Environment Week.

The first 4 days in Jequitinhonha, MG (Mata Escura Biological Reserve)  
The 5th day in Almenara, MG.



The schedule included various activities such as guided tours, theatrical performances, workshops, and lectures. A highlight was the photophy exhibition "*Das Lentes do Meu Céu*" ("From the Lenses of My Sky"), by Ednardo Martins, a quilombola and environmental monitor hired by Vale, who portrayed the socio-biodiversity of the Reserve.

The event also featured talented local artisans and the *Coral Vozes do Jequitinhonha* (Voices of Jequitinhonha Choir).






Photo by Tiago Godinho.

## Cherry-throated Tanager Conservation Program (PCSA)

Marcos Daniel Institute - IMD

Since 2021, the Vale Natural Reserve has partnered with the Marcos Daniel Institute, supporting conservation efforts for the cherry-throated tanager (*Nemosia rourei*), a critically endangered bird species known to occur only in the state of Espírito Santo.

-  Donation of 1,454 seedlings of native species for restoration and enrichment at the Kaetés Reserve, Castelo, ES;
-  Support with environmental education materials for raising awareness in the area where the Cherry-throated Tanager Conservation Program operates;
-  Knowledge sharing on ecosystem protection, seedling production, and research.



Cherry-throated tanager (*Nemosia rourei*). Photo by Gustavo Magnano.

## Harpy Eagle Project

The monitoring of the harpy eagles has been conducted at the Vale Natural Reserve and the Sooretama Biological Reserve since 2010. Starting in November 2019, these activities have been supported by Vale through a partnership agreement with the Federal University of Espírito Santo.



2023  
**7 nests monitored** by camera traps installed in tree canopies and on the ground, 5 of them in the Vale Natural Reserve and 2 in the Sooretama Biological Reserve. Searches for new nests continue with the aid of drones.

With the aim of developing a conservation program for the harpy eagle in the Protected Areas Mosaic of Carajás, a workshop was held from June 13 to 15 at the Carajás Integrated Management Center (NGI) headquarters and at the Vale Amazonia BioPark in Paraupébas, Pará (PA). The Vale Natural Reserve played an active role in the discussions.



Harpy eagle (*Harpia harpyja*). Photo by Gabriel Bonfa.

## Forest Restoration

The Vale Natural Reserve, along with the Sooretama Biological Reserve, forms the largest remaining area of native Atlantic Forest in the state of Espírito Santo. Over time, the Vale Natural Reserve has established itself as a remarkable center for the generation and sharing of knowledge, with benefits that extend beyond its boundaries.



Research conducted over the past 50 years has contributed to ecosystem restoration, biodiversity conservation, and the sustainable use of natural resources.

Building on this experience, aligned with global sustainability agendas and Vale's strategic focus on nature, the Vale Natural Reserve has been developing projects that contribute to the protection, restoration, and promotion of the sustainable use of terrestrial ecosystems, not only in the Atlantic Forest but also in other Brazilian biomes.



Photo by Pedro Cattony.

# Agroforestry Systems

The Agroforestry Systems (AFSs) at the Vale Natural Reserve were planned considering the agricultural suitability and the landscape where the Reserve is located. Currently in the structuring phase, the experiments aim to shed light on the production costs and associated productivity, according to the region's soil and climatic characteristics.

The management of agroecosystems is carried out with low technology, exploring both mechanized and non-mechanized arrangements, as well as the use of green manure. This strategy aims to facilitate the replication of the Agroforestry Systems in small and medium-sized rural properties with different socioeconomic realities, encouraging the planting and sustainable use of timber and non-timber forest resources, while combining the conservation of native Atlantic Forest species with income generation for surrounding communities.

Seeking to share knowledge and promote sustainable development within communities, the products harvested from the Agroforestry Systems are used as inputs for training courses through the Sustainable Reserve Program.



Photo by Rayany Batista.

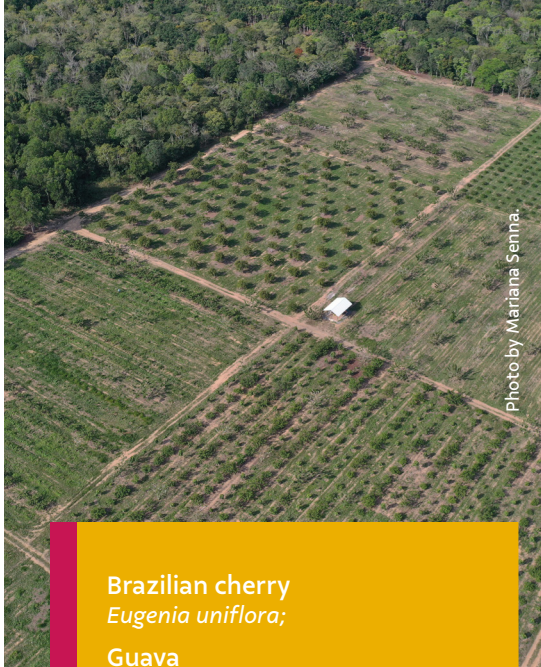


Photo by Mariana Senna.

**Brazilian cherry**  
*Eugenia uniflora;*

**Guava**  
*Psidium guajava;*

**Brazilian peppertree**  
*Schinus terebinthifolius;*

The harvests were processed during the training sessions and transformed into food and cosmetic products.

The courses offered take into account the community's needs, focusing on the production of low-cost, commercially viable products. In the future, the emphasis on training will be enhanced from a business perspective through the strengthening of partnerships to integrate these products into the local ecosystem, contributing to at least 4 of the 17 Sustainable Development Goals.

- 2 ZERO HUNGER
- 11 SUSTAINABLE CITIES AND COMMUNITIES
- 12 RESPONSIBLE CONSUMPTION AND PRODUCTION
- 15 LIFE ON LAND

# Environmental Regularization Program

## Minas Gerais

The Vale Natural Reserve supports the State Forestry Institute (IEF) and the State Secretariat for the Environment and Sustainable Development (SEMAD) in implementing the Environmental Regularization Program (*Programa de Regularização Ambiental*) on small rural properties within the Cachoeira das Andorinhas Environmental Protection Area (APA), a commitment outlined in the Brazilian Forest Code. This initiative includes the revitalization of two IEF seedling nurseries and support for the structuring of Payments for Environmental Services (PSA). The partnership, formalized through a Technical Cooperation Agreement (TCA), covers an area of up to 540 hectares and is set to last for 8 years (2023 – 2030). The goal is to promote income generation through the preservation and restoration of forests in the region, which is highlighted as a hub for fruit cultivation.

According to the vice president of the Rio das Velhas Watershed Committee, the program represents a significant tool for environmental regularization in the region.



Photo by Fernando Piancastelli.

*"This program has arrived at a very opportune moment, helping to enhance all the environmental recovery work that is already taking place here in the Rio das Velhas basin... This is the way to work on local development and conservation in the territory."*

Ronald Guerra – Vice President of the Rio das Velhas Watershed Committee.



Patricia Daros, Director of Nature-Based Solutions at Vale, at the signing of the Technical Cooperation Agreement between Vale, IEF, and SEMAD. Photo: Diego Balestrin.

According to the IEF's South-Central Regional Supervisor, Ricardo Loschi, the implementation of the Environmental Regularization Program and the analyses of the Rural Environmental Registry, if successful, will elevate the level of environmental management in the territory.



Photo by Fernando Piancastelli.

*"We now have detailed knowledge, as a public agency, considering the productive and conservation characteristics of the property. With this, we can propose public policies, advisory programs for producers, including compensation for environmental services."*

Ricardo Loschi – IEF's South-Central Regional Supervisor.



Learn more about the interview. Point your phone's camera and access the website.

## Espírito Santo

Drawing on the experience acquired from the recovery of permanent preservation areas and water recharge areas on rural properties in the state of Espírito Santo, the Vale Natural Reserve was invited by the Institute of Agricultural and Forestry Defense of Espírito Santo to contribute to the definition of the regulatory framework for the Environmental Regularization Program of Espírito Santo (PRA-ES). A total of four workshops were held between March and August 2023 to discuss accepted restoration methods, species groups that could be used, and ecological indicators to validate forest restoration.



Photo by the Institute of Agricultural and Forestry Defense of Espírito Santo Collection.

Between March and August, a total of **4** workshops were held.



Photo by Agroicone Collection.

After a long participatory process, the Environmental Regularization Program of Espírito Santo was officially launched in August, with the presence of State Government authorities, the Brazilian Agricultural Research Corporation (Embrapa), the Brazilian Confederation of Agriculture and Livestock (CNA), companies, non-governmental organizations, and academia.

## Inclusive Restoration in Federal Protected Areas

In 2023, Vale signed a partnership with the Chico Mendes Institute for Biodiversity Conservation to support the Inclusive Restoration project, aimed at large-scale ecological restoration in Federal Protected Areas.

The initiative includes institutional arrangements, opportunity mapping, and stimulation of the production chain. The partnership, formalized through Technical Cooperation Agreement No. 83/2022, valid for 5 years, focuses on priority areas such as the Igarapé Gelado Environmental Protection Area (PA) and the Mata Escura Biological Reserve (MG). These Protected Areas, managed by the Chico Mendes Institute for Biodiversity Conservation, host endangered species of fauna and flora and already benefit from Vale's collaboration in ecosystem preservation.



Map of the areas of operation – Inclusive Restoration Project – Igarapé Gelado Environmental Protection Area (PA) and Mata Escura Biological Reserve (MG).



### The Vale Natural Reserve becomes a member of the Alliance

The Alliance for Restoration in the Amazon is a multi-institutional and multi-sectoral initiative established in 2017, with the overall goal of promoting, enhancing, and scaling up forest landscape restoration in the Brazilian Amazon.

**Goal** Coordinate multiple stakeholders for restoration in the Amazon as an integrated strategy for conservation with shared socioeconomic benefits.

**100** members

We participate in the working groups on: Research, extension, and bioeconomy of restoration.



Photo by Vagno Fernandes.

## Atlantic Forest Restoration Pact

With the aim of joining efforts to the multi-sectoral movement that seeks to drive the restoration of the Atlantic Forest biome, the Vale Natural Reserve became a signatory to the Atlantic Forest Restoration Pact (*Pacto pela Restauração da Mata Atlântica*) in December 2023. The purpose of this partnership is to unite forces with actors from various sectors, aiming to implement large-scale actions and outcomes with prospects for economic, social, and ecological benefits.

The Atlantic Forest Restoration Pact is a national movement that brings together actors from various sectors committed to the restoration of the Atlantic Forest biome. Since 2009, the Pact has operated strategically, coordinating and stimulating public and private institutions, scientific communities, and landowners to integrate

efforts and resources for generating results in forest restoration and biodiversity conservation.

Partnerships with the Atlantic Forest Restoration Pact and the Alliance for Restoration in the Amazon are aligned with Vale's Nature Strategic Positioning, aiming to influence transformative external agendas for positive outcomes in nature conservation. These actions help strengthen initiatives and highlight biome restoration on national and global forest restoration agendas.



**PACTO**  
PELA RESTAURAÇÃO DA  
MATA ATLÂNTICA

## Media and Communication Campaigns



Photo by Pedro Cattony.

The Vale Natural Reserve, through its conservation efforts, is featured in various company campaigns and stands out in media outlets interested in its local actions and partnerships with Protected Areas. In 2023, 371 news articles were published in the press, and 23 were shared through Vale's communication channels.

## Live Forest Campaign

### Life thrives within

The Live Forest Campaign (*Campanha Viva Floresta*) highlights Vale's role in conserving vast forested areas, focusing on the company's social and environmental assets. The campaign invites the public to explore these areas, either through in-person visits or remotely, emphasizing that they are dynamic and protected conservation spaces of immeasurable value.

The Vale Natural Reserve concludes the campaign with the concept "Life thrives within", showcasing the vibrant movements of the local fauna and flora, encouraging the public to experience a deeper connection with nature.

The campaign was broadcast in Espírito Santo through various media outlets, including TV, websites, radio, and digital platforms like Instagram, Facebook, and LinkedIn, as well as advertising structures such as billboards and fixed totems.



Photo by Vale Communications Department.



The campaign reached **3 million users**.

The posts were printed 6.1 million times, generating 2,400 interactions.

Cuidar das florestas hoje é transformar o amanhã de todos.  
vale.com/florestas  
Reserva Natural Vale, Linhares-ES.

Photo by Vale Communications Department.

television	138 placements 10,244,012 impacts;
radio	138 inserções 6,589,350 impacts;
internet	871,806 placements 4,596 clicks.

## Know to Preserve Campaign

With the Know to Preserve Campaign (*Conhecer para Preservar*), Vale won the regional award for the most important corporate communication prize in the country, the Aberje Award 2023, in the Organizational Sustainability category. This initiative introduced native edible species from the Atlantic Forest at the Vale Natural Reserve to the Brazilian public.

In 2022, the campaign Recipes from the Forest focused on species crucial to wildlife and local communities, such as Brazilian peppertree, cacao, and juçara palm, highlighting their roles in cuisine and crafts. Conducted through advertising, social

media, and external communications, the campaign won the Aberje Award 2022 in both the regional ES and national categories, using gastronomy as a means to discuss environmental issues and establish new connections with the public.



Photo by Vale Communications Department.

## Cameras in the Forest Campaign

Camera traps are important tools for monitoring nature, indicating the state of the environment and the wildlife it hosts. Since 2019, the Vale Natural Reserve has been using camera traps to monitor wildlife, recently expanding this practice to partnerships with the Forest Goal's Protected Areas. The footage from these cameras reveals a rich diversity of species, many of which are indicators of environmental quality and have been observed in these areas for the first time. These results highlight the relevance of the Vale Natural Reserve and the Forest Goal's partnerships for biodiversity conservation in the Atlantic Forest. In the Protected Areas, several species have been identified through wildlife surveys, including birdwatching, camera traps, and other methods. Some of these species are considered rare and endangered, including jaguars, pumas, ocelots, capuchin monkeys, and jaguarundis.

Capturing images during monitoring was crucial for including some of them in the species list for the area.



Photo by Daniel Zanuzzio

### Characteristics of camera traps surveys:

1. Important tools for wildlife inventories;
2. Non-invasive and highly efficient collection method, providing accurate identification for most species;
3. Important for nature research and conservation;
4. Many animals, including birds and mammals, are recorded by these cameras;
5. Monitoring of animal behavior and species interactions;
6. Discover the distribution territories.



Recording of a puma (*Puma concolor*) in the União Biological Reserve.

### União Biological Reserve (RJ)

- Total of 114 wildlife species;
- 3 of these species are listed as endangered by the IUCN;
- 32 animals were recorded at the site with the use of the cameras.



Learn more. Point your phone's camera and access our Instagram.



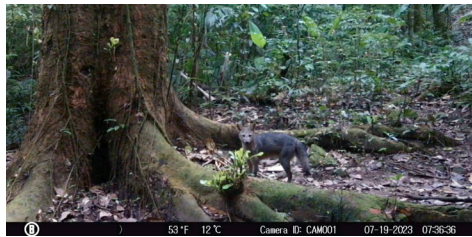
Puma (*Puma concolor*) at the Mata Escura Biological Reserve.

### Mata Escura Biological Reserve (MG)

- Total of 181 wildlife species;
- 6 of these species are listed as endangered by the IUCN;
- 34 animals were recorded at the site with the use of the cameras.



Learn more. Point your phone's camera and access our Instagram.



Crab-eating fox (*Cercdocyon thous*) at the Cunhambebe State Park.

### Cunhambebe State Park (RJ)

- Total of 95 wildlife species;
- 15 of these species are listed as endangered by the IUCN;
- 30 animals were recorded at the site with the use of the cameras.



Learn more. Point your phone's camera and access our Instagram.

Other conservation units, such as the Serra das Torres State Natural Monument, the Duas Bocas Biological Reserve, and the Augusto Ruschi Biological Reserve, are also involved in the project and have achieved excellent results, receiving significant attention in local media.

### Management Structure of the Natural Resources and Protected Areas Department

Eduardo de Salles Bartolomeo  
President of Vale

Maria Luiza de Oliveira Pinto e Paiva  
Executive Vice President of Sustainability at Vale

Hugo Guimarães Barreto Filho  
Director of Climate, Nature, and Cultural Investment at Vale

Patrícia Fagundes Daros  
Director of Nature-Based Solutions at Vale

Márcio Elias dos Santos Ferreira  
Manager of Natural Resources and Protected Areas

Fernando Calheiros de Moraes Junior  
Administrative Supervisor of the Natural Resources and Protected Areas Management

### Natural Resources and Protected Areas

Administration:  
André Neves, Cássia Amaro, Erica Andrade, Fernanda Klein, Felipe Fernandes, Jennifer Rangel, Josana Sagrillo and Vitor Castro

Biodiversity:  
Ana Karine Peixoto, André Cardoso, Débora Mendonça, Diego Balestrin, Natalia Paes, Sayonara Cometti and Tiago Godinho

Maintenance of Green Areas and Living Collections:  
Miguel Effgen

Infrastructure:  
Humberto Cerri e Rodrigo Moulin

Herbarium and Scientific Collections:  
Geovane Siqueira

Public use:  
Emanuelle França, Fernanda Cravo, Jackeceli Falqueto, Lais Pego, Mariana Senna, Rayany Batista and Viviane Fassarella  
Ecological Protection:

Adeildo Hartuique e Leila Possatti

Seedling Nursery:  
Ernesto Sakai e Jonacir Souza

Health and Safety:  
Marilete Abadi

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Emanuelle França

Review:  
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