
ANNUAL ACTIVITY
REPORT 2019

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LETTER FROM THE PRESIDENT



At the end of 2019, we could count on some good news in the context in which we operate here in the middle of Rio Doce.

The terrible drought that has plagued us in recent years, especially the one observed between 2014 and 2016, seems to be behind us. We had well distributed rains practically throughout the year, with 28% of them occurring in the driest season in the region, which occurs between May and September.

Although it didn't rain much at the end of the year, from October - when the planting season begins - it was possible to advance some planting to be completed the following year. In addition, the better distributed rain allowed us to start planting our yellow peroba (*Paratecoma peroba*) orchard. The first genetic bank within Instituto Terra received 800 seedlings from 40 different matrices that today occupy just over 1.2 ha of RPPN Fazenda Bulcão.

The year of 2019 served to deepen the reflection on experiments of natural regeneration and direct seeding, both with not very encouraging results. The consultancy of Professor Sergius Gandolfi, MsC and PhD, professor at ESALQ - Luiz de Queiroz School of Agriculture, University of São Paulo, and a member of his LERF - Laboratory of Ecology and Forest Restoration, helped us to rethink a project of enrichment of Fazenda Bulcão through the direct planting of seedlings, culminating in the presentation of a conceptual project at the end of the year.



Still inspired by this need to extend the Institute's vision a little more to the medium term, we held a Seminar within the scope of our Directing Board to define the Strategic Guidelines for a period of at least three years, defining, at the end of the discussions, six axes to be deployed in projects and plans from 2020

The first of them came from the inspiration of the founders of the Terra Institute, Lélia and Sebastião Salgado, when they stated at one of the Board meetings that, currently, the institution's biggest project is the protection and restoration of springs of water in the Rio Doce valley.

Starting from this ambitious and challenging vision of bringing water back to all the streams in the valley, we started to restructure the project in two ways. In the first, we will start working on a concept of micro-basins so that we can better measure their impacts on the region. In the second aspect, the idea of adding to the already existing environmental demands those of a socio-economic nature, as it is important to rescue the value of the land for the current owners and their dependents, demystifying the idea that conservation or forest restoration is incompatible with the income generation on your property.

The need to improve the technical-scientific standard of Instituto Terra's forest restoration actions was also evident. To this end, we must strengthen the relationship with Universities and Research Centers, in Brazil and abroad. In addition to giving more fundamentals to the fieldwork, this relationship should be made in order to improve the development and training of our internal employees.



Strengthening the Instituto Terra brand and recognition was another need pointed out by the discussions, increasing the dissemination of the Institute's actions to different audiences, and not only in Brazil. Publicizing our actions, supported by the credibility they have gained over 20 years, will also help to improve the awareness of these audiences about issues that precede ecological restoration, such as forest conservation and the value of standing forests. In addition, of course, to draw the attention of the population in general to the increasingly relevant topic of climate change.

Based on the accumulated experience in the management of the RPPN Fazenda Bulcão, of reviving a forest in degraded land, and considering the extent of degraded lands in the entire region of the Rio Doce, the permanent objective of Instituto Terra was to consolidate the restoration of our RPPN.

More than that, using this experience to demonstrate that the sustainability journey of a forest rebuilt from scratch can serve as an example, not only in the Rio Doce valley, but also in other biomes. It is never too much to remember that in the Brazilian iNDC - which reflects each country's ambitions to reduce domestic emissions - there is a commitment to restore 12 million hectares of degraded land.

Last but not least, we also deal with the theme of Environmental Education. Not as an isolated theme, but as a Mission that works across the Board and permeates all of our policies, projects and activities. We have a relevant role in training qualified labor for forest restoration work, with almost 200 technicians trained within the Institute.

Having a permanent concern to update the curriculum of the course, making the theme of environmental education a relevant issue for the school networks of our region. It is fundamental to bring knowledge that supports the rural extension work to the owner-partners of our projects.

For this to happen, nothing is more important that we incorporate in our management model the opportunity to “learn by doing” that Instituto Terra offers, to train and develop all the people in our staff.

Finally, I want to take this opportunity to thank all those who were with us last year, partners and sponsors, individual and corporate donors, members of the boards who volunteered at various times to continue this work, to those who volunteered in the form of “Pro bono” with relevant and fundamental services so that the work of the institution could flow, to our suppliers of goods and services and also to the members of our executive board, managers and employees who, in offices or in the field, sweated their shirts and worked for the Terra Institute.

Thank you all very much.

Jose Armando de F. Campos
President of the Directing Board
Instituto Terra

HIGHLIGHTS OF 2019

Restoration Technologies focus on the rescue of biodiversity

In 2019, Instituto Terra promoted intense studies and actions to improve the reforestation of the Atlantic Forest area that has been in the process of recovery since 1999 at PRNH Fazenda Bulcão, with its headquarters in Aimorés-MG. It also focused its efforts on ensuring the continuity of the biodiversity present in this important biome for future generations.

With the support of foundations, companies and individual donors, in 2019 the cycle of reforestation conducted using the technique of natural regeneration ended and intensified actions for a more biodiverse restoration, resuming with the restoration based on the planting of seedlings (active restoration).

The objective is to place, as soon as possible, all areas of the PRNH on an ecological trajectory that provides security to the perpetuity of the planted forest. The entire forest will receive, over the next few years, other plantations to accumulate species occurring in the region (enrichment), with the objective of making the PRNH Fazenda Bulcão a sanctuary of native species of the Atlantic Forest in the Doce River Valley region.

The actions taken to restore the Atlantic Forest also include ensuring the preservation of species that are currently at risk of extinction. The project initiated in 2018 with the formation of a germplasm bank with emblematic native species of this biome was continued in 2019, with the objective of creating a granary of enormous socio-environmental importance for the region of the Doce River Valley, with the establishment of orchards with species that are at risk today, such as the yellow Peroba (*Paratecoma peroba*), the Vinhático (*Plathymentia reticulata*), among others.



The activities carried out in the forest restoration area are always associated in some way with the environmental education initiatives promoted by the institution. An example of this exchange of knowledge, at the PRNH Fazenda Bulcão, is a beekeeping initiative - of a collection of bees that don't sting -, the implementation of beekeeping courses, open to the community. Partners in the initiative were the National Rural Learning Service (SENAR Minas) and the Union of Rural Producers of Aimorés.

On the occasion, students from the Center for Studies in Ecosystemic Restoration and Instituto Terra employees, as well as interested members of the local community, could learn more about the biology, breeding and specificity of native bees. The course must be included in the institution's annual calendar of activities. Stingless bees live in colonies and are considered excellent pollinators of native plants. For this reason, they have a high ecological and economic importance within the context of the preservation of the Atlantic Forest.

You can view these and other projects carried out throughout 2019 on the following pages.

NURSERY

- **55,270** seedlings of **44** species native to the Atlantic Forest produced, with **4,860** seedlings having been planted in the PRNH Fazenda Bulcão, headquarters for the institute in Aimorés-MG.
- **6,075,903** is the total number of seedlings of **297** different native species produced by Instituto Terra from 2002 to 2019.

EDUCATION

- **15** technicians were capacitated in recuperation of degraded areas and protecting natural springs, totaling **192** students that graduated from Instituto Terra since 2005, coming from **59** municipalities in Minas Gerais and Espírito Santo.



PROTECTION OF NATURAL SPRINGS

- In 2019, the Olhos D'Água Program promoted the technical follow-up and monitoring of **357** natural springs to ensure data collection and performance in the environmental recovery actions already carried out in the water sources.
- **1,960** is the total number of natural springs protected since 2010 through Olhos D'Água Program, directly serving **1,049** rural properties in **34** municipalities in the Doce River Basin, **22** in Minas Gerais and **12** in Espírito Santo.

VISITORS

- **9,064** was the total number of visitors received at PRNH Fazenda Bulcão, headquarters of Instituto Terra, in 2019. With **6,380** spontaneous visits and **2,684** scheduled visits. There were teachers, students, journalists, researchers, professionals in the environmental field, as well as tourists from Brazil and other countries
- Since it was founded in 1998, PRNH Fazenda Bulcão has received **139,236** visitors.

DONATIONS

- A total of **R\$ 1,927,000.00** in 2019, coming from personal donations to donations from other institutions.





WHO WE ARE



Instituto Terra is a private entity set up in the form of a non-profit civil organization. Founded in April of 1998 by Lélia Deluiz Wanick Salgado and Sebastião Salgado, its mission is to encourage sustainable development through the recovery and conservation of forests, environmental education and the correct use of natural resources.

It is located in the municipality of Aimorés-MG, and operates primarily in the Doce River Valley region, between the states of Minas Gerais and Espírito Santo. Instituto Terra manages Fazenda Bulcão, with a total area of 711.84 hectares, of which 608.69 constitute the first Private Reserve of Natural Heritage (PRNH) of the State of Minas Gerais created in a degraded area. It has the title of Advanced Post of the Biosphere Reserve of the Atlantic Forest, and also the titles of state public utility by Minas Gerais (2005) and by Espírito Santo (2011), and municipal, by Aimorés (1999).



PRNH Fazenda Bulcão is an Outpost of the Atlantic Forest Biosphere Reserve.



MISSION

Encourage sustainable development through the recovery and conservation of forests, environmental education and the correct use of natural resources.

VISION

Become a national reference in:

- ecosystem restoration of degraded areas of the Atlantic Forest in the Doce River Valley;
- production of native Atlantic Forest seedlings;
- environmental education for children and youth, and;
- NGO management.

OUR VALUES

To achieve our vision and mission, we operate with the following values:

- That our work contributes strongly to the improvement of the living conditions of living beings;
- Having respect for ethical and moral precepts must be above any and all personal interests or advantages;
- Transparency must be the keynote of all our actions;
- Our partners are entitled to solutions that contain the best technical and managerial knowledge available, at the lowest prices compatible with the proper execution of activities and the survival of our institution;
- We must seek continuous improvement of technical and managerial knowledge, as well as its formalization, with a view towards improving our internal processes and transmitting it to other organizations;
- We cultivate an environment where cooperative work and confrontation of ideas prevail (respect for opinions), favoring creativity and initiative, and;
- Our career plan model is based on performance, seniority and knowledge criteria.



FIELDS OF ACTION

- Ecosystemic restoration;
- Production of Atlantic Forest seedlings;
- Environmental extension;
- Environmental education, and;
- Applied research.

Our objectives are divided according to their temporality, assuming two perspectives: permanent (purposes to be pursued continuously and uninterruptedly in the pursuit of achievements) and situational (purposes imposed by changes in the environment, resulting from new conjunctures of internal or external factors).

The tool used for the establishment and monitoring of objectives is the Balanced Scorecard, an instrument developed by professors from Harvard, Kaplan and Norton, in 1992, which allows a clear and articulated view of all the work of Instituto Terra.

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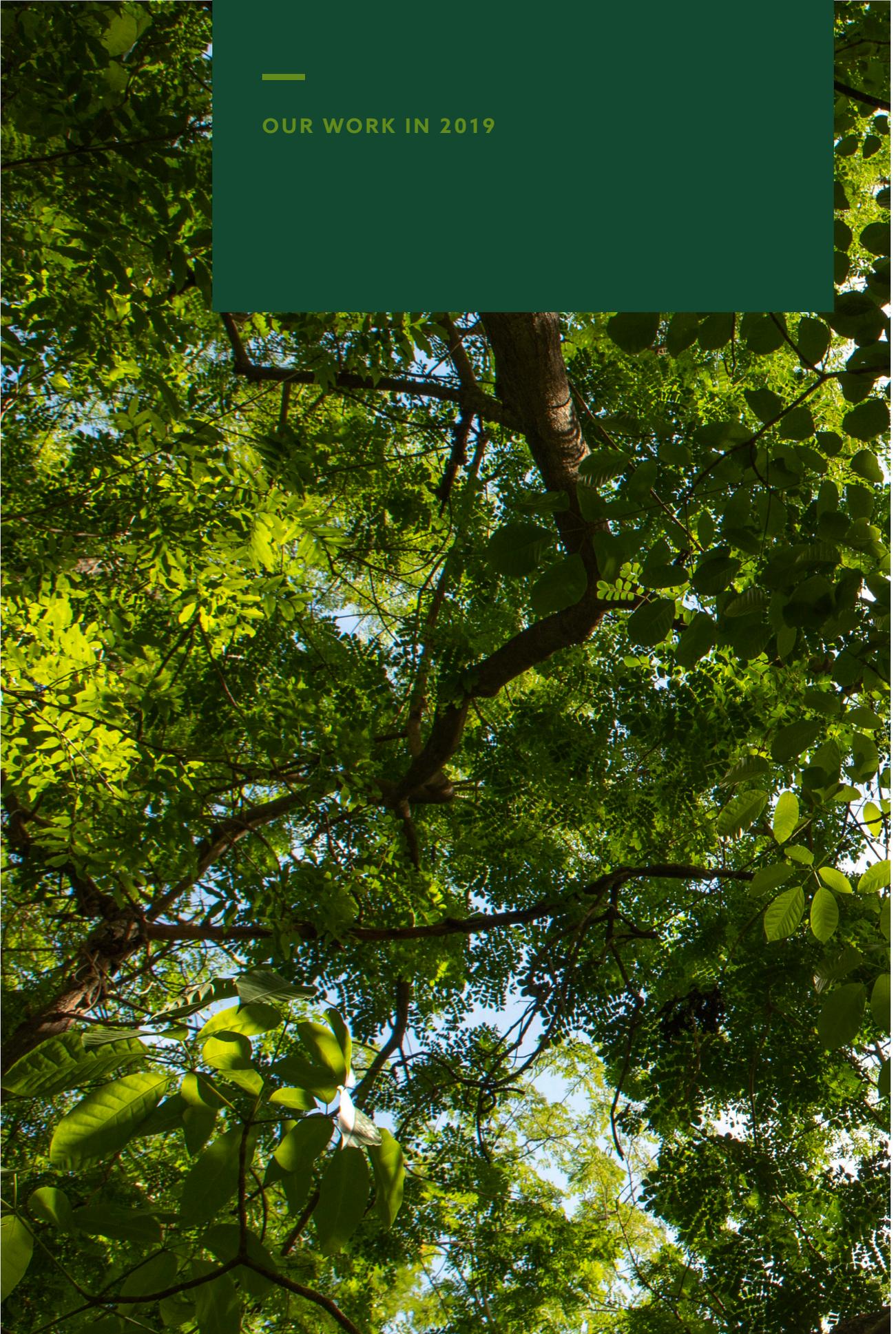
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WHERE WE OPERATE

Our geographic field of priority action is the Doce River Valley, which extends between the states of Minas Gerais and Espírito Santo, reaching 229 municipalities - 26 in Espírito Santo and 203 in Minas Gerais. The region has an area of 82,646 km².

OUR WORK IN 2019





FOREST



INSTITUTO TERRA ADOPTS NEW TECHNIQUES TO EXPAND PLANTED FOREST DIVERSITY

The year 2019 allowed Instituto Terra to promote numerous actions aimed at enriching the forest planted at its headquarters, the PRNH Fazenda Bulcão. The reforested area received over 6,360 seedlings of native species from the Atlantic Forest in the year.

44 species were prioritized, including gurindiba (*Trema micranta*), capixingui (*Croton floribundus*), ingá-branco (*Inga laurina*), which provide shade for species of long-lived trees and food for fauna, in addition to the garapa (*Apuleia leiocarpa*), gibatao (*Astronium graveolens*) and sapucaia (*Lecythis pisonis*), which are species of long life in the forest, therefore, they give sustainability to it.

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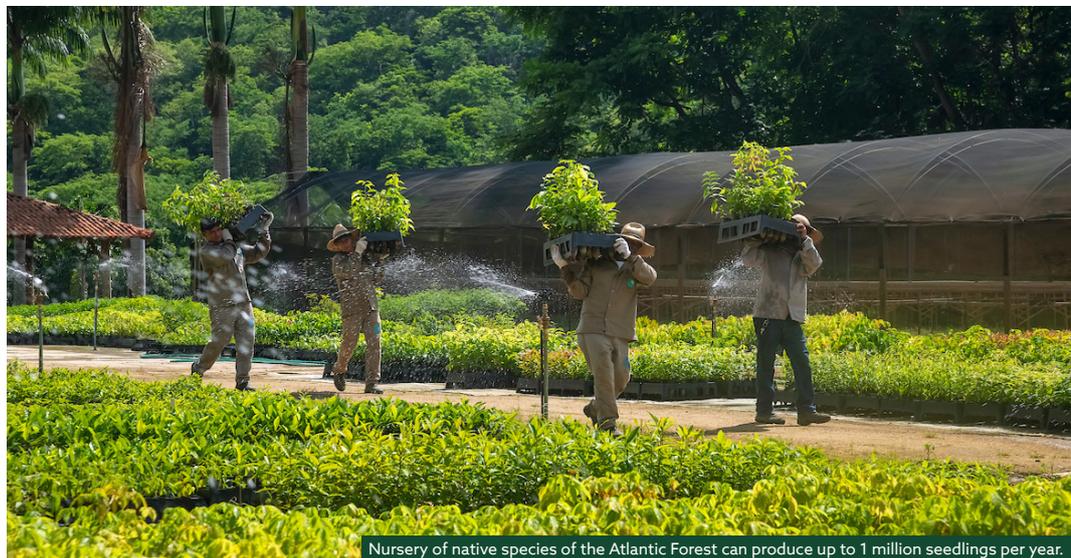
The beginning of 2019 also marked the end of experiments in conducting natural regeneration through maintenance with crowning, mowing, fertilizing and ant control, carried out on a 32-hectare plot within the PRNH.

We evaluated the efficiency of the technique of conducting natural regeneration in terms of its ability to restore the area in question and due to the poor results. It was possible to verify the need for a greater intensity of actions for a more effective and biodiverse restoration. The number of trees that occurs naturally in the area has not yet been sufficient to guarantee full coverage of the soil and there are few trees nearby that can provide seeds for natural regeneration.



Based on this information, Instituto Terra decided to resume with the restoration based on the planting of seedlings, that is, with the active restoration. The technique used in these plantations aims at consolidating the forest restoration carried out in the last two decades in the PRNH, within the concept that the forest reaches a level where it will no longer need future interventions to perpetuate itself. This enrichment model should be adopted for the entire area planted in the Reserve, also aiming to increase the diversity of species that can make the PRNH Fazenda Bulcão a sanctuary for native species of the Atlantic Forest in the region of mid-Doce River.

The planting phase also incorporated new features throughout 2019, such as the opening of cradle in a semi-mechanized way, up to 70 centimeters deep, which made it possible to open up to 250 cradles per person per day, improving physical conditions (disruption of layers compacted) and chemical (nutrient incorporation) of the soil at a greater depth (70 cm instead of 40 cm previously practiced), so that the seedlings expand their roots more deeply. Also used were softening (small excavation around the planted seedling in order to accumulate more rainwater close to the roots) and the allocation of straw close to the seedlings after planting. This makes the surrounding soil moist for longer, promoting a reduction in soil temperature and allowing for better root growth, as well as the biological activity of soil microorganisms.



Nursery of native species of the Atlantic Forest can produce up to 1 million seedlings per year.



THE CHALLENGES OF RESTORATION

Forest restoration requires overcoming challenges ranging from fundraising to planning, execution and ecological monitoring. One of the biggest concerns is the water conditions in the region where reforestation actions are implemented. In Aimorés, the rainy season, which usually starts in October, is a long-awaited season, as that is the best time to plant.

The planting of the seedlings should take place as close as possible to the beginning of this season so that the plants receive enough rainwater for rooting and growth, and can withstand a summer period, when a low rainfall index combines with very high temperatures, and when this period has expired - which normally occurs in the month of January -, the plants can receive the last rains of the season, between February and March to later resist the driest months of the year - which in the region of the mid-Doce River can last between seven and eight months.

The rains observed throughout 2019, mainly between October and December (beginning of the rainy season), provided adequate and continuous soil preparation, as well as favoring the planting of seedlings in the ideal humidity condition for the development of the seedlings. Taking advantage of the good rainfall of the year, native Atlantic Forest seedlings were planted in the understory of exotic invasive trees occurring at PRNH Fazenda Bulcão.



Plantings are done annually in the rainy season.

The choice of exotic trees planted at the beginning of reforestation actions at Fazenda Bulcão, in arid and degraded land, were chosen precisely to support the future establishment of native trees, providing shade and also to help break up the soil compacted by the old pastoral activity. After the native trees are established, and their functional mission is fulfilled, exotic species are eradicated, as their permanence interferes with the development of native biodiversity.

CLIMATE - RAIN FALL COMPARISON 2019 VS 2018

PERIOD	2018 mm of rain and %	2019 mm of rain and %
JANUARY TO APRIL	40.4 /8	207/36
MAY TO SEPTEMBER	17.2/3	162/28
OCTOBER TO DECEMBER	466.2/89	207.4/36
TOTAL	523.8/100	576.4/100





SOIL CONDITIONS

When it received its first plantings in 1999, the soil of PRNH Fazenda Bulcão had low water and nutrient retention capacity and low fertility. Restrictions that have been overcome through the application of organic and chemical fertilizers, aiming at water retention and the balanced supply of nutrients that plants need for rapid development.

Another major challenge in the planting area is the high incidence of leaf-cutting ants, which demonstrated that the place was unbalanced, as these insects cut the vegetables that are "sick" so that the system can renew itself. The ant population is being maintained at acceptable levels for restoration through the application of low-toxic chemical baits, and this will be done for up to two years, when the system is expected to become more balanced.





VISIT TO FOREST RESTORATION AREAS TO EXCHANGE KNOWLEDGE

PRNH Fazenda Bulcão works as a laboratory for applied research on restoration of degraded areas of the Atlantic Forest. Through studies, observations, tests and external visits, techniques are developed or adapted to consolidate ecological restoration.

As a way to better visualize the ecological processes in forests of different ages and to be able to anticipate making decisions about the best routes so that the forest reaches a point where it is permanent and self-sustainable, a team from the Environmental area of Instituto Terra visited areas reforested in different locations and aged between 10 and 60 years, in municipalities around Campinas-SP. The technical visits were coordinated by professor and researcher in restoration Sergius Gandolfi, who showed in each unit visited the indicators that indicate whether a forest has well-developed ecological restoration processes or not.

The information collected allowed the incorporation of new techniques and the planning of a conceptual project to be applied in the consolidation of the ecological restoration of PRNH Fazenda Bulcão.



With the restoration, PRNH Fazenda Bulcão is today a refuge for beautiful specimens of fauna, such as jaguar (Leopardus pardalis).



GENETIC BANK TO PRESERVE ENDANGERED SPECIES



Instituto Terra strengthened in 2019 the actions to create a germplasm bank, to conserve genetic material of the species of the Atlantic Forest, especially from the mid-Doce River region, and which constitutes an essential tool for the conservation of the planet's biodiversity.

The initiative started in 2017, under the guidance of forest engineer Renato Moraes de Jesus. He started with a survey of older residents of the mid-Doce River region, to find out which native tree species they perceived as very rare today. From this simple field research, 11 species were identified, namely: Braúna, Peroba-rosa, Peroba-Amarelo, Parajú, Angico-curtidor and Angico-Vermelho, Gibatão, Jequitibá-rosa, Vinhático, Jacarandá and Pau-brasil.

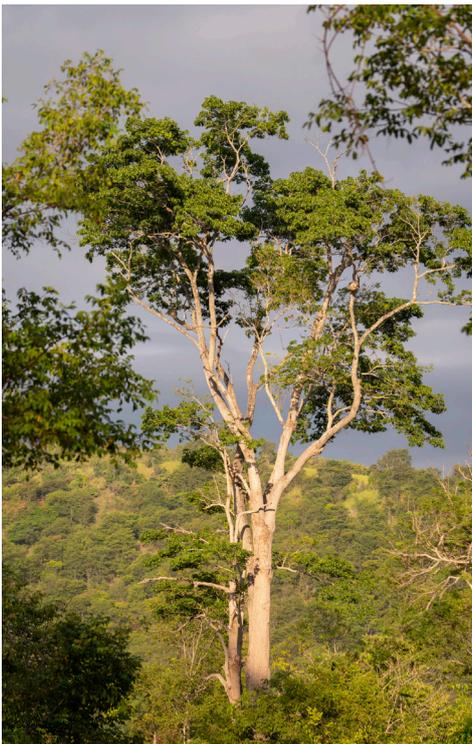
The original list underwent a new technical analysis, which highlighted five priority species to support the start of the actions, considering the relevance in number of citations or economic importance. They are: Angico-Vermelho (*Anadenanthera colubrina*), Angico-tanner (*Anadenanthera peregrina*), Peroba-Amarelo (*Paratecoma peroba*), Jequitibá-rosa (*Cariniana legalis*), and Vinhático (*Plathimenia reticulata*).





Finally, in 2018, Instituto Terra started the formation of a germplasm bank with native species, choosing as the first species to be planted the most emblematic in the Atlantic Forest microregion, where the PRNH Fazenda Bulcão is located. The decision was made for the production of Peroba-Amarelo seedlings. In 2019, the activities related to this project involved preparing the soil for planting scheduled for the beginning of 2020.

The idea of turning Instituto Terra into a species storehouse, some considered rare, of enormous socio-environmental importance in the region of the Doce River Valley, culminated in the strategy of creating "orchards" with an area between 0.5 ha and 1.0 ha for each species, ensuring good genetic variability with a careful selection of matrices. Orchards will initially be implanted at PRNH Fazenda Bulcão, but there is the purpose of seeking institutional partners outside the limits of Instituto Terra to ensure the preservation of these species, increase safety and reduce the risk of loss due to fire or illness. These orchards will also serve as a shelter for forest biodiversity and for the promotion of better local environmental conditions.



*The first steps of Instituto Terra's genetic bank of Atlantic Forest species are being taken with the **yellow Peroba (Paratecoma peroba)**. Popularly known as *ipe-peroba*, *peroba* and *peroba-do-campo*, it is an early or late secondary species of emerging trees. It reaches over 40 meters in height, being terrestrial, annual, deciduifolia and hermaphrodite, and has anemochoric dispersion syndrome. It has a generation time of approximately 15 years. It develops in seasonal semi-deciduous forests and lowland wet forests. The species occurs in the states of Minas Gerais, Espírito Santo and Rio de Janeiro, in an area of up to 50 meters in altitude. Despite being protected by some conservation units (SNUC) and used in forest restoration plantations, it is a species with a history of intense exploitation due to its high wood potential, mainly for the manufacture of fine furniture. Today it is considered possibly extinct in the State of Rio de Janeiro.*



INCREASING CARBON STOCK IN PLANTED FOREST

In September 2019, Instituto Terra promoted, in partnership with Plant Inteligência Ambiental, a survey of carbon stocks in the forest biomass of PRNH Fazenda Bulcão. The students of the 2019 class of the Center for Studies in Ecosystem Restoration at Instituto Terra and employees of the institution also participated in the activities and were able to learn about the importance of this measurement. The study showed that conservation actions at Fazenda Bulcão are being effective for the maintenance and increase of their carbon stocks, considering the increase of 4.4% between the years 2013 (100,355 tCO₂) and 2019 (104,771 tCO₂). In order to have an idea of this accumulated CO₂ stock since the beginning of the plantations in the PRNH until 2019, it is possible to mention that it would be able to offset the CO₂ emission caused by 49 thousand round-trip air travels between São Paulo and Paris.

Georeferencing of PRNH Fazenda Bulcão

An instrument adopted by INCRA as a way to standardize the identification of rural property, the georeferencing of PRNH Fazenda Bulcão, with the recognition of the geographical coordinates of its perimeter and confrontations, had its process carried out in 2019. The land now has a precise delimitation and standardized nationally, which is allowing to update official documents, with images and maps.



ENVIRONMENTAL EDUCATION





KNOWLEDGE SHARED IN THE FIELD

Since the beginning, Instituto Terra has associated forest restoration actions with educational activities, aiming to promote a new environmental awareness in the region of the Doce River Valley, based on the recovery and conservation of the environment in a way associated with agricultural production and improvement quality of life in rural areas.

All the projects carried out aim to share the knowledge acquired over more than 20 years in the reforestation of degraded areas of the Atlantic Forest. The initiatives involve different audiences and teaching models, bringing together farmers, students, teachers, community leaders, professionals and technicians from companies and governments active in the environmental issue, as well as the population of the communities served. Check out some of the projects developed throughout 2019.



BEES AS ALLIES OF FOREST RESTORATION

At Instituto Terra, stingless bees have become important partners in the work of reforesting the Atlantic Forest. Since May 2019, a meliponary - a collection of stingless bee hives (Meliponines) of various types - has been installed at the institution's headquarters, in the reforested area of PRNH Fazenda Bulcão.

Also known as land bees, indigenous bees, native bees or Brazilian bees, stingless bees live in colonies and are considered excellent pollinators of native plants. For this reason, they have a high ecological, economic and even aesthetic importance.

All activities related to meliponiculture are being conducted by students from the Center for Studies in Ecosystem Restoration (CSER) of Instituto Terra. They are newly trained agricultural, environmental, and forestry technicians who, during a one-year period, in a semi-boarding school, participate in the restorative activities developed by Instituto Terra in the region and in the PRNH itself, within the Training Course for Agents in Ecosystem Restoration, offered free of charge annually. .

"If bees are important to the forest, they are important to the entire network of animals that live here as well. In addition, because they are a docile species and without risks for people, we can, through environmental education activities, inform about the importance of preserving native bees", explains Educational Advisor at Instituto Terra, Andressa Catharina Mendes Cunha.



For Andressa Catharina, this work initiated by Instituto Terra, and which is already practiced by honey farmers in Brazil, is very important to encourage the preservation and creation of native bees, and thus protect them from extinction. "We will thus be contributing, not only to the survival of the human species, but to the entire network of pollination and strengthening of native forest species, and consequently to the production of food and the survival of fauna," she says.



In 2019 the Institute held a meliponiculture course, open to the community, through a partnership with SENAR Minas and the Union of Rural Producers of Aimorés. On this occasion, CSER students and Instituto Terra employees, as well as interested members of the local community, could learn better about the biology, breeding and specificity of native bees. The course must be included in the institution's annual calendar of activities.

The species present in the hives of Instituto Terra are the following:

TRIGONAS GROUP

- Iraí (*Nannotrigona testaceicornis*)
- Jataí (*Tetragonisca angustula*)
- Lambe-Olhos (*Leurotrigona muelleri*)
- Mirim (*Plebeia droryana*)

MELÍPONAS GROUP

- Mandaçaia (*Melipona quadrifasciata*)
- Manduri amarela (*Melipona marginata Rufis*)
- Uruçu amarela (*Melipona mondury*)



The installation of the meliponary, with the collection of stingless bee hives, was attended by NERE students.



LEMARCHAND AND GENEVOISE DE BIENFASANCE FOUNDATIONS SUPPORT TRAINING FOR ENVIRONMENTAL RESTORATION AGENTS

The struggle for environmental balance has no boundaries. Headquartered in France, the Lemarchand Foundation is an important promoter of Instituto Terra's actions in the recovery of the Atlantic Forest and the Doce River. Over the past few years, it has already supported actions for reforestation and defraying institutional expenses that are not covered by the projects carried out by the Institute. In 2019, it again allocated resources, this time to support the continuity of the training of new students in the "Ecosystemic Restoration Agents" training course.

A family founded philanthropic organization created 11 years ago with the mission of supporting projects that aim to reconnect man to nature, the Lemarchand Foundation has committed itself to allocate 27 thousand Euros per year, between 2019 and 2021, to guarantee the training of three students in each class of the Center for Studies in Ecosystem Restoration (CSER).

"We believe that education is the only way to have a truly positive impact on our human ecological practices and therefore on our environment in the long term," said Laure Fourteau-Lemarchand, of the Lemarchand Foundation. Laure points out that by teaching new generations how to live in a way that does not harm the environment and even restore ecosystems, Instituto Terra is building a new way of thinking about our relationship with nature.

"This is exactly what the Lemarchand Foundation aims to do: make the relationship between man and nature harmonious again", he adds. "We hope that these young people who graduate from Instituto Terra's program will be the local leaders of tomorrow, be able to further disseminate these new practices and convince their peers of our vital need to have a respectful relationship with Nature", justifies Laure Fourteau- Lemarchand.



INSTITUTOTERRA



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In 2019, the Center for Studies in Ecosystem Restoration also received support from the Fondation Genevoise de Bienfaisance Valeria Rossi di Montelera, of Switzerland, which allowed the offer of education for eight students, out of a total of 15 trained in December 2019 by CSER. The Swiss-based Foundation aims to provide assistance to lay and ecclesiastical people and institutions that seek to promote charitable and public service actions in Geneva and abroad; encourage artistic and scientific production, granting scholarships in particular.

Training in the recovery of degraded areas of the Atlantic Forest and protection of springs is one of Instituto Terra's main initiatives in the area of Environmental Education. Offered free of charge since 2005, the training is aimed at newly trained agricultural, agribusiness, environmental and forestry technicians, and has already trained more than 190 technicians. These young people learn in practice, participating in the projects developed by Instituto Terra in the area of reforestation, protection of springs and sustainable rural development. With 20 vacancies offered annually, the course works in its own structure at PRNH Fazenda Bulcão, which has the capacity to accommodate students free of charge during the training period, which lasts one year. They are able to act as incentives for sustainable rural development, helping small rural producers in their cities of origin.



INSTITUTO TERRA STUDENTS PARTICIPATE IN A PROJECT FOR THE ENVIRONMENTAL ADAPTATION OF A REFRIGERATOR

A school in which students learn in practice to recover degraded areas of the Atlantic Forest. This is how the Center for Studies in Ecosystem Restoration (CSER) at Instituto Terra works, which between July and August 2019 provided young residents with direct participation in the development of a project for mitigation and environmental recovery, forest enrichment and landscaping for the local meat packing company Boi Gordo, from Aimorés-MG.

Technicians undergoing training in the CSER course had the opportunity to participate in activities such as the implantation of thick vegetation, enrichment of the legal reserve, landscaping in the administrative area and in the industry area, and environmental education actions for the company's internal public.

For the creation of the vegetable curtain and its density, in the surroundings of the area of the enterprise, 45 seedlings of different native species were planted, in addition to another 1,200 seedlings of the "sanction-of-the-field" species, meeting the technical guidelines of the environmental licensing process of the company. CSER students also presented a lecture to the internal public of the meat packer on the theme: "Basic Notions of Environment and Sustainability".



IN PARTNERSHIP WITH SUZANO, AGRICULTURAL SCHOOL STUDENTS PAY A TECHNICAL VISIT TO THE PRNH FAZENDA BULCÃO

One of Instituto Terra's missions is to replicate the knowledge acquired in the recovery of degraded areas of the Atlantic Forest in the Doce River Valley. In this sense, 35 students from the rural area of the Family Agriculture School of Setúbal (FASSET), in Malacacheta-MG, participated, in October 2019, in an intensive course on ecosystemic restoration and implantation of native seedling nurseries in the Atlantic Forest at the PRNH Fazenda Bulcão itself, headquarters of the environmental NGO in Aimorés-MG.

The creation of native stingless bees (Meliponiculture), the use of GPS and exchange activities with students from the Center for Studies in Ecosystem Restoration (CSER), of Instituto Terra, were also part of the activities. "The objective was to enrich FASSET's socioenvironmental education activities, with content that can be replicated in the regions of origin of each student", explains Andressa Catharina Mendes Cunha, CSER's Educational advisor.

The technical visit was the result of a partnership between Instituto Terra and Suzano, for the Nascentes do Mucuri (Natural Springs of Mucuri) project. The FASSET director, José Carlos Lopes Pereira, the technical coordinator Chanderson Ernani, and the technicians of the Nascentes do Mucuri Project, Ivan Pereira Nery and Adilana Alves Pinto, participate in the activities together with the students.



COURSE ADDRESSES MONITORING OF FOREST RESTORATION FOR ADAPTIVE MANAGEMENT

Instituto Terra, in partnership with UN Environment and ELTI (Environmental Leadership & Training Initiative), developed from March to November 2019 a course on processes and indicators that govern the monitoring of forest restoration areas. The content involved knowledge about ecological, biophysical and social processes of monitoring landscape restoration, as well as the development of individual monitoring and adaptive management plans. The activities were carried out online in a first phase, in the first semester of 2019, and in person at the end, in November.

The course served an audience made up of 20 specialized professionals - including consultants, specialists, extension workers, managers of government agencies, the private sector and third sector institutions - involved in forest landscape restoration projects in different Brazilian biomes. The course was attended by experts from the Yale University network of partners, who produced the teaching material, as well as mentors from ELTI, the Institute for Ecological Research (IPÊ) and invited speakers.



ENVIRONMENTAL RECOVERY AS AN ACTIVITY TO SERVE SENTENCES FOR MINOR CRIMES

Since 2018, in Aimorés, Minas Gerais, those who receive penalties for crimes of a less serious nature, mainly related to the environment, and that can revert in providing services to the community can serve the sentence working in activities aimed at environmental recovery among those promoted by Instituto Terra.

Throughout 2019, 19 prisoners were served by Instituto Terra, thanks to the partnership signed with the Prosecutor's Office of Aimorés, linked to the Public Ministry of Minas Gerais. In all, from the beginning, 30 people were assisted.

The initiative has been widely accepted as a model for serving alternative sentences. The agreement allows prisoners to participate in various actions, such as working in the seedling nursery and helping with spring protection activities. The partnership brings gains for the recovery of the environment while integrating the community with environmental education.



SEMINAR DEBATES SUSTAINABILITY OF THE DOCE RIVER VALLEY

Instituto Terra in partnership with Sebrae-MG and the Canadian Embassy promoted the "FuturACTION Seminar - a step towards the sustainability of the Doce River Hydrographic Basin". The event was held in October 2019, at Cineteatro Terra, at PRNH Fazenda Bulcão, headquarters of the environmental NGO in Aimorés-MG. In debate, topics such as the contribution of innovation and dialogue involving society to the practice of sustainability. The participating public involved public and private leaders, and organized society in the Doce River Valley region.

Cláudia Rosa, Public Relations advisor at the Canadian Embassy in Brazil, attended the opening of the event, which featured an opening lecture by Rachel Biderman, Executive Director of WRI Brasil, on "Ecosystemic Restoration: sustainable solutions in climate, forest and cities".

Anderson Cabido, master in Administration at UFMG, presented the "Possible connections: how social dialogue can contribute to a new vision of economic development in the territories", while Fábio Júlio Magalhães Pessoa, master in Tourism and Environment by UNA / BH addressed the "Sustainability" theme. At the end of the event, there was a presentation of systems and innovations in the Energy segment.



INSTITUTO TERRA IS FEATURED IN AN INTERNATIONAL FILM FESTIVAL IN THE CZECH REPUBLIC

The results achieved by Instituto Terra in the reforestation of an old cattle farm, degraded after years of extensive livestock, was presented at an event in October, in the Czech Republic, within the schedule of the Inspiration Forum of the International Film and Documentary Festival Ji .hlava - JI.HLAVA IDFF 2019. It is a significant European festival of artistic and critically reflective documentary work.

Executive director Isabella Salton presented, as a word of hope, the actions developed by Instituto Terra in the recovery of the Atlantic Forest, in the protection of Doce River springs and in the environmental education of communities living in the Doce River Valley region.

Held annually, through debates, lectures, interviews and documentary dialogues, the Inspiration Forum analyzes important issues of the present and the future. On the occasion, Isabella Salton also participated in interviews and a jury in the section Between the Seas, a competition of cases from Central and Eastern European countries, including their historical, political and cultural interrelations in relation to the theme proposed by the event. This section of the festival, defines the Best Documentary Film in Central and Eastern Europe, and was attended by directors from Ukraine, Slovakia, Hungary, Romania, Estonia and Serbia.

NATURAL SPRING PROTECTION



OLHOS D'ÁGUA PROGRAM INCORPORATES NEW WATER AND SOIL CONSERVATION TECHNIQUES

2019 was dedicated to the improvement of activities within the Olhos D'água Program for the protection of natural springs. A new model was adopted in its methodology, based on the concept of work by a watershed, and not restricting the restoration only in the immediate vicinity of the spring.

New water and soil conservation practices were also introduced, contributing directly to the conservation and improvement of water resources in rural properties served by the Program. In this way, the work started to contribute even more to connect areas of ecological importance for the rescue and protection of springs, such as hill tops and Permanent Protection Areas.

In this sense, the Instituto Terra Program adopted the pasture subsoiling technique, performed in a contour line, with a subsoiler coupled to an agricultural tractor. The process involves making furrows in the earth, breaking the compacted surface structure. As a result, less runoff and greater infiltration into the soil are created, avoiding the runoff of rainwater through the surface with soil transport and silting up of the watercourses.



Another novelty in the Olhos D'água Program in 2019 was the construction of small dams in the projects developed in rural properties. Named and known as "barraginhas", these small reservoirs in the shape of a basin, box or terrace, capture rainwater and control runoff on side roads or rural properties, contributing to increase the level of groundwater. In practice, they favor the water to remain in the reservoirs for the shortest possible time, so that it infiltrates and recharges the water table, the greatest number of times, during the rainy cycle, providing the elevation of the water level of the same and, from there, fill the springs and streams.

Visit allows to know mechanical practices of water retention in the soil

Cenibra employees received a team from the Environment area of Instituto Terra to present the soil and water conservation practices they adopt in their reforestation areas. Subsoiling was presented in steep areas, with soft relief, for water retention and for forest implantation. These are techniques that can be adopted in the natural springs recovery projects, such as the Instituto Terra's Olhos D'água Program. The implantation of native forests in areas of springs acts in the long term in the environmental recovery, on the other hand, the mechanical practices are a way to obtain faster results in the infiltration of water in the soil. And they are complementary practices to forest restoration.



Small rural producers receive technical assistance to recover the headwaters on their properties.

*DONATIONS AND
PARTNERSHIPS*





DONATIONS



Partnerships help expand plantations at PRNH Fazenda Bulcão

After covering the degraded area of an old cattle farm with the green of the Atlantic Forest, Instituto Terra is now working on enriching and densifying the forest planted in the area that constitutes the PRNH Fazenda Bulcão, the institution's headquarters in Aimorés-MG. The following initiatives, added

together, helped Instituto Terra continue to realize the dream of re-establishing the Atlantic Forest in an area that was once taken over by pasture and erosion. Among the formalized partnerships that supported the environmental actions of forest rescue in 2019 at PRNH Fazenda Bulcão, we have:

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TREE PLANTING:

The Public Defender's Office of Colatina, with the Green Solution Project: wake up. Plant!, and the Leaders of Tomorrow Institute, directed resources allowing the production and planting of 1,500 native seedlings in an area of 0,6 hectare in the PRNH.



Cradle of small trees: from the choice of the best seeds to the production of seedlings in the nursery of native species.



CO₂ NEUTRALIZATION

Audiovisual producer and distributor Bonfilm allocated R\$ 6,323.46 for the production and planting of 286 seedlings in the rainy periods between 2019 and 2020, as well as their maintenance for a period of three years. The amount invested is an initiative to neutralize, from the planting of trees, the damage caused by the emission of CO₂ due to the flights carried out to carry out the "Varilux Festival of French Cinema", which in the 2019 edition completed 10 years of realization.

A SEEDLING FOR EVERY LETTER

Throughout the month of September 2019, for each letter or correspondence sent by the law firm Rocha Cerqueira to its clients, the corresponding amount was allocated for the production of a seedling in the Instituto Terra nursery. The total amount allocated was R\$ 1,005.00, resulting in the planting of 50 seedlings in December, within the PRNH Fazenda Bulcão. Each client was informed of the action, which won a stamp marking the initiative stating: "Your letter has planted a tree".

*Bonfilm's donations, added to those by Michel Adenau and the Rocha Cerqueira Law Firm, allowed, in all, the production and planting of 4,860 seedlings in an area of 4.4 hectares.





MANAGEMENT:

Instituto Terra in 2019 continued to promote improvements in its accounting and financial management processes, always within the objective of better execution and accountability of the environmental projects it carries out. Using a new management system, Alterdata, a larger database on management and financial reports are facilitating decision making and improving internal controls regarding fiscal documents, budgets, payments, donations and financial development of projects, among others. With this, and maintaining total transparency, accountability to project partners received 100% approval in 2019.

VISITS TO INSTITUTO TERRA:

In 2019, the PRNH Fazenda Bulcão, headquarters of Instituto Terra, received close to 10,000 visitors, who had the opportunity to visit part of the reforested area, as well as all the work carried out by the institution in favor of the rescue of the Atlantic Forest in the Doce River Valley, bringing the cumulative total of visitors to 139,236 people. It is worth remembering that Instituto Terra's facilities have increasingly become a pleasant place for local and regional tourism. For this reason, Instituto Terra adopts, as a policy to welcome the surrounding communities, the exemption from visitation fees for special groups such as: students from APAE, students from public schools and from social projects developed by the partnering city halls, and with increasing frequency, for groups of the elderly in search of pleasant moments and contemplation of the scenic beauty, flora and fauna, as well as learning more about the environment and its importance for human beings.



ADMINISTRATIVE STRUCTURE

The governance model of Instituto Terra defines its power macrostructure: deliberative bodies (Board of Directors), supervisory bodies (internal, Fiscal and external Council, Independent Audit), consultative bodies (Advisory Board) and executors (executive team) and how they relate.

The basic governance principles of Instituto Terra are transparency, equity, accountability and responsibility. Seeking to offer maximum transparency to the application of resources, in line with their values, the financial statements are analyzed and certified by renowned external audit companies since 2002 - PwC (2002 to 2004), KPMG (2005 and 2006), Baker Tilly (2007 to 2015), PricewaterhouseCoopers (2016 and 2017), RSM in 2018, and by a Fiscal Council since its foundation.

BOARD OF DIRECTORS

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Publicity Department





GRATUITIES

Partnerships called pro bono constitute an important support for entities in the Third Sector, guaranteeing the performance of activities necessary for the proper functioning of the institution, but which are normally not paid for by the project sponsors. Throughout its history, Instituto Terra has always had important partners that identify with the environmental cause and the need to rebuild the Atlantic Forest in the Doce River Valley. Check out our pro bono donors below in 2019:

BOARD OF DIRECTORS FOR INSTITUTO TERRA

LAW OFFICES OF SOUZA LEÃO SUBTIL

ADVERTISING AGENCY MP PUBLICITY

SERVINO CONSULTING

AIMORÉS CITY HALL

PHOTOGRAPHIC SERVICES BY LEONARDO MERÇON





INSTITUTIONAL REPRESENTATION

Instituto Terra participates in Basin Committees in the Doce River region. Check out this representation in several spheres of mobilization:

Doce-HBC - Doce River Hydrographic Basin Committee

The Institute has participated since March 2005 and in April 2009 it became a full member, being one of the three elected members of the State of Minas Gerais to represent the area of Teaching and Research.

Guandu-HBC - Guandu River Hydrographic Basin Committee

Participates as holder, being one of the representatives of civil society. Instituto Terra, despite having its headquarters in Minas Gerais, was elected to Guandu-HBC (committee of the affluent Espírito Santo river) for its relevant work in the Doce River Basin.

Manhuaçu-HBC - Manhuaçu River Hydrographic Basin Committee

Participates as holder, being one of the representatives of civil society.

Suaçuí-HBC - Suaçuí River Hydrographic Basin Committee

Participates as holder, being one of the representatives of civil society.

Pontões e Lagoas-ES - HBC

Participates as a full member representing organized civil society for the 2017-2021 term.

Santa Maria do Doce-ES - HBC

Participates as a full member representing organized civil society, responding for the vice presidency of the Council in the 2017-2021 term.



MEC - Municipal Environmental Council of Aimorés/MG

The Institute is an effective member of the MEC of Aimorés, which is a collegiate body charged with advising the Municipal Government on matters relating to the protection, conservation and improvement of the environment.

YRMC - Youth Rights Municipal Council of Aimorés/MG

The Institute is a full member, being one of the representatives of civil society. The Youth Rights Municipal Council is a normative, consultative, deliberative and controlling body for the policy of promoting, assisting and defending the Rights of Children and Adolescents. (2018-2019)

Sete Salões State Park Advisory Council

The Institute is an effective member, legally elected. The Council brings together the municipalities of Conselheiro Pena, Itueta, Resplendor and Santa Rita do Itueto, in Minas Gerais. The formation of Consultative Councils of CUs - Conservation Units is foreseen in the NSCU - National System of Conservation Units. They are forums for discussion, negotiation and support for decision-making in the management of the Conservation Unit and its area of influence, to address environmental, social, economic, cultural and political issues. (2018-2019)

Rio Guandu Consortium

A consortium formed by the municipalities that make up the Guandu River Basin (Afonso Cláudio, Baixo Guandu, Brejetuba and Laranja da Terra). Instituto Terra joined in 2005, at the invitation of the other members. Instituto Terra is also part of the Consortium's Fiscal Council.

National Pact for the Restoration of the Atlantic Forest

Instituto Terra is one of the NGOs signatory to the Pact, which also brings together governments, companies and research institutions from all over Brazil and aims to implement large-scale forest recovery projects to recover, by 2050, 15 million hectares of forest area that has been damaged in the country.



Forest Dialogue

Instituto Terra participates in this initiative that constitutes a National Forum aiming at the interaction between representatives of companies in the forest-based sector and environmental organizations and social movements in order to build a common vision and agendas between these sectors. It aims to promote effective actions associated with forest production, expand the scale of conservation and restoration efforts in the environment, generating benefits for the participants of the Dialogue and for society in general.

Atlantic Forest NGO Network

Instituto Terra is part of the Network of Non-Governmental Organizations of the Atlantic Forest - NAF, an institution that aims to weave a wide network for the defense, preservation and recovery of the Atlantic Forest, promoting the exchange of information, mobilization and coordinated political action.

Atlantic Forest Biosphere Reserve

First Outpost of the Atlantic Forest Biosphere Reserve in Minas Gerais, Instituto Terra has this "accreditation" granted to institutions that regularly and measurably develop significant actions in the three basic functions of Biosphere Reserves: conservation, knowledge and sustainable development, as defined by the UNESCO MaB Program.



COME AND VISIT INSTITUTO TERRA

At PRNH Fazenda Bulcão it is possible to walk the trails, visit the nursery of native seedlings of the Atlantic Forest, the Archaeological Center of Aimorés-MG and also enjoy the Exodus Exhibition by Sebastião Salgado. Come and visit Instituto Terra! Schedule your visit by email: visitas@institutoterra.org or telephone (33) 3267-2025 | (33)3267-2302.

BE A FRIEND TO INSTITUTO TERRA

You make a difference! Through a simple purchase over the internet or even donating a few cents generated by rounding up your credit card bill, or in purchases made at partner stores of the Round Up movement. There are several options for you to help Instituto Terra to continue rescuing the Atlantic Forest.

VISIT WWW.INSTITUTOTERRA.ORG AND CLICK ON THE "HOW TO PARTICIPATE" TAB TO LEARN MORE ABOUT BECOMING A FRIEND TO INSTITUTO TERRA.



ANNUAL ACTIVITY REPORT 2019

Organization, Editing and Texts

Maria Helena Fabríz

Text Translator

Marcella Gonçalves Fialho

Photos

Leonardo Merçon, Muryllo Gonçalves, Philippe Lemarchand e Arquivo do Instituto Terra

Art and Layout

Ampfy

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Renascimento que Transforma.

