" PÊ has contributed to the protection and appreciation of life in Brazil. Goals that are now more important than ever. We hope that in the future we are be able pass on more and more of our knowledge and values, thus inspiring many to enjoy life to its fullest. "

Suzana Machado Padua, IPÊ president

IPÊ INSTITUTE FOR ECOLOGICAL RESEARCH

2019

REPORT IN ENGLISH (SUMMARY)

.SUMMARY

An invitation to change

I was expected to introduce our 2019 report which you, reader, may appreciate in the following pages. In fact, we have many to thank for the many successful projects: the IPÊ team for its competence, the supporters of several levels and nationalities, faithful partners and an active Board. The year was fruitful for us, presenting gains for science, communities, students and nature. Making use of this harvest period, Claudio Padua, one of our founders and our vice-president, decided to become a Councilor to the organization, granting the team the chance to show its maturity and competence in leading IPÊ. This was an enormous test of love for the institution, and they exercising care for succession at the right time. Our "Tuxaua", as we nicknamed him here, continues bringing us confidence, and we can continue counting on his invaluable visionary, daring and competent contribution.

But I cannot write about the past without focusing on the moment we are living. The year of 2020 is a surprise to all. An invisible virus has been causing unprecedented imbalances, death, fear and transformation in all areas of our lives.

Unfortunately, humanity is reaping what it sowed for centuries. On moving away from nature, treating it as a resource, disrespecting everything and everybody, indiscriminately, little has remained intact. Many ethnic groups are feeling outrage and social inequities and injustice have never been so evident. The oceans are filled with plastics and waste, rivers have been polluted, damaged springs have been silted up, forests have been devastated, most of the species are now part of those endangered, the soil has become impoverished and naked, mangroves, the nursery for so many water species, have been destroyed, the climate has changed and is threatening the survival of life as we know it. How could all of this take place as a result of the activities of the species that considers itself the smartest and most advanced.

Undoubtedly, the virus is a consequence of all this imbalance. It has come as a yell to warn us: wake up! Humanity, wake up now, immediately! It is not possible that we, humans, cannot see that we are part of the nature we are destroying - which is the essence of our existence. Each human being and every animal or plant deserves to be appreciated, celebrated, loved. Every species that disappears has taken billions of years to become what it is, and this wealth, called biodiversity, should be a crown jewel! Earth is, from what we know, the only planet to house such life and wealth.

During the pandemic, staying at home, returning to interacting with our families, visiting friends and even relatives virtually, or even being alone with our thoughts, may have been transforming. Human movement worldwide has been drastically reduced, but the movement of other species has increased at incredible speed, showing the natural world's power of regeneration when we do not destroy it. In a short while, turtles have returned to Guanabara Bay and birds have started singing as never before in large cities where pollution has dropped.

The world lives very well without human presence. Isn't it embarrassing to learn that? Are we not capable of finding a way of life that includes and respects the wonders that surround us? Their end is our end.

This is an opportunity to appreciate life as a whole, considering the smallest of details and nuances, with colors, scents and sounds. An invitation for us to follow a different route from what we had been following, giving life another chance - ours and that of other beings. If we are going to succeed, only time will tell. It will be up to each one of us to provide greater meaning to the word "life".

As you, reader, may see in this report, IPÊ already has these principles in its DNA, making a contribution for protection and appreciation of life in Brazil, which is extremely diverse! The Institution was established considering these purposes, which are now showing themselves more important than ever. We hope that, in future, we may transfer more and more of our knowledge and values, infecting many with the desire to enjoy their lives to the fullest.

Suzana Padua
President

Dear reader,

In the next pages you will find a report of the main IPÊ accomplishments in the year prior to dissemination of the coronavirus in Brazil and worldwide.

In 2019, Brazil was sadly marked by socio-environmental tragedies, like the rupture of the Brumadinho dam, oil leaks on the coast, and substantial expansion of forest fires in the Amazon.

Such facts resulted in unquestionable losses to human beings and to the planet, while being decisive for the environment having gained space in the press and in the plans of decision makers. In the following year, 2020, this space was taken over by the Covid-19 crisis and by its results, adding more elements for reflection about our relations with the planet.

This reflection allows us to recognize the need for rethinking the agenda and the routes for development of our society. If we are facing one of the largest economic crises in history, this may be an appropriate moment for the process of reconstruction of our development models to focus on sustainability and environmental conservation principles. For this reason, more than ever, our socio-environmental projects and our schools, ESCAS, play a fundamental part and may offer relevant contributions to the construction of a true agenda for development in the post Covid-19 period. We must manage, exchange and promote knowledge, especially that turned to innovation and to sustainability, and that is what we do through ESCAS (which has reached the mark of **7,029** students benefited since establishment) and that is what we do through our projects, in a practical manner.

The world needs examples and true cases of care with biodiversity and the responsible use of natural resources. With our projects, we have reached a total of **3.2 million** trees planted in the Atlantic Forest. The disposition of plantation follows a logic of integrated planning of landscapes, building based on the knowledge generated by our research and discussed alongside local players. Here, you may see our advances in the north corridor of the Pontal do Paranapanema towards the completion of our "dream map of connectivity". In the Cantareira region, in turn, our actions have been turned to helping farmers in their transition to more sustainable systems for production and generation of income.

Still regarding landscapes, we have much to report about our contributions through the "LIRA", "MOSUC" and "MPB" projects, for protected areas in the Amazon to play their part effectively, resulting in conservation of biodiversity with the engagement of local communities and local organizations.

Scientific research applied to the search for solutions to socio-environmental challenges continues as one of the differentials for our organization. With regard to that, gaining prominence is the work performed by the IPÊ in 2019 in the Cerrado and Pantanal. Our scientific information on wildlife roadkill, emphasizing on tapirs, and also on contamination by pesticides, has been under careful systematization to assist public policies and decision making.

For these and other actions to be more consolidated and to be expanded, this year we have implemented "Logalto", a management tool for management, measurement and demonstration of activities, of results and of the impact of all we do. This measuring follows the global tendency for measurement of results that is already used by other civil society organizations.

2019 was also marked by an important change for the Institute. Claudio Padua, vice-president, leaves this post and becomes part of the IPÊ Board, opening a new chapter in the succession process within the organization. The continuation of IPÊ has always been a great concern for Claudio and Suzana Padua, creators of the Institute. The decision takes place at a favorable moment for our organization, both in terms of management and in terms of conquests and results. Claudio's inspiration as a great leader remains among the entire team, alongside one of his great lessons, that conservation is only possible through

connections between people and dialogue between the most varied of sectors in society, reaching multiple areas. All accomplishments described in this report, in fact, were only possible because IPÊ does not operate alone. Throughout our existence, we have aimed to build solid partnerships with people and institutions that share our purposes. In 2019, for example, we had the joy of celebrating 15 years of an important partnership with Havaianas, showing that it is possible to align several sectors in favor of a beneficial cause to the whole of society.

We developed our partnerships because we strongly believe in interdependence. Currently, as our society is constantly finding conflicts related to divergence and ideological polarization, we bet on cooperation, so that we can use diversity in our favor. We hope that this report may help illustrate the interdependent relations, as well as the importance and the parts played by scientists, environmentalists, third sector organizations, and all those who dedicate themselves to an agenda for the good of the planet.

Enjoy your reading,
Eduardo H. Ditt
Executive Secretary

1. HIGHLIGHTS OF THE YEAR

2019 was a year full of great achievements and celebrations. Check out the year's highlights here.

A partnership to celebrate and cherish

At Havaianas' invitation, IPÊ went to Lisbon (Portugal) for a special commemoration: our 15 year-long partnership with the brand. Between partners, supporters and admirers, we celebrated our achievements thus far with the Havaianas-IPÊ collaboration - the flip flops which showcase Brazil's biodiversity, with **7%** of the profits going towards our conservation work. The celebration marked the European launch of the 2018/19 collection.

"It's been a pleasure for Havaianas to work with IPÊ for all this time. The company holds very similar values to ours. For 57 years Havaianas have been putting flip flops on the feet of people across the world, and we believe that this partnership is a great tool for bringing environmental issues to light in society. I strongly believe in partnerships between private companies and the tertiary sector, this is an excellent way to promote a cause pairing it with a quality product" says Guillaume Prou, Havaianas director for the EMEA region (Europe, Middle East and Africa).

To top off the celebration, the Brazilian plastic artist Arlin Graff who signed the Havaianas-IPÊ collection was invited to graffiti a 30 meter tall wall in Lisbon with the image of a red-and-green macaw; one of the stars of the Havaiana's IPÊ run. He painted another in July, this time in London (England), of another species, the black lion tamarin.

"Nature's one of my biggest inspirations, that's why when I was invited to paint the mural, I didn't think twice. Doing this work made me feel like I was contributing to something that really makes all the difference!", Arlin Graff commented.

- Total Sales in 2019: **R$ 647,270.70**
- Total funds raised for the cause since 2004: **R$ 9,286,709.34**
- Total flip flops sold since 2004: **15,427,923**

This resource isn't just important for the institution's evolution but also its sustainable growth. It complements the work carried out through various projects in various biomes in Brazil.

"It's an honour to be partners with a company that's genuinely Brazilian. In these 15 years of unity, Havaianas entrusted us with tremendous responsibility and we stepped up to the challenge. Thanks to our partnership, we were able to grow and expand our efforts in biodiversity conservation throughout the whole of Brazil" said Suzana Padua, President of IPÊ.

New model of biodiversity evaluation

Scientists from various organisations and universities around the world propose introducing a new method of evaluating biodiversity risk by using Areas of Habitat (AOH) maps. They indicate not only where the species have been spotted in traditional field surveys, but also where they might be able to live more safely. In October's edition of "Trends in Ecology and Evolution", researchers led by IUCN's (International Union for Conservation of Nature) head scientist Dr. Thomas Brooks, explain that this new methodology has already produced maps for Areas of Habitat of over **20,000** mammalian, avian and amphibian species; compiling data from the IUCN Red List of Threatened Species with remotely collected data. Clinton Jenkins, researcher at IPÊ, took part in the study.

Pantanal at risk, claims group of scientists

A collection of **114** scientists published a lengthy article on the importance and challenges facing the conservation of the Pantanal; drawing attention to the science undertaken in the area and the need for investment into research. Coordinated by researcher Walfrido Tomas and joined by Rafael Chiaravalloti, Patrícia Medici and Arnaud Desbiez, researchers at IPÊ, the article lays out the ways in which conservation may be carried out in the region that, in reality, is still at risk, despite some data to the contrary.

Speaking out for Latin America's Protected Areas

Latin America is home to a large part of the world's megadiversity and thanks to innovative and creative solutions in conservation, it continues to strengthen its role as leader due to innovative and creative solutions. Despite its great power, getting our society to take action, with regards to awareness of protected area importance and conservation action, is still notoriously difficult (academia, civil service bodies and governments).

IPÊ shared its experience on integrated solutions in protected areas in the Amazon at III Latin American and Caribbean Congress on Protected Areas so to help solve the issue. In it's third year, congress managed to link world behavioural tendencies (heading towards social inclusion) with the issues necessary for the conservation of these protected areas. It was interesting to see the impact that women, the young and indigenous had; acting as important strategic groups for the transformation.

I Conservation Leadership Symposium and I Professional Master's Congress Meeting

On the 28th of September, IPÊ'S ESCAS (Graduate School in Environmental Conservation) had the Leadership for Conservation Research Symposium (I Simpósio de Pesquisas Liderança para a Conservação) and the Professional Master's Leavers' Reunion (I Encontro de Egressos do Mestrado Profissional). The reunion served to strengthen the connections of an active network of people for socio-environmental revolution.

"It's more than just a network of professionals, it's a chance to boost the sharing of knowledge by connecting old students through the school. New ideas, new connections, new ways of thinking and taking positive action that impacts socio-environmental conservation and the country's sustainability come of out this", claims Cristiana Martins, Masters coordinator.

During the symposium, the old students had a chance to share their career progress and reflect on conservation leadership too.

"The relationship with people, how to engage with them, I really got deep into that during the masters, and I saw during 2 years of working after the degree that conservation is carried out by people, and I need to work with people to get results.

Going through IPÊ was the only way to come to that understanding", commented Karlla Barbosa, from SAVE Brazil.

AWARDS

National Geographic 2019

One of the biggest conservation awards in the world, the National Geographic Society/Buffett Award for Leadership in Conservation was awarded to the Brazillian Patrícia Medici on the 12th of June in Washington D.C. Medici has been the go-to reference for studies on the Brazilian tapir *(Tapirus terrestris)*, for more than 23 years.

The award was also given to Tomas Diagne who works for the conservation of critically endangered freshwater turtles. The award highlights the work scientists do for wildlife and natural resource conservation. It's offered every year to South American and African professionals.

Patrícia Medici is the founder and coordinator of LTCI- The Lowland Tapir Conservation Initiative at IPÊ. She's also president of the Tapir Specialist Group - TSG, Species Survival Commission - SSC, International Union for the Conservation of Nature

- IUCN where she heads a global network of more than **130** tapir conservationists across **27** countries.

"This award is, without a doubt, the most important recognition for our lowland tapir conservation efforts that we've had yet, in over two decades of work. It further deepens our commitment to conservation of the species and Brazilian biodiversity. More importantly, it shows how long-term scientific research can bring meaningful results", Patrícia said.

Muriqui Prize (Prêmio Muriqui) from Atlantic Forest

We received the 2019 Muriqui Prize in the Legal Entity category. The award is a recognition from the Atlantic Forest Biosphere Reserve for our work, and especially the results of that work, in the conservation of the biome.

The trophy, which pays homage to the only **two** species of the genus *Brachyteles*, symbol of the Atlantic Forest, was awarded on the 7th of September at the opening of the Seminário Nacional Turismo and Atlantic Forest, Mata de São João (BA).

Founded by the Conselho Nacional da Reserva da Biosfera da Mata Atlântica (CN-RBMA), in 1993, the award seeks to incentivise work that might contribute to the conservation of biodiversity, stimulate and spread knowledge both traditional and scientific, as well as promoting the sustainable development in the biome's region.

We were awarded for our work in the Amazon

In December we received **two** significant honours from local communities for the work carried out with them in the Amazon. The first of which was given by the communities of state-protected reserve Uacari, Sustainable Development Reserve (RDS) and Extractive reserve (Resex) Médio Juruá, which awarded us for turtle conservation efforts via the Participatory Monitoring of Biodiversity project (Monitoramento Participativo da Biodiversidade).

The United States Agency for International Development is recognised as a partner of Resex and RDS and received the award through Fabiana Prado, who is responsible for Institutional Articulation and is a Project Coordinator of IPÊ, on behalf of ICMBio, SEMA and the Communities of Médio Juruá.

The other award was given to IPÊ by the Extractive Reserve (Resex) Tapajós Arapiuns. During the commemoration for the 21 years since the creation of Resex, and the 20 years of the Tapajoara Association, IPÊ was honoured as NGO partner with the Celino Rodrigues Trophy.

The trophies were presented to Suzana Machado Padua, IPÊ's president, and to Claudio Valladares Padua, Vice President and rector of ESCAS at IPÊ's headquarters in Nazaré Paulista (São Paulo). The awards given to IPÊ's initiatives are thanks to the partnership of ICMBio, the support of Gordon and Betty Moore Foundation and USAID.

Impact management and measurement program

In 2019 we implemented the use of LogAlto in projects for measuring and managing impact. The Canadian software is proprietary, inclusive and designed to be used in remote areas with poor connectivity such as those areas where researchers often find themselves during projects. The measure follows the global trend of measuring results, already used by international CSO's.

"Our pursuit of transparency and efficiency in delivering our work for Brazilian society is non-stop. We believe it's a crucial step to ensure the constant evolution of our management. In a time where organisations are looking to show results in even more efficient and clear ways, the data collected from this software will play an important role in the way we continue to direct our efforts in search of goals that benefit all of society", says Eduardo Ditt, Executive Secretary for IPÊ.

IPÊ IS COMMITTED TO THE U.N. GLOBAL AGENDA

The 17 Sustainable Delopment Goals (SDG) need to be implemented across every country in the world within the next 15 years, by 2030. Our projects contribute to the following SDG's:

IPÊ IN NUMBERS

GENERAL

ANNUALLY

OVER 14,000

PEOPLE BENEFIT FROM IPE`S INITIATIVES, GENERATING SOCIAL AND ENVIRONMENTAL BENEFITS

3,200,000

TREES HAVE BEEN PLANTED IN THE ATLANTIC FOREST, CONSERVING LOCAL FAUNA AND WATER RESOURCES

OVER 300

PARTIAL AND FULL SCHOLARSHIPS WERE GRANTED

OVER 140

PEOPLE COMPLETED THEIR MASTERS` DEGREE

6 SPECIES

OF THE FAUNA DIRECT INVESTIGATED, GENERATING BENEFITS FOR OTHER SPECIES

OVER 7,000

STUDENTS WERE TRAINED IN CONSERVATION AND SUSTAINABILITY AT THE IPÊ SCHOOL – ESCAS

IN 2019

OVER 14,500

PEOPLE REACHED WITH ACTIONS THAT GENERATE SOCIAL AND ENVIRONMENTAL BENEFITS

350

PEOPLE BENEFITED WITH SUSTAINABLE LIVELIHOOD ACTIVITIES

OVER 1,200

PEOPLE MOBILIZED AND BENEFITED THROUGH INTEGRATED SOLUTIONS IN THE AMAZON

250

PEOPLE TAKING PART OF SCIENTIFIC PROJECTS

220,000

TREES PLANTED IN ATLANTIC FOREST

OVER 7,200

PEOPLE BENEFITED WITH COURSES AND TRAININ

2. PROJECTS BY LOCATION

2.1 PONTAL DO PARANAPANEMA

Biome: Atlantic Forest
Region: Southeast of the State of São Paulo
2,258 Beneficiaries

Our challenge:

To develop systems and methodologies for landscape management, finding a balance of socio-economic gains by maintaining services for the ecosystem and working to conserve species at risk of extinction.

Our main achievements in the region:

- The largest atlantic forest wildlife corridor that has been reforested in brazil: **2.7 million** trees
- Database with information about black lion tamarins and making improvements on the red zone of the list of species (between those critically endangered and those that are considered at risk)
- Support in creating ucs which is the eco station for tamarins
- Official introduction of environmental education to the Teodoro School curriculum
- More than **500** people who have benefitted from sustainable production and the development of alternative income
- Mapping of restoration and forestry connection areas in western São Paulo

Plan has the aim of reconnecting the forests of western São Paulo

The west of São Paulo state contains parts of the river basins of Pontal do Paranapanema, Rio do Peixe and Rio Aguapeí. It is also home to the interior of the Atlantic Forest. This area is known as Seasonal Semi-deciduous Forest (SSFs) and is the most endangered part of the Atlantic Forest. The small areas of forest which still exist there are each separated. As a result, these forests which are home to important flora and fauna, become vulnerable to forest-fires among other things. These effects stop animals from being able to move around the forests therefore reducing their chances of feeding and reproducing, which can lead to extinction.

With this challenge in mind, IPÊ researchers, the Forest Foundation, the Department of Infrastructure and Environment of the state of São Paulo (SIMA), and from other civil society organizations have developed an **operational plan for connecting Conservation Units and Protected Areas in the west of São Paulo.**

As a result of fieldwork and **four** major meetings in 2019, the group established a complete database of the region's biodiversity and was able to map areas of western São Paulo state which would be ideal for forest connections and conservation. The information pointed out key work that needed for reconnecting the forests such as creating new conservation units and establishing some new and more economical wildlife corridors. The aim is to do this with the support and participation of rural landowners as well as involving local communities.

One of IPÊ's key goals is to create and monitor community involvement projects, environmental education and social and economic initiatives that allow forest restoration work to have workable results for both the people and the planet.

Restoration work for a positive economic impact

We support sapling growers such as Aderson Renivaldo Borges Gomes (photo) who is a resident of São Bento in Teodoro Sampaio (São Paulo). His nursery produces **60** thousand saplings per year, with **25** different species. The saplings are sold to companies who need to meet reforestation quotas.

The restoration can be quite profitable for the Western Region of São Paulo. Research data from the Brazilian biodiversity and Ecosystem Services Platform (BPBES) and International Institute for sustainability (IIS) suggests that **200** jobs are created for every **1,000** hectares that are restored. This doesn't take into account the positive impact of other productive activities such as planting vegetables all of which is key to agroforestry. And it is estimated that up to **77** thousand hectares could be restored in this region.

In August, IPÊ promoted a workshop on this topic at Morro do Diabo State Park, in Teodoro Sampaio (São Paulo). Producers, organisations and business men and women came together to evaluate the regional market for forest restoration and how this could boost the local economy. The workshop helped start "The Market Study of Forest Restoration and Wildlife Corridors between western São Paulo's Conservation Units"

Training and Generating Income

We promote restoration of forestry in the wildlife corridors connecting the conservation units of Pontal do Paranapanema. In the one known as the North Corridor we delivered environmental education and agroecology training to **300** farmers and students. We also helped increase income for the communities involved by producing and commercialising native tree saplings from their forest-based nurseries. These are social enterprises with the goal of socio-economic and environmental development for the farming families living on land reform settlements.

Over the course of more than 20 years, along with the development of the wildlife corridors, IPÊ has promoted training for **eight** community forest nurseries located in different settlements throughout the region which the institute is closely following. Most take the form of associated or cooperative groups, but there are still private initiatives managed by farmers who have participated in our free training programmes. In 2019, the nurseries produced approximately **800,000** saplings helping support **40** people in the region.

The Atlantic wildlife corridors initiative relies partner institutions for the work they do, these include: Natura, BNDES, Petrobras, Funbio, Whitley Fund for Nature, Durrell Wildlife Conservation Fund, CTG, CESP, Morro do Diabo State Park, Teodoro Sampaio City Hall, State Public Prosecutor's Office, Saving Species Fund, among others. ECOSIA collaborated with the initiative in 2019 and restored **200** hectares. Another of IPÊ's partners is WeForest.

In Pontal do Paranapanema, IPÊ restores wildlife corridors that connect Conservation Units within the Atlantic Forest. Check out the results from the North Corridor project:

- **300** trained farmers and students

- Increasing income for communities, promoting the production and marketing of native saplings in **8** community forest nurseries

- **800,000** saplings produced helping support **40** people in 2019 alone

Agroforestry systems: Biodiversity in Food production

Agroforestry Systems (AFS) sustainably enhance agricultural production, balancing economic, social and environmental gains. In Pontal do Paranapanema, IPÊ helps support **51** families in rural settlements with this system. This, in an area that can have a considerable impact on the protection of the Atlantic Forest. In 2019, IPÊ offered technical rural assistance to producers who have implemented and continue to manage agroforestry and agroecological systems. It is farmers who relied on the proposal to implement the SAFs in 2015 and 2016 - combining the planting of native tree species with fruit trees and coffee, which began to bear fruit this year.

The monitoring of the impact of AFSs carried out by the Department of Infrastructure and Environment in the state of São Paulo. This is done through the agroforestry panel, which collects biophysical data from IPÊ concerning agroforestry in Pontal and other locations. The information is available in the AFS spreadsheet for São Paulo, developed under the Sustainable Rural Development Project (PDRS). The tool is for free public use, to assist in financial planning and economic evaluation of agroforestry systems (AFS).

Coffee in the Shade

Coffee can be one product of implementing agroforestry systems (AFS). Overall, *51* rurally settled families plant coffee trees within the Atlantic Forest. This creates a higher level of biodiversity in the area and also stops the weather from greatly affecting the coffee harvest. The growers can generally earn more from this product and the support provided by IPÊ also helps. In 2019, **560** kg of coffee was harvested and **920** packets of roasted and ground coffee was marketed in places such as the Chão Institute, in São Paulo.

IPÊ's initiatives in Pontal do Paranapanema promote sustainability within the local population, with restoration projects and initiatives to increase local income. these projects guarantee the conservation and restoration of the habitat for several species of regional fauna and flora. The Institute also surveys and manages species. The work carried out with one of these species, the black lion tamarin, began before IPÊ was founded.

"Dream Map" provides guidance about the Atlantic Forest's wildlife corridors

The so-called "Dream map" for the most ideal reconnecting of the forestry in Pontal do Paranapanema is one of IPÊ's initiatives. It outlines the best sites in both Legal Reserve Areas and Permanent Preservation Areas for forest replanting, so that the new trees can directly benefit the recovery of the biodiversity. Today this model is used for other connectivity initiatives in particular areas.

This map guided the design of Atlantic Forest wildlife corridors implemented by IPÊ in Pontal. The largest of them, covering 20 kilometers with **2.7 million** trees, connects the Morro do Diabo State Park (PEMD) and the Ecological Station Black Lion Tamarin (ESEC-MLP), increasing the chances of survival of endangered species and helping stop which has become the most serious environmental problem in the region.

The Operational Connectivity Plan accounted for the most relevant fauna species of western São Paulo. Learn More:
- Black Lion Tamarin *(Leontopithecus chrysopygus)*
- Spotted Jaguar *(Panthera onca)*
- Tapir *(Tapirus terrestris)*
- Brazilian Guinea Pig *(Cavia cf. aperea)*
- Altantic Forest Climbing Mouse *(oecomys cleberi)*, known only in the Pontal do Paranapanema, pale-headed blindsnake *(Liotyphlops cf. beui)*
- Broad-snouted Caiman *(Caiman latirostris)*
- Cuvier's dwarf Caiman *(Paleosuchus palpebrosus)*, at risk in São Paulo and with unprecedented numbers for the Pontal do Paranapanema.

The largest wildlife corridor ever restored in Brazil is in the Atlantic Forest, in Pontal do Paranapanema (São Paulo) and was planted by IPÊ (Institute of Ecological Research).
This corridor consists of **2,400,000** trees in **1,200** hectares of land and is within the Rosanela Farm Permanent Preservation Area.

The North Corridor is Extended

In 2019, IPÊ took a new and important step in the development of the wildlife corridors of the Atlantic Forest project with the commencement of planting for the "Northern Wildlife Corridor", located north of Morro do Diabo State Park (PEMD). The goal is for the Northern Corridor to be reforested - a total **1 million** trees covering **500** hectares of land.

The area chosen for the wildlife corridor belongs to the Alcidia Distillery, a priority site for forest restoration. The project was designed by Atvos as environmental compensation, through the Nascentes do Estado program in São Paulo, the city's Department of Infrastructure and Environment (SIMA) which has been delivering fines in the form of required environmental work.

In 2019, in the North Corridor, in the Pontal do Paranapanema region, IPÊ promoted **70** more hectares of restored forest area, **150,000** more trees and 3 further kilometres of forests, which add to the first wildlife corridor of the Atlantic Forest which was completed by IPÊ in 2011. Together, the **two** wildlife corridors now reach a total of **2,850,000** trees.

The North Corridor, forest restoration region in the Pontal do Paranapanema region, in São Paulo, benefited from the addition of:
- **300** producers with training in biodiversity conservation
- **120** rural producers in the production of saplings in agroforestry nurseries
- **40** producers in the provisioning of planting and forest maintenance services
- **20** professionals: coordinators, educators, extension workers and researchers

35 Years Protecting the Black Lion Tamarin

One of the longest-running species conservation initiatives in Brazil is The Black Lion Tamarin Conservation Program. This program, created by IPÊ in the São Paulo Atlantic Forest region, celebrated, in 2019, **35** years of research and work in aid of this species *(Leontopithecus chrysopygus)*. From this project, the Institute formed the groundwork in developing a whole methodology of innovative biodiversity conservation, based on: scientific research, environmental education, community involvement in sustainable business, restoration of vegetation in the landscape and support for public policies.

Artificial Tree-hollowing: Positive Results

In order for the wildlife corridor to offer all necessary resources to the tamarins, we started artificial tree hollowing in the hopes they'll return to the restored areas. We did so because new trees are not yet hollow at all and tamarins usually use the crevices as shelter during the night. The man-made hollows are monitored by cameras, to identify when tamarins and other arboreal animals use them.

The project is supported by the Disney Conservation Fund, the Sustainable Lush Fund, and developed in partnership with the Laboratory of Primatology (LaP) of UNESP Rio Claro (São Paulo).

Another major supporter of the Black Lion Tamarin Conservation Program is the Durrell Wildlife Conservation Trust. In 2019, the Black Lion Tamarin campaign was joined by the Jersey institution (United Kingdom) to carry out strategic planning and developing unique annual campaigns to support IPÊ's work in protecting this species. All the money raised will be invested in: management of wild populations (translocation), habitat management (restoration and implantation of artificial tree hollows), managing the population in captivity and team training.

PONTAL DO PARANAPANEMA IMPACT TARGETS

1,000,000
Tones CO2Eq neutralized in new forest plantations

U$10,000,000
of local income through restoration services

U$1,200,000
of local income through community nurseries

U$25,000
of local income through agroforestry products

30 jaguars,
30 pumas,
300 ocelots,
1000 tapirs,
1400 tamarins in forest connectivity

200
bird and
10
amphibian species monitored through soundscape ecology

15,000,000
trees planted and in regeneration process

60,000
hectares protected

5,000
hectares restored in new forest corridors and agroforestry

7 large companies and extension agencies involved in production and sustainable development policies

More black lion tamarin conservation projects in 2019:

• The tamarin on postage stamps
A symbolic species for the state of São Paulo, the black lion tamarin was included as part of a special run of postage stamps in 2019. They were joined by other species - Beetle Larvae (sometimes known as glow-worms - Pyrearinnus termitilluminans), which cause the phenomenon known as the Luminous Termite Tree, and the sloth (Bradypus torquatus). The photograph featured on the stamps was taken by the biologist Gabriela Cabral Rezende, a researcher at IPÊ. Turn an animal into a postal stamp and it's popularity soars.

• The Primate Congress, with education and the Black Lion Tamarin on the agenda- the 18th Brazilian Congress of Primatology (6th to 10th of November), run by the Brazilian Society of Primatology (SBPr), brought education to the debate, with the theme "educating primates". The opening of the event in Teresópolis (RJ) was held by the president of IPÊ, Suzana Padua. Suzana, doctor of environmental education, argues that the subject should be treated as a science, as are other activities involving the conservation of primates in Brazil.

• Trends in Primate Research: Congress sought to advance **two** key issues in primate research and conservation in Brazil: the use of species-monitoring technology in the field and communication technology for conservation. Opening up discussions on education and communication in reference to primate conservation was also new.

Brazil has the greatest diversity of primates in the world: **153** species and subspecies **23%** of which are critically endangered, especially those primates living in the Atlantic Forest and in the arc of deforestation area (Amazon Rainforest).

IPÊ, for **35** years, has strived to conserve the black lion tamarin which is a symbol of the state of São Paulo.

Environmental Education: The Pontal's Legacy

In 2019, the Pontal Bom para Todos (Healthy Pontal Region for Everyone) program continued to develop planned projects within the black lion tamarin conservation program. In all, it involved **1,600** people, including students, teachers and heads of Public Schools in **eight** municipalities of Pontal do Paranapanema, in addition to promoting community engagement activities.

The environmental education promoted by IPÊ is a long-term project which has been of great value for the city of Teodoro Sampaio. It is part of the school curriculum in the municipality, due to the work done by the institute in the region which has been taking place since before its official founding in 1992.

In 2019, IPÊ promoted environmental education projects in Pontal do Paranapanema

• More than **1,600** students, teachers and institution directors were involved
• Local community engagement projects
• Initiatives in 8 municipalities

Partnerships with teachers: the value of the region's natural wealth

For 21 consecutive years teachers from the Pontal do Paranapanema region have relied on IPÊ for environmental education skills development. Through courses, lectures and workshops that are all free of charge, we've already trained **3,700** teachers, which, apart from just training said teachers, also means higher-level training for students and locals.

The partnership with public sector teachers is worthwhile for the schools and the community. Such is the case for the Salvador Moreno Munhoz State School, in Teodoro Sampaio, whose teachers have been partnered with IPÊ since 2003, when they started the Sinal Verde (green sign) project. Said project is responsible for the installation of a native saplings nursery and is one of the school's strongest ties with both IPÊ and environmental issues.

Other highlights in environmental education

- In December we promoted large-scale planting in the Rosana municipality, in a permanent preservation area which is linked with the VerdeAzul Município program (VerdeAzul Municipaility Program). Among the participants were **100** students, the mayor, the municipal environmental secretary and the of state school head, João Pinheiro Correia.
- We promotedEspaços IPÊ, a native saplings donation site for for reforestation and educational activity.
- We also act as partners for the great environmental activity event, PrimaveraX, in Teodoro Sampaio

A seed of IPÊ in every school

Just as the nursery is an important environmental education tool in the school of Teodoro Sampaio, LABECA - Laboratory of Biology and Education, Environmental Conservation has the same role in the State School Professroa Maria Audenir de Carvalho, in the municipality of Primavera. Close to **200** evening class students participated in the laboratory as an optional class. The initiative began in 2019 to debate the issue of Amazon fires and climate change, with the idea that it would become a space for discussion and conservation of biodiversity work.

"We talk about fires, climate change and political issues like disciplines of science, biology and chemistry. It's a space where we discuss environmental issues which don't often have time to be debated in the classroom - it compliments the students' mandatory classes", explains Maria das Graças, IPÊ coordinator of Environmental Education.

In 2020, the goal of LABECA's project is to provide students with a scientific induction through Brazil's Citizen Science school program, exploring permanent preservation areas and legal reserves within the municipality's urban area so that the community has eyes on, and gets to know the value of nature in their green areas.

2.2 NAZARÉ PAULISTA AND CANTAREIRA SYSTEM

Nazaré Paulista - Cantareira System

Biome: Atlantic Forest
Region: Southeast of the State of São Paulo and Southeast of Minas Gerais
Beneficiaries: **2,024**

Challenge:

To conserve ecosystem services with the application of scientific research and community involvement. work proposes better land use with new productive systems and environmental education, favoring water resources and the remaining forest in the region.

Main Achievements

- Planting of more than **370,000** native trees in water source areas
- Greater and more detailed mapping of the socio-environmental situation of the cantareira system
- Promotion of environmental education in **100%** of the Municipal Schools of Nazaré Paulista and expansion of actions to **seven** other municipalities that cover the cantareira system.

Semeando Água project in the Cantareira System

The city of Nazaré Paulista (São Paulo) is home to the IPÊ headquarters. The region is of strategic importance for the conservation of the Atlantic Forest and the maintenance of important ecosystem services, such as water resources. Since 2013, the Institute has expanded its work to encompass cities comprising the Cantareira Supply System, which provides water to about **7.6 million** people in the metropolitan region of São Paulo and another **5 million** in Campinas and Piracicaba. In addition, they supply surrounding rural producers and companies that collect water from the rivers that feed into the system. Despite its large size, the Cantareira System is not particularly resilient, which can lead to periodical water shortages. IPÊ´s data indicate that there is a deficit of **35 million** trees in Permanent Preservation Areas (PPAs) that extend the length of the system.

The Semeando Água project, sponsored by the Petrobras Socio-environmental Program, is seeking to overcome this challenge. In cities that have a direct impact on water production for the Cantareira System (Bragança Paulista, Joanópolis, Mairiporã, Nazaré Paulista, Piracaia, in São Paulo; and Extrema, Camanducaia and Itapeva, in Minas Gerais), we introduced environmental education, courses and practices to improve land use, social engagement and restoration programmes. The recognition guaranteed the project's nomination for the 7th "Action for Water Award", promoted by the PCJ Consortium (Piracicaba, Capivari and Jundiaí), in 2019.

Results in 2019 of the Semeando Água Project, which operates in the region of the Cantareira Supply System:

People reached by Environmental Education and Rural Extension: **2,350**
People reached by social networks and indirect work: **29,390**
Trees planted: **34,000** saplings across **20** hectares.
Number of properties with operations: **13**

EDUCATION, RESTORATION AND SOCIAL PARTICIPATION

Materials from the project support public school teachers

In the Cantareira System, we brought environmental education to **2,350** people in 2019, including **500** public school teachers in municipalities we operate in. Teachers are fundamental to fostering a culture of higher socio-environmental awareness To that end, we offer tools to provide practical help in the teaching of socio-biodiversity issues.

Learning with practical lessons

With projects such as Semeando Água, we seek not only to reforest but also to encourage better soil practices that make a difference to the safety of the water. Social participation in the restorative planting carried out by IPÊ is promoted to help cultivate a relationship between people and nature. In 2019, more than **60** employees from companies located in the Cantareira System region and the Paulínia Refinery (Replan/ Petrobras) participated in communal planting work. In addition, they had the chance to see how Agroforestry Systems and syntropic agriculture are carried out in Nazaré Paulista (São Paulo).

Free Video Classes

In 2019 we published **three** more video classes to reach even more people with quality informative content: Rural producers and those interested in Forest Restoration, Agroforestry Systems and Native Forestry.

In 2019 we restored **30** hectares of water PPAs (Permanent Preservation Areas) and carried out maintenance on **10** hectares that were planted previously. In 2019 the project lead to the planting of **34,000** trees overall.

Engagement: campaign with app insiders

A network of IPÊ insiders was put together by the Semeando Água project with a mission: to spread information on WhatsApp groups about The Caminho da Água (Way of Water), A Produção do Cantareira(The Cantareira Production), The Impact of Scarcity (O Impacto da Escassez) and How to Sow Water (Como Semear Água).
That's why the IPÊ insiders campaign, developed by the Talquimy communication agency, identified more than **800** micro-influencers of various

profiles. The target audience was the population supplied by the Cantareira System, especially that of the metropolitan region of São Paulo.
The movement reached more than **390,000** people, who had access to materials, animations, videos, articles and also participated in a Facebook live-stream, which brought accurate, quality information to these everyday conversation channels.

Research to propegate knowledge and create public policies

Like in all IPÊ projects, the subject of public policies in Semeando Água enables important developments, such as the development of partnerships to create regional strategies and alternatives. That's why we participate in events related to Water Resources Management and others that complement biodiversity conservation.

With the importance of institutional relationships in mind, in 2019 we promoted the Fórum Desafios e Oportunidades para Segurança Hídrica(Challenges and Opportunities for Water Safety) in the Cantareira System and established a Technical Cooperation Agreement with the Forest Foundation of the State of São Paulo, organizing the 1st Scientific-Technical Symposium of the Cantareira Continuum (I Simpósio Técnico-Científico do Contínuo Cantareira).

IPÊ is one of the directors of a symposium on the Cantareira Continuum

The Cantareira Continuum Protected Area System, or continuum Cantareira, is a complex formed by several conservation units, which are essential for the formation of a connecting corridor between the forest fragments of the Serra da Cantareira mountain range and the forest ranges of the Serra da Mantiqueira. They are the Cantareira state parks, Itaberaba, Itapetinga, Pedra Grande Natural Monument, Guarulhos State Forest, the APA Cantareira System and the Usina District Dam. Because of their significance, they are now research development areas which provide crucial results to the development of conservation and management strategies for the Protected Areas and their surroundings.
As to learn about work undertaken in the region, identify gaps in knowledge and seek strategies for the promotion of applied research, IPÊ gathered at the 1st Scientific-Technical Symposium of the Cantareira Continuum (I Simpósio Técnico-Científico do Contínuo Cantareira), on October 30 and 31, in Nazaré Paulista (São Paulo). The event had Fundação Florestal (Forest Foundation,) together with ESCAS - Faculty for Environmental Conservation and Sustainability, the Semeando Água project and the Forest Institute as partners.

As a result, an action plan for local research was developed, alongside a Good Practice protocol between Protected Areas managers, researchers and universities and a document with the priority areas of research.

Other IPÊ projects to influence public policy:

• We work with the Technical Boards (Câmaras Técnicas, CTs) of the PCJ Committees (Piracicaba, Capivari and Jundiaí basin), participating in discussions about policies and initiatives in the Amazon basin, aiming to strengthen work in the region of the Cantareira System. We are members on the Environmental Education, Rural, Basin Plan and Natural Resources Technical Boards now too.

• IPÊ is also a member of the multi-sectoral movements: Brazil Coalition on Climate, Forests and Agriculture. In the coalition's Green Finance group, we support drafting lines of credit proposals for the agricultural sector to be forwarded to the Ministry of Agriculture.

• At the Parliamentary Environmentalist Front for the Defense of Water and Sanitation in São Paulo, from the State Legislative Assembly, we support discussing and creating proposals to improve public policy related to: conservation of remaining forests, management of Conservation Units and sustainable food production.

• As next steps, Semeando Água wants to support strengthening the food production chain of the Cantareira System, organic production in particular. By choosing to eat food grown in the region, consumers also contribute to water safety and it encourages producers to continue working in the countryside and helps to increase the area's average income, which, per family, is less than minimum wage.

Proper results and safeguarding for the future.

Productivity improvements in the field as well as soil and water conservation, an increase in biodiversity, are all the results seen by rural landowners upon implementing IPÊ's methods. In an event that celebrated the results of the Semeando Água project, producers who adopted the methods commented on the experience.

"I had the chance to get to know IPÊ through a producer, I did the first module of the ecological pastures course that is heavily linked to sustainability, through the triple bottom line; social, environmental and financial. We also did forest restoration around the bodies of water in the PPAs, it was really encouraging to see the progress that was made. I'm really happy with this partnership and I'm rooting for the extension so it helps more and more people" Ricardo Troster, rural property-owner from Joanópolis.

Lázaro Brandão, manager of the Social Responsibility sector at Petrobras attended the event. *"It's with great pleasure that we support initiatives such as the Semeando Água project, lead by IPÊ, and to see this network of all the partners, institutions, [and] local producers. This is where we make a difference, in taking local action, in the training and development for families, schools, the managers - all in a network, advancing together. The results are concrete, tangible"*.

"If we do the agroforestry mix, we'll have more food for other people and for ourselves. And I'll feel proud, because I dreamt of having something different close to home."
Olinda Maria da Silva Santos,
rural producer in Camanducaia.

2.3 PANTANAL AND CERRADO

Biome: Pantanal and Cerrado
Region: Mato Grosso do Sul
No. of beneficiaries: **7,232**

The Challenge:

To develop solutions for the conservation of the lowland tapir *(Tapirus terrestris)*, the giant armadillo *(Priodontes maximus)* and the giant anteater *(Myrmecophaga tridactyla)*. To that end, we're carrying out projects on scientific research, population modeling, development of conservation strategies, environmental education, training and empowerment, scientific tourism and communication. Since 2019, IPÊ has been advancing socio-environmental research in the western region of the Pantanal.

Major achievements:

• We have put together the most comprehensive database on the Brazilian tapir in the world, which helps to strategize conservation work for the species in different biomes and to publicise the importance of protecting the animal.
• Collecting unpublished data on the giant armadillo, which also aids in the formulation of conservation plans.
• All projects work intensively on collecting information and implementing public policies to best help the species.

Lowland Tapir: regional conservation strategies

Since 1996, we have carried out work for the conservation of the Lowland Tapir *(Tapirus terrestris)*. Work began work promptly in the Atlantic Forest of Pontal do Paranapanema (SP), and then advanced to other biomes, thus giving rise to the Lowland Tapir Conservation Initiative (LTCI). The main objective is to develop regional conservation strategies, based on science and plans to mitigate

threats to the species in the biomes where it's still found (Atlantic Forest, Pantanal, Cerrado and Amazon).

LTCI is today the largest tapir study in the world. Long-term work gave rise to the most complete database on the species, which provides information to scientists from various countries and is widely used to influence the decision-making process for the animal's conservation policies.

The team captured **165** different tapirs, **35** in the Atlantic Forest, **95** in the Pantanal and **35** in the Cerrado, for reasons such as collar placement and removal and data collection on social hierarchy and reproduction. All in all, **101** tapirs were monitored for extended periods of time.

Initiative heads to the Amazon

In 2019 another important step was taken as we started our tapir conservation work in the Amazon, thus bringing the conservation work for the tapir and its habitat to an end.

A 30-day expedition, carried out in June 2019, covered more than **5 thousand** kilometers along the southern arc of deforestation, passing through Rondônia, Mato Grosso and Pará. In this region there's a variety of human activities which inlude large-scale agriculture (soybeans in particular), livestock, mining and palm oil plantations, amongst others. The aim was to check the status of tapir in the region and draw up a plan for research on the species in the region for 2020. We rely on manifold crowdfunding donators from around the world to make these expeditions viable.

In the Pantanal and Cerrado, research includes monitoring and genetic analysis

In the Pantanal, LTCI's research is carried out in the Fazenda Baía das Pedras, an environment better balanced ecologically-speaking than the Cerrado, where the threats to wildlife are higher due to pesticides and busy roads. The disparity between these **two** areas of study is significant as it allows for the comparison of animal behavior and health condition in such diverse environments.

In 2019, we conducted **two** capture expeditions in the Pantanal (Fazenda Baía das Pedras). In all, **33** tapirs were captured (**24** recaptures). The animals are tagged with GPS collars to monitor dispersion and social and family struture.

That same year, scientists from the Grupo de Especialistas em Planejamento da Conservação from the Species Survival Commission (SSC) of Conservation Planning Expert Group of the International Union for Conservation of Nature (IUCN) linked to the Conservation Planning Specialist Group (CPSG) contributed through the LTCI team in modeling the Pantanal and Cerrado tapir populations.

The methods of capture (box traps and tranquilizer darts) are used in all areas of study for research of spatial ecology, landscape movements and spatial overlap. Another method used is the camera trap, which is for analysing tapir social order and reproduction in the Pantanal. Currently, **50** of these traps are distributed around the Baia das Pedras. Since 2010, the camera trap study has resulted in **24** thousand photos and videos.

Following their every step

Monitoring the tapirs, either by satellite telemetry or camera trap, provides extremely important data. Over the years, we have been able to record hundreds of breeding events and learn about the interaction between females and calves.

Several females we monitor had calves between 2015 and 2017, most of them survived, which provided us with an incredible opportunity to monitor their growth and development, their social interactions and parental relationship. In 2020, this data will be published in the population viability analysis (PVA).

More results from the LTCI

- Throughout 2018 and 2019, LTCI published **11** articles, **15** of which still being prepared for publishing in 2020 and 2021 on the health and genetics of tapirs, done in partnership with Brazilian public universities.

-It's not just collisions with cars which reduce the population of tapirs in the Cerrado, biological necropsy samples indicate the presence of **nine** pesticides, some of which not legal in Brazil, and four metals (cadmium, lead, copper and manganese). Learn about the studies done to combat the issues: Technical Report on tapirs and pesticides in the Cerrado; use of underpasses along the Anta along the MS-040 highway; and impact of running over lowland tapir on Mato Grosso do Sul highways.

- In 2019, environmental education activities **12** teachers and **800** children, teens and young adults in rural and urban schools the Pantanal and Cerrado, in addition to **30** farm owners and approximately **800** farmers in **five** settlements of landless workers.

- Over the past 23 years, we have partnered with more than **100** zoos around the world to link the in situ (within zoos) and ex situ (off-site) conservation work and include a wide community (from directors to visitors) in tapir conservation.

- LTCI gives talks for tourists visiting the Pantanal and those who participate in scientific tourism programs. In 2019, we gave talks on tapir conservation for **70** tourists from Baía das Pedras and welcomed volunteers from Australia, Canada, France, the United Kingdom and the United States, in accompanying us on our expeditions.

- As the oldest tapir conservation program in the world, LTCI is also aiming to spread awareness. Since 2015, it's functioned as a center for training and expertise exchange between the conservationists of the species. In five years, we provided grants for **19** people from **nine** countries, including Argentina, Brazil, Colombia, Costa Rica, Guatemala, Honduras, Nicaragua, Paraguay and Peru.

- With lectures and presentations for training up professionals, LCTI supported, in 2019, around 3,000 undergraduate and graduate students in biology, veterinary and conservation biology at national and international universities.

- The results of LCTI's studies on tapir health were published as scientific articles, while others were on topics such as nutrition and food ecology. Tissue samples are also collected for genetic studies. This research on health and genetics is done in partnership with several of the country's universities and laboratories.

SOCIAL NETWORKS
"It's a tapir!"

In Brazil, there is a prejudice with tapirs. They are considered an animal without intelligence. So, saying somebody "is a tapir" is considered offensive. But, tapirs aren't lacking in the intelligence department! The animal boasts a high neuron count, it's agile and is key for biodiversity. We got "#antaéelogio" (meaning "tapir appreciation") going viral on social networks to get them some recognition. Share it too!

GIANT ARMADILLO: pioneering research

The Tatu-Canastra (giant armadillo) project, carried out by IPÊ and the Institute for the Conservation of Wild Animals (ICAS), began in 2010 in the Pantanal of Mato Grosso do Sul and expanded its work into areas of the Cerrado (Mato Grosso do Sul) and Atlantic Forest (Minas Gerais and Espírito Santo) over the years. The primary objectives of the project are to research the giant armadillo's (Priodontes maximus) evolution and biology,

as well as using field data for planning and influencing public policies for its conservation.

The project was pioneering in its methodologies of investigating the ecology and biology of the giant armadillo and is one of first in training aspiring conservationists. The initiative has already documented the important role of armadillos as ecosystem engineers, and has consistent data on the spatial ecology of species and their habitat selection, as well as information on their health, diet, reproduction and communication.
Part of the data collected over the years was published in **four** scientific articles, in 2019. In 2020 there will be new articles published on the species. Information on the armadillos aids in the decision-making process of conservation and was even used in the construction of the Plano de Ação Nacional (National Action Plan) for the giant armadillo. Said plan was validated by the ministry for the environment as well as the Chico Mendes Institute for Biodiversity Conservation in July 2019.
http://bit.ly/artigostatu2019

See how research in each biome has been done

Pantanal

In a **360** square kilometer area around the farm Baía das Pedras (MS), the project carried out **eight** research expeditions in 2019. **Four** new armadillos were captured, among them a young female, which will help us fill in data on giant armadillos parental relationships. Such as at what point exactly mother/calf separation happens. During these expeditions we managed to implant **10** new GPS devices in recaptured armadillos. The reproduction and sexual maturity data for the species is all set and waiting to be published in an article in 2020.
Pantanal species studies are long-term and by 2020 will have been going on for 10 years. We're now also using a new piece of innovate technology: a new activity sensor inside the GPS device. A new permanent grid will also be set up throughout the study area, monitoring possible social interactions (animals visiting each other's living area), reproduction and armadillos health.

Atlantic Forest

In 2019, the researchers conducted an expedition to Rio Doce State Park, The last park in the Atlantic Forest known to be home to the giant armadillo and has confirmed the species' presence there. In 2020, with support from the Whitley Fund for Nature, a new project will be underway in the region, to assess the viability of the species population and involve the local population so the animal becomes a source of pride and a symbol of conservation efforts in the park. The fieldwork is going to involve creating camera trap networks and visiting nearly **70** areas around the park.

Cerrado

Seven field campaigns were carried out in the BR-267, Mato Grosso do Sul area, from April to November 2019. The aim of which was to evaluate the armadillo population density and positioning in the area. While working in **32** rural areas there in which we chose **50** zones for study and installed **150** camera traps in various spots. We recorded **22** species of medium to large mammals in **20** of the **50** zones that were studied.

After the surveys were carried out in the Cerrado and the Atlantic Forest, the project put together maps of the area which illustrate armadillo positioning. They are now available to the government. Now the plan is to encourage the establishment of such protected areas for armadillos and other important species too.

The stamp showing beekeeper friends of the armadillo

In Cerrado, Mato Grosso do Sul, a conflict is arising, endangering the lives of the giant armadillos and local beekeepers activity. As hives and beekeeping production are close to the last native forest areas of the biome, armadillos are drawn to it and destroy the hives to eat the bees and larvae. Beekeepers often put poison on the fallen hives, which leads to the death of armadillos and giant anteaters, amongst other animals too. Some research is already pointing out that due to the farmers action there is now localised extinction of the armadillo species.

In 2019, we installed camera traps in the production areas to gather evidence of the armadillo behaviour. We conducted interviews with **135** producers and, after lengthy conversation with some of the farmers, we created the wildlife-friendly beekeeper stamp, to raise awareness of the importance of keeping armadillos alive in nature. The stamp is a sign the farmer is caring for the native fauna and serves as a way for the farmer to diversify their target market for product sales.

In 2020, the certification criteria will be laid out, together with the Wildlife Friendly enterprise Network (WFEN). As for rural extension work, mitigation measures and certification for associations and eucalyptus plantations will be endorsed.

In 2019, we put our communication and education strategy for the armadillo into practice:

• The project involved **50** public schools in Mato Grosso do Sul, including **seven** rural schools, with approximately **2,500** students participating in our education work.

• The project trained up **20** educators from the Municipal Department of Education (Secretaria Municipal de Educação de Campo Grande, MS) and made new education-based partnerships with Brazilian zoos, NGOs and state bodies such as the Municipal Educational Transport Department (Secretaria Municipal de Transporte Educacional, Campo Grande and Aquidauana), Municipal Environment and Urban Planning Department (Secretaria Municipal de Meio Ambiente e Planejamento Urbano); State Council of Mato Grosso do Sul; Department of water and sanitation and **two** animal rehabilitation centers.

• At the 71st meeting of the Brazilian Society for the Advancement of Science (SBPC), the project's booth attracted **2,000** visitors.

• Participating in creating documentaries as well as press articles is also strategically apt. In 2019, the project was the subject of a PBS film called Espionagem Animal (Spies in Disguise) and was also a documentary from Houston based broadcasters, KPRC (USA).

• Since 2010, there's now been more than **80** biologists and veterinarians trained through the project, which has become essential reading for students and professionals interested in on-site conservation. In March 2019, we conducted the course on population viability analysis for conservation.

GIANT ANTEATER: Managing roads and pavements

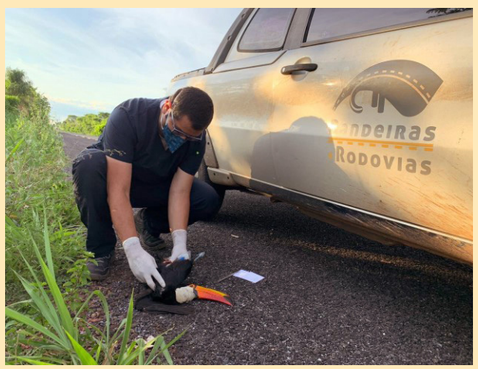
With the Bandeiras & Rodovias (Anteater & Highway) project, researchers from IPÊ and ICAS (Institute for the Conservation of Wild Animals) are looking to measure the impact that roads have on the giant anteater's (Myrmecophaga tridactyla) survival, population structure and health. The giant anteater and other animals are often run over on these roads. The project seeks to define landscape and road management strategies to prevent potential extinctions.

1,337 kilometers of highway has been monitored since 2017 every fortnight. In two years, **11,199** dead animals were recorded. Among them, **44** giant anteaters.

To better understand this issue, we interviewed lorry drivers passing through the BR-262 and BR-**267** highways and analysed the data, which will contribute to more effective measures of raising awareness.
Data from photo traps dotted along the BR-267 is also being analysed, as well as samples of **1255** animals and **102** necropsies (of **62** anteaters) that will lead to more data about the health of these creatures.

The Anteater & Highway project recorded, in two years, **11,199** animals killed on the roads in Mato Grosso do Sul, including **44** giant anteaters. These run-ins with traffic have halved the giant anteater population growth rate for those that live near the roads. We are still working with truck drivers to understand how we might prevent these accidents.

Taking another look at the Pantanal
Under researcher Rafael Chiaravalloti's management, IPÊ started research related to fishing communities in western Pantanal; the region of Serra do Amolar. The proposal being to understand the so-called socio-ecological systems and how communities adapt to changes in the environment to survive. The study can be found at http://bit.ly/socio-pantanal



3.0 THEMATIC PROJECTS

THEME PROJECTS

Apart from the projects developed locally, we also operate in what we call theme projects, which are broader in terms of activities and territories. This line includes Integrated Solution projects developed in Brazilian Protected Areas, and Research & Development initiatives.

Integrated Solutions for protected areas: Amazon

In the Amazon, we have **352** Protected Areas and 380 Indian Territories that have been demarcated, totaling **732** Protected Area. But the low level of consolidation of these protected areas expands the vulnerability of forests, biodiversity and the people of traditional communities. Deforestation and forestry degradation are the main causes for loss of biodiversity and emissions of gasses that affect the climate.
In search for consolidation of these areas and conservation of biodiversity, IPÊ promotes Integrated Solution projects in the biome, since 2013.

Our strategies to support protected areas in the Amazon are:

- Creating local capabilities through promotion of knowledge and generation of income with sustainable practices (development of productive chains);
- Developing research connected to management instruments that establish information for operation and management of protected areas; and
- Articulating networking with local institutions (NGOs, Indian Associations, Extractivist Associations, Cooperatives, Companies and Government Organizations) to boost the results and funds within a certain territory.

OUR RESULTS IN NUMBERS - AMAZON

12 institutions and non profits organizations benefited with institutional strengthening

Direct actions in **42** protected areas (PAs)

336 biodiversity monitors trained to work in PAs

32,000,000 hectares more efficiently conserved in the biome

4,895 people benefited with knowledge in environmental conservation events

571 people trained to work in monitoring and PAs management

1,000 people benefited with IPÊ work at Lower Black River (Baixo Rio Negro)

6 states of brazilian Amazon benefited with actions focused on their PAs

25 partner organizations acting in a network with IPÊ

What are Integrated Solutions?

Our initiatives are structured on **two** fronts: Systemic, with structured activities within the National System for Protected Area (SNUC), involving articulation with government management organizations; and Local, with options directly within the Protected Areas, mostly executed in the Amazon biome.
In 2019, **three** projects worked by integrating these concepts in the Amazon: Participative Monitoring of Biodiversity, Motivation and Success in the Management of Protected Areas and LIRA - Legado Integrado da Região Amazônico (Integrated Legacy of the Amazon Region).

Young leadership was one of the highlights of the Congress

IPÊ participated in the III Congress of Protected Areas in Latin America and the Caribbean, in Lima (Peru), where it presented the results of the Integrated Solutions for Protected Areas. We brought to the debate the part played by the Third Sector to support management of Protected Areas, participative monitoring of biodiversity and volunteers as an innovative form of conservation in Protected Areas. We introduced LIRA as one more strategy to strengthen these areas and we also covered the part of young leadership in conservation.

IPÊ has been operating in the Amazon territory for over 20 years. Over this period, we have developed more than **15** projects. This has made it possible for us to build a relationship network based on respect to traditional knowledge and on the joint pact of actions and their results.

MOTIVATION AND SUCCESS FOR MANAGEMENT OF PROTECTED AREAS (MOSUC)

Biome: Amazon
Area of operation: **30** Federal Protected Areas (**28,701,983** hectares)
No. of people benefited: **125**

In 2012, IPÊ and Chico Mendes Institute for Biodiversity Conservation (ICMBio) joined forces with Gordon and Betty Moore Foundation in project Motivation and Success in the Management of Protected Areas (MOSUC). The initiative stimulates innovative activities and good planning and management practices in management of these areas. Furthermore, it promotes arrangements for expansion of the number of people and communities working together with the managers, as partners and volunteers.
In August 2019, we ended the "Partnership Network" component of the project, a structure developed over the last two years, benefitting over **30** Protected Areas, including **two** integrated management nuclei and a special advance unit. The proposal was to provide models for the hiring of local NGOs to support the management of Protected Areas, targeting the development of these protected areas. In all, we have involved **12** local institutions and another **50** collaborators, covering an area of almost **29 million** hectares of Protected Areas in the states of Roraima, Amazonas, Amapá, Pará, Mato Grosso, Rondônia and Acre.

"In MOSUC, we managed something new in the management of Protected Areas in Brazil - the establishment of partnerships alongside civil society organizations to support the management of Protected Areas with the promotion of similar actions to those of a park ranger. The results of this experience were very positive, for example, with the increase of integration of the Protected Area with the local community, the institutional strengthening of small partner institutions, and expansion of the effectiveness of management of the supported Protected Areas," explains project coordinator Angela Pellin.

TRAINING AND INFORMATION THAT TRANSFORMS

In the process of development of our projects, we seek to stimulate people by promoting knowledge and empowering them to develop their activities in an independent manner, in favor of their wellbeing and of conservation of biodiversity where they live. Marilene Lima is one of the examples of results we get from this work. The daughter of a rubber farmer in the rural region of Sena Madureira (Acre), she is currently the head of Extractive Reservation (Resex) Cazumbá Iracema, one of the main Conservation Units in the state.

"Living the MOSUC project was the best opportunity I have had in my life, both in terms of knowledge and in professional development. I was against the Protected Areas, because my community was going to become a Resex, and I did not know what that meant or the benefit it could bring - and I learnt that in the MOSUC. It is very strange to me, the daughter of a rubber farmer, to become the head of a Protected Area like Cazumbá. But, I can now have a broad vision - that of someone who understands the residents of the Resex, as I come from a reality that is very similar, from a place lacking in technical planning and guidance about how to produce and sell. Today, as the head of the unit, I also feel respected due to that."

*In memorian of Marilene Lima, head of Extractive Reservation (Resex) Cazumbá Iracema, one of the main Protected Areas in Acre, where over 370 families survive off the nuts, rubber trees, flour production and other activities.

Partnership with ICMBio to strengthen management of Protected Areas and volunteering

• The MOSUC activities involve federal Protected Areas in all Brazilian biomes. We are operating in partnership with ICMBio to strengthen management in these protected areas, with seminars to exchange experience with managers and publishing best practices used in the Protected Areas as a way to inspire professionals and communities for more participative operation for consolidation of these areas.

• One of the main highlights in this work was IPÊ support in restructuring the entire ICMBio Volunteer program for Protected Areas, from renewal of visual communication to development of a platform for registration and management of volunteers and activities. In 2019, we concluded the system that we started in 2018.

• Since 2018, we have registered **24,000** volunteers. In 2019 alone, **2,900** volunteers used the platform to register and work at one of the **212** Protected Areas and in the **12** Research Centers that participate in the program.

With ICMBio, IPÊ coordinates a volunteer program for operation in Protected Areas in the Amazon. Since 2018, we have registered **24,000** volunteers.

PARTICIPATIVE MONITORING OF BIODIVERSITY (MPB)

Biome: Amazon
Area of operation: **17** Federal Protected Areas (**11,970,762.04** hectares)
No of people involved: **1,103**

In the MPB project, the community itself analyzed the status of local biodiversity conservation, like plants, mammals, insects. The figures generated in this monitoring program help establish ecological parameters for evaluation of the effectiveness of the federal Protected Areas. The information helps subsidize, evaluate and follow projected changes in distribution and sites where the species is identified on site answering to climate change and other threats. With this participation of society, the Protected Areas in the Amazon gained even more management support.

The MPB also supports the National Plan for Adaptation to Climate Change, which forecasts the implementation of a program for the monitoring of 50 federal Protected Areas, to evaluate and follow the impacts of current and future climate change on biodiversity.

The project, which partners with Chico Mendes Institute for Biodiversity Conservation (ICMBio)'s National Program for the Monitoring of Biodiversity (Monitora) and counts on the support of USAID, Gordon and Betty Moore Foundation and the ARPA Program, has already benefited over **4,700** people, since 2013.

Courses graduated more than 150 monitors in 2019

The training of biodiversity monitors is one of the most important actions in the project. This is a chance for the population to learn more about the region they live in and also to prepare for the opportunity for volunteer or paid work at the Protected Areas. The courses also work on improving monitors who have already been trained.
For their monitoring work, communities apply methodological routes, which they design alongside Protected Area managers, specialist researchers, technicians and IPÊ researchers. The routes are important as they create a standardized database, used to make comparison and measurement of the state of the species analyzed. There are specific routes for monitoring nuts, fisheries, butterflies, wildlife, and lumber monitoring, among others. In the course, practice is emphasized, as is the exchange of knowledge.

In 2019, IPÊ worked on the training of biodiversity monitors in 14 Protected Areas, instructing **153** people. Of the total, **183** operated as monitors, **70** of them remunerated. This initiative of the MPB (Participative Monitoring of Biodiversity) project promotes the engagement of local communities in knowledge and conservation of species in fauna and flora.

"I have always liked biology, but my sole purpose when I entered the project was income. After the course and the practical monitoring, everything changed. I noticed that it was not only an activity to generate income: I realized the importance of acquiring knowledge for life. There are incredible things to learn in biodiversity. Learning about the behavior of species, for example, is very interesting. I liked it very much. And I still have the chance to transfer this knowledge to my children, brothers and friends." Zeziel F. de Moura Silva, biodiversity monitor at Flona Jamari since 2014.

With the help of monitors, in 17 Protected Areas the MPB project has already collected records of:

5,783 mammals and birds
6,647 butterflies
1,756 lumber plants
1,201 Amazonian chestnut trees monitored
734 individual chelonii, **8,162** nests monitored and **344,024** tortoises released
35 species and **2,987** individuals recorded in subsistence hunting
42 species and **83,882** records of mammals in forestry concession areas
136,581 individuals recorded in tucunaré (peacock bass) fishing
9,248 kg fished and **5,816** kg of fish consumed in self-monitoring of fishery

Spaces for dialogue: strategic for biodiversity

Dialogue is always fundamental in participative processes. In the MPB, IPÊ and its partners promote actions that stimulate constant exchange of knowledge.

Meeting of Knowledge

In 2019, the MPB promoted **four** editions of the "Meeting of Knowledge". One of them, at Extractive Reservation (Resex) Cazumbá-Iracema (Acre), brought together over **120** people: monitors, members of the community, researchers and representatives of the ICMBio, IPÊ, Embrapa, WWF and the Sena Madureira Rural Worker Union. Community members also participated in at least **four** Resex sites: Cazumbá, Cuidado, Alto Caeté and Iracema.

There, the community was presented with the results of Protected Area monitoring and the next steps of the work were defined. This moment of giving back is part of the participative monitoring process and enriches the results of the project. This is the most strategic phase to make conservation of biodiversity something truly collective.
For example, the researchers noticed a reduction in the number of certain species of animals, and could not understand the reason. In conservation with monitors, who live in the community, it was discovered that the tabocais (bamboo forests where these animals live) had died off, and it was concluded that the animals could have left these monitored areas.
The event is part of the Collective construction of Learning and Knowledge, a consolidation of MPB project results.

Participative Monitoring Dialogues

On Uatumã river, in Presidente Figueiredo (AM), is Balbina Hydroelectric Power Plant (UHE Balbina) dam, covering over **2,300** km2. There, the main fishery attraction is the tucunaré (peacock bass). To evaluate how to perform better management of the activity, **100** fishermen monitor the **three** species. The fishermen send information collected to monitors at the Vila de Balbina port, and to the Boa União do Rumo Certo community port.

To exchange information about this activity, currently fundamental for fishermen and for fish conservation, the so-called Participative Monitoring Dialogues were promoted in 2019. The events included users of lakes and monitors in the communities of Boa União do Rumo Certo, with **63** participants, and Vila Balbina, with **51** participants. Apart from them, the events also included representatives of the Uatumã Biological Reservation (Rebio Uatumã), IPÊ, the Presidente Figueiredo Fishery Union, and Z-6 Fishery Colony.

highlight In 2019, we released the second edition of publication Participative Monitoring of Biodiversity: Learning Evolving. The book brings notes on the experience of Protected Areas in the Brazilian Amazon from 2013 to 2017, strategies, tools and a step-by-step process for implementation.

Collective Construction

The II Seminar for Collective Construction of Learning and Knowledge, promoted by the IPÊ, in partnership with ICMBio, in June 2019, brought together **118** people, including managers, researchers, monitors and members of communities in Protected Areas and people who live close to these protected areas. Some participated in the project for Participative Monitoring of Biodiversity (MPB).

In the seminar, the experiences of participants in the project were shared. Conversation roundtables favored exchanges of experience in the monitoring of biodiversity in the Amazon. That was a moment to learn how monitors are playing their part as protagonists and how traditional knowledge is added to academic knowledge.

National Week of Science and Technology for River Dwellers in the Amazon

Considered the main event in Brazil in the area of scientific promotion, for the first time the National Science and Technology Week (SNCT) was promoted among river dwelling communities in the Amazon. The measure provides chances to multiply the knowledge of biodiversity research with the local population - that is, making Science more accessible - and is also a means to listen to these people, their knowledge, and to exchange learning.

In partnership with IPÊ's MPB, the National Institute for Research on the Amazon (Inpa), with support of the Amazonas State Environment Secretariat (SEMA) and the Friends of the Manatee Association (Ampa), playful and informative activities were executed for youths, as were educational activities that generate income for adults.

The activities took place in October in the communities of the Lower Rio Negro (AM): Baixote and Pagodão, Sustainable Development Reservations (RDS) Puranga Conquista and São Sebastião, in the Aturiá Apuazinho Environmental Protection Area (APA).

LIRA – INTEGRATED LEGACY OF THE AMAZON REGION

Area of Coverage: 20 federal Protected Areas, **23** state Protected Area; **43** Indigenous Areas; (**80 million** hectares)

Estimated number of people benefited: **35,000** over the 5 years of the project

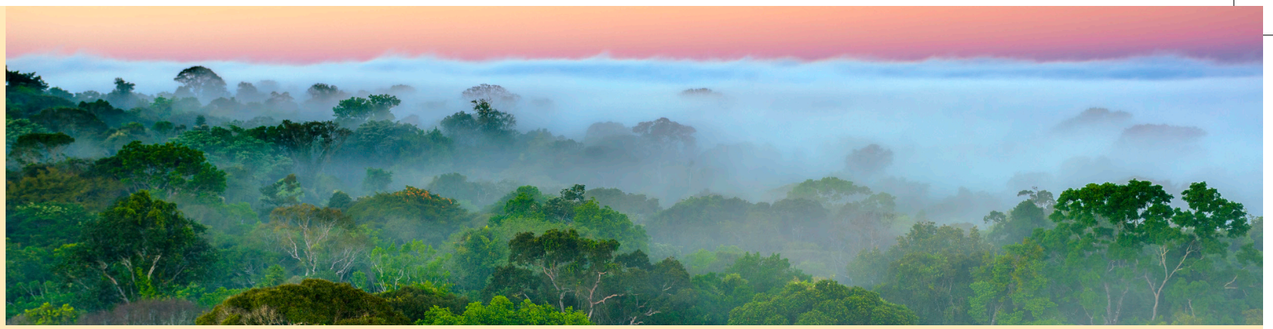
In 2019, we started project Integrated Legacy of the Amazon Region, the second main Brazilian conservation program. Inspired on federal government program ARPA, which aims to expand and consolidate the UCs, we developed a complementary action strategy and have inserted Indian land in the initiative.

LIRA shall promote growth in the effectiveness of management of the protected areas for maintenance of standing forests and for the fight against great forestry degradation threats.
On intensifying the integrated work performed alongside NGOs, Indian associations, extractivist associations, the private sector, and state and federal governments, the capacity and governance structure is created for socio-economic promotion and environmental conservation of the territory.
The area of the project covers **80 million** hectares of Amazon biome, grouped into **six** territorial blocks in the states of Acre, Rondônia, Amazonas and Pará.

Call selects projects to benefit 35,500 people

In 2019, a call was issued to select **eight** organizations to work together with another **39** institutions. The projects will receive around **R$ 40 million** to implement actions by 2022. The objective is maintenance of the landscape, of climate functions and of socio-environmental and cultural development of people and traditional communities, benefitting over **35,500** people.

Those selected shall promote the following activities in the territory: structuring and fostering socially impacting business related to bio-economy; elaboration and implementation of the plan for territorial and environmental management (PGTA); forestry management plans; governance mechanisms; monitoring and protection systems; use of management and protection technology; integration with regional development; and access to public policies.



IPÊ will be responsible for articulating, integrating and potentializing all actions to take place in the local level and elevate them to the regional and federal spheres.
LIRA financial partners include the Amazon Fund/ BNDES and Gordon and Betty Moore Foundation.
lira.ipe.org.br

RESEARCH & DEVELOPMENT

In 2019, to proceed with the partnership in research and development with company CTG Brasil in 2020, we developed a new proposal that originated project "Development of Simplified Procedures for Economic-Monetary Valuation of Ecosystemic Services and Non-Monetary Appreciation of Cultural Ecosystemic Services Associated to Forestry Restoration". It should last 40 months and shall be developed in the Pontal do Paranapanema, in the West of the State of São Paulo, in the Environmental Conservation Areas (ACAs) maintained by CTG Brazil.

We are going to elaborate simplified procedures to stimulate the economic/monetary value associated to forestry restoration impacts in the company business. The figures should include costs avoided through the maintenance and mitigation of assets, or compensation due to environmental damages, and the potential revenues with new business based on ecosystem services.

Furthermore, we shall proceed with the collection of biodiversity data on birds, amphibians, bats, and other mammals of medium and large size, using autonomous recorders and camera traps, as well as water, soil and carbon analysis for new ACAs.

Also evaluated will be the economic and non-monetary value of forestry restoration alongside different social players and the perception with regard to external features produced, which directly influence company Social Licenses to operate. We will count on the participation of organizations like FEALQ- the Luiz de Queiroz Foundation for Agrarian Studies at ESALQ, Lavras University, and GVCes under Getúlio Vargas Foundation.

CTG Brasil has already invested in actions that resulted in the plantation of **11 million** trees (on **6.715** hectares) and in conservation of **2,818** hectares of natural regeneration areas, assisting in the conservation of landscapes in the ACAs involved.

4.0 PARTNERSHIPS AND SUSTAINABLE BUSINESSES

Through building partnerships, the Unidade de Negócios Sustentáveis do IPÊ works to spread the word of the socioambiental cause and give everyone the opportunity to get involved. We do cause-related marketing projects on developing donation culture, new income opportunities for communities, reforestation, education and social mobilisation. See our 2019 results.

Companies get to know our work through the IPÊ Experience

IPÊ's experience of organising activites for the conservation of biodiversity in various regions of Brazil spans more than 27 years, said experience is given back to society so we all might further our understanding and contact with nature. To that end, we launched the IPÊ Experience program in 2019, for business groups that wish to learn, understand and experience for themselves the work carried out by our teams. The experience, which takes the participants through seedling nurseries, lectures and native tree planting activities, can also be changed to cater for their interests.

This year, **270** people participated in the experience and planted **1,525** trees in total. Amongst the participants were teams from the Y&R advertising agency as well as the companies Tecnotron, Teleperformance, Havaianas, Tour House and the Ecoswim initiative.

A Participation Record: 960 swim for the Atlantic Forest

With a new participation record in 13 years, the Ecoswim event brought together **960** people split into teams on the 9th of November to find out can swim the most for the environment! A proportion of the money raised will be used by IPÊ and put towards our seedling nursery for the Atlantic Forest.

In 2019 the event raised **BRL$ 20,000** for the cause! The highest amount collected since the first edition.
Ecoswm is a swimming team initiative conceived of at the Polytechnic School of the University of São Paulo. Along with the donation via registration fees, the particpants receive seedlings from the very same nursery that they're helping to conserve, such as the ipê-rosa, goiabeira amongst others. One square metre of reforestation for every journey.
E-trip is a Tour House company which specialises in corporate trips and in November launched the "E-trip Green Friday" campaign. For every transaction on the website in that month, the company pledged to plant one square meter of the Atlantic Forest with IPE, as a way to promote offsetting the mass consumption during the month of the Black Friday sales.

The Initiative raised **BRL$ 6,360.30** and had various companies taking part : Tour House Corporative, Tour House Eventos, Air France KLM, Gol, Movida, Vivere Viagens, Italica, **123** Espanhol, **123** Japonês, Evento Único, Rock Content and Agência Amigo. With this money, 1,910m² of forest was planted, in other words that's **320** trees and **30** people participating directly.

Havaianas-IPÊ 2019: new Brazilian animals collection

The partnership between IPÊ and the footwear brand marked it's 15 year anniversary in 2019 (See more in Highlights of the year). Back in May we launched the new collection featuring the giant anteater *(Myrmecophaga tridactyla)*, broad-snouted caiman *(Caiman latirostris)* and the harpy eagle *(Harpia harpyja)*. **7%** of the sales from the Havaiana-IPÊ partnership went to IPÊ to help with environmental work. In 2019 the sales raised **BRL$ 647,270.70** for the cause.

Round up: everyone can contribute with donations

IPÊ participates of the Movimento Arredondar (Rounding Up Movement), which means that customers shopping at partner establishments can "round up" the price of their shop and donate the extra few cents to Brazilian environmental and social organisations. An individual's donation may not exceed more than **BRL$ 0.99** during a transaction. Up to 2019, we were partnered with Luigi Bertolli and Meggashop. Havaianas and Tricard are still part of the movement!

In 2019 IPÊ received a total of **BRL$ 46,442.09** This monetary resource is put towards the advancement and strengthening of our work in conserving biodiversity.

• Havaianas also participated in the movement

Buying a pair of flip flops from the brazilian animal collection isn't the only way that people can contribute to the cause. In Havaianas own shops (in Sao Paulo: Concept Store Oscar Freire, Shopping Iguatemi, Shopping Morumbi and Outlet Catarina. In Rio de Janeiro: Concept Store Rio and Shopping Leblon), customers can round up the cost of their shopping, those extra pennies will then be donated to the IPÊ Institute.

The participation of these partnered shops is crucial if the movement is to be successful. As such we run training courses for sales people and till operators which really makes the difference, both in the partnership working and raising more money.

In 2019 we undertook **two** more projects: distributing a thousand seedlings of species native to the Atlantic Forest in the Concept Store in Oscar Freire (São Paulo) on World Environment Day the 5th of June, and **15** trainees from Alpargatas visited IPÊ's headquarters in October.

• Tricard customers can now round up their bill

A new way to pay in 2018, rounding up payments via credit/debit card was an innovation thought up by IPÊ, Arredondar, and Tricard (Integrated Martins System). The client can select to round up their payments through the website or Tricard app which is applied from then onwards. The round-up will never exceed **BRL$ 0.99**. In 2019 the initiative generated **BRL$ 4,749.08** for the socioenvironmental cause. Since its launch, **1,500** people have joined in to help the initiative.

• For every transaction processed, Tribanco donates to IPÊ

Not only involved in the Rounding Up movement, Tricard (Tribanco) has been an IPÊ partner since 2006 through linking their products with us. Every Crédito Certo operation in Tribanco means **10** cents donated to our projects and 1 cent from every transaction paid with Tricard is put to the sustainability and strengthening of IPÊ. Total money raised in 2019: **BRL$ 48,290.05**.

Tourism in Atibaia supporting IPÊ

The Atibaia & Região Convention Visitors Bureau (AR&CVB) initiative means that Turista+ encourages cooperation between visitors to the Atibaia region and the Atlantic Forest area through partnerships with the hotel chain and the transaction of goods and services. Turista+, which is part of the "room-tax", is a voluntary payment made by the guest which goes to IPÊ.

This small contribution from guests not only helps fund research and environmental protection work but also covers the cost of personal accident insurance during their stay. In just 2019, more than **14.2** thousand people opted into the room-tax and to support IPÊ, which resulted in **BRL$ 7,703.75** being donated to the cause.

More than 52,000 tourists have already joined in on the project which is equal to 20,000 seedlings farmed or planting 1,000 native trees.

To ensure the project's success, Turista+ relies on the various teams of hotel staff to inform and explain the initiative and its results to the guests. In 2019 we trained up 45 staff at the Hotel Vila Verde, Atibaia Residence Hotel, Tauá Hotel and AR&CVB network.

We're supporting alternative income opportunities in communities

IPÊ wants the communities that it works with to engage with and get involved in learning about the importance of biodiversity and conservation. One of the ways to do it is showing them alternative ways to generate income which then strengthens these communities. Check out some of our initiatives:

- IPÊ Shop: the place for local products

These communities that IPÊ works create products which can be bought through the site shop: www.lojadoipe.org.br

The work done by the embroiderers from the Sewing the Future project in Nazaré Paulista (SP) is amongst the products for sale, as are the bath sponges and agro-ecological coffee from the agrarian reform settlers of Pontal do Paranapanema (SP), as well as T-shirts produced by volunteers such as designer Fabio de Sá.

Sewing the Future: income and conservtion

Between sewing circles, production and environmental education offices, the project teaches production, marketing and sales to a group of **nine** women from Nazaré Paulista (SP). Not to mention education around the biodiversity of the Atlantic Forest that they live in too.

Their work is a reflection of the critters and the forest; the style is a result of meeting with volunteer designers. In 2019 the designer Simone Nunes held another production meeting with the women.

With the C&A Foundation, the group of embroiderers participated in **four** events this year, the first a workshop for employees of the C&A head office, the Feira do Bem in Praça Milão, São Paulo, and the Virada da Virada in Bienal do Ibirapuera, also in São Paulo. The ladies came along to the Atibaia Festa de Flores e Morangos in 2019 and raised **BRL$ 2,260.00** for the group.

Environmental awareness at the Festa de Flores e Morangos in Atibaia

For the fourth year running, and with around 5 thousand attendees, we took part in the 39th Festa de Flores e Morangos in Atibaia this September. The city of Atibaia is of great interest in terms of environmental conservation as it's home to endangered species of flora and fauna of the Atlantic Forest, as well as water resources that feed into the Sistema Cantareira. That's why we, with help from the Associação Hortolândia de Atibaia which runs the event, always endeavour to raise awareness of the issue at the event.

Apart from the environmental awareness stand, up for sale were the products made by the Nazaré Paulista communities as well as the saplings of trees native to the Atlantic Forest grown in IPÊ's school nursery.

Reflecting on sustainability and teamwork through gaming

Commited to providing education and sustainability solutions to everyone, we created the "Sustainability Game" (Sustentabilidade em Jogo). Devised by ESCAS professor Marcos Ortiz, the tabletop game provokes debate and reflection on the topic of sustainability while at the same time prompting a sense of teamwork between the players. Through analysing, in a fun way, our perceptions on the topic, the game facilitates not just learning but also knowledge recollection. The game's real highlight is the challenges which require teams to strategize and solve real problems that today's organisations and experts face.

The game can be customised to best suit the institutions/organisations that want to use the game in their work too. In 2019 the game was played at Havaianas and during **two** meetings with Grupo GV; which brings together business leaders in the Nazaré Paulista region to discuss leadership, entrepreneurship, sustainabilty and personnel management.

Um Dia no Parque brings visitors closer to nature

The campaign Um Dia no Parque (A day in the park), held on the 21th of July by Coalizão Pró-UCs (Pro-Protected Areas Coalition), which we're a part of, promotes activities in Protected Areas across the country. The aim is to foster a culture of tourism through commemorative days so protected areas and partnered NGO's, organised visit groups and companies offer activities which, beyond just for recreation, open participants eyes to environmental awareness.

Young climate change leaders enjoy an immersive day at IPÊ

Climate crisis is a reality. So to face these socio-environmental challenges of the coming years, the startup Youth Climate Leaders is giving young people an intense training crash course to help combat the problems. Over the course of **2** months, **35** young people aged from **17** to **37** attend classes, talks and socio-environmental experiences which aim to reduce the impact of climate change on our lives. To round off the intense course, the group chose to spend a day with researches and project managers at IPÊ to exchange knowledge and experience.
"These young people in the course are in a period of career transition. We're always looking for immersion opportunities with organisations that undertake environmental work, contact with experts in the field and of course, contact with nature itself. It's a way to show how it's put into practice in Brazil. IPÊ has the infrastructure that we look for", explains Flavia Bellaguarda, co-founder of Youth Climate Leaders and climate change advisor for ICLEI (Local Governments for Sustainability).

5. EDUCATION

Education for biodiversity conservation is in IPÊ's DNA, the organisation began offering short courses in this field back in 1996; soon becoming a reference in Conservation Biology. Today, ESCAS - Faculty for Environmental Conservation and Sustainability offers, in addition to short courses, a Professional Master's Degree and an MBA, all of which favour training and teaching around biodiversity in light of Brazil's socio-environmental challenges.

Graduates since 1996: **7,029**
Graduates in 2019: **316**
Master graduates: **141**
MBA graduates: **53**
Scholarships: **302**

SHORT COURSES

Participants:
Classroom courses: **91**
Online courses: **68**
Total scholarships: **2**

Courses promote the mastery of applicable tools for environmental conservation

In 2019, ESCAS promoted field courses for Nurseries and Seedlings, Landscape Ecology and Field Taxonomy, with **44** people participating. The classes provide a practical approach and the necessary tools for those in the field. Some courses were also undertaken online, to ensure access to any professionals not in São Paulo.

One of the longest courses at ESCAS, the Nursery and Seedlings course, changed direction towards being more market-oriented in 2019. Examples show that work in this field can be profitable mainly in areas of high environmental liability in which there's high demand for seedlings native to the area. Some nurseries produce **400,000** seedlings per year and are expanding their capacity to meet demand.

The Landscape Ecology course provides students with tools to help them deal with conservation in the face of complex changes to land and landscape use. Forest engineer Joachim Graf Neto said that, thanks to the course, his decision-making process on how to work with species was better, due to maps that indicate forest fragments, lakes and rivers along with agriculture and livestock area. Watch Joaquin's testimonial here:

INTERNATIONAL PARTNERSHIPS

ESCAS/IPÊ has been working to develop international partnerships with universities, as this gives foreign students the opportunity to get to know how IPÊ operates and, for ESCAS students, the chance to get in touch with courses promoted by organizations abroad.

Total Students: **128**
Partner Universities: University of Colorado (USA), ELTI (Yale University Initiative) and the University of St. Gallen (Switzerland).

Universities: real project experiences

For the ninth time we held the course for Conservation Biology and Practice in Brazil's Atlantic Forest - Brazil Global Seminar with the University of Colorado Boulder (USA). From the 13th to the 30th of May, undergraduate students participated in an immersion program in Brazil, going through IPÊ projects and developing their own.

With the University of St Gallen, Switzerland, we held the second edition of practical field classes in the Amazon. Having embarked on the Maíra I; IPÊ's boat, the students visited projects in the lower Rio Negro (Amazon). Business and economics students got a taste of daily life in the region and applied their knowledge to bona fide projects.

Free rural training around sustainable production

In partnership with ELTI - Environmental Leadership and Training Initiative, an initiative at Yale University's School of Forestry and Environmental Studies, we hosted **two** free courses for **36** farmers. The courses worked in tandem with the Semeando Água project which is centered on the conservation of the Sistema Cantareira.

Held in Itapeva (SP), Camanducaia (MG) and Extrema (MG), the focus of the classes was to provide training in sustainable production and forest restoration, tackling practices such as Rural Management, Chain of Production, Pasture Management, Agroforestry and Forest Restoration.

The course was also held with those who work in the field of restoration in mind: "dynamic management for monitoring forest restoration". The partnership between ELTI, UNEP Brazil and Instituto Terra culminated in **six** weeks of online clases then one week in-class at Bulcão Farm, Aimorés (MG). Overall, **19** professionals participated, all with different backgrounds and specialising in different fields, some from the government, others NGO's and companies.

Leadership: Following up with past students

In 2019, we continued supporting our ex alumni with the ELTI Leadership Program. The initiative provides both technical assistance and assistance in the implementation of sustainable production systems for those who've attended prior courses. One of the program's objectives was rural planning training for former students. This would allow students to continue supporting producers in the Cadastro Ambiental Rural (CAR) and in planning reforestation in areas of production systems. The program was attended by **29** landowners and extension workers.

Regional action: sustainable dairy ranching

In partnership with ELTI once again, ESCAS started taking regional action by training rural producers and extension workers in partnership with Danone and the Colombian organisation Centro de Pesquisa em Sistemas de Produção Agrícola Sustentável (CIPAV). The idea is to create small to medium sized demonstration units (DU's) for sustainable dairy farming, while applying practical knowledge to see the real-world benefits of the model. In 2019, the first pilot unit began at Fazenda Gordura (MG). The work is still ongoing in 2020.

PROFESSIONAL MASTER'S

The multidisciplinary Professional Master's program in Biodiversity Conservation and Sustainable Development encourages healthy interaction between student and teacher. As well as that, the end-of-course projects effectively contributed to society and the environment: with **66%** of students reporting that their master's degree project was applied in an socio-environmental initiative.

Students in 2019: **58**
Master's graduates in 2019: **28**
Total Master's graduates: **141**
By 2019, **141** students graduated with a master's, **40%** of which obtained professional placements thanks to the program. ESCAS' Master's graduates work in a variety of sectors: **31%** in companies, **21%** in civil society organizations, **45%** in governmental agencies and **3%** in academia.

Intensive knowledge acquisition

In 2019, **26** journal articles were published by professors and students, and about **40** technical papers were produced by the program and submitted to CAPES (Coordenação de Aperfeiçoamento de Pessoal de Nível Superior). The course's results ensured that ESCAS' Professional Master's Degree received a score of **4** in CAPES' evaluation (the highest possible score being 5). The grade means that IPÊ's school is now looking to the future and its newest chapter, doctorates and PHD's.

ESCAS' Professional Master's degree is now **two** classes large. In the South of Bahia and with support from Veracel and Instituto Arapyaú, the course offers scholarships to professionals from the area. In Nazaré Paulista (SP) there is also the opportunity to receive a partial or full scholarship.

Final project: a management plan for the Atlantic Forest

By looking at practical side of study, the master's degree students are inspired further. In the final stages of the professional master's program, students work on a real challenge which requires developing solutions for socio-environmental problems that are then delivered to the client.
In 2019, our students coordinate a Management Plan for the Copaíba Private Natural Heritage Reserve (RPPN) in Socorro (SP). Copaíba is an environmental association whose mission is "to conserve and restore the Atlantic Forest in the Peixe and Camanducaia river basins".
This management plan goes into detail explaining the geomorphology and water resources of the RPPN, in addition to pointing out the diversity of its flora and fauna, the social dynamics of the territory, as well as the main economic activity and services in the area.
In previous years other such plans were devised as part of the course: Solid Waste Management Plan for the city of Nazaré Paulista; Survey of the impact of cell phone antennas for the company Vivo; Research on the consumer disposal for reverse logistics for Havaianas / Alpargatas S.A.; Communication Plan for the Serra do Conduru (BA) State Park; Study on future prospects for high school students in Serra Grande (BA).

"The interdisciplinary nature of the group forces you to think outside the box - Which is what working in the real world is actually like. Now I'm a biologist that knows how to talk to people, how to tell a story, and above all, how to listen to people, to communities. It also changed my outlook on research, even with the field team, listening to them more, learning together. It really opened a door in work and out of it" Francis Forero Sánchez, biologist, Colombian, master's student at ESCAS. He is the recipient of a scholorship from WCN and WWF.

Donate to the ESCAS/IPÊ scholarship fund

We want our impact to be felt far and wide. So, to reach a greater number of students benefited in Sustainability and Biodiversity Conservation courses of various levels, we created a Scholarship Fund that can be supported by you via a donation through the Global Giving

https://www.globalgiving.org/projects/build-a-fund-for-20-young-sustainability-students/

Master's Degree now available in Porto Seguro (BA)

The Professional Master's is now in Porto Seguro (BA) too. Upon the graduation of **six** cohorts of students in the city of Uruçuca (Serra Grande), where the course has been held since 2009 in continuous partnership with Instituto Arapyaú, the students of the seventh cohort (2019) now also have classes in the Estação Veracel Private Reserve of Natural Heritage (RPPN), in partnership with this company.

The group includes biology consultants, architects, managers of public and private conservation units, social entrepreneurs, agronomists and forest engineers working in restoration and agroecology. All of which are interested in learning how to act to support the sustainability of their territories and in the conservation of socio-biodiversity.

The Professional Master's Degree has **67** graduates in Bahia. In the south of Bahia, ESCAS provided all students with full scholarships, ensuring quality training for the professionals who today really make the difference in the region

"Having the option of doing a master's in Bahia gave me the chance I needed, I couldn't do a course like this if it wasn't here. It's been crucial in coming to understand how what happens in Brazil and around the world impacts the region. Not to mention how much we've learned about conflict resolution and how to develop the implementation of conservation units like RPPNs". Cleiuodson Lage, nicknamed Peu, forest engineer at RPPN Rio do Brasil.

MBA IN SOCIO-ENVIRONMENTAL BUSINESS MANAGEMENT

The MBA prepares students in developing solutions for the complex socio-environmental challenges in Brazil and around the world. The course has teachers with extensive experience in the industry and is structured inBlended Learning, meaning modules are divided between online and in-class. For the MBA we have pedagogical support from Artemisia Negócios Sociais and Ceats-USP (Center for Entrepreneurship and Administration in the Third Sector). Professors from USP (University of São Paulo), IPÊ, FGV (Fundação Getulio Vargas), UFRJ (Federal University of Rio de Janeiro) and Artemisia come together as the teaching staff.
The main topics are approached via case studies, which encourages participants to develop practical solutions to real social and environmental challenges. There are also technical visits aimed at promoting interaction with projects from various institutions working in the industry. One of which is an immersion experience on the IPÊ school-boat Maíra I in the Amazon.

The fifth group has 15 students from different backgrounds

The MBA's fifth group started in October 2019 and is made up of **15** students from different backgrounds, who are looking for some new career direction and to enable themselves to create innovative businesses that positively impact society and the environment.

Biologist Naiara Rabelo Valle is president of the Ecos de Gaia Institute, which works with social and environmental projects in the state of Maranhão, such as fauna monitoring and restoration. Amongst other initiatives, she wants to promote the recovery of **20** springs in the state with partnership from private enterprise. Naiara says that, thanks to the course, her ability to negotiate in the corporate world has took a positive leap forward.
"What I wanted to get out of the MBA was to get to know the other side of companies. Today I see how our discourse with managers and entrepreneurs has improved, showing that it's possible to keep one eye on the socio-environmental, while still generating income for the business". Naiara Rabelo Valle, President of Instituto Ecos de Gaia and MBA student in Socio-Environmental Business Management.

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