

**INSTITUTO ARAGUAIA**

**ANNUAL REPORT**

**2015**

**AND  
PROSPECTS FOR 2016**

# MISSION

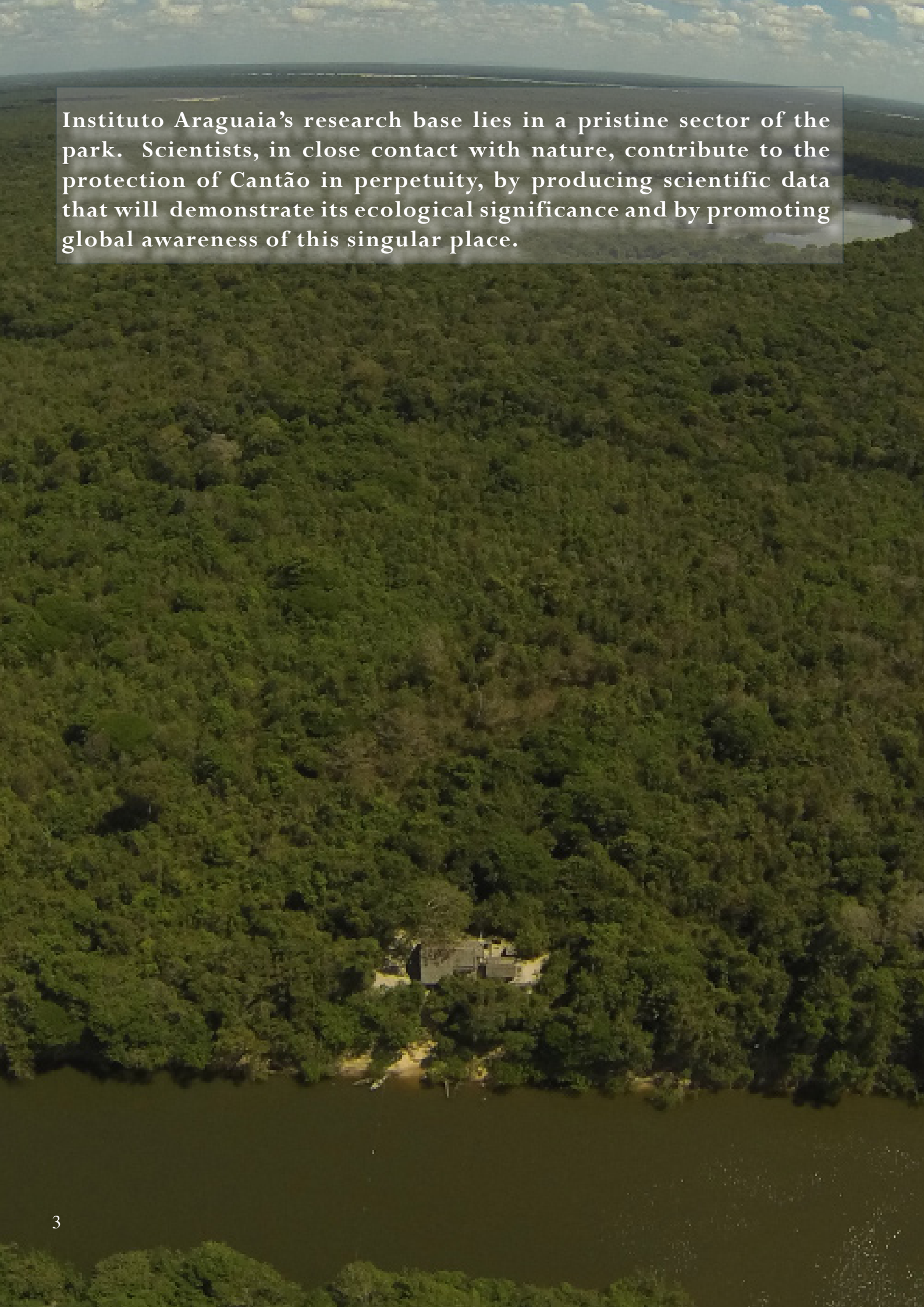
*To protect the biodiversity of the Araguaia River basin and its ecological processes, in particular in and around Cantão Park.*

Associação Instituto Araguaia de Proteção Ambiental  
CNPJ 13.461.137/0001-95 Brasil  
[www.araguaia.org](http://www.araguaia.org)  
[araguaia@araguaia.org](mailto:araguaia@araguaia.org)

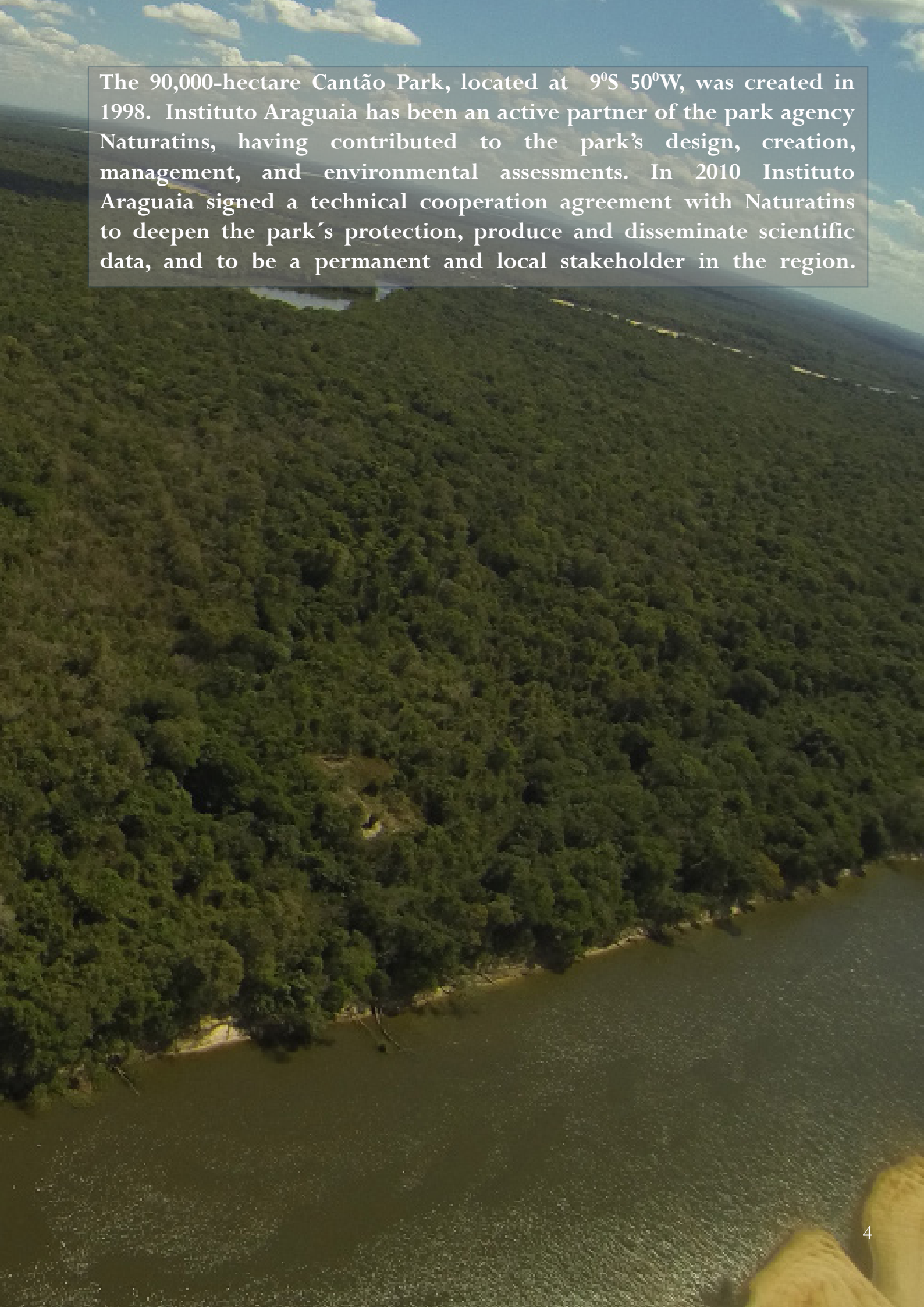


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An aerial photograph showing a vast, dense green forest. In the lower center, a small cluster of buildings, likely the research base, is visible near a riverbank. The river flows from the bottom left towards the right. The sky is blue with scattered white clouds.

Instituto Araguaia's research base lies in a pristine sector of the park. Scientists, in close contact with nature, contribute to the protection of Cantão in perpetuity, by producing scientific data that will demonstrate its ecological significance and by promoting global awareness of this singular place.

An aerial photograph showing a vast, dense green forest that stretches across a large area. The forest is situated along the edge of a large, dark body of water, likely a reservoir or a wide river. The sky above is blue with scattered white clouds. The forest appears to be a natural, undisturbed area, with a mix of tree heights and colors of green. The water in the foreground is dark and reflects the sky. The overall scene is a natural landscape with a significant body of water and a large forested area.

The 90,000-hectare Cantão Park, located at 9°S 50°W, was created in 1998. Instituto Araguaia has been an active partner of the park agency Naturatins, having contributed to the park's design, creation, management, and environmental assessments. In 2010 Instituto Araguaia signed a technical cooperation agreement with Naturatins to deepen the park's protection, produce and disseminate scientific data, and to be a permanent and local stakeholder in the region.

## WORDS OF THE PRESIDENT



Dear Members, Sponsors, Supporters, Partners, and Friends,

I am pleased to present the review of what was a great year for Instituto Araguaia, along with the perspectives for 2016. Since its foundation in 2010, Instituto Araguaia has been growing significantly as an organization, in its scope, project volume and personnel, but never was this transformation so substantial as in the past year. In 2015 we have not only achieved all the goals established in last year's annual report, but we have gone even further, accomplishing results which were expected only for 2016.

Despite Brazil's economic fluctuations during the period, Instituto Araguaia's financial situation remains solid. As you will see in this Annual Report, an external auditor accepted by international sponsors has approved our financial statements for 2015 without qualification. We are driven by results: 96% of our expenditures are in the field - salaries for rangers and biologists, research equipment, fuel, supplies for our research base at the heart of Cantão and satellite images to guide our field work.

We were not just lucky. Our institution's achievements in 2015 did not happen without great efforts from our tireless staff and continuous support from our dear partners, sponsors, and authorities who have always believed in us and in what we can accomplish. Our motivation comes from our solid commitment to the preservation of Cantão's unique biodiversity above all things. And we are proud to have achieved our annual goals effectively.

I am extremely thankful to those who have supported and encouraged us in the past year, and I can assure all of our current and yet-to-come partners that we will continue to work with scientific professionalism, financial effectiveness, and total devotion to our cause.

Silvana Campello, Ecologist,  
President of Instituto Araguaia

## WORDS OF THE EXECUTIVE DIRECTOR

2015 was a good year for Instituto Araguaia's conservation work. Our campaign to map and protect the Cerrado along the border of Cantão Park was successful beyond our expectations. We successfully developed and tested the first accurate method for counting river dolphins using a blimp, and used it to confirm that Cantão is the most important refuge for the endangered Araguaia river dolphin. This generated much positive publicity for Cantão and its wildlife at both local and national levels.



Our long-term study of Cantão's exceptional fish fauna concluded its first phase, and led to a strong, science-based proposal to improve fishing regulations in the state and prohibit the trade in arapaima. Our giant otter research produced a publication and a masters theses. Through it all, we never neglected our core mission: we successfully protected our sector of Cantão from heavy poaching pressure for one more year.

But while we won these local battles, the fact is that we are losing the planet itself. Global climate change has arrived with full force, bringing repeated droughts to our region. Deforestation continues unabated, and soon the area around Cantão will be the last great wilderness remaining in all of Central Brazil. Agricultural expansion to feed an ever-increasing population is pumping dry many tributaries of the Araguaia, disrupting the natural cycles of this amazing aquatic ecosystem. If we want Cantão and its glorious wildlife to survive in the long run, we must protect it not only against the local threats of deforestation and poaching, but also against the new, planetary-scale threats of the Anthropocene. We must join forces and share responsibility with our friends and supporters from around the world in order to face the great crisis ahead.

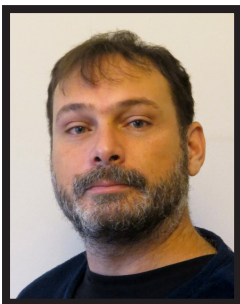
Some day, perhaps, we will emerge from these dark ages for nature to which our blind progress has brought us. On that day, surviving functioning ecosystems like Cantão will be invaluable for the recovery of the Earth. Cantão is a precious relic of a natural world that we have largely destroyed. Like an intact surviving manuscript from an ancient library fire, it will be the more precious if it is all that is left. We must preserve it at all costs. Our future on this planet depends on it.



## TECHNICAL SCIENTIFIC ADVISORY BOARD

*in alphabetical order*

**REUBER ALBUQUERQUE BRANDÃO**  
Ph.D Ecology at Universidade de Brasília.



Reuber is Associate Professor at Universidade de Brasília Department of Forestry. He is responsible for the creation and coordination of the Fauna and Protected Areas Lab at Universidade de Brasília, where he supervises the PhD and Master degree students in Forestry Sciences and Zoology. Prior to that, as an Environmental Analyst at the Brazilian Institute for the Environment and Renewable Natural Resources (IBAMA), he has worked in the creation of protected areas, mainly in the Cerrado and the Amazon.

**SILVANA CAMPELLO** (*Board of Directors*)

Ph.D Fellow, Biology, The Smithsonian Institution, USA, 1985; Master of Sciences Biology, The George Washington University, USA 1985.



President and founder of Instituto Araguaia. Before founding Instituto Araguaia, Silvana was a Principal of the environmental consulting company Tangará-Consultoria em Meio Ambiente e Turismo, having coordinated the design, creation, ecological assessments and management of more than 20 protected areas in Brazil, including Cantão State Park. Before Tangará, Silvana worked as Ecologist at the World Bank's Russia and Central Asia Division, and as Director for the Brazil Program at the American NGO The Nature Conservancy. In Brazil, was Head of the Special Projects Department at the Brazilian Tourism Agency, having developed the first Ecotourism Program for Protected Areas in Brazil.

**FÁTIMA DO SOCORRO GOMES COSTA** (*Board of Directors*)

MBA in Education Administration, Lutheran University, Tocantins, Brazil; Bachelor in Tourism, Universidade do Pará, Brazil.



Fátima currently works as senior consultant in environmental education. She has worked for federal, state, and private institutions in the development of community outreach programs in association with protected areas. Her work with local communities in the Amazon include the development of projects that are economically, environmentally and socially sustainable. She is an expert in applying participatory methodologies that help different stakeholders achieve satisfactory agreements.

## MARC J. DOUROJEANNI

**Emeritus Professor of the Universidad Nacional Agraria La Molina (Peru).**



**Marc has been Dean of the Faculty of Forestry of Universidad Nacional Agraria La Molina, Deputy Minister of Forestry, President and founder of the NGO ProNaturaleza, Vice-President of the World Conservation Union (IUCN) and of the World Commission on Protected Areas (WCPA); senior advisor of the World Bank and first Chief of the Environment Division of the Inter-American Development Bank (IDB). Author of 17 books.**

## CAROLINA BURLE DUBEUX

**Ph.D. in Energy and Environmental Planning, Federal University of Rio de Janeiro, Brazil.**



**Carolina is a researcher at the Center for Integrated Studies on Climate Change and the Environment at Centro Clima / COPPE / Federal University of Rio de Janeiro. She develops studies related to mitigation climate change options and socio-economic development, being a pioneer on the issue of climate mitigation in cities, in Brazil . She is one of the technical coordinators of The Economics of Climate Change in Brazil developed by ten research centers. She is also a Lead Author of Chapter 17, Economics of Adaptation, of the Working Group II contribution to the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5).**

## GEORGE GEORGIADIS (*Board of Directors*)

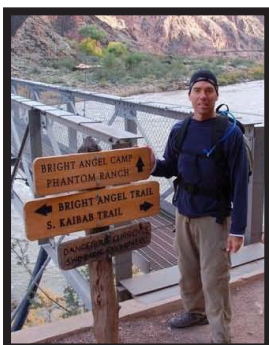
**B.Sc. Physics at University of Miami, Florida, USA.**



**Director and founder of Instituto Araguaia. Prior to co-founding Instituto Araguaia, George was Principal of the environmental consulting company Tangará-Consutoria em Meio Ambiente e Turismo; He has participated in all aspects of the design, creation and management of more than 12 Amazon Protected Areas, including Cantão State Park. Before Tangará, George worked as Environmental Policy Specialist in the World Bank's Division for Brazil, Peru and Venezuela, worked as consultant for the Pantanal Program at The Nature Conservancy in Washington,DC. and built and operated the most productive shrimp mariculture facility in Brazil.**

## PETER GRIFFITH

**Ph.D. Ecology University of Georgia; M.S. in Marine, Estuarine, and Environmental Sciences University of Maryland; B.S. with honors in Botany and Zoology Duke University.**



**Peter leads NASA's Carbon Cycle and Ecosystems Office at the Goddard Space Flight Center. He serves as coordinator of the North American Carbon Program, and is a member of the senior leadership of the Arctic Boreal Vulnerability Experiment. Previously Peter led NASA's component of the Large-scale Biosphere Atmosphere Experiment in Amazonia. He is currently a science advisor to NASA and the U.S. Park Service's Partnership for Building Climate Literacy for Informal Educators and a volunteer SCUBA diver at the National Aquarium.**

## **MONIKA RICHTER**

Post-Doc, Ph.D. and M.Sc in Geography, B.S. Forestry Engineering, Universidade Federal Rural do Rio de Janeiro



Monika is Associate Professor of the Geography Department of the Universidade Federal Rural do Rio de Janeiro (UFRRJ), supervising graduate students in Geography and in Tourism. She is also a member of the university Remote Sensing and Environmental Planning Group, working with environmental management and modeling, and recuperation of degraded habitats.

## **FRANCISCO A. TOURREILLES**

MBA Sloan School of Management, S.M. Civil Engineering, MIT; S.B. Mathematics, S.B. Economics, MIT.



Francisco has over 25 years of global experience in banking, finance and investment. He worked at the International Finance Corporation, where he held a number of senior management positions as director of Credit, global power investments and global infrastructure investments. Prior, Francisco held positions in the private and public sectors, including director of conservation finance at The Nature Conservancy in Washington D.C, manager in the financial institution group at McKinsey & Company in New York, director of transportation at the Intendencia Municipal of Montevideo, and advisor to executive director at the International Monetary Fund. Francisco is now an independent consultant.

## **MARIA CARLOTA CASTRO DE FREITAS VALLE** (*Board of Directors*)

Economist, MBA Economics and Energy Management, Instituto de Pós-Graduação e Pesquisa em Administração, Universidade Federal do Rio de Janeiro; MBA Marketing, Escola Superior de Propaganda e Marketing – ESPM.



Carlota works for group Petrobras - Petroleo Brasileiro S/A as a senior economist of natural gas. In Petrobras she has worked in administration, finance, and commerce, and has created and managed projects in marketing. Author of several award-winning case studies about the utilization of natural gas in transportation, and the use of biodiesel and LNG in Brazil. She was also the editor of Petrobras' online magazine aimed at users of natural gas.

## **LUCIANA YEGROS** (*Board of Directors*)

Ballerina, choreographer and classic ballet teacher.

*Corps-de-Baille* at Eugenia Feodorova Ballet School in Rio de Janeiro.



Prior to being a choreographer for major *Escolas de Samba* Groups for the Carnival parades in Rio de Janeiro, Luciana was First Ballerina and Soloist at the Contemporary Ballet of Rio de Janeiro Company, Ballet Oficina Company, and Marcia Milhazes Contemporary Dance Company. The critics have praised Luciana's Carnival choreographies and she has been awarded the highest prizes of the category, including the "Oscar do Carnaval" in 2014. She is currently preparing her own ballet production "Legends of Cantão".

**ELAINE VAN DER PUT**

**Ph.D. Immunology University of Miami; Master’s degree in public health at Miller School of Medicine, Miami; B.S. in mathematics and an M.S. in industrial engineering from Catholic University, Brazil.**



**Elaine currently holds the position of Chief Strategy Officer for the University of Miami Miller School Of Medicine and has over twenty years of experience at the Executive level for multinational corporations operating in Latin America as well as in Academic Medical Centers. She has held positions with responsibility for strategic planning, marketing planning, communications, financial planning, budget planning and control for companies such as IBM, Coca-Cola and BAT (British American Tobacco). Her major strengths are analytical thinking and strategy elaboration.**

**LEAD FIELD STAFF**

**BENAYA NOGUEIRA LELES**

**M.Sc. Biology Universidade Federal do Tocantins, Brazil;  
B.S, Biology Universidade do Estado de Goiás in Iporá, Brazil.**

**Manager of Instituto Araguaia. Benaya was born in Goiás in 1990, in a small town on the Araguaia river basin. In 2011 she graduated in Biology. She has special training in Environmental Education in the Araguaia Region. With funding from the Frankfurt Zoological Society Benaya was hired by Instituto Araguaia in January 2013 as field biologist and manager of its research base.**



**JUAREZ SENA FEITOZA**

**Ranger, research assistant, backcountry guide, lead custodian of the research base and all its equipment. Juarez joined Instituto Araguaia after fourteen years of working as ranger in Cantão State Park.**



# PROJECTS 2015



## PROTECTING & MONITORING THE CANTÃO ECOSYSTEM

In 2015, Instituto Araguaia (IA) employed a full-time team of four guards/field assistants and one biologist at our research base in Cantão State Park. With support from the **Frankfurt Zoological Society** and other donors, for the first time we were able to have a minimum of two rangers at the base year-round. This team, augmented by volunteers and visiting researchers, has maintained a continuous presence at IA's field station at the Furo do Cicica, a critical access point to the Park's pristine interior. As of September 2015, the team has:

- Stopped all boats coming up the Cicica and performed regular rounds of a study area comprising 20 lakes, removing several groups of intruders from the Park during the 2015 low-water season; this year, while June and July were typically tumultuous with many recreational fishermen trying to invade the park, August and September were very quiet, with only two poacher groups detected trying to fish in our sector of the park. Close support from **Naturatins** and the state police was essential in achieving this success.



- We recorded 28 adult giant otters in our regular research area, including seven resident groups and three solitary individuals. Although we recorded two unsuccessful litters by one couple (the cubs died before emerging from the den), only two cubs reached the free-swimming stage this year. A further 15 adult otters, in four groups, were observed and identified during expeditions beyond our research area.

- With support from **Mohamed bin Zayed Species Fund**, we counted, using a blimp camera, the Araguaia river dolphins in our research area. We estimate the population of the area we surveyed to be about 84 dolphins, distributed among five isolated bodies of water (the only places in our sector where river dolphins spend the dry season). We found that the density of dolphins in the backwaters of Cantão is up to 10 times greater than along the main rivers.



- Served as field advisors to two graduate students, whose masters theses were respectively in the development of a methodology to accurately census river dolphins and the population dynamics of giant otters in Cantão.

- Monitored water level, temperature, and turbidity at five points in the Park's lakes and channels;

- With support from **Fundação Grupo Boticário**, tagged 421 large predatory fish, and recaptured 12 tagged fish so far this year, including some that had dispersed outside the park, yielding the first data about growth rates and dispersal of these species.

- Handed out hundreds of leaflets with information on the Park and its regulations to people legally fishing along its border, and made brief presentations about the Park and IA's work groups camped in tents at the Park's sole designated campsite at the mouth of the Furo do Cicica;



- Supported the new Park manager, helping her to understand the area and its problems and to initiate her activities, and provided ecological information and management recommendations to Naturatins for the ten-year review of the Park's Management Plan, which is ongoing;

- Completed four expeditions to remote areas of the park to assess poaching pressure and gather comparative data on the populations of giant otter, river dolphins, and pirarucu (*Arapaima gigas*).



The expeditions found relatively healthy populations of otters and dolphins, but no pirarucu at all among signs of heavy fish poacher activity. So far this year the only pirarucus detected are near our base. During one expedition the team detected another attempt at building a cabin inside the Park. This was reported to the new Manager, who quickly took legal action to stop construction. At the end of the year we completed a full count of all the Araguaia river dolphins that spend the dry season in our sector of the Park – perhaps 25% of Park’s population, judging from the amount of available dry season habitat. We also determined that the pirarucu is already extinct in nearly half of the lakes in the park.



- Gave audiovisual presentations to schoolchildren and local community members at public events throughout the year, like Environment Day, the Park’s anniversary etc.

- Hosted many visitors at the base, including researchers, public authorities, students, television crews, and other official visitors to the Park.

*(photo: Dr. Patrick Sorgeloos, Emmeritus Professor, Faculty of BioScience Engineering, University of Ghent, Belgium)*

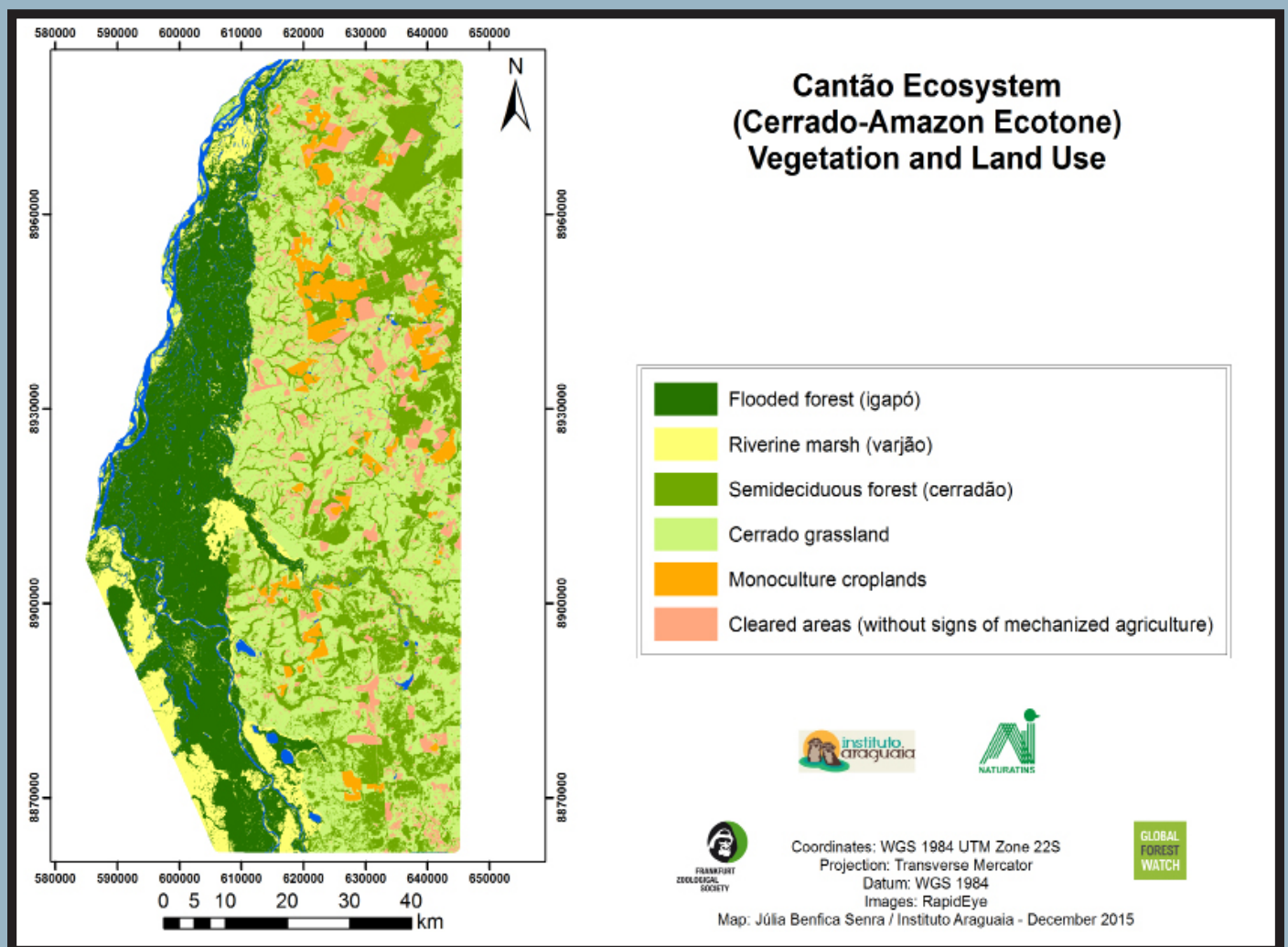


- Appeared on two national television programs, including Globo Reporter, the most watched documentary program in Brazil, talking about Cantão, the giant otters and the river dolphins.

- **Initiated the Cerrado Program (next page)**

# MONITORING THE CERRADO

In July we purchased a 5-meter resolution RapidEye satellite image covering the entire Cantão Ecosystem, defined as the great Amazonian inland delta of the Javaés river (mostly inside Cantão State Park and Araguaia National Park) and the adjacent Cerrado, out to the Caiapó River, the first barrier to wildlife movement. With this we began to produce a vegetation and land use map, showing the great extent of deforestation in recent years.

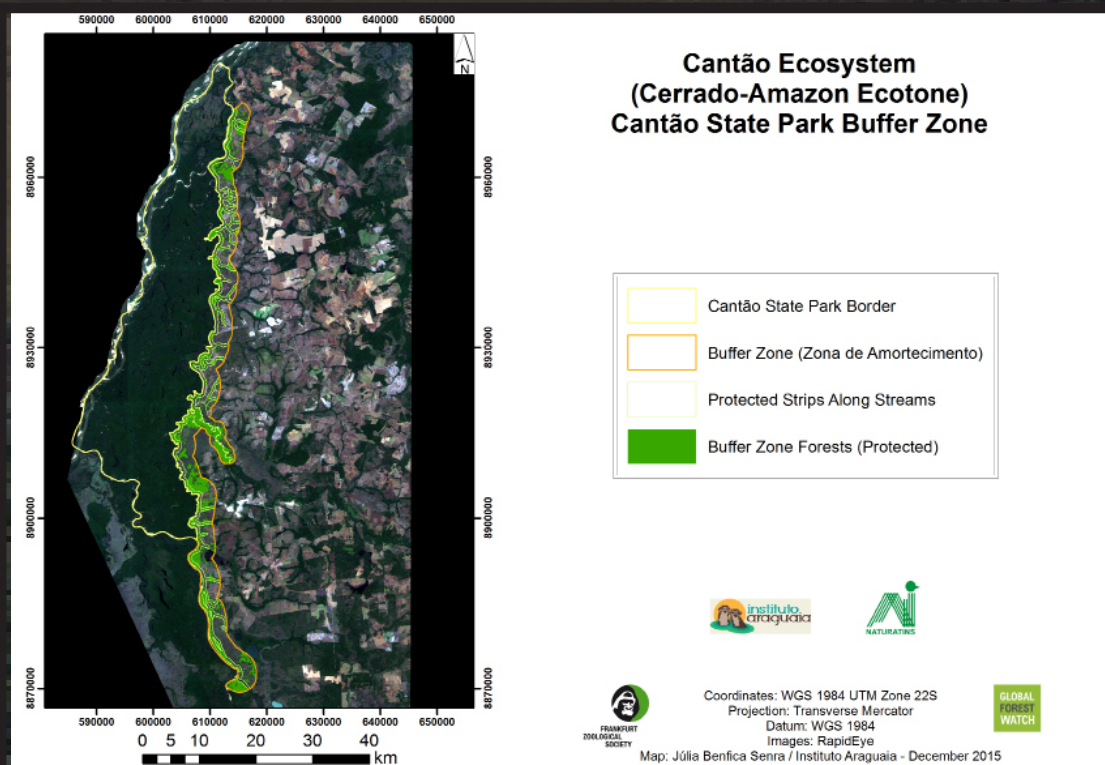


This project was supported by the World Resources Institute/Global Forest Watch and the Frankfurt Zoological Society



We concluded the analysis of satellite imagery and ground truthing, and produced the official map of the buffer zone (ZA) around Cantão. We closely supported Naturatins in the drafting of the ordinance establishing the ZA, as well as with the continuing revision of Cantão Park's 10-years-old Management Plan. In a public meeting organized by Naturatins, we presented our proposal for the legal "Zona de Amortecimento" (ZA). Ranchers, rural smallholders, local authorities, academics, and the Chief of Araguaia National Park all participated, and, after much discussion, the zoning and regulations for the proposed ZA were approved unanimously. The state ordinance legally establishing a ZA was published on December 2. As established, the ZA protects an area of 40,148 hectares of Cerrado, of which 13,854 hectares are zoned for strict protection, i.e., no deforestation at all will be allowed. This is now the only significant expanse of strictly protected lowland Cerrado in the entire Araguaia valley. Its biological value is increased by the fact that it borders Cantão Park and Araguaia National Park, both of which provide additional habitat and resources to Cerrado wildlife during the critical dry season (and in turn their own wildlife will have a refuge during the wet season).

Also, unlike many ZAs in Brazil, this one specifically prohibits the use of pesticides (and therefore of GM crops and industrial agriculture) in a broad strip around critical habitat. Another success was that the ZA covers a 3000-meter wide strip of Cerrado, also protecting the buffer zone of both Cantão and Araguaia parks. This is a significant accomplishment in an agricultural state like Tocantins, and demonstrates the value of consensus building, as opposed to technocratic decision-making.



## CAMERA TRAPS AND DRONES



The vast wilderness of Cantão, with its myriad isolated lakes, makes research and monitoring a logistical challenge. Although we believe that serious conservation work requires people in the field, we use technology to multiply the power and reach of our rangers and scientists. With camera traps we can monitor giant otter campsites deep in the flooded forest, keep a permanent eye on dens with cubs, and obtain precious data on species like the jaguar, which are difficult to observe directly. By using small unmanned aerial vehicles (drones), we can make surveillance of backcountry lakes much more effective. Drones have also allowed us to identify poachers in remote lakes, and to document for the first time the unique foraging behavior of the newly-described Araguaia river dolphin, as well as establish the lake types in which Cantão's population spends the dry season.

## ECOTOURISM

Instituto Araguaia continues to support ecotourism development in Cantão by permanently monitoring and maintaining the area designated for public use, which encourages guides to follow the rules, reduces poaching to a minimum, and makes it possible for visitors to sight the park's rich wildlife, which has been habituated to the presence of people by our researchers. We also produce new videos and posters in order to update the Park's Visitor Center.



### CERTIFICATE OF INTERNSHIP



**ELENA WEINDEL**

HAS SUCCESSFULLY COMPLETED AN INTERNSHIP AT INSTITUTO ARAGUAIA  
FROM AUGUST 21 TO OCTOBER 18, 2015

THUS CONTRIBUTING TO INSTITUTO ARAGUAIA'S EFFORTS TO PROTECT GIANT OTTER (*Pteronura brasiliensis*) AND PINK RIVER DOLPHIN (*Inia araguaiaensis*) HABITAT IN CANTÃO PARK, IN THE ARAGUAIA RIVER BASIN, BRAZIL.



*S. Weindel*  
President

## INSPIRING YOUNG FIELD RESEARCHERS

In 2015 we hosted Elena Wendell, who came as a volunteer from Germany. Elena stayed with us for 2 months and participated in every project, focusing mainly on identifying giant otters and assisting the dolphin researchers.

## GIANT OTTER MONITORING (*PTERONURA BRASILIENSIS*)

The results of giant otter monitoring in 2015 confirm trends we have observed in previous years. We continued to record instances of den sharing and extensive territorial overlap. We recorded two dispersals: two individuals identified in 2014 during expeditions, where they were seen to be part of resident groups, moved to our research area, each forming a pair with another immigrant otter. The distance of dispersal following the meandering channels of the Park was 9 km in one instance and over 50 km in the other instance. We recorded 28 adult giant otters in our regular research area, including seven resident groups and three solitary individuals. Although we recorded two unsuccessful litters by one couple (the cubs died before emerging from the den), only two cubs reached the free-swimming stage this year. A further 15 adult otters, in four groups, were observed and identified during expeditions beyond our research area.

As for the population study, while individual giant otters and entire groups come and go, the total number of otters present in our research area over the past four years has varied narrowly between 26 and 30 animals, except for a few months in late 2014 when two litters of cubs brought the number to 33. Reproductive rate varies much more, with no cubs observed in 2010, 1 cub in 2011, 9 cubs in 2012, none again in 2013, 6 in 2014, and 2 in 2015. This refers to cubs that have emerged from their dens and reached the stage where they can swim with the group (about 60 days old). There may have been additional litters that failed before emerging; we did detect two such failed litters to a newly formed pair that spent most of 2015 around our base. However, once cubs emerge, survival rate is much higher than reported elsewhere: of 18 cubs observed so far, only two disappeared before the age of 12 months.

*This project was supported by the Frankfurt Zoological Society*



## FISH MONITORING



We tagged 421 fish in 2015, bringing the total to 1720 since the project started in August of 2013. Twelve fish were recaptured this year, three of which had dispersed beyond the park boundary. The species most consistently recaptured are the two species of predatory tucunaré (*Cichla piquiti* and *C. kelberi*), which are also the ones under most intense sports fishing pressure. The data produced so far has enabled us to estimate the abundance of tucunarés in each size class, to confirm that the Park as a “no-take zone” contributes significantly to restocking surrounding rivers, and to propose to Naturatins a revision of size limits, with adoption of a maximum size for each species that would protect large breeding stock.

Meanwhile, our pirarucu (*Arapaima gigas*) survey once again found that the species was only abundant in four lakes



near our base – the very four in which our teams are working most often. The species was completely absent in most of the lakes and river channels we surveyed this dry season. We will continue our science-based campaign to have its capture and sale prohibited in the state.

*This project was conducted with a grant from the Fundação Grupo Boticario de Conservação da Natureza*



# ARAGUAIA RIVER DOLPHIN

*Inia araguaiaensis*



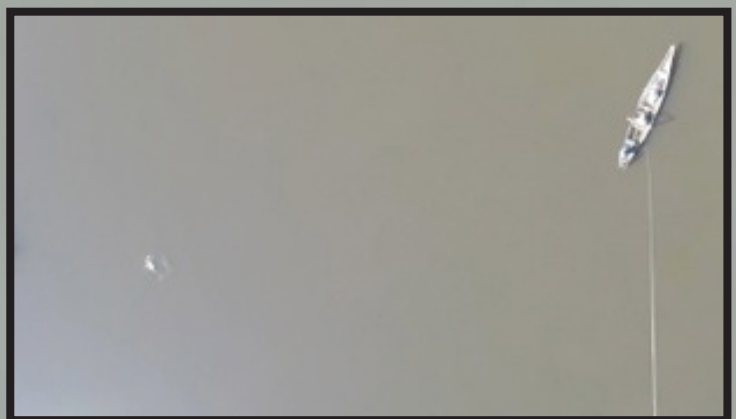


In June 2015 we began to test a 4-meter helium blimp, to which we adapted a GoPro camera and gimbal stabilizer. By towing it behind an electric canoe, we found that we could easily observe and count the Araguaia river dolphin, even when they were underwater. Ms Julia Furstenau Oliveira, a German-Brazilian student at the University of Freiburg, began a five-month stay at the base to test this methodology for her masters

theses. We also began the season's fish tagging, and intensified the search for giant otters. All this research activity meant lots of teams and equipment circulating around the area, which kept trespassing to a minimum.

In September an expedition was carried out to an area up the Rio do Coco where we detected a population of river dolphins isolated for the dry season. A team of four spent five days counting dolphins with the blimp, and also recording giant otters and arapaima sighted.

In October and November, we concluded the dolphin and fish research for the year. Over the course of two more expeditions, we completed a full count of all the Araguaia river dolphins that spend the dry season in our sector of the Park – perhaps 25% of Park's population, judging from the amount of available dry season habitat. All counts were performed multiple times simultaneously by the blimp and by three observers in a boat, and we were able to demonstrate that river dolphin counts by boat are unreliable, while the blimp's aerial footage makes accurate counts easy. We estimate the population of the area we surveyed to be about 84 dolphins, distributed among five isolated bodies of water (the only places in our sector where river dolphins spend the dry season). Interestingly, 36 of the dolphins were concentrated in a single body of water, a stretch of the Rio do Coco isolated by sandbanks. This stretch runs along the Park's border, outside the protected area, once again demonstrating the importance of protecting both the Park and its surroundings.



# Theses and Publications



In October Benaya Leles, Instituto Araguaia's biologist and Base Manager for the past three years, successfully defended her masters theses on the giant otter's population structure in Cantão State Park. The result of this study is being prepared for publication in a scientific magazine. She will now pursue a doctorate with giant otters, which unfortunately requires her to move to another state.

To replace her and enable us to take on the more complex challenges of working in the Cerrado half of the Cantão ecosystem, we were lucky to be able to hire Ms Thaís Susana, a native of São Paulo, with 10 years of relevant experience with aquatic mammals, including a period working as volunteer for Instituto Araguaia in 2014.



Ms Julia Furstenau Oliveira, a German-Brazilian student at the University of Freiburg, carried out a five-month survey at the base to test the methodology for dolphin research for her masters theses. The results of this study will be published in a scientific magazine in 2016.

At the end of December, we published a note about the giant otters of Cantão in a special issue of the Latin American Journal of Aquatic Mammals (**LAJAM**). This is the first peer-reviewed publication of our work in Cantão, and covers the period from 2010-2012. In 2016 we intend to submit a manuscript covering the results of giant otter research from 2012 to 2015.

## Media

In April we again hosted a film crew from the BBC, which had come to film the Araguaia river dolphins inside the flooded forest in the wet season.

In September we hosted a TV crew from Brazil's premier national TV documentary program "Globo Reporter". They filmed our team researching river dolphins and giant otters, and we provided them with wildlife footage to increase the appeal of the program, aired in early 2016.



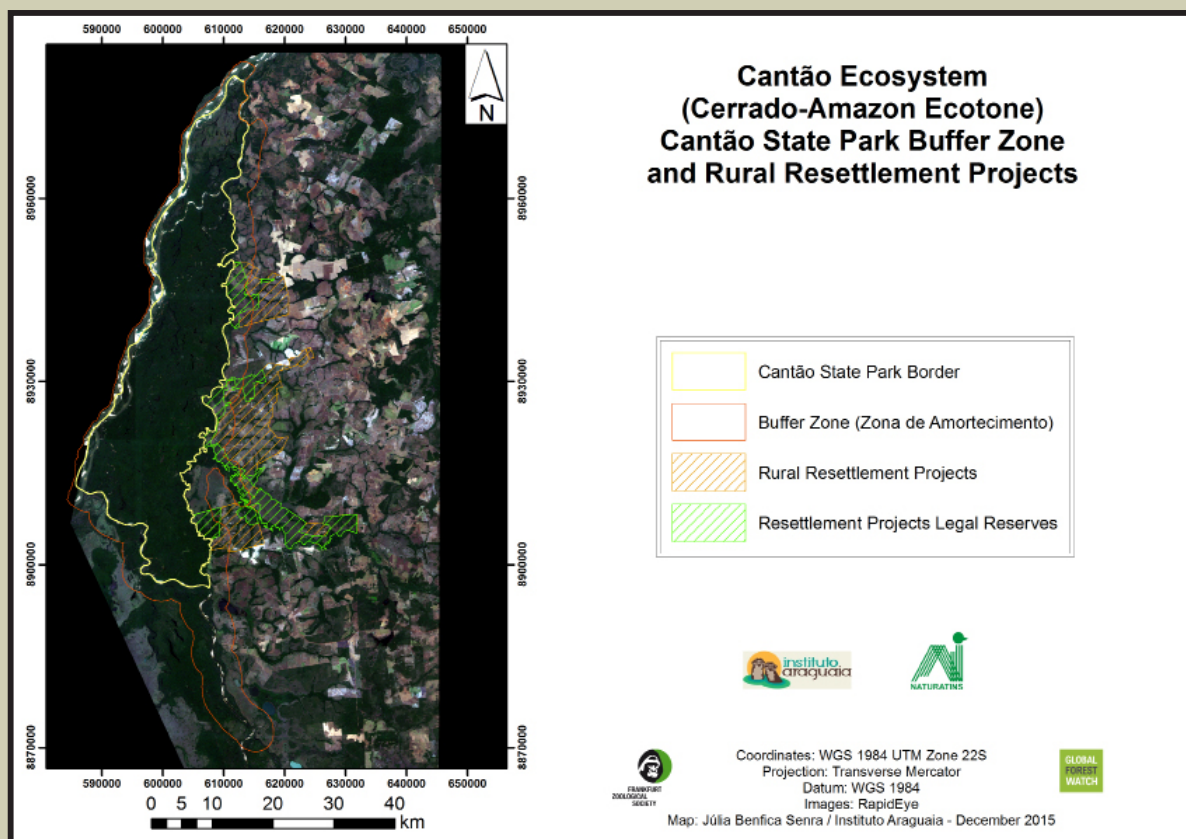
# PROSPECTS for 2016

- All the projects previously mentioned for 2015 will be continued in 2016 -

Instituto Araguaia's objective for 2016 is to continue the ongoing protection, monitoring, and outreach activities in the Cantão ecosystem, working both within Cantão State Park and in the surrounding Cerrado.

Within the Park we will continue intensive protection of our sector of the park and its wildlife, as well as ongoing research and monitoring of the populations of giant otters, Araguaia river dolphins, arapaima, and other predatory fish.

Outside the Park, with the buffer zone (ZA) already legally established, 2016 will be a year to begin its implementation, in close cooperation with Naturatins. The first step will be to contact every property owner in the zone to explain the new regulations, and also the ways in which the buffer zone can be utilized without violating the rules or damaging the ecosystem. We also intend to monitor Cerrado forest remnants in the buffer zone for illegal deforestation, by car, boat and drone. This process will also assist us to refine and detail the map of native ecosystems within the buffer zone.

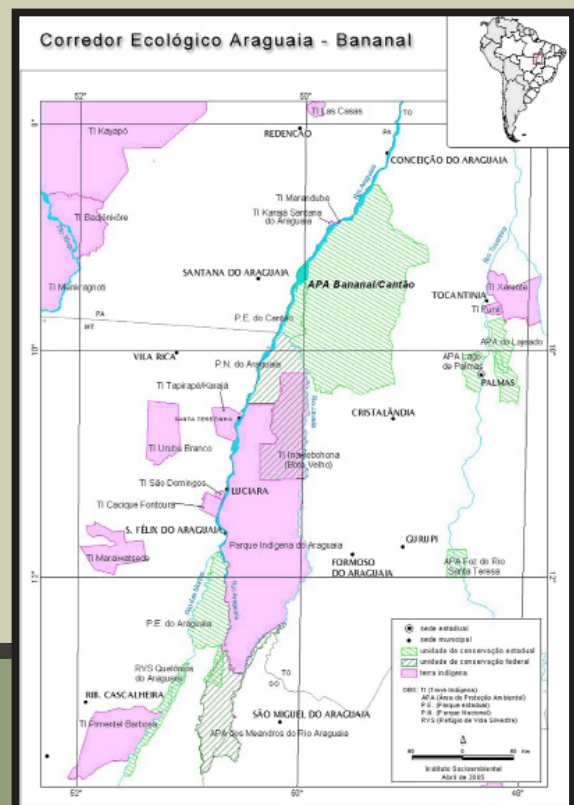


# PRIVATE RESERVES AND ECOLOGICAL CORRIDORS

The 2015 mapping showed us that some of the largest tracts of native Cerrado within the buffer zone are the “legal reserves” (“reserva legal”) of rural settlement projects (government projects that give land to poor farmers). Three rural settlement projects that border the park have their legally-mandated 35% “legal reserve” held in condominium, forming continuous tracts of Cerrado of several thousand hectares, located along the park borders. These reserves cannot be converted into pasture or agriculture, but much illegal logging and hunting goes on inside them. We will work with the community associations at these rural settlements to dissuade illegal exploitation of the legal reserves. We will also reach out to private ranches around the park, many of which have their “legal reserves” located near the Park, and work with them to improve management and protection of these Cerrado remnants.

Finally, we will use the results of our mapping and surveys to identify key tracts of Cerrado adjacent to the Park, and will seek the means to turn them into strictly protected nature reserves.

The long-term goal is the implementation of the Araguaia-Bananal Ecological Corridor, a string of native Cerrado remnants within a mosaic of protected areas with different levels of legal protection that extend along the eastern borders of Cantão and Araguaia Parks in the State of Tocantins, connected to the western part of the State of Mato Grosso by corridors and by the Parks themselves, and thus preserving a functional sample of the world’s richest ecotone, between the Pantanal, the Cerrado and the Amazon.



New Programme

# **DARK SKY and THE SCIENCE CLUB**

As part of Instituto Araguaia's COMMUNITY OUTREACH PROGRAM, in 2016 we will initiate a Science Club where local youth from Caseara will be offered membership. The Club will focus on the telescopic observation of Cantão's outstanding night sky and an understanding about the Universe around us. Free from city light pollution, the park gains a new dimension, helping protect not only its biodiversity, but also the Cosmos above our heads, which constitute an essential part of human culture and history.

# FINANCIAL REPORT 2015

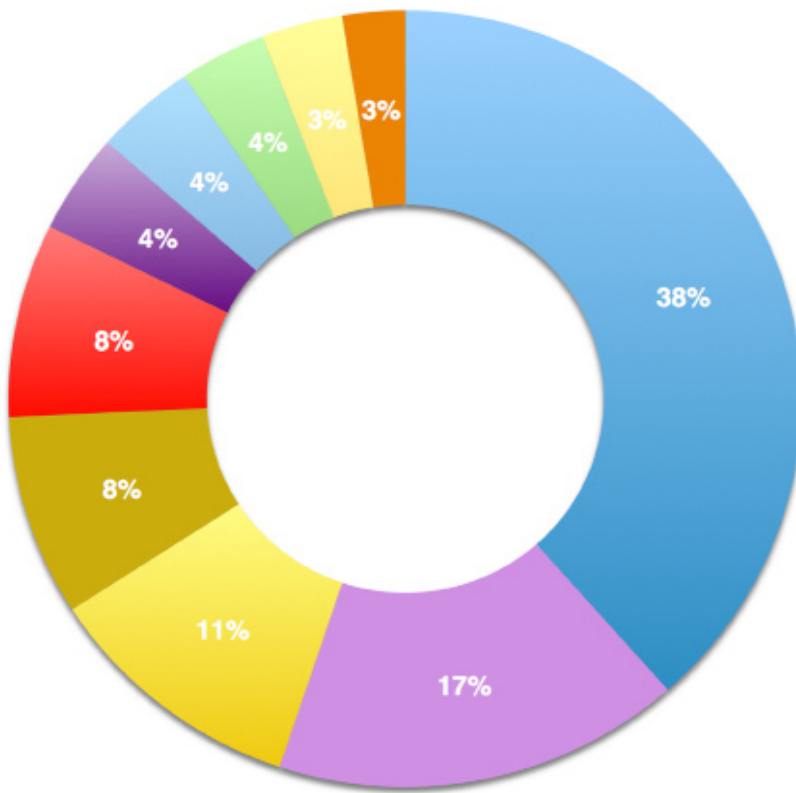
## Expenditures 2015 (in reais)

Field staff salary and benefits	104,434.21
Remote sensing and mapping	45,158.78
Research equipment	29,133.34
Food for the field station	22,712.79
Fuel	21,900.77
Equipment for the field station	11,274.00
Internet	11,200.00
Accounting and administrative	9,588.00
Field station maintenance	8,989.01
Vehicle maintenance (boats and car)	6,927.10
<b>TOTAL</b>	<b>271,318.00</b>

## Revenues 2015 (in reais)

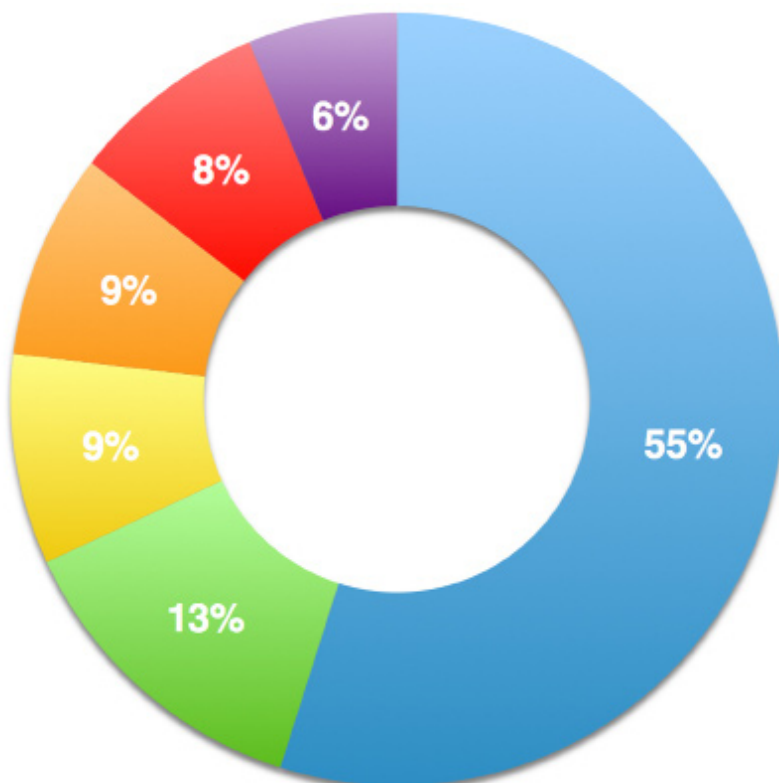
Frankfurt Zoological Society	164,890.04
BBC (filming fee)	39,596.10
WRI/Global Forest Watch	26,461.65
Donations from individuals	25,840.94
Mohamed bin Zayed Species Fund	24,876.58
Fundação Grupo Boticário	18,755.00
<b>TOTAL</b>	<b>300,420.31</b>

## Expenditures



- Field staff salary and benefits
- Remote sensing and mapping
- Research equipment
- Food for the field station
- Fuel
- Equipment for the field station
- Internet
- Accounting and administrative
- Field station maintenance
- Vehicle maintenance (boats and car)

## Revenues



- Frankfurt Zoological Society
- BBC (filming fee)
- WRI/Global Forest Watch
- Donations from individuals
- Mohamed bin Zayed Species Fund
- Fundação Grupo Boticário

## Cash Flow 2015 (in reais)

Cash at the beginning of year	65,015.63
Cash revenue 2015	300,420.31
Expenditures 2015	271,318.00
Cash at end of year	94,117.94

## Assets and Liabilities (in reais)

	2015	2014
<b>Assets</b>		
Cash and equivalent	94,117.94	65,015.63
Accounts receivable	0.00	29,325.50
<b>Liabilities</b>		
Unspent project funds	13,821.69	2,345.14
Project staff benefits and termination costs	4,200.00	21,217.18
<b>Net assets</b>	<b>76,096.25</b>	<b>70,778.81</b>

<b>Material Assets</b>	<b>2015</b>	<b>2014</b>
Buildings at the field station	5	5
Outboard motor	0	1
1998 Toyota Hilux 4x4	1	1
Research boats and canoes	4	5
Internet communications system	1	1
Telephone communications system	1	1
TV and satellite dish	1	1
Laptop computer	2	1
Camera traps	12	7
Video cameras	4	4
Field binoculars	2	2
Electric motors	2	3
12 V batteries	12	14
Solar panels	12	9
Drones, blimps, and research balloons	4	1

**OFÍCIO/DMA/Nº            /2016/AUD/RT.**

Palmas, 08 de abril de 2016.

À Sua Excelência a Senhora

**SILVANA CAMPELLO**

Presidente da Associação Instituto Araguaia de Proteção Ambiental  
Caseara- TO

Ref.: Relatório sobre a auditoria realizada nas áreas: Da Estrutura Operacional (Atas da Diretoria e Conselho Fiscal), Contabilidade, Administrativa, Financeira, Fiscal, Tributária, Trabalhista, Previdenciária, Compras, Contratos, Convênios e Patrimônio da Associação.

Prezada Senhora,

Apresentamos aos vossos cuidados, nosso relatório de auditoria realizada na Associação, correspondentes ao período de 01/01/2015 a 31/12/2015.

Este relatório contempla nossa análise e opinião aos itens que foi solicitado por meio do **Ofício/DMA Auditoria Independente nº 1/2015, de 08 de dezembro de 2015**, e outros que foram constatados durante a execução dos trabalhos, oferecendo sugestões para melhoria aos itens que merecem atenção.

Aproveitamos para colocar à inteira disposição de Vossa Excelência para quaisquer esclarecimentos adicionais quanto aos trabalhos realizados.

Atenciosamente,

**FRANCISCA MARGARIDA DE ASSIS**

**Contador CRCRN nº 3.046-T-8-TO**

*“When animals are no longer colonized and appropriated by us, we can reach out to our evolutionary cousins. Perhaps then the ancient hope for a deeper emotional connection across the species barrier, for closeness and participation in a realm of feelings now beyond our imagination, will be realized.”*

*- Dr. Jeffrey Moussaieff Masson*

