

### FUNDACION BIODIVERSA COLOMBIA

Fundacion Biodiversa Colombia (FBC) is a Colombian non-profit non-governmental organization formed in 2005 by a team of 20 professionals with high-level academic backgrounds in complementary areas and committed to the conservation of Colombian biodiversity.

Our mission: the conservation of the Colombian natural and cultural heritage through scientific research with social involvement and through sustainable productive projects that contribute to conservation, to social development and to self sustainability of local communities..

Our vision: to grow as a self-sustainable organization that develops projects and research in multiple areas of Colombia, generating positive, growing and long-lasting social and environmental impacts..

#### **G**ENERAL INFORMATION

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#### Members

#### **Directive board**

- President/Legal Representative Alternate Vocal Vocal Vocal Vocal Substitute board member: Board advisor Board advisor
- Fernando Arbeláez MSc Andrés F. Almonacid MSc. Catalina Giraldo MFA María Teresa Gámez Marisol Santos Acevedo Natalia Góngora MSc. Susana Rodríguez -Buritacá PhD Alba Lucía Morales Jiménez PhD Daniel van der Post PhD Javier Díaz Silvia Vejarano MSc Aida Vasco Palacios PhD
- Topical Ecology, conservation Alternative energies Environmental arts, Paleoecology Photography, visual media Fisheries, Marine ecology Aquatic ecology, Scientific outreach Ecology, Conservation biology Primatology Theoretical Biology, Primatology Mastozoology, Participative cartography Evolutionary biology, Conservation Mycology, Microbial ecology

#### Associated members

Katja Poveda PhD Mario Vargas Ramírez PhD Natalia Norden PhD Nicolás Castaño PhD(c). Dafna Camila Ángel MSc. Paula Caycedo Msc. Diana Teresa Gutiérrez MSc. Andrés Felipe Aponte Juan Jacobo Jiménez Jorjany Botero Juan David Sánchez MSc.

Agroecology Herpetology Plant ecology Amazonian Biodiversity, plant ecology Ecology Ornithology, Bioacoustics Visual and Dance Anthropology Herpetology Arachnology, Community projects Ornithology Mastozoology

Founded in 2005, Fundacion Biodiversa Colombia (FBC) is an NGO working in conservation of endangered species and ecosystems. The Conservation of Barbacoas Wetlands and Forests programme started in 2009 with the aim of preserving the species and remnant ecosystems in a highly degraded and biodiverse region in Colombia, the Middle Magdalena Valley. Our strategy is to establish strong partnerships with all stakeholders, and to diversify the activities we develop with them, as well as the scale at which we develop them. This has only been possible because we are also local actors. We consolidated our permanent presence in the area in 2012 when we established a 74 ha El Silencio Natural Reserve with an IUCN-NL grant. This was pivotal to strengthen partnerships with local, regional, and international organizations and stakeholders. The reserve became an operational base to promote forests and wetlands conservation, sustainable development, better productive practices, and cooperative actions to improve wellbeing of local communities. This new approach proved to be an innovative way for relating with local stakeholders, building trust, and developing and upscaling several conservation actions. Some of our actions and achievements include:

- FBC advocated and provided technical support for the declaration of the first Public Protected Area in the lowlands of the Middle Magdalena by the regional environmental authority, Corantioquia, in June 2017: the DRMI Ciénagas de Barbacoas with 32072 ha. For this work, FBC was awarded with the Caracol TV Environmental Awards in August 2017.
- FBC secured conservation agreements with landowners to protect nearly 70% of the remaining forest fragments in Barbacoas and to completely stop wetland deforestation and degradation.
- As a consequence of FBC actions, there is an increased awareness of the value of forests in the area to the extent that both vulnerable communities and landowners monitor the area and inform authorities about illegal logging. The annual deforestation rate dropped from 5 % between 2005-2010, the highest in history, to 0.006% after 2010, the lowest since 1977.
- FBC and partner organizations have restored more than 40 ha of pastures for water protection and forest connectivity, completely connecting more than 2700 ha of forest, 1000 of which represent the best standing forests in the region.
- FBC and partner organizations established over 41ha of silvopastoral pilots to promote the use of environmentally friendly production practices.
- In 2018, El Silencio was expanded in 519 ha with funds from World Land Trust, IUCN-TN and a Colombian clothing company, ensuring long-term protection of about 415 ha of forests and generating further opportunities for restoration and sustainable development.
- The status of the endemic and critically endangered Blue-billed curassow has improved due to the project conducted together with the national oil corporation (Ecopetrol) and WCS that aims to raise awareness of local communities about the threat of the species and conserve and expand its suitable habitat.

- FBC monitors biodiversity using active and passive methods (camera traps, ecoacoustics), and, in particular keystone species such as Brown spider monkeys, Silvery Grey tamarins and large felines, among others, increasing our knowledge on their trends and status in the area.

Other relevant achievements:

- Besides Barbacoas, FBC has collaborated in the declaration of El Sapo Hoyo Grande as a regional public protected area in November 2017. We carried out the document to support its declaration in 2016 and the Environmental Management Plan in 2018-2019.
- Since 2008 we have been successfully running a Community-based Conservation Program of three threatened Amazon River turtle species with indigenous communities from Colombia and Peru
- FBC collaborated with the Ministry of the Environment and Corpocaldas to publish in 2008 the "National Conservation Program towards conservation of the endemic species of Colombia Saguinus leucopus".

FBC takes a comprehensive approach by recognizing the need to create economic alternatives for vulnerable communities, as key actors in wetland conservation, and proper economic recognition for big landowners investing in conservation. FBC's strategy with local communities, is to emphasize appropriation via knowledge transfer, and support of local initiatives like ecotourism or sustainable agriculture. Our permanent presence, generating local appropriation, a comprehensive and inclusive approach considering all local stakeholders, and the ability to build strong and trustworthy partnerships with a diverse set of stakeholders make FBC an extremely innovative and unique organization.

#### **ONGOING PROJECTS**

#### El Silencio Natural Reserve and Research Station

With a grant from IUCN-The Netherlands SGPN we purchased the 74 ha El Silencio Natural Reserve in order to create the first protected area in the Barbacoas wetland complex, and as a base station for our and others' projects in the area. Using an in-site native plants nursery, nearly 40 ha of pastures have been submitted to active and passive restoration with enrichment with threatened species and other important food source species. We also built the first research station of the area that has been used by several institutions working in the Barbacoa area. In 2019 the Reserved was expanded by 519 ha thanks to the joint support of IUCN-NL, World Land Trust and Tennis S.A. clothing company.

Funding and support: IUCN-TN, World Land Trust and Tennis S.A

Duration: 2012-present

Budget: ~479.000 USD

Coordinators: Fernando Arbeláez MSc ferarbe@fundacionbiodiversa.org and Maria Catalina Giraldo Pastrana MFA catagira@gmail.com

# Ecosystem-based adaptation and strengthening wetland guard groups in the DRMI Ciénagas de Barbacoas and DRMI El Sapo

This project aims to build capacity and strengthening wetland guard groups in the DRMI Ciénagas de Barbacoas and DRMI El Sapo in areas such as: organizational skills, plant nurseries, restoration, silvopastoral systems and food security, and carry out passive and active restoration in 10 ha of degraded grasslands in both wetlands and maintenance of 38 ha of sillvo-pastoral systems.

Duration: 2018-2019 Budget: USD 66.700 Coordinator: Santiago Jaramillo <u>sjaramilloes011@gmail.com</u>

Environmental Management Plan of the DRMI El Sapo/Hoyo grande The aim of this project is to design the DRMI Environmental Management Plan. Duration: 2018-2019 Budget: USD 50.000 Coordinator: Marisol Santos Acevedo MSc. <u>msantosacevedo@gmail.com</u>

Conservation of Blue-billed curassows Strategy at Barbacoas Wetland Complex

The objective of this project is to avoid the extinction of the blue-billed curassow (*Crax alberti*) in the wetland complex of Barbacoas (middle Magdalena River valley) by increasing forest area and connectivity through reforestation and enrichment of biological corridors with landowners and the local communities.

With the surveys we confirmed the importance of Barbacoas as a refuge for the blue-billed curassow populations. We identified forest patches with its presence and added 61 biological registers for the species in Colombia. We restored 23 ha of pastures to create biological corridors that will connect 2785 ha of continuous habitat. We carried out 3 conservation agreements with landowners and intervened in two more, covering a total area of 13.315 ha, 41.7% of the Regional Protected Area and 70% of its forest and wetland conservation areas. Finally, we registered two plots (including El Silencio) in the National Parks Office as Civil Society Natural Reserves, covering 5780 ha.

During the second phase, the project aims to support landowners with conservation agreements in the implementation of their Environmental Management Plans and declare further Civil Society Natural Reserves.

Funding and support: Ecopetrol, Fundación Mario Santodomingo, Wildlife Conservation Society, Fondo Acción..

Coordinators: Fernando Arbeláez MSc ferarbe@fundacionbiodiversa.org and Maria Catalina Giraldo Pastrana MFA catagira@gmail.com

Duration: 2014-2020 Budget: USD 200.000

The community-based conservation program of three species of endangered river turtles (*Podocnemis* spp.) with Peruvian and Colombian indigenous communities of the Amazon River

For eight years, this program, which was born as a local initiative, aims for community-based conservation of three endangered Amazon River turtle species, through awareness-raising and environmental education, direct conservation actions and formation, capacity-building and empowerment of local conservation groups (LCGs) in indigenous communities of Colombia and Peru.

Funding and support: Decameron Hotels, World Land Trust, Columbus Zoo and Aquarium, Curuinsi Huasi Indigenous Association, The Mohamed bin Zayed Species conservation fund, Turtle Conservation Fund, Rufford Small Grants Foundation, Cleveland Zoological Society, Cleveland Metroparks Zoo, Idea Wild, U.S. Wildlife and Fishery Service Coordinator: Fernando Arbeláez MSc. ferarbe@fundacionbiodiversa.org

Duration: 2008-2019 Budget: USD 120.000

Design and implementation of a Monitoring and Evaluation System for the projects of "Patrimonio Natural Fondo para la Biodiversidad y Áreas Protegidas"

Funding and support: Patrimonio Natural Fondo para la Biodiversidad y Áreas Protegidas. Coordinator: Fernando Arbeláez MSc. <u>ferarbe@fundacionbiodiversa.org</u> Duration: 2015-2019 Budget: USD 42.000

COMPLETED PROJECTS

2015

Identification and execution of conservation strategies in the biological corridor of Manatee in Coriantioquia jurisdiction. Funding and support: The Nature Conservancy, Corantioquia Coordinator: Susana Rodríguez-Buritica PhD. <u>dsrburitica@gmail.com</u> Duration: 2014-2015 Recursos: USD 45.000

As a result of this project, a Fisheries Management Plan for the Barbacoas Wetlands, Antioquia was carried out with the participation of local communities. Furthermore, an ecological restoration pilot was carried out in the surroundings of the wetlands

#### Declaration and Planning of a protected area in El Sapo Wetland Complex, Nechi Basin, Antioquia

The "El Sapo" wetlands and surrounding forests are strategically important for the conservation of threatened ecosystems in the low Cauca river valley. The habitat of many species includes wetlands and surrounding forests, which have deteriorated in the last decades by non-sustainable productive system such as mining, cattle farming and overfishing. Fundacion Biodiversa Colombia is providing technical support for the establishment of a regional protected area to ensure the conservation of these wetlands in the lower Cauca river valley. This project is based on a community work and its aim is to design a management plan in line with the purpose of the protected area and the needs of owners and local communities. This project is conducted in collaboration with The Nature Conservancy and the regional environmental authority – Corantioquia. Funding and support: Corantioquia, TNC

Coordinator: Dafna Camila Ángel MSc. <u>angeldafna@yahoo.com.mx</u> Duration: 2014-2015

Budget: USD 31.000

Sustainable pest management and yield increase strategies through ecological, genetic, and economic analysis

The purpose of this collaboration between Fundación Biodiversa Colombia, Cornell University and Universidad Nacional de Colombia was to study different Colombian varieties of potato (*Solanum tuberosum*) to measure levels of resistance and tolerance to the pest insect *Tecia solanivora*. The project aimed to combine push-pull technology to reduce pressure of the pest by using tolerant plants that have the ability to compensate pest damage by increasing production. This allowed to develop a sustainable pest management plan that will have a long-term impact on pest management in Colombia. Funding and support: Atkinson Center for a Sustainable Future at Cornell University and Universidad Nacional de Colombia Coordinator: Katja Poveda PhD <u>kpoveda@gwdg.de</u> Duration: 2012-2015

Budget: USD 42.100

#### 2014

Inputs for the Declaration of a Public Protected Area in Barbacoas and its Management Plan

Cooperantes: Proyecto Vida Silvestre (WCS, Ecopetrol), Proyecto Adopte su Logo - Conservación de la iguana verde en Colombia (Instituto Humboldt, Ecopetrol), Corantioquia, Municipio de Yondó, Consorcio Compañía Agrícola San Bartolo, Inversiones San Bartolo y Productora de Lácteos

This program provided biological, ecological and social economical input for the declaration of Barbacoas as a Regional Protected Area and for its management plan.

FBC aimed to declare a regional public protected area in the wetlands and rainforests of Barbacoas and to gather information for the design and implementation of a landscape conservation and management plan of the protected area.

Funding and support: TNC. Corantioquia, Instituto de Investigaciones Alexander von Humboldt, Ecopetrol, Compañía Agrícola San Bartolo, Inversiones San Bartolo and Productora de Lácteos consortium, and Municipio de Yondó.

Coordinator: Silvia Vejarano MSc. <u>silvejarano@gmail.com</u>

Duration: 2011-2014 Budget: USD 40.000 Adjustment to the Santuario de Fauna y Flora Corchal "Mono Hernández" protected area Management Plan and definition of a technical proposal for a buffer area.

The project aimed to develop a proposal to adjust the design of the Santuario de Santuario de Fauna y Flora Corchal "Mono Hernández" protected area between the Caño Correo and Caño Rico sector, and to elaborate a technical proposal for the buffer zone of the protected area.

Funding and support: TNC Coordinator: Fernando Arbeláez MSc. <u>ferarbe@fundacionbiodiversa.org</u> Duration: 2012-2014 Budget: USD 39.000

Study of the role of ectomycorrhizal fungi in functioning and dynamics of a monospecific and endemic *Pseudomonotes* tropenbosii forest, in the Colombian Amazonia

The main objective of this Project is to contribute to the study of Ectomycorrhizal fungus diversity in ecosystems of the Colombian Amazonia. Funding and support: International Foundation for Science IFS, Faculty for the Future Coordinator: Aida Vasco PhD avascop@gmail.com

Duration: 2011-2014

Budget: USD 26.000

#### 2012

<u>The Environment and Biodiversity as meeting points between stakeholders from Colombia and Ecuador</u> The Project aimed to enrich bi-national dialogue and cooperation between social actors, local border governments and the productive sector of Colombia and Ecuador, having environment and biodiversity as directive lines. Funding and support: Corporación Andina de Fomento, Fundación Natura Regional Coordinator: Silvia Vejarano MSc. <u>silvejarano@gmail.com</u> Duration: 2010-2012 Budget: USD 64.000

<u>Technical support for the carrying capacity estimation of Corales del Rosario y San Bernardo Marine Protected Area.</u> The main goal was to estimate the carrying capacity of terrestrial areas in the Management Plan Update\_of the Corales del Rosario y San Bernardo Marine Protected Area Framework. Funding and support: Agreement NASCA 1551 120921 TNC- FBC. Coordinator: Fernando Arbeláez MSc. <u>ferarbe@fundacionbiodiversa.org</u> Duration: 2012 Budget: USD 34.500

#### 2009

The white-footed tamarin (Saguinus leucopus) national conservation program

The white-footed tamarin conservation program is the starting point towards conservation of this endemic, highly endangered species of Colombia. The program carried out effective actions focused on in-situ and ex-situ conservation, reintroduction of captive individuals, capacity-building among project members and education to control the pet trade and habitat destruction.

FBC collaborated with the Ministry of the Environment and Corpocaldas to publish in 2008 the "National Conservation Program towards conservation of the endemic species of Colombia Saguinus leucopus".

Funding and support: seven Colombian zoos and 20 European zoos, the EAZA and ACOPAZOA. It has achieved collaboration agreements with Corpocaldas and Cortolima, two regional environmental authorities to carry out research projects in their action ranges.

Coordinator: Alba lucía Morales-Jiménez PhD <u>almoralesj@gmail.com</u> Duration 2005-2009

#### Budget: USD 80.500

#### The spider monkey (Ateles hybridus & Ateles fusciceps) national conservation program 2006-2010

These two understudied and endangered species have been identified as a priority for conservation and research in Colombia. This program is the starting point towards their conservation, and aims to bring solutions to the illegal pet trade by offering support to zoos and rescue centers to establish an ex-situ conservation program, linked with an educational campaign. It also has an ex-situ component that aims to research population densities and consolidation of protected areas for the species.

Funding and support: South Lakes Wild Animal Park, Zoo de Doué La Fontaine, Conservation International. Coordinator: Dr. Alba lucía Morales-Jiménez <u>almoralesj@gmail.com</u> Duration: 2006-2009 Budget: USD 28.462

## The community-based conservation program for the Magdalena River turtle (*Podocnemis lewyana*) in the Upper Magdalena and Lower Sinu Rivers

This project was carried out by researchers of FBC and the Continental Turtle Line of the Conservation and BioDiversity Group of the Universidad Nacional de Colombia. The program aimed to collect and analyze preliminary biological data and social basic information on the Magdalena River turtle, to design and implement adequate and coherent actions towards its protection, conservation and sustainable use. This project earned the "best student presentation" in the sixth annual symposium of turtle conservation and biology, carried out in September 2008 in Tucson, Arizona.

Funding and support: Cleveland Zoological Society / Cleveland Zoo, Turtle Conservation Fund, Wildlife Conservation Society and Ideawild.

Coordinator: Dr. Mario Vargas-Ramirez <u>mavargas@yahoo.com</u> Duration: 2006-2009 Budget: USD 20.000