



# BIOAMAZON PROJECT

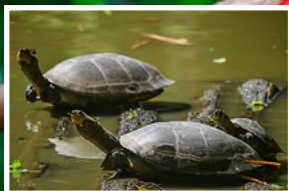
Conservation of species threatened  
by unsustainable trade



## ACTO

Amazon Cooperation  
Treaty Organization

# CONSERVATION OF SPECIES THREATENED BY UNSUSTAINABLE TRADE







ARAPAIMA GIGAS

# CONSERVATION OF SPECIES THREATENED BY UNSUSTAINABLE TRADE



Bolivia



Brazil



Colombia



Ecuador



Guyana



Peru



Suriname



Venezuela



**ACTO** is an intergovernmental organization formed by eight Member Countries - Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname and Venezuela, that encourages sustainable development and social inclusion in the Amazon Region.

#### **Board**

**María Alexandra Moreira López**  
Secretary General

**Carlos Alfredo Lazary Teixeira**  
Executive Director

**Carlos Armando Salinas Montes**  
Administrative Director

#### **Communication**

**Frida Montalvan**  
Communication Advisor



Bioamazon is a regional project of the Amazon Cooperation Treaty Organization (ACTO) that contributes to the conservation of the Amazon Biodiversity, especially of the species included in the CITES Convention. For this it seeks to increase the efficiency and effectiveness of management, monitoring and control of wildlife species threatened by trade in ACTO's Member Countries - Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname and Venezuela. It is part of a Cooperation Agreement between the Federal Government of Germany and ACTO with implementation through KfW.

#### **Bioamazon Project**

**Mauro Luis Ruffino**  
Coordinator

**Vicente Guadalupe**  
Technical Specialist

**Sergio Paz Soldan Martinic**  
Administrative, Financial and Procurement Manager

**Denise Oliveira**  
Communication Advisor

**Janet Herrera Maldonado**  
Administrative, Financial and Secretarial Assistant



This publication has been prepared by the Bioamazon Project, a development project of ACTO, co-financed by the Federal Republic of Germany through KfW.

PHOTO: ISTOCKPHOTO.COM/FILIPPERAZAO

---

BLUE-AND-YELLOW MACAW  
(ARA ARARAUNA)

---









# INDEX

8

## CONTEXTUALIZATION

8

ECOSYSTEMS AND IMPORTANCE OF THE AMAZON

9

CULTURAL DIVERSITY

11

THE AMAZON COOPERATION TREATY AND ACTO

12

THE CITES CONVENTION AND TRADE

14

## THE BIOAMAZON PROJECT

14

SCOPE

15

BACKGROUND

16

OBJECTIVES, COMPONENTS AND EXPECTED RESULTS

18

OVERVIEW OF THE AMAZON COUNTRIES AND CITES

22

STUDIES AND PROJECTS OF MANAGEMENT AND TRACEABILITY OF SPECIES

26

## STRATEGIC PARTNERS

28

## FIND US

# BIOAMAZON PROJECT CONSERVATION OF SPECIES THREATENED BY UNSUSTAINABLE TRADE

## Contextualization

### **Ecosystems and the importance of the Amazon**

From the heights of Arequipa (Peru) to the Atlantic (Brazil), the waters of the Amazon River run 6,992 km, discharging 6.6 billion m<sup>3</sup> of water into the Atlantic Ocean annually. With an average flow of 150 thousand m<sup>3</sup> per second the Amazon River is considered the most torrential river on the planet with approximately one thousand tributaries covering 6.11 million Km<sup>2</sup>.

The Amazon Forest extends from the eastern side of The Andes Mountains, near the Pacific up to the Amazon Plain in the Atlantic, generating interdependence between both parts that make the Continental Amazon

a strategic region in terms of its biodiversity. With an extraordinary richness, more than 30.000 species of plants, almost 2,000 species of fish, 60 species of reptiles, 35 families of mammals, and approximately 1,800 species of birds inhabit the region<sup>1</sup>.

---

<sup>1</sup> Strategic Actions Program, Regional Strategy for Integrated Resource Management, Amazon Basin Water / Amazon Cooperation Treaty Organization (ACTO). Amazon Cooperation Treaty Organization (ACTO). Brasília: TDA, 2018



## Cultural Diversity

The Amazon is also synonymous with cultural diversity, which is the result of a historical process of occupation of the territory and interaction between human groups of different ethnic and geographical origin. Its 40 million inhabitants account for 11% of the population of the eight Member Countries of the Amazon Cooperation Treaty Organization (ACTO), including 420 indigenous peoples that form part of the high socio-cultural diversity of the Amazon population. It is possible to affirm that in South America there are 185 registries of Isolated Indigenous Peoples, of which 66 have been confirmed by indigenous and indigenist organizations<sup>2</sup>.



*AERIAL VIEW OF THE AMAZON FOREST AND RIVER, BRAZIL*

PHOTO: ISTOCKPHOTO.COM/FILIPPEFRAZAO

<sup>2</sup> Indigenous Peoples in Isolation in the Amazon and Gran Chaco - Regional Report: Territories and Development - IR. Land is Life. Regional Strategy for the Protection of Isolated Peoples, 2019, p. 91.



---

*INTERIOR OF THE  
RAINFOREST  
IN THE UPPER  
AMAZON BASIN IN  
ECUADOR*

---

The indigenous Amazonian peoples speak the great linguistic trunks of the South American continent (Tupi, Gê, Pano, Makú, Karib, Tukano, Arawak and Quéchua), as well as isolated languages that are not affiliated with the aforementioned groups. In addition, indigenous peoples are recognized as important actors in the conservation of forests, natural resources and biodiversity.

The Amazon Region is of great importance because of its role in the ecosystem services it provides to world, such as climate regulation, the supply of freshwater and biodiversity, among many others.

***THE AMAZON REGION IS OF GREAT IMPORTANCE FOR ITS  
ROLE IN THE ECOSYSTEM SERVICES IT PROVIDES TO THE  
WORLD, SUCH AS CLIMATE REGULATION, FRESHWATER  
SUPPLY AND BIODIVERSITY***



## **The Amazon Cooperation Treaty and ACTO**

In 1978, the Amazon Cooperation Treaty was signed between the countries that share the Amazon Region: Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname and Venezuela. Subsequently, the Amazon Cooperation Treaty Organization was created as an intergovernmental institution for regional cooperation. The ACTO, through its Permanent Secretariat (PS), coordinates the procedures within the framework of the Amazon Cooperation Treaty and energizes the execution of its decisions.

**COUNTRIES THAT SHARE THE AMAZON REGION:  
BOLIVIA, BRAZIL, COLOMBIA, ECUADOR, GUYANA,  
PERU, SURINAME AND VENEZUELA**

The objectives of ACTO are, through technical and financial cooperation, to reduce the asymmetries between countries and to promote the convergence of public policies and economic and social inclusion in the Amazon Region, with unrestricted respect for the sovereignty of the member countries over their territories, for the wealth and diversity of cultures and peoples of the Amazon.

ACTO acts as a forum for dialogue and cooperation and seeks a harmonious and sustainable development in the Amazon Region. The Organization has a broad vision of the cooperation process and seeks to strengthen

**THE ORGANIZATION  
HAS A BROAD VISION  
OF THE COOPERATION  
PROCESS AND SEEKS  
TO STRENGTHEN  
THE VOCATION OF  
GOVERNMENTS TO  
BUILD SYNERGIES  
AMONG THEMSELVES  
AND WITH  
MULTILATERAL  
ORGANIZATIONS,  
COOPERATION  
AGENCIES, THE  
SCIENTIFIC  
COMMUNITY  
AND OTHER  
STAKEHOLDERS.  
THUS, IT ALSO ACTS  
IN THE SEARCH FOR  
FINANCING AND  
MANAGEMENT OF  
REGIONAL PROJECTS.**

PHOTO: ISTOCKPHOTO.COM/ATELOPIUS





the vocation of governments to build synergies among themselves and with multilateral organizations, cooperation agencies, the scientific community and other stakeholders. Thus, it also acts in the search for financing and management of regional projects.

The Amazon Cooperation Treaty is the main line of work of the Organization. ACTO's thematic areas are conservation and sustainable use of natural resources; research, science and technology; indigenous peoples and regional health management, with transversal axes of sustainable development, climate change and gender issues.

ACTO implements technical and financial cooperation agreements with various intergovernmental bodies and international and multilateral organizations such as the Economic Commission for Latin America and

***CITES IS AN INTERNATIONAL  
AGREEMENT BETWEEN GOVERNMENTS,  
TO WHICH STATES AND REGIONAL  
ECONOMIC INTEGRATION  
ORGANIZATIONS VOLUNTARILY JOIN***

the Caribbean (ECLAC), the Inter-American Institute for Cooperation on Agriculture (IICA), and the Inter-American Institute for Global Change Research (IAI), International Italian-Latin American Organization (IILA), Global Environment Facility (GEF), German Cooperation (GIZ), German Development Bank (KfW) and Development Bank of Latin America (CAF), among others, in order to support the sustainable and harmonious development of the Amazon countries within the framework of the Amazon Cooperation Treaty.

## **CITES Convention and Trade**

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is an international agreement between governments, to which States and regional economic integration organizations voluntarily join. The Convention provides a framework that must be respected by each of the Parties, which must enact their own national legislation to ensure that CITES, is implemented at the national level.

CITES aims to ensure that international trade in specimens of wild animals and plants is not a threat to their survival.

To date, CITES has 183 Parties. The eight Amazon countries joined the Convention between 1975 - the year CITES began - and 1981.

***THE TRADE IS VERY  
DIVERSE, FROM  
LIVE ANIMALS AND  
PLANTS TO A WIDE  
RANGE OF WILDLIFE  
PRODUCTS DERIVED  
FROM THEM***

***YACARÉ (CAIMAN YACARE)***

## Trade

According to the Convention on International Trade in Endangered Species of Wild Fauna and Flora<sup>3</sup>, international trade in wildlife is estimated to be in the billions of dollars annually and affects hundreds of millions of animal and plant specimens.

The trade is very diverse, from live animals and plants to a wide range of wildlife products derived from them, such as food products, leather goods from exotic animals, musical instruments made of wood, timber, and souvenirs for tourists and medicines.

The levels of exploitation of some animals and plants are high and their trade, along with other factors such as habitat destruction, is capable of significantly depleting their populations and even bringing some species to the brink of extinction.

Many of the traded species are not endangered, but an agreement to ensure the sustainability of the trade is essential to preserve these resources for future generations.

So, trade regulation and international cooperation are needed to protect certain species from over-exploitation.

The Convention provides Appendices that group species according to the degree of threat due to international trade.

About 5,800 animal species and 30,000 plant species are covered by CITES against over-exploitation due to international trade. The database on CITES-listed species is maintained by UNEP-WCMC<sup>4</sup>.

3 <https://cites.org/eng/disc/what.php>

4 <https://trade.cites.org/>

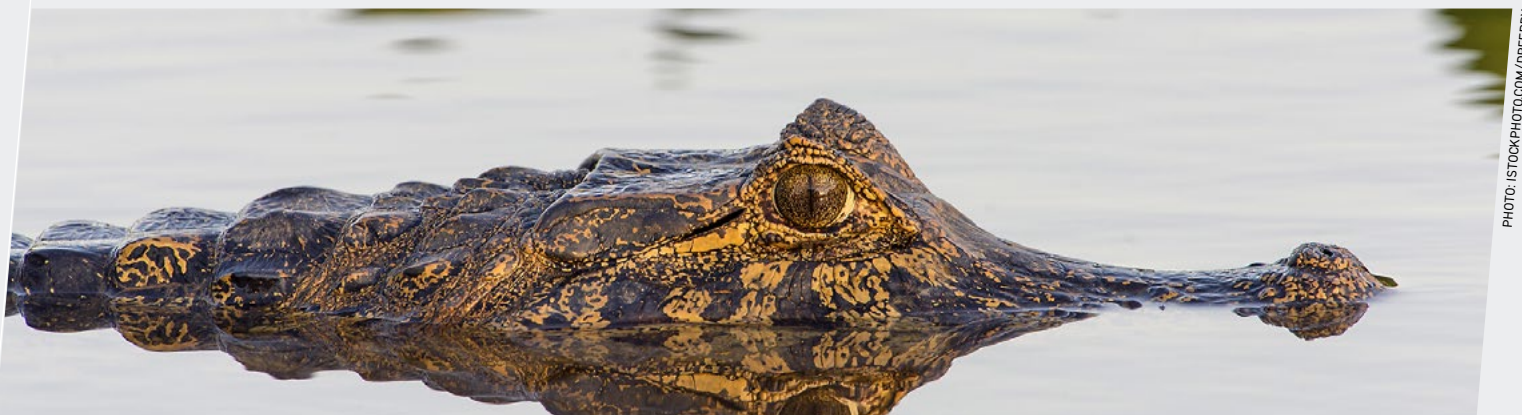


PHOTO: ISTOCKPHOTO.COM/DRFERRY



AFTERNOON IN THE AMAZON FOREST INSIDE THE  
YASUNI NATIONAL PARK, ECUADOR

PHOTO: ISTOCKPHOTO.COM / SL PHOTOGRAPHY

## The Bioamazon Project

### Scope

The Regional Project for the Management, Monitoring and Control of Wild Fauna and Flora Species Threatened by Trade (Bioamazon Project) was born out of the need to protect Amazon species threatened by trade and the urgency to cooperate with Amazon countries to reduce asymmetries and weaknesses in the conditions for monitoring and conserving threatened species of flora and fauna.

This important regional initiative contributes to the conservation of Amazon Biodiversity and especially of the species included in the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in the eight Member Countries of the Amazon Cooperation Treaty Organization (ACTO) - Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname, and Venezuela.

Among the Project's priorities is the institutional strengthening of the Ministries and authorities of CITES and the capacities of public officials in the Member Countries to improve the conditions of the on-site monitoring and information systems for wildlife trade permits.



## Background

The Amazon Cooperation Treaty (ACT) establishes that the eight Amazon countries will make joint efforts and actions to promote the harmonious development of their respective Amazon territories, as well as for the preservation of the environment and the conservation and rational use of natural resources in those territories.

It also establishes the importance of promoting scientific research and the exchange of information and technical personnel between the competent entities of the respective countries in order to increase knowledge of the flora and fauna resources of their Amazon territories; as well as the joint or coordinated implementation of research and development programs are provisions foreseen in the Amazon Cooperation Treaty.

The documents that constituted the orientation and conceptual basis for the elaboration of the Bioamazon Project were the Amazon Cooperation Strategic Agenda (ACSA), adopted in November 2010 at the X Meeting of Ministers of Foreign Affairs of ACTO (Resolution X-MRE-ACTO-5) and Resolutions X MRE-ACTO-7 and X-MRE-ACTO-10.

Based on this background and with attention to the standards required by KfW for this type of financing, the regional consultation process was initiated for the formulation and participatory design of an investment project proposal agreed upon by the ACTO member countries.

Led by the Ministries of Foreign Affairs, with the participation of the competent national bodies, a process of elaboration and final approval of the project was implemented.

In the framework of previous meetings on the subject promoted by ACTO, the Member Countries requested support for the development of strategic activities for the implementation of CITES, in particular, the development of tools to facilitate the issuance of CITES permits and certificates and the exchange and management of information.

Thus, the Regional Project for the Management, Monitoring and Control of Wild Fauna and Flora Species Threatened by Trade is framed within the strategy and concepts of biodiversity conservation of ACTO and promotes progress in the implementation of the priority actions of the Amazon Cooperation Strategic Agenda, its themes and sub-themes.

## Objectives, components and expected results

The regional project aims to increase the efficiency and effectiveness of management, monitoring and control of wildlife species threatened by trade.

Its strategy is based on two main axes and three components:

### Axes

1. Investments in information management systems and equipment.
2. Strengthening of institutional technical capacities and inter-institutional coordination in the countries.

### Components

#### *Component 1: National and regional information systems and knowledge management*

It aims to improve and balance the level of information and knowledge management, by supporting and strengthening ACTO Member Countries' Biodiversity and CITES information systems and the PS/ACTO information management.

It also seeks to facilitate the knowledge management of national and regional information related and/or produced in the framework of the project, through agreed mechanisms and systems of articulation.

#### *Component 2: Strengthening and regional harmonization of national permitting mechanisms/systems/processes*

The objective is to provide the necessary investment in infrastructure, equipment and technology to cover the gaps or existing demands for the operation of systems related to the electronic issuance of CITES permits and their articulation with the single window systems at the national level, as well as a regional harmonization.

#### *Component 3: Strengthening sustainable management initiatives and traceability mechanisms for Amazonian species*

It seeks to improve chain of custody mechanisms and strengthen control systems at the national and regional levels, including mechanisms for the control of origin and traceability, exchange of experiences and information on computerized control systems for origin, destination and traceability.

The implementation of the project strategy is completed in a transversal way with::

- Promotion of exchanges of experiences and collaborative learning;
- Establishment of spaces for discussion and agreement;
- Strengthening of national mechanisms and tools;
- Proposal of regional guidelines for cooperation in information management;
- Improvement of the infrastructure and equipment of the national institutions in charge.



---

*YELLOW-SPOTTED RIVER TURTLE (PODOCNEMIS UNIFILIS) ON A BRANCH WITHIN THE YASUNI NATIONAL PARK, ECUADOR. THIS VULNERABLE SPECIES IS ALSO FOUND IN VENEZUELA, COLOMBIA, PERU, BRAZIL AND BOLIVIA.*

---

## ***Expected Results of the Bioamazon Project***

### ***Result 1***

Interoperable national and regional information and knowledge management systems related to biodiversity conservation for the management, monitoring, and control of CITES or other wildlife species threatened by trade in the Amazon Region are strengthened and in operation.

### ***Result 2***

National mechanisms, systems and processes for issuing electronic permits in operation, compatible at the regional level, strengthened and harmonized with the guidelines of the CITES toolkit and others that the countries consider relevant.

### ***Result 3***

Existing and prioritized initiatives for the sustainable management of species are strengthened through investments requested by ACTO's Member Countries.

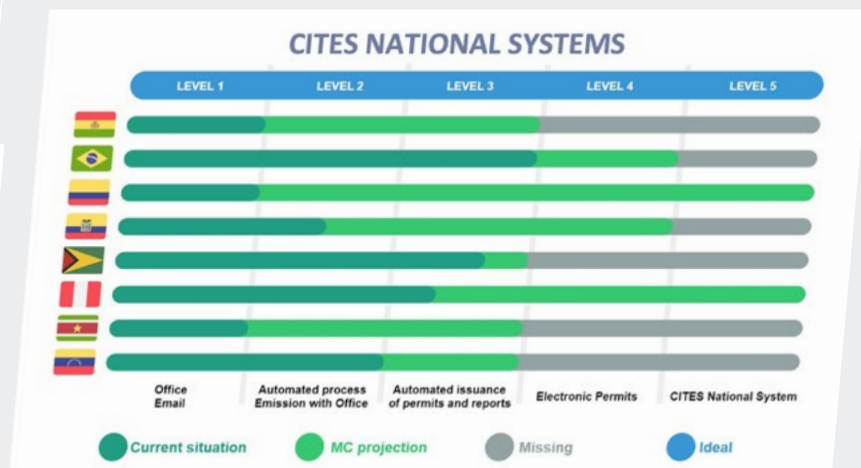


## Overview of the Amazon Countries and CITES

The Amazon Cooperation Treaty Organization (ACTO), through the Regional Project for the Management, Monitoring and Control of Wild Fauna and Flora Species Threatened by Trade (Bioamazon Project) is supporting the development of national and regional information and knowledge management systems to strengthen the instruments for managing CITES species in the countries and, through ACTO's Amazon Regional Observatory (ARO), currently under construction, to advance regional integration in the management of CITES species.

To this end, it ordered a regional analysis of the CITES and Biodiversity information systems in ACTO's Member Countries and the development of a regional system interoperability strategy involving ACTO's eight Member Countries. Figure 1 - National CITES Systems - shows the state of development of the national systems versus the ideal condition.

The Bioamazon Project, in its Component 1, is supporting the development of information systems to reduce asymmetries between countries.



**FIGURE 1. CITES NATIONAL SYSTEMS WITH THE LEVEL OF NATIONAL SYSTEMS VERSUS THE IDEAL CONDITION.**

SOURCE: CORPORATE EXCELLENCE/  
BIOAMAZON PROJECT/ACTO, 2020

International trade in CITES-listed species requires a single window for transactions and permit issuance. In this case there are also asymmetries between the Amazon countries, as shown in Figure 2 - CITES Interaction - Comex Single Window.

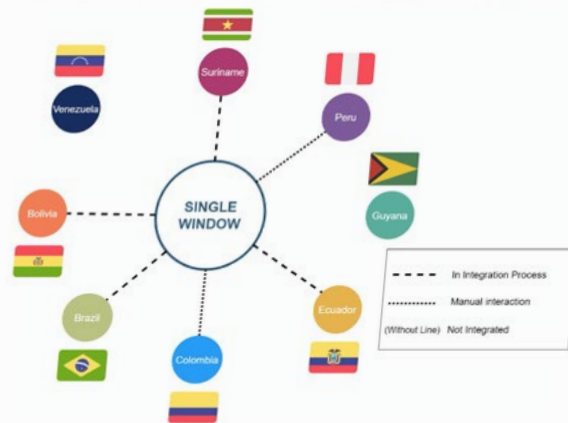
The Bioamazon Project, through its Component 2, is looking for all countries to have a connection to the single window. To this end, it supports countries in the development or improvement of national systems for the issuance of CITES electronic permits and integration into the single window for foreign trade.



PHOTO: ISTOCKPHOTO.COM/BRASIL2

AMAZON RIVER

## INTERACTION OF SINGLE WINDOWS CITES AND COMEX



**FIGURE 2. CITES INTERACTION - COMEX SINGLE WINDOWS.**  
 SOURCE: CORPORATE EXCELLENCE/BIOAMAZON PROJECT/ACTO, 2020.

Besides improving the national CITES information systems, ACTO also seeks to create the conditions for the regional vision of CITES species and biodiversity through the creation of the Amazon Regional Observatory (ARO) - Figure 3.

## CITES REGIONAL INFORMATION STRATEGY

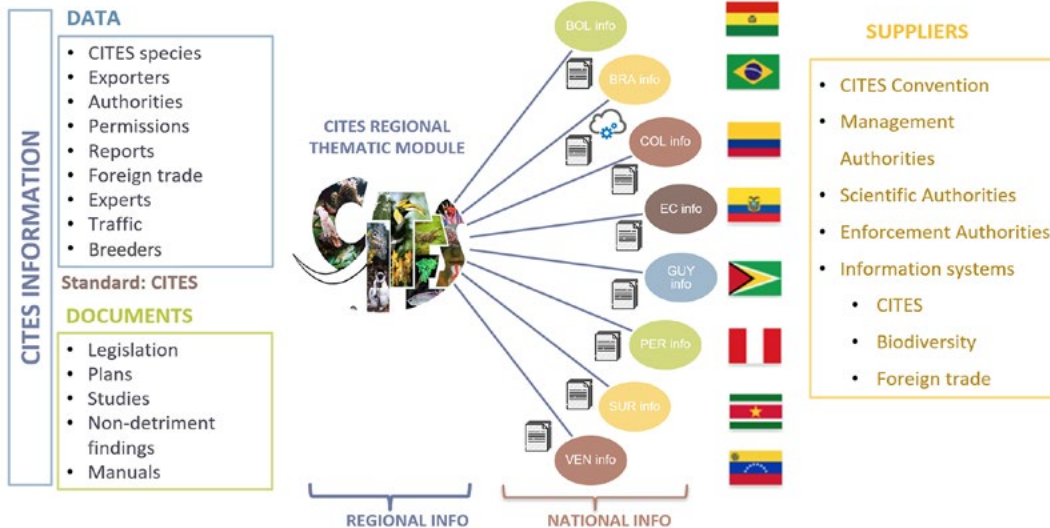
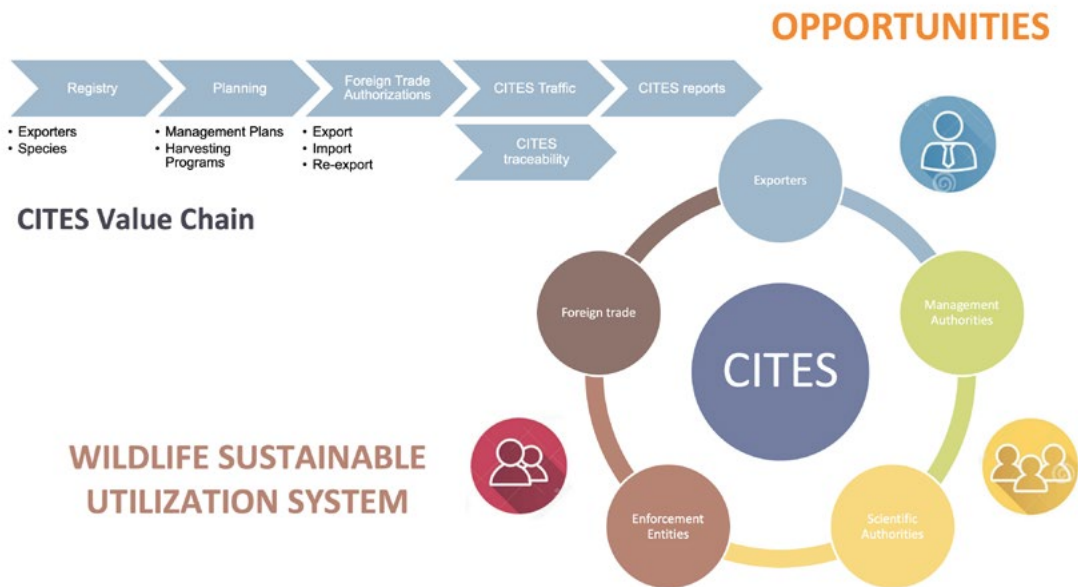


FIGURE 3. CITES REGIONAL INFORMATION STRATEGY.  
SOURCE: CORPORATE EXCELLENCE/BIOAMAZON PROJECT/ACTO, 2020.

The opportunities generated by these processes of development, integration and improvement of national information systems on biodiversity and CITES species are to provide managers and decision makers with more access to information, technical studies and specialists by adding a regional vision for the Amazon and a virtual environment of communication and exchange.





**FIGURE 4. WILDLIFE MANAGEMENT SYSTEM**  
 SOURCE: CORPORATE EXCELLENCE/  
 BIOAMAZON PROJECT/ACTO, 2020.

A SUMAUMA TREE (*CEIBA PENTANDRA*) OVER 40 METERS HIGH, FLOODED BY THE WATERS OF THE NEGRO RIVER, IN THE AMAZON RAINFOREST



PHOTO: ISTOCKPHOTO.COM/PARALAXIS

## Species management and traceability studies and projects

Within the scope of Component 3, the Bioamazon Project generates studies and supports projects for the management and traceability of CITES species in different countries. In conjunction with strategic partners and contracted consultancies, the following studies and projects per country are underway:

### Bolivia



- Study of the population status of the alligator (*Caiman yacare*) and the black caiman (*Melanosuchus niger*) in their natural distribution areas.
- Design of the traceability system for the trade of alligator products and by-products (*Caiman yacare*).

### Brazil



- Study on the dynamics and evolution of the international market for freshwater ornamental stingrays.
- Study on the population and demographic dynamics of the freshwater ray species *Potamotrygon wallacei* (Negro River).
- Study on the population and demographic dynamics of the freshwater ray species *Potamotrygon leopoldi* (Xingu River).
- Elaboration of a proposal for the creation of a traceability system and application for *Arapaima gigas* by-products to monitor the production chain and data analysis.
- Identification of woods using the NIRS methodology as a traceability system.



PHOTO: ISTOCKPHOTO.COM/MANADO

CROCODILE IN ATTACK MODE



PHOTO: ISTOCKPHOTO.COM/MIRECCA

XINGU RIVER FRESHWATER RAY (*POTAMOTRYGON LEOPOLDI*)

## Ecuador



- Proposal for strengthening the value chain of orchids, fish (*Arapaima gigas*) and turtles in the Amazon Region (Napo, Morona Santiago and Zamora Chinchipe).

## Guyana



Elaboration of management plans for:

- Tapir (*Tapirus terrestris*)
- Yellow-footed turtle (*Chelonoidis denticulata*)
- Spectacled Caiman (*Caiman crocodilus*)
- Cayman postruso (*Paleosuchus trigonatus*)
- Cuvier's Smooth-fronted Caiman (*P. Palpebrosus*)
- Pistacides



PHOTO: ISTOCKPHOTO.COM/HAILSHADOW

AMAZON FRESHWATER FISH (ARAPAIMA GIGAS)

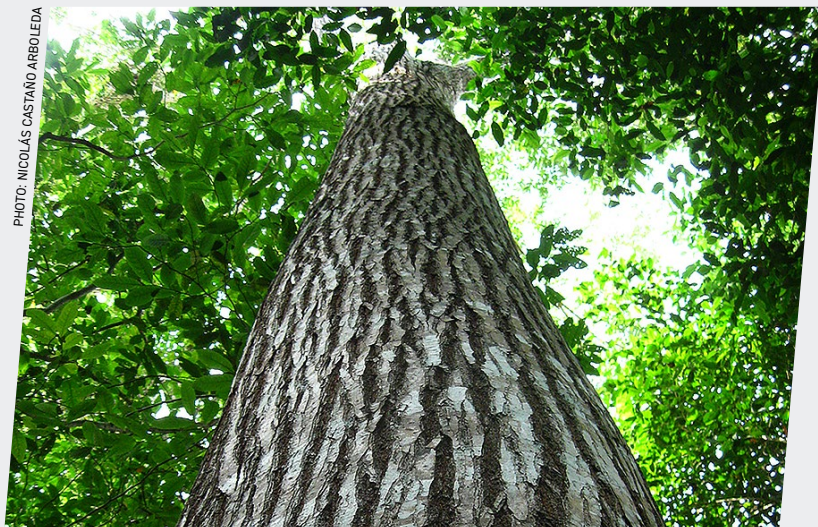


PHOTO: ISTOCKPHOTO.COM/THEPALMER

SCARLET MACAW (ARA MACAO)



PHOTO: NICOLÁS CASTAÑO ARBOLEDA



CEDAR (*CEDRELA ODORATA*)

PHOTO: ISTOCKPHOTO.COM/FOTOVOYAGER



BLUE-AND-YELLOW MACAW (*ARA ARARAUNA*)



**Peru**

- Technical study to determine the yield factor for obtaining *Aniba rosaeodora* oil extract.
- Technical study on the status of *Cedrela spp.* in Peru.
- Pilot project for the certification of peccary skins in the Peruvian Amazon.
- Diagnosis of local management experience and traceability of Yellow-spotted River Turtle (*Podocnemis unifilis*) in the department of Loreto.
- Situational diagnosis of fish farming (*Arapaima gigas*).
- Situational diagnosis of Amazonian ray species in the natural environment.
- Improvement of the infrastructure of the Amazon Rescue Center (CREA).



**Suriname**

- Evaluation of the habitat and presence of at least three species of parrots (*Amazona farinosa*, *Ara ararauna* e *Ara chloropterus*).

## Venezuela



- Development of a management plan for the conservation and sustainable use of the species *Podocnemis erythrocephala* Red-headed Amazon River Turtle, *Podocnemis unifilis* (Terecay), *Podocnemis expansa* South American River Turtle and *Peltocephalus dumerilianus* Big-headed Amazon River Turtle, through institutional strengthening and the updating of information on the status and population dynamics and the design of strategies for their conservation and sustainable use.



SOUTH AMERICAN RIVER TURTLE (*PODOCNEMIS EXPANSA*)





## Strategic partners

### Financing

A financial cooperation agreement between Germany and the Permanent Secretariat of ACTO (PS/ACTO) through KfW allows the contribution of resources for the Regional Project for the Management, Monitoring and Control of Wild Fauna and Flora Species Threatened by Trade (Bioamazon Project).

### Implementing partners:

The operational implementation of the project is carried out in conjunction with the institutions that have competence and represent the CITES Management and Scientific Authorities in the ACTO Member Countries. Thus, the regional project has a Steering Committee and regional working groups, the National Coordination Institutions and their Focal Points.

---

IGARAPÉ (SMALL RIVER, STREAM)  
RUNS WITHIN THE FLOODED  
FOREST

---

PHOTO: ISTOCKPHOTO.COM/EDSONGRANDISOU



**Bolivia**

- Ministry of Environment and Water (MMAyA)

**Brazil**

- Brazilian Institute of Environment and Renewable Natural Resources (IBAMA)
- Forest Products Laboratory (LPF) of the Brazilian Forest Service (SFB)

**Colombia**

- Ministry of Environment and Sustainable Development (MADS)
- Amazon Institute for Scientific Research (SINCHI)

**Ecuador**

- Ministry of the Environment of Ecuador (MAE)

**Guyana**

- Guyana Wildlife Conservation and Management Commission (GWCMC)

**Perú**

- Ministry of the Environment (MINAM)
- National Forest and Wildlife Service (SERFOR)
- Ministry of Production (PRODUCE)
- Peruvian Amazon Research Institute (IIAP)

**Suriname**

- Ministry of Land Policy and Forest Management
- Suriname Forest Service, Nature Conservation Division

**Venezuela**

- Ministry of People's Power for Ecosocialism

## Find us

### Contacts and Social Media

#### *ACTO's Address:*

SEPN 510 Norte Bloco A 3º andar CEP: 70750-521,  
Brasília-DF, Brasil. Tel.: (55 61)3248-4119/4132.

#### *Bioamazon Project:*

[bioamazonia@otca.org](mailto:bioamazonia@otca.org)

#### *[Bioamazon Bulletin](#)*



#### *ACTO in Social Media - Follow us*



[www.otca.org](http://www.otca.org)



[Facebook](#)



[Twitter](#)



[Youtube](#)

[LinkedIn](#)







PHOTO: ISTOCKPHOTO.COM/ANDREYGUDKOV

#### **Publication data sheet**

**Denise Oliveira**

Content editing

**Frida Montalvan**

Review

**Ribamar Fonseca (Supernova Design)**

Graphic design, layout and assembly











Bolivia



Brazil



Colombia



Ecuador



Guyana



Peru



Suriname



Venezuela