WWF

REPORT

2018

# IS BRAZIL HEADED FOR A FUTURE IN HARMONY WITH NATURE?

## An overview on Brazil's status within the goals of the Convention on Biological Diversity (CDB)

**Technical Data Sheet**

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# IS BRAZIL HEADED FOR A FUTURE IN HARMONY WITH NATURE?

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November 2018

# Background

Living in harmony with nature was the slogan chosen by the United Nations Convention on Biological Diversity as a statement intended to inspire the countries that signed the convention to take steps to ensure a future in balance with the environment for the current and future generations.

On the eve of the 14th Conference of the Parties (COP) to the Convention on Biological Diversity (CBD), to be held this year in Sharm El- Sheikh, Egypt, Brazil is sharing this reflection on how we are preparing for that future in harmony with nature.

All member'states within the CBD should be posing themselves the same questions, because they will be gathering in Beijing in 2020 in order to assess the progress attained towards the targets of biodiversity conservation, the sustainable use of natural resources and the sharing of benefits undertaken in 2010 in Aichi, Japan: the Aichi Targets 2011-2020.

While the Brazilian government is preparing its 6th National Report for the Convention on Biological Diversity, we preview in this analysis some of the trends regarding the compliance with some, but not all, of the key targets for the Brazilian scenario.

In this way we hope to play our role of keeping alive the debate on the implementation of the CBD in Brazil as part of our global commitment to a future in harmony with the environment.

May you enjoy your reading!

**Maurício Voivodic**
*WWF-Brasil, Executive Director*

On the eve of the 14th Conference of the Parties to the Convention on Biological Diversity, in Egypt, WWF-Brazil assesses the state of the art of the Brazilian biodiversity conservation in relation to the targets set nationally.

Brazil has managed to reduce deforestation in its two largest biomes, the Amazon and the Cerrado. It can currently boast more than 2.5 million square kilometers (965,225 square miles) of marine and continental Protected Areas. However, it has not met the target of reducing the rates of conversion of native environments, and still faces major challenges to ensure the effectiveness of protected areas, in addition to dealing with pressures to reduce their size and protection status.

With two years to go before the end of the second period of commitments, when the risk of extinction of endangered species should be reduced, hundreds of them still lack protection measures. Moreover, the fight against overfishing is undermined by the lack recent statistics.

More importantly: although Brazilians acknowledge the need to protect nature, biodiversity is still an issue pushed to the background in government agendas.

# Introduction

On the 25th anniversary of the United Nations Convention on Biological Diversity, in May 2018, a barely-noticed debate between two biologists laid bare an essential question.

## So, how is Brazil actually doing in biodiversity conservation?

Braulio Dias, who held the highest position on biodiversity policy in the world for five years (2012-2017), said Brazil was "looking good" when compared to most countries, particularly in terms of efforts to implement the international treaty. Bráulio considers that Brazil is the country that has most expanded its Protected Areas and enhanced the protection of endangered species, in addition to reducing deforestation rates in the Amazon. "Pressure factors on biodiversity still exist and remain strong, both globally and nationally - consumption, pollution, pressure on forests, overfishing, invasive species, climate change... We are waging an uphill battle," he summarized, noting the risk of setbacks, such as the pressure to pass the so-called "Poison Package" in the National Congress, a Bill which would facilitate the registration of pesticides, henceforth to be called "phytosanitary products".

Responding to Braulio, fellow biologist Carlos Joly, a professor at Unicamp and coordinator of the BIOTA Program of FAPESP and the Brazilian Platform of Biodiversity and Ecosystem Services, wrote a few days later that the situation of biodiversity in Brazil "is far from good". He went on to say that Brazil has created Protected Areas without ensuring the infrastructure to truly implement them, passed a Forestry Code with insufficient protection to allow forests to provide ecosystem services, and has not yet ratified the Nagoya Protocol on genetic heritage. Joly argued that the debate on biodiversity should cease to be restricted to environmentalists and ought to be mainstreamed into Brazil's economic agenda, which he claims is the only way to stop the degradation of the national heritage.

With two years to go before the end of the second period of worldwide and national biodiversity targets, in 2020, this analysis by WWF-Brazil intends to move forward in the Dias-Joly debate and present a preliminary scenario on how the country will appear on the 14th Conference of the Parties to the Convention on Biological Diversity to be held in Sharm El Sheikh, Egypt, in the second half of November. This study also intends to reflect on the Post-2020 agenda.


*Bouquet de Mélastomacées brésiliennes: dédiées a Sa Majesté Dom Pedro II empereur du Brésil /*

Saldanha da Gama, José de, - Cogniaux, Alfred, Verviers [Belgium] :Impr. A. Remacle, 1887.

Missouri Botanical Garden, Peter H. Raven Library

# The global treaty to protect biodiversity

The Convention on Biological Diversity (CBD) was launched in 1992, during the United Nations Conference on Environment and Development in Rio de Janeiro. Brazil ratified the convention in 1994 and along with another 194 countries plus the European Union, is considered a party to the CBD. The United States has not ratified the treaty.

The Convention arose from the international community's growing commitment to sustainable development and from its recognition that biological diversity is a valuable asset for current and future generations of the planet. Biodiversity is therefore broadly understood as support for human well-being. The loss of biodiversity exacerbates other global problems or challenges, such as climate change, water supply and food security.

The CBD sets forth rules for the conservation and sustainable use of biodiversity in each country that signed the treaty, as well as for the equitable sharing of the benefits arising from the economic use of genetic resources.

In 2010, in the Aichi Prefecture of Nagoya, Japan, the Parties to the Convention established a strategic plan and targets to be achieved by 2020, with the motto "Live in harmony with nature". The main goal is that, in 2050, "Biodiversity be valued, conserved, restored, and used wisely, maintaining ecosystem services[1], sustaining a healthy planet and providing essential benefits to all the people".

The Strategic Plan 2010-2020 is based on the understanding that efforts needed to be made to halt the loss of biodiversity, which can lead to other challenges on the global agenda, such as limiting global warming to 2ºC and moving forward in the United Nations Development Agenda, renewed in the Sustainable Development Goals (SDG). Six of the 17 SDGs interface with the Aichi Targets; two of them relate directly to biodiversity targets.

An assessment made in 2014, on the fourth and latest report on the Global Biodiversity Outlook, reported that pressures on biodiversity would continue or increase at least until 2020. The Business as Usual scenario in terms of behavior, consumption, production and economic incentives would prevent ecosystems from being able to meet the needs of future generations, concluded the report on the progress on the so-called Aichi Targets.

This assessment was forcefully reinforced for the Americas on the Assessment Report on Biodiversity and Ecosystem Services for the Americas, launched by the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES), in March 2018. The IPBES was created by the UN in 2012 with four objectives: a) to produce thematic or methodological diagnoses on biodiversity and ecosystem services; b) to develop and strengthen the interface between science and decision-makers in these matters; c) to identify gaps in scientific knowledge of biodiversity and ecosystem services; d) to train human resources and institutions to use the tools and diagnoses produced. In practice, it performs the same role for biodiversity and ecosystem services as the IPCC does in the climate change field.

The 20 Aichi Targets are organized around five strategic goals: 1- to address the fundamental causes of biodiversity loss by mainstreaming biodiversity concerns across the government and society; 2- to reduce the direct pressures on biodiversity and promote sustainable use; 3- to improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity; 4- to enhance the benefits to all from biodiversity and ecosystem services; and 5- to enhance implementation through participatory planning, knowledge management, the inflow of financial resources, and capacity building.

1 Ecosystem services are benefits that humans obtain from ecosystems, such as food and water (provisioning services), and the regulation of floods, droughts and soil degradation (regulating services). Deforestation and such inappropriate agricultural practices as the indiscriminate use of pesticides degrade soils, pollute the waters and cause loss of biodiversity, compromising the natural operation and adjustment of the environment and its capacity to provide these services.

The main driver for the loss of biodiversity, according to the 2014 global report, is agriculture. That is why one of the priorities of the Convention is to boost food output, ensuring the restoration of ecosystem services, reducing waste and losses in the supply chain, and promoting changes in consumption patterns.

Brazil plays an important role in the CBD, due to the threats to biodiversity it faces and the extensive biological diversity it can boast.


*American Lepidoptera: illustrations of new and rare species*

London :R.H. Porter, 1892
www.biodiversitylibrary.org


*Oncidium Concolor*
Nativa do Brasil, Serra dos Órgãos - Rio de Janeiro.

Orchid album - London, 1882.
www.biodiversitylibrary.org

# Megadiverse and under pressure

**Brazil participates in the negotiations on biodiversity in a unique position. It is the world's most biodiverse country, ahead of another 19 megadiverse countries.**

There are at least 46,220 known species of plants and 116,692 known species of animals in the country. They are scattered across six terrestrial biomes (two of them deemed global biodiversity hotspots[1]) and three large marine ecosystems. The country holds 10% to 20% of the total number of species on the planet.

At the same time, Brazil is one of the world's largest food producers and exporters. This production depends on the ecosystem services - on the abundance of water, soil quality and the availability of pollinators - and also represents a threat to the integrity of ecosystems, due to the relationship with the advance of deforestation and conversion.

To strengthen its domestic governance of biodiversity, Brazil set up the National Program of Biological Diversity - Pronabio in 1994 to coordinate the National Policy on Biodiversity, introduced in 2002 through Decree 4,339. In 2003, the National Commission on Biodiversity - Conabio Resolution was set up in order to promote the implementation of the commitments assumed by Brazil in the Convention on Biological Diversity.

As provided for in Aichi Target 17 each member-state of the CBD should develop, adopt as a policy instrument, and start to implement a national strategy and action plan for biodiversity. Brazil has relied since 2013 on National Biodiversity Targets, by means of Conabio Resolution No. 6. In 2017, it published the second version of the National Biodiversity Strategies and Action Plans (NBSAPs), also aimed at the period of the global strategic plan, by 2020.

It is based on the NBSAP – the main instrument for the implementation of the CBD at the national level – that this study will assess Brazil's performance on the Convention on Biological Diversity and what strengths and challenges will we bring to the 14th Conference of the Parties, in Sharm el Sheikh, in Egypt. It should be noted that, on the eve of the COP 14, Brazil still does not have effective monitoring of its Biodiversity Targets.

The work is organized into six topics: protected areas, genetic heritage, conservation of species, loss of ecosystems, sustainable use of biodiversity and, finally, how the issue is addressed by the government and seen by society, under the title: "Who cares about biodiversity". The study concludes by addressing the next period of commitments of the convention, post-2020.

*Dicholophus cristatus*
Seriema

*Abbildungen zur Naturgeschichte Brasiliens*

Wied, Maximilian, Prinz von,
Weimar :im Verlage des Grossherzogl. Sächs.
priv. Landes-Industrie-Comptoirs,1822-1831.

1 Hotspots are areas of high biodiversity that are under threat. Worldwide, there are 35 areas recognized as such by Conservation International, such as the Cerrado and the Atlantic Forest in Brazil.

# Protected Areas

## It is on the theme of the Protected Areas (PA) that Brazil most significantly contributes to the global biodiversity targets.

National target number 11 provides that, until 2020, at least 30% of the Amazon, 17% of each of the other terrestrial biomes, and 10% of marine and coastal areas will be conserved, particularly areas of special significance for biodiversity and ecosystem services.

In these numbers, Protected Areas (Strict Nature Reserve, Protected Area with Sustainable Use of Natural Resources) and other categories of officially protected areas are considered, such as Permanent Preservation Areas (PPA), Legal Reserves (LR) and Indigenous Lands (IL).

According to data from the National Registry of Protected Areas (CNUC) updated up to early July 2018, 18.08% of Brazil's continental area are protected as Strict Nature Reserve or Protected Area with Sustainable Use of Natural Resources (not including Indigenous Lands) under the management of the Federal Government, States and municipalities.

Of the total marine area (territorial sea plus Exclusive Economic Zone) 26.34% is protected. Continental and marine PAs come to 2.5 million square kilometers (965.255 square miles). In the Amazon, the percentage included in the National System of Preserved Areas (SNUC) is 28.07% of the biome, leaving aside overlaps.

In the Cerrado, Strict Nature Reserve and Protected Area with Sustainable Use of Natural Resources come to 8.34% of the biome.

The least protected biomes are the Pampa and the Pantanal, which respectively have 2.86% and 4.55% in protect areas.

Since the National System of Protected Areas does not count protected areas in private properties, due to the Forestry Code, nor indigenous lands or quilombola communities as Permanent Preservation Areas (PPAs) or Legal Reserves (LRs), we can state that the country has probably surpassed national target 11 in terms of the extension of protected areas, in spite of the gaps in some biomes. However, it is important to note that the calculation of PPAs and LRs declared in rural properties and registered in the Rural Environmental Registration System (Sicar) has not yet been validated by the States. A study by Brazil's Agricultural Research Corporation - EMBRAPA estimates that preserved areas in private properties come to 11% of the national territory, a percentage similar to that of the Indigenous Lands (13%).

It is just as important to consider the effectiveness, the representativeness and the fairness of these protected areas as their extension. The Management Analysis and Monitoring System of the Chico Mendes Institute for Biodiversity Conservation (ICMBio) measures the effectiveness of management of the PAs based on the relations between what each of them tries to conserve, the uses of the areas, and the management actions carried out by the managing agency. On average, the PAs assessed had a moderate rate of management effectiveness, 50.52%, in 2017. However, the variation is large, ranging from 78.85% effectiveness in an area of major ecological interest in Manaus (AM), to 21.99% in an Environmental Protection Area in Lagoa Santa (MG).

The WWF Network also developed a method, the RAPPAM (Rapid Assessment and Priorization of Protected Area Management). The average rate of management effectiveness in PAs was moderate: 55% in 2015. Using this other metric the variation is wide, ranging from 82% effectiveness in the Ecological Station of Maracá (RO), the first ESEC in Brazil, to 28% at Jacundá National Park (in the State of Rondônia, in the Amazon).

# PAs under attack

**Another important issue in this context is the pressure PAs have been facing to reduce their size and conservation status.**

In July 2018, the State Court of Rondônia granted a preliminary injunction to restore the creation of 11 protected areas that had been suspended by the local State Legislature as part of a movement to prevent new protected areas in Rondônia.

Provisional Presidential Decrees issued in late 2016 by President Michel Temer started the most serious attack to date, affecting Jamanxim National Forest, created to halt the deforestation in the region of the BR-163 highway, in the State of Pará. The Flona (National Forest) recorded a high rate of deforestation, attributed to land conflicts and illegal prospecting activity in the region, and had to give way to a railroad, Ferrogrão. The government proposed reduzing the size or protection category of 57% of the territory of the national forest. The threat was expanded in the National Congress, where bills that threaten 10% of the protected areas in the country are being considered. Given the international repercussions of the case, the government opted to send a bill removing a smaller portion of the national forest. The bill has been under consideration in Brazil's Lower House since July 2017.

Another potential threat to the protected areas was shown by a WWF study identifying 5,675 ongoing mining activity processes within the limits of PAs, including Indigenous Lands, ranging from exploration applications to mining permits. Even though the National Mining Agency keeps these mining deeds officially "blocked", the mere assumption that there are minerals encourages illegal garimpo (prospecting) or attempts to regulate mining activities in Indigenous Lands, as shown by the study titled *Mining in the Legal Amazon and Protected Areas – Status of Mining Rights and Overlapping Areas*.

Another WWF-Brazil study showed that of 316 federal and state PAs in the Amazon, 110 are potentially threatened by infrastructure projects. In turn, deforestation is pressuring 204 PAs in the biome, including full protection areas. The existence of pasturelands was observed in 181 units. The overlap between rural environmental registrations filed by rural landowners with the borders of 247 PAs was also recorded. These are signs that these protected areas may undergo processes known as PADDD (Protected Areas Downgrading, Downsizing and Degazettement) in the academic literature, when the size or protection status of PAs is reduced, or even when they are extinguished.

The attack on the PAs goes against public opinion, according to a Brazilian Opinion and Statistics Institute (IBOPE) poll commissioned by WWF-Brazil in June 2018.

In a sample of 2002 people, no fewer than 80% fully agreed with the statement that new protected areas should be created. The perception is that protected areas improve air quality, protect the headwaters of rivers and the diversity of plants and animals, in that order. However, donating money or paying a higher rate on the water bill to help protect water catchment sources are issues that do not mobilize the population.

Most Brazilians believe that nature is not properly protected: 91% of respondents believe that further efforts should be made, particularly by the government, which should be responsible for protecting the nature, according to 72% of the sample.

# Genetic heritage

**The second theme discussed in this study is probably one of the most sensitive subjects for Brazil in the next Biodiversity COP 14.**

**It deals with the access to genetic resources and the associated traditional knowledge, and the sharing of benefits.**

The situation is paradoxical: Brazil has a very advanced law on genetic heritage (Law No. 13.123, enacted May 20, 2015), governed by a presidential decree dated May 2016 (No. 8.722), which will soon result in the collection, for the use of genetic information, of resources that will go to the National Fund for Benefit Sharing, an important source of funds for the conservation of biodiversity.

At the same time, Brazil has not yet ratified the Nagoya Protocol for Access to Genetic Resources and Sharing of Benefits arising from their utilization (ABS, Access and Benefit Sharing), although it has been a signatory to the supplementary agreement to the CBD since 2010. The message of the Presidency of the Republic for the ratification of the protocol was sent to Congress in 2012, on the eve of Rio+20, and its vote has been held up for more than five years, because the Special Commission created in the National Congress to consider the ratification has never met.

Those countries ratifying the Nagoya Protocol see their sovereignty strengthened in order to regulate access to genetic resources: this ensures that Brazil's legislation is respected by foreign companies economically exploiting products based on access to Brazilian genetic heritage.

The issue is important for Brazil in the ongoing negotiations in the CBD due to another acronym: DSI, Digital Sequence Information, herein simplified as genetic information. The Brazilian legislation already provides for the payment for the use of the genetic information found in plants or animals, regardless of the use of genetic material; a root, a snake venom or a plant resin, for example.

But this interpretation is not a consensus in the CBD context. It is advocated by Brazil, with the support of other megadiverse developing countries, but faces resistance from major laboratories or companies using genetic information. Research using this type of sequence information, recorded in genome databases, involves industries such as cosmetics and food industries, agriculture, medicine and renewable energies.

Inajá
*Maximiliana regia*

C. Fr. von Martius. Historia Naturalis Palmarum

# Conservation of species

The third theme in this study deals with the conservation of species. National target 12 says that the risk of extinction of endangered species shall be significantly reduced by 2020, tending towards zero; their conservation status, particularly for those facing a major decrease, will have been improved. This target is part of the same strategic goal of improving the biodiversity status that deals with protected areas and also aims to minimize the loss of genetic variability in the country.

Brazil has greatly advanced in the knowledge of its species of fauna and flora. As previously mentioned, there are at least 46,220 known species of plants and 116,692 known species of animals in the country. In 2010, the Catalog of Brazilian Plants and Fungi was published, part of an as-yet not completed effort to update the first catalog of Brazilian flora, begun in 1840 by naturalist von Martius. In 2016, the Flora do Brasil 2020 system was launched online, with details on the 4,754 species of algae, 83,179 species of angiosperms, 1,567 species of bryophytes, 5,719 species of fungi, 29 species of gymnosperms and 1,353 species of ferns and lycophytes. In the same year, the executive summary of the Red Book of Brazilian Fauna Threatened With Extinction was published. And the launch of the platform of the Salve System, to assess species of Brazilian fauna, should be done soon.

The current Lists of Species of Brazilian Flora and Fauna Threatened with Extinction were published on December 18, 2014. The lists recognize 2,113 species of plants and 1,173 species of animals threatened by the expansion of agriculture, by major infrastructure works, by over-exploitation and trafficking, and even by invasive alien species. Of a total 3,286 species threatened, 785 are "critically endangered" and only one was considered extinct in nature, that is, it only exists in captivity:: Pauxi mitu, known as Alagoas curassow, a species originating from the Atlantic Forest of Pernambuco and Alagoas. Besides the glaucous macaw, nine other species are considered extinct in Brazil: Vespucci's rodent (*Noronhomys vespuccii*), the Eskimo curlew (*Numenius borealis*), the Pernambuco pygmy owl (*Glaucidium mooreorum*), the Alagoas foliage-gleaner (*Philydor novaesi*), the cryptic treehunter, the Pampas meadowlark (*Sturnella defilippii*), the spiny-knee leaf frog (*Phrynomedusa fimbriata*), the narrowmouthed catshark (*Schroederichthys bivius*), and the netooth shark (*Carcharhinus isodon*).

There was also progress in the establishment of National Action Plans for the Conservation of Species Threatened with Extinction, instruments to combat threats to populations of species and their natural environments. There are currently 45 Plans in force, reaching 642 threatened species, according to the Chico Mendes Institute for Biodiversity Conservation (ICMBio). Few actions recommended in the plans are implemented.

Despite the advances in the awareness of existing species and species under threat, the country has been facing budgetary difficulties for their conservation.

A WWF-Brazil study has shown that ICMBio, responsible for the management of the Federal Protected Areas and for the protection of endangered species, was the autonomous entity related to the Ministry of Environment that endured the most reductions in the budget this year. The spending authorization between 2017 and 2018 decreased from R$ 1.256 billion to R$ 708 million, (44%).

To move ahead with the protection of threatened species, Brazil counts on donations from the Global Environment Facility. The GEF provided US$ 13,4 million for a four-year period.

The objective in supporting the Pró-Espécies program is that protection measures be introduced by 2020 for the threatened species, above all for 290 currently unprotected species, considered to be in a more critical situation in 12 key areas for conservation. But support for the implementation of National Actions Plans is also set forth. The running of the program is the responsibility of WWF-Brazil.

One noteworthy initiative is the Sites of the Brazilian Alliance for Zero Extinction – BAZE, recognized in July 2018, by means of an ordinance (No. 287) of the Ministry of the Environment. These areas, known as Baze Sites, harbor the last refuges for species under threat of extinction with restricted geographical distribution. The ordinance strengthens the BAZE, set up in 2006, inspired by a global initiative.

# Loss of ecosystems

The fourth topic of this study relates to national target number 5. It states that the rate of loss of native environments will be reduced by at least 50% in relation to the 2009 rates by 2020 and will as far as possible be reduced to close to zero.

One observation is that the specific target for conservation of biodiversity is bolder than the voluntary target to reduce deforestation and conversion for the two largest Brazilian biomes, the Amazon and Cerrado, determined in the Climate Convention in 2009. Another observation is that the latest official deforestation and conversion data for these two biomes, collected by the satellites of the Brazilian National Institute for Space Research (INPE) show that the country is still far from reaching the target.

In the Amazon, between 2009 (the base year for target 5) and 2017, deforestation fell from 7,464 square kilometers to 6,947 square kilometers (1,844,395 acres to 1,716,641 acres), following an increase in the previous year, and still quite far from the 50% reduction stated in the target. In the Cerrado, the 2017 deforestation rate is 26% lower than the 2009 rate; however, a much greater effort would be required, particularly in the Maranhão, Tocantins, Piauí and Bahia (MATOPIBA) agricultural frontier, where the conversation of native vegetation continues at a faster pace.

Another concerning factor is the most recent halting of the decline in rates. In the Atlantic Forest, for example, where deforestation is monitored by the NGO SOS Mata Atlântica and by INPE, we observed a 57.7% increase in the rate between 2015 and 2016. In that period, 294 square kilometers (72,649 acres) of native vegetation disappeared. It was the highest deforestation rate in 10 years.

In short, despite acknowledged efforts to curb the rate of deforestation in the Amazon and the Cerrado, with significant results (above all from 2009 to 2015), Brazil is still far from reaching its biodiversity target. There is also a lack of updated monitoring data for the remaining Brazilian biomes.


*Bradypus tridactylus*
Preguiça

*Abbildungen zur Naturgeschichte Brasiliens*

Wied, Maximilian, Prinz von,
Weimar :im Verlage des Grossherzogl. Sächs. priv. Landes-Industrie-Comptoirs,1822-1831.

# Sustainable use of biodiversity

**That target of reducing the loss of native environment by 50% is part of what is probably the greatest challenge in the Brazilian biodiversity agenda: reducing pressures and promoting the sustainable use of natural resources.**

To achieve this goal, there are specific targets on the sustainable use of fishing resources and the dissemination of sustainable agricultural management, topics to be addressed in the following paragraphs.

Changes in land use, agriculture and livestock farming lead the ranking of greenhouse gas emissions in Brazil (SEEG 2016), and are major drivers of the loss of terrestrial biodiversity. In addition to fighting deforestation, the main public policy to reduce the pressure on terrestrial ecosystems is the Low Carbon Agriculture Plan (or ABC Plan in Portuguese). The targets of the plan include recovering 15 million hectares of degraded pastures, expanding the crop-livestock-forestry integration system, and replace the use of nitrogen fertilizers.

A study conducted by Observatório ABC shows that rate of adoption of the plan is below what is needed to reach the goals by 2020. Another study published in 2017 by the Observatório shows that the funding available for low carbon agriculture fell in the 2016/2017 harvest. Farmers borrowed only 63% of the total amount available during the harvest, as against 90% in the 2012/2013 harvest.

In marine environments, overfishing and predatory fishing have been pointed out as a threat to biodiversity. Brazil has done little to address the issue, remaining distant from target 6, to ensure by 2020 that the management and catching of fish are sustainable. After the extinction of the Ministry of Fishing in 2016, the subject was under the responsibility of the Ministry of Development, Industry and Commerce, and was recently shifted to a special secretariat under the General Secretariat of the Presidency.

In the midst of this institutional disarray, the national monitoring of fishing activity was interrupted. The 2011 edition of the Fishing and Aquaculture Statistical Bulletin, the most recent, has only partially updated data. The document registered a 2.3% increase in extractive fishing, with a production of more than 800,000 tonnes. There is a lack of consolidated and reliable data on the activity in Brazil in recent years. The list of species threatened with extinction, published in 2014, lists 475 aquatic species in this condition, among them the red porgy, *lambari*, *piaba*, *cascudo* and *bagre*. Two species are considered extinct: the narrowmouthed catshark and the finetooth shark.


*Mauritia vinifera*. Buriti
C. Fr. von Martius. *Historia Naturalis Palmarum* 1823-1850

# Who cares about biodiversity?

An opinion poll conducted by WWF International in 2018 in 10 countries, including Brazil, showed that a many Brazilians (67%) feel responsible for protecting biodiversity and nature, although their understanding of what biodiversity is exactly is limited, and only 36% of respondents are in favor of reducing the volume of land used for agriculture and livestock to allocate larger areas for conservation. The project is part of the German Government's International Climate Initiative.

While seven out of ten Brazilians care about biodiversity enough to feel committed to protect it, the issue is peripheral to the broader context of Brazilian public policies.

A fifth topic for analysis in this report has precisely to do with the first strategic goal of the national targets for biodiversity: mainstreaming concerns for biodiversity within the government and society.

We are interested in measuring, even if only provisionally, the engagement of different sectors of the government in the conservation and sustainable use of biodiversity.

The criterion for analysis was the participation of government agencies that joined in or sent contributions to the development of actions of the Strategy and National Action Plans for Biodiversity. The 264-page Strategy document, published in 2017, lists those institutions that participated in the preparation of the 721 actions in the plan.

As institutions "contributing to and joining" the plan, the document mentions the EMBRAPA and the ministries of Science, Technology, Innovation and Communication, Health, Planning and Tourism. The ministries of Planning and Agriculture were understood to have contributed to the text, as well as the Serviço Geológico do Brasil (CPRM), subordinated to the Ministry of Mines and Energy.

Although the Ministry of Finance was invited, it neither contributed to nor joined the Action Plan. It could have participated, for example, in the regulatory process for Environmental Reserve Quotas, a mechanism created by the 2012 Forest Code to compensate for environmental liabilities and encourage the conservation of native vegetation in rural properties.

The participation of the Ministry of Agriculture does not ensure the support of the ministry for a more sustainable management of water and soil resources. The current minister for Agriculture, Blairo Maggi, is the author of a bill now under analysis in the National Congress to ease restrictions on the use of pesticides in Brazil. The project is popularly known as the Poison Package and changes their name from pesticides to phytosanitary products, as agribusiness players would prefer.

The State of Mato Grosso, Maggi's constituency, is the largest pesticide consumer in Brazil, in turn one of the world's heaviest pesticide users. Research published in 2017 shows that the soy crop was Brazil's largest pesticide user (63%), followed by corn and sugar cane crops.

Consumption per hectare was led by tobacco, cotton, citrus, tomato, soybean, grapes, rice, papaya, corn, and sunflower.

The current situation may be understood as a period of setbacks to the biodiversity agenda, above all due to the strength of the so called rural caucus in the National Congress.

# And after 2020?

The debate on the strategic plan of the Convention on Biological Diversity for the post-2020 period has already begun. The Brazilian proposal maintains the vision of the strategic planning that has driven the CBD and the national plans, that of a life in harmony with nature. Different scenarios on biodiversity and ecosystem services indicate how unlikely it is that the current standards of consumption will meet environmentally safe limits in the coming decades. Therefore, the need for an expanded global commitment to biodiversity protection is considered even more important in the period that follows the current targets.

The advances made so far and the level of ambition required to reach the overall goal of a future in harmony with nature should calibrate the new goals. The Brazilian document discusses expanding the extension of protected areas - deemed the most relevant instrument to maintain biological diversity - and above all ensure that they are well managed and ecologically representative.

The text also indicates the need to strengthen the BAZE, identifying areas of refuge for endangered species.

The document prepared by the environmental area of the Brazilian government considers the loss of a significant proportion of biodiversity in the coming decades unacceptable. The new agenda must therefore ensure that the impacts of human activity on nature respect ecologically safe limits, avoiding the collapse of ecosystems and loss of biodiversity. As science deals with uncertainties regarding the thresholds for ecosystem rupture, the strategic plan should work to prevent known risks and follow the precautionary principle.

There is a concern to connect the biodiversity agenda to the Sustainable Development Goals (SDGs). Above all, goals 14 and 15 of the agenda of the United Nations, considered more closely related to the goals of the Convention on Biological Diversity. These goals deal respectively with conservation and sustainable use of the oceans and with halting and reversing the degradation of terrestrial ecosystems, the loss of biodiversity and ecosystem services.

And there is still a matter of emphasis to be given to future targets, so that the strategic plan for biodiversity should not be seen as an extra cost to society or a barrier to economic development, but as an investment to promote benefits for all. Promoting social engagement for the post-2020 agenda is considered a great challenge.

**Brazil is considering launching the proposal to declare the period between 2021 and 2030 the Decade of the United Nations on Ecosystem Connectivity and Restoration, in order to support the implementation of international treaties on Biodiversity, Climate Change and Fighting Desertification, in the context of the Sustainable Development Goals.**

## BIODIVERSITY

Brazil is the planet's most biodiverse country, ahead of 19 other megadiverse countries. It holds 10% to 20% of the total number of species on the planet.

## CONSERVATION

By 2020, at least 30% of the Amazon, 17% of each of the other terrestrial biomes, and 10% of marine and coastal areas will be conserved, above all areas of special significance for biodiversity and ecosystem services, according to national target 11.

## SPECIES IN BRAZIL

There are at least 46,220 known species of plants and 116,692 known species of animals in the country. They spread out across six terrestrial biomes (two of them are considered global biodiversity hotspots) and three large marine ecosystems.

## CBD RULES

The CBD publishes rules for the conservation and sustainable use of biodiversity in each signatory state, as well as for the equitable sharing of the benefits arising from the economic use of genetic resources.

WWF

**Why we are here**
To stop the degradation of the environment and to build a future in which humans live in harmony with nature.

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