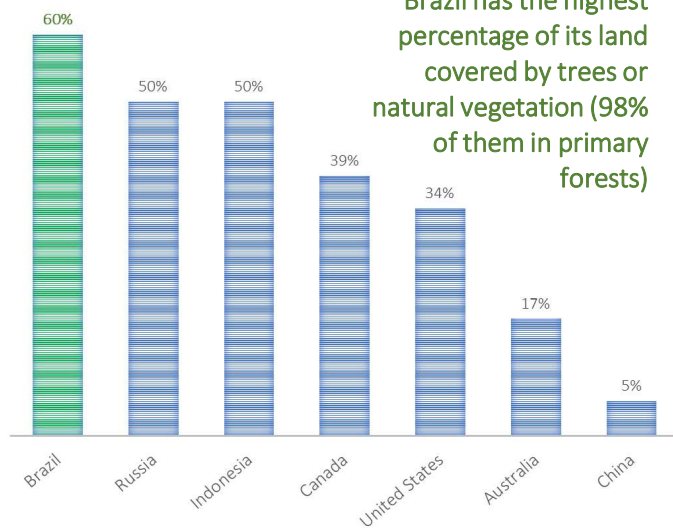
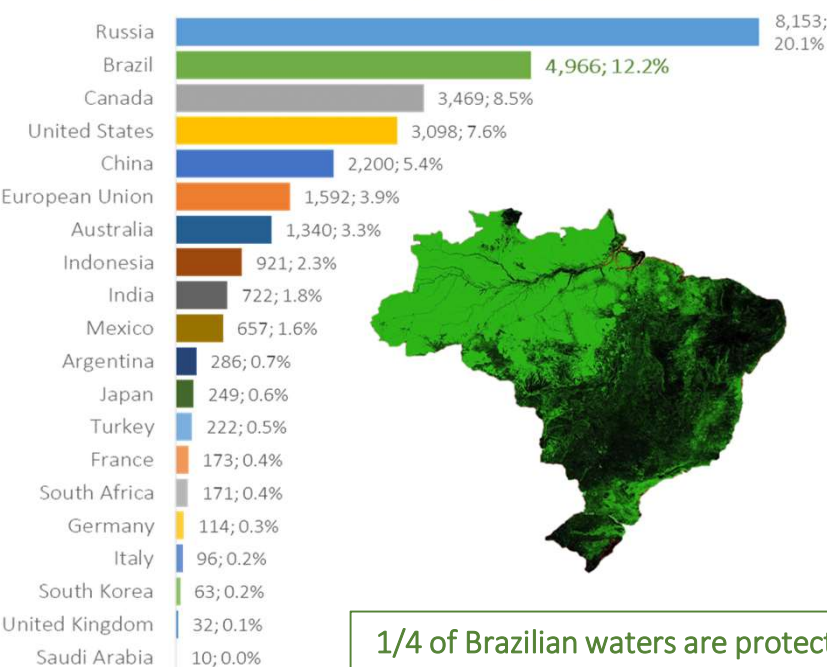


# BRAZIL'S GREEN MONITOR

## A GREEN GIANT

**Forest area**  
(1,000 Km<sup>2</sup>; % of World Total)



Among the countries with the largest forests, Brazil has the highest percentage of its land covered by trees or natural vegetation (98% of them in primary forests)

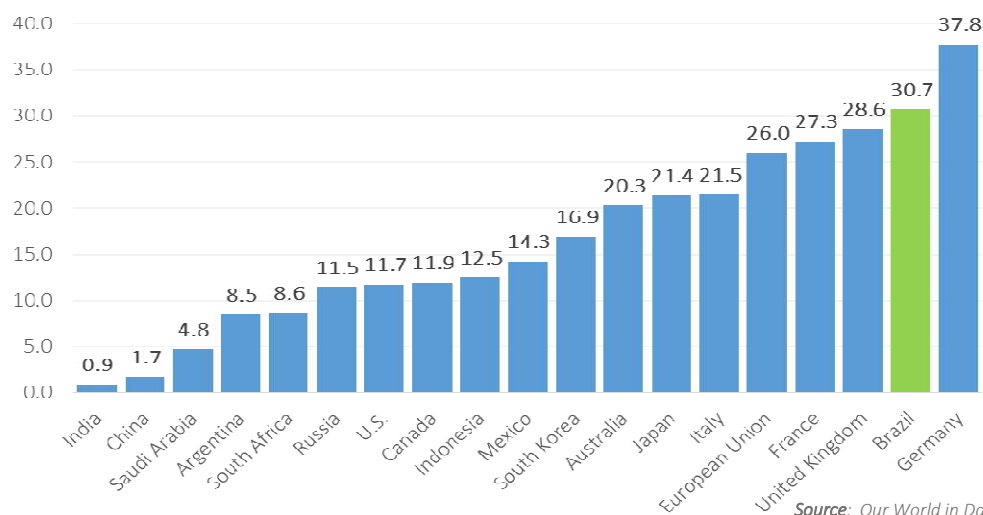
Source: World Bank

**1/4 of Brazilian waters are protected**, far exceeding the targets the country committed to at the United Nations, under the Aichi Target 11. This status helps the country to safeguard its rich biodiversity.

### 1/3 of Brazil's Terrestrial area is protected by law.

These areas integrate the SNUC (National System of Nature Conservation Units) or belong to one of the 724 Indigenous Territories. The protected area in Brazil is larger than the territory of France, Spain, Portugal, Italy, Germany, Switzerland, Belgium, Netherlands, Poland, UK and Ireland together.

**Protected areas, % of total land area, 2021 or latest available (G20 countries)**



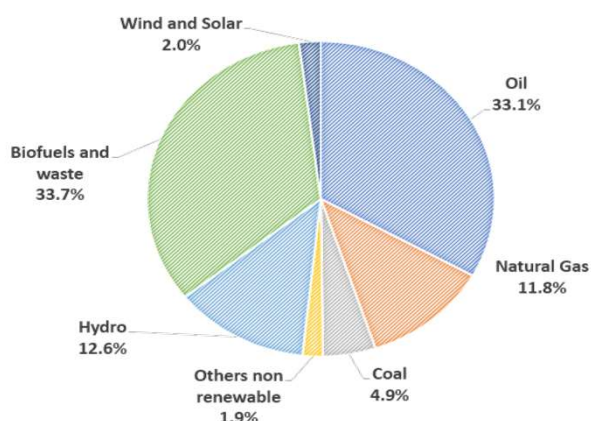
Source: Our World in Data

### Biodiversity

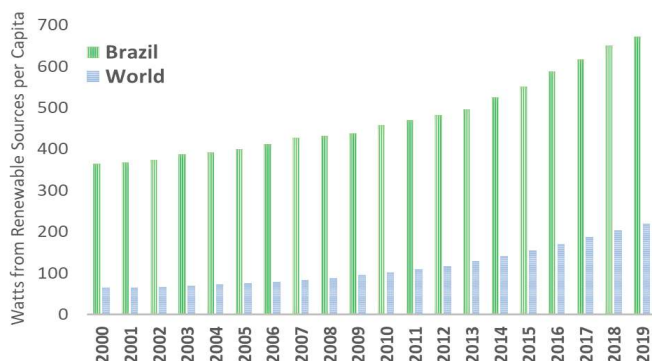
Brazil is the most biologically diverse country in the world. It is classified at the top among the world's 17 megadiverse countries, and second only to Indonesia in terms of species endemism. It contains two biodiversity hotspots (the Atlantic Forest and the Cerrado), six terrestrial biomes and three large marine ecosystems. At least 103,870 animal species and 43,020 plant species are currently known, comprising 70% of the world's catalogued animal and plant species. It is estimated that Brazil hosts between 15-20% of the world's biological diversity, with the greatest number of endemic species on a global scale. Brazil's biodiversity is ever-expanding, with an average of 700 new animal species discovered each year.

(Source: Convention on Biological Diversity)

## A CLEAN ENERGY MATRIX



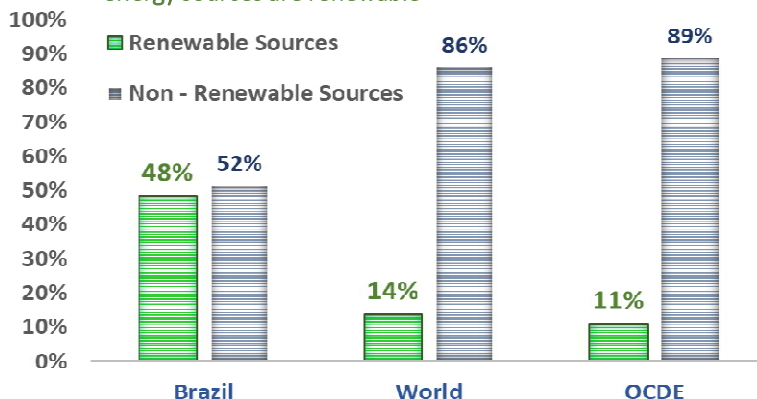
Source: EPE, Brazilian Energy Balance 2021



Note: SDG Indicator 7.b.  
Source: UN, SDG Global Database

In average, Brazil's electrical supply from renewable sources per habitant is **3 times higher** than other countries' supply.

### Brazil's Energy Supply: Almost half of our energy sources are renewable



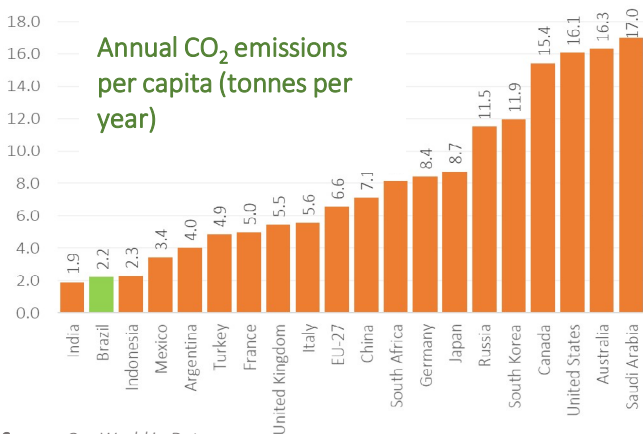
Source: EPE, Brazilian Energy Balance 2021; IEA, World Energy Balances 2020

### Recent years growth of renewable sources in Brazil's Total Energy Supply



Source: EPE, Brazilian Energy Balance 2021

## LOW CO<sub>2</sub>e EMISSIONS

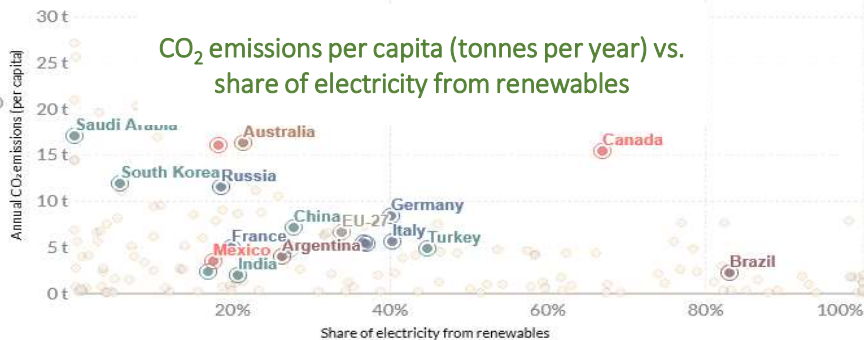


Annual CO<sub>2</sub>e emissions per capita (tonnes per year)

Source: Our World in Data

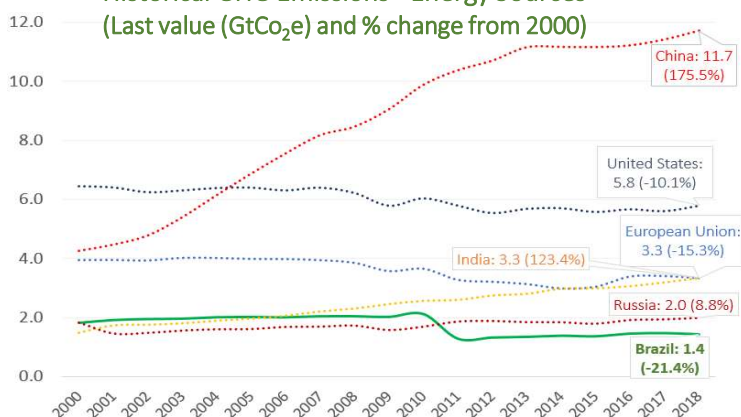
Brazil's GHG emissions per capita is very low in comparison with the emissions from world's main economies.

CO<sub>2</sub> emissions result from activities mainly related to the energy use of fossil fuels and changes in land use and land cover. In Brazil, as of 2003, there was a significant reduction in emissions from the LULUCF (Land Use, Land-Use Change and Forestry), mainly related to the reduction in deforestation.



Source: Our World in Data based on the Global Carbon Project, BP Statistical Review of World Energy and Ember (2021)

### Historical GHG Emissions - Energy Sources (Last value (GtCO<sub>2</sub>e) and % change from 2000)



Source: Climate Watch Data

## MAIN ENVIRONMENTAL LAWS

**Law 6.938/1981**

Law of the National Environmental Policy, establishing the National System of Nature Conservation Units.

**Law 9.985/2000**

Establishes the National System of Nature Conservation Units.

**Law 6.766/1979**

The Urban Land Subdivision Law establishes rules for urban demarcations, prohibited in ecological preservation areas, in those where pollution represents a danger to health and in swampy lands.

**Law 9.605/1998**

The Environmental Crimes Law has as its main objective the repair of environmental damage, including actions to prevent and combat this damage. The law provides for the application of the penalty and the types of environmental crimes.

**Law 12.365/2010**

The National Solid Waste Policy (PNRS) Law establishes instruments and guidelines for the public sectors and companies to deal with waste. Through the PNRS, organizations are required to be transparent with the management of their waste. The PNRS is a milestone to prevent environmental damage caused by incorrect waste disposal.

**Law 9.433/1997**

The Water Resources Law sets up the National Water Resources Policy and creates the National Water Resources System. The law defines water as a scarce natural resource, endowed with economic value, which can have multiple uses – human consumption, energy production, transport and sewage disposal.

**Law 7.802/1989**

The Pesticides Law regulates all stages of production and trade, packaging, storage, marketing, commercial advertising, waste destination, transport, technological and toxicological control of pesticides.

**Law 12.651/2012**

The New Brazilian Forest Code provides for the protection of native vegetation, Permanent Preservation areas and Legal Reserve areas; forestry exploitation, the supply of forestry raw material, control of the origin of forest products and the control and prevention of forest fires, and stipulates economic and financial instruments for achieving sustainable development.

**Law 11.445/2007**

The National Basic Sanitation Policy establishes guidelines for water supply; collection, treatment and final disposal of sewage and rainwater drainage. It also covers the collection, treatment and disposal of solid waste and industrial liquid effluents.

**Law 14.119/2021**

Establishes the general guidelines for payments for environmental services, and creates the Federal Payment Program for Environmental Services (PFPSA).

**Sanitation  
Regulatory  
Framework**

Taking care of basic sanitation is working to clean up rivers, protect biodiversity, ecosystem balance, reduce infant mortality and improve health for all Brazilians. The legal framework has as a goal the universalization of sanitation, providing for the collection of sewage for 90% of the population and the supply of drinking water for 99% of the population by 2033. Investments of more than R\$ 700 billion and the creation of 700 thousand jobs in the country are expected in the coming years.

## GOVERNMENT ACTIONS

### Green Growth Program

A federal government initiative aiming at carbon neutrality by 2050, generating employment and income, respecting Brazilian regional differences.

Rural Product Certificate for environmental assets (CPR Verde). Decree 10.828/2021 establishes this security, that will allow the financing of environmental areas belonging to rural producers. At CPR Verde, the product to be traded will be the environment and the carbon sequestered by it. Rural producers who preserve part of their land will be able to offer the green CPR and companies that need to carry out carbon offsets will be able to buy them. The measure expands the instruments for environmental compensation and offers extra income for the rural producer.

Differentiation of rates on rural credit for low-carbon agricultural activities: Under the ABC Program - Low-Carbon Agriculture, the Banco do Brasil offers reduced interest rates to rural producers to finance projects aimed at practices that contribute to the reduction of emission of greenhouse gases from agricultural activities.

Green Bonds: Since 2020, the issuance of domestic debentures for corporate financing of infrastructure projects with environmental and social benefits are included in the emissions that are subject to tax benefits in the country. The program's actions aim to develop the green bond market, expanding the issuance by Brazilian companies of green bonds in the local and international markets.

Sustainable Brazilian Finances – FiBraS: studies for the development of policies and instruments that attract investments in sectors such as green infrastructure, low-carbon agriculture, renewable energies, basic sanitation, sustainable transport and urban mobility, energy efficiency and sustainable management of water resources.

Structuring forest and national park concessions, with the objective of sustainable forest management: The national park concession agenda began with the concession of 2 national parks in August this year. The initial concession package includes 18 parks. The action aims to bring the private sector to environmental conservation under strict sustainability criteria, while at the same time developing ecotourism, generating employment and income.

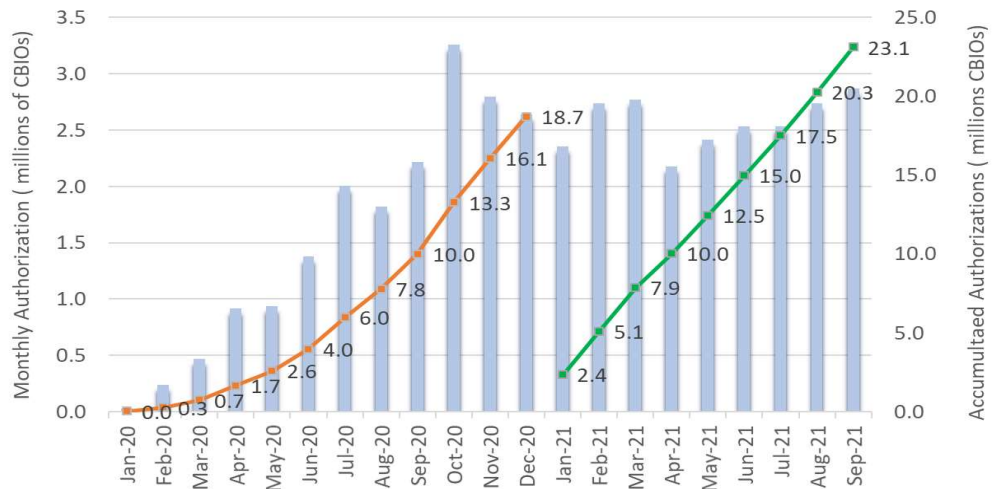
**Use of Financial Incentives for Sustainable Growth:** The consolidation of payment for environmental services is an efficient instrument to generate employment and income in regions with a significant potential for forest conservation. The Federal Government has implemented, since 2020, the Forests+ Program, which aims to create, promote and consolidate the market for the payment for environmental services, recognizing and remunerating those who provide those services.

As a result of the Program's implementation, native forest conservation has been formalized as an economic activity, in the National Classification of Economic Activities (CNAE), with the objective of increasing and maintaining carbon stocks, biodiversity conservation, climate regulation, soil protection and fertility, among other ecosystem benefits.

Within the scope of the Forests+ Program, payments will be provided for environmental services aimed at forest conservation and recovery, in addition to contributing to the creation of innovative technologies in the forest sector within Legal Amazon. With resources of around R\$500 million donated by the Green Climate Fund, the project is being implemented, with the first direct payments to small rural producers and resources for projects aimed at indigenous peoples and traditional communities expected in 2021.

## SUSTAINABLE FINANCE

Evolution of CBIO issuance authorization from regulatory agency



Source: ANP. RenovaBio Dynamic Panel

Total Authorization of CBIO Issuance since 2020  
**41,833,623**  
(Volume of avoided tCO<sub>2</sub>e emissions)

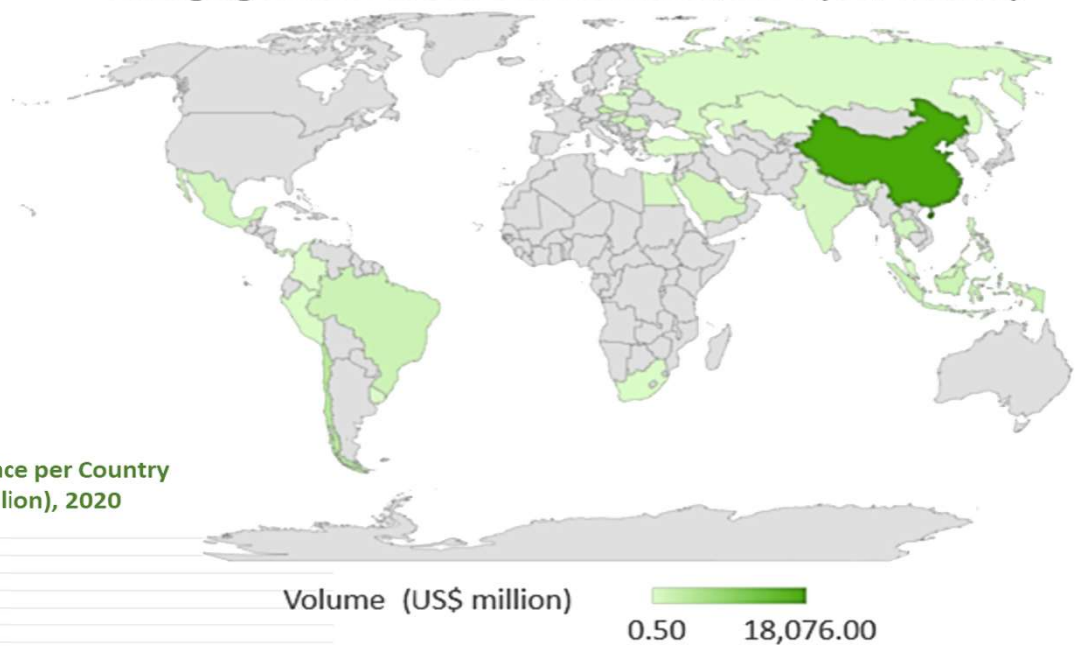
**CBIO Explained:** In an effort to fulfill the commitments made at COP 21, Brazil set annual decarbonization targets for its fuel sector with the aim of increasing the bioenergy share in the Brazilian energy matrix to approximately 18% by 2030.

The Decarbonization Credit (CBIO) is an instrument adopted by RenovaBio as a tool to reach this target. CBIOs will be issued by biofuels producers and importers duly certified by the National Petroleum Agency (ANP), based on their purchase and sale invoices. In contrast, fossil fuel distributors will have annual decarbonization targets calculated by the ANP based on the ratio of fossil fuels they sell. Purchasing CBIOs is the only way to reach these targets.

Each CBIO will be equivalent to 1 ton of CO<sub>2</sub> avoided, it will not expire and can only be withdrawn from circulation when its retirement is requested. Each year, fuel distributors should request the retirement of CBIOs held by them in an amount equivalent to the decarbonization targets set for them.

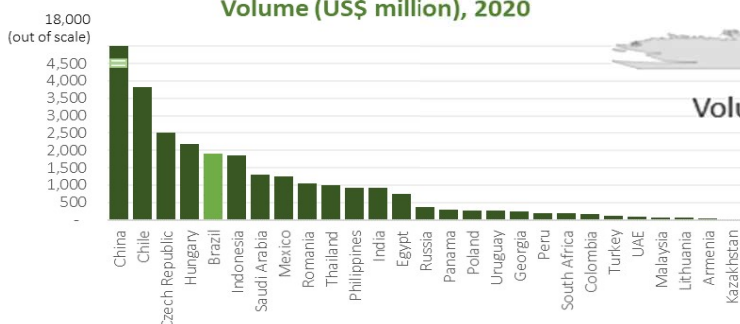
## GREEN BONDS

Emerging Market Green Bond Issuance, 2020 (US\$ Million)



Among the Emerging Markets, Brazil ranked in the top 5 issuers of Green Bonds in 2020.

Green Bonds - Issuance per Country  
Volume (US\$ million), 2020



Source: IFC/WB & Amundi (2021). Emerging Market Green Bonds Report 2020.

## ALIGNMENT WITH OECD PRINCIPLES

### Total Alignment

- Water
- Biodiversity conservation and sustainable usage
- Waste

### Partial Alignment

- The polluter-pays principle
- Environmental assesment
- Integrated pollution prevention and control
- Environmental performance of government
- Use of Economics instruments
- Energy and air pollution
- Transport

### Missing Alignment

- Environmental information and transparency

## SOME PRIVATE SECTOR INITIATIVES

**CARBON MARKET:** Brazil is already prepared to adopt carbon pricing with climate integrity, protection of competitiveness and transparent and participatory governance. CEBDS, a non-profit civil association that promotes sustainable development in companies operating in Brazil, led the outline of the domestic compulsory carbon market proposal (the current PL 528/2021) developed through several events and consultations with its members.

**BRAZILIAN BUSINESS AND BIODIVERSITY INITIATIVE:** 17 projects on biodiversity underway in 2021 by 14 private companies.

**COMMITMENT TO WATER SAFETY (Hub Aquasfera):** Its purpose is to serve as an instrument so that the actions taken are treated with the necessary transparency and visibility, and to provide a channel for disseminating information, exchanging experiences and learning. The Commitment to Water Security is conceived from the pillars of availability, use and destination of water.

**FOOD SYSTEMS:** With the purpose of promoting greater cooperation in the sector for practical actions, CEBDS constituted the Working Group (WG) on Transformation of Food Systems, which has been active since 2020. The initiative brings together more than 20 companies and seeks to build and consolidate the position of the business sector to lead the transformation of food systems in Brazil. The WG already has publications such as the CEO's Guide, the Independent Dialogue with Embrapa for the 2021 UN Summit and the Position of the business sector on the Sustainability of Food Systems in Brazil.

**BUSINESS MOVEMENT FOR THE AMAZON RAINFOREST:** The Movement aims to express concern about the perception of the country's image abroad in relation to socio-environmental issues in the Amazon and other Brazilian biomes and to reinforce support and participation of the Brazilian business sector in taking positive actions. The objective is that representatives of the Movement maintain direct dialogue with various institutions and representatives of the Executive, Legislative and Judiciary powers to build an effective agenda in defense of sustainable development in the Amazon region and elsewhere in Brazil.



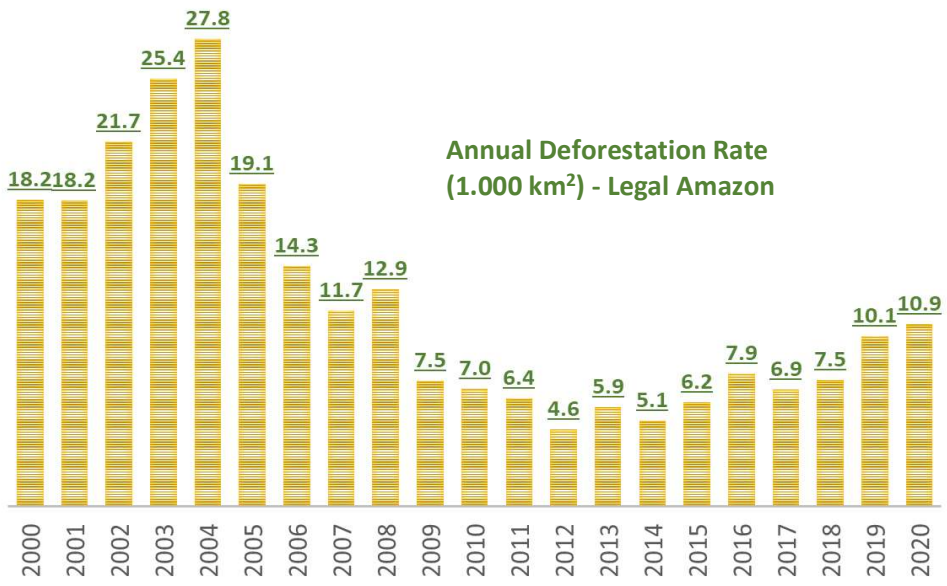
## PRELIMINARY TARGETS FOR 2021 TO REDUCE GREENHOUSE GAS EMISSIONS

The goal for 2025 remained the same as the Nationally Determined Contribution originally presented in 2015, that is, to reduce the emission of greenhouse gases in Brazil by 37% compared to the year 2005.

Another goal is to reduce our greenhouse gas emissions by 43% by 2030 compared to that same base year.

The country aims at becoming carbon neutral until 2050.

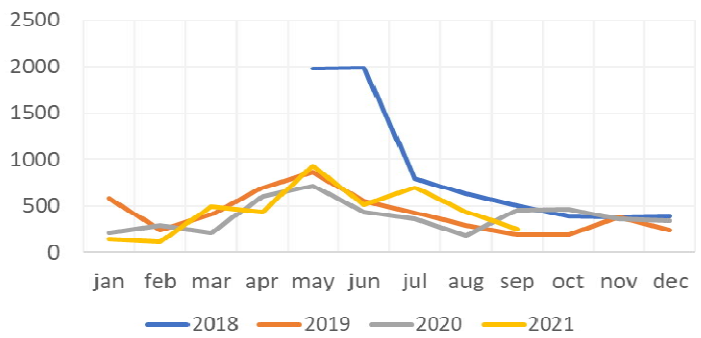
## CHALLENGES



Source: INPE (National Institute for Space Research)

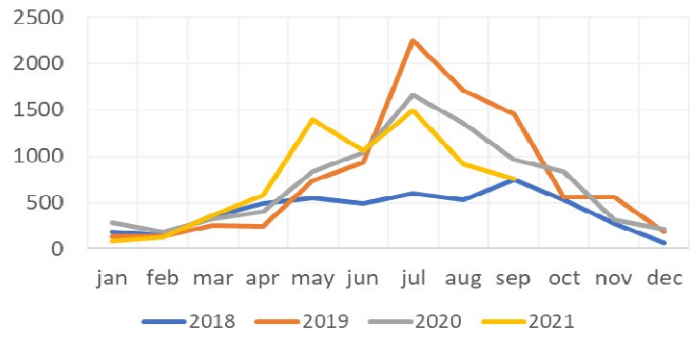
- The Brazilian Government, fulfilling the international commitment announced at the Leaders Summit on Climate in April this year, strengthened the surveillance and control actions by doubling the resources for the environmental inspection organizations, Ibama and ICMBio.
- The Ministry for the Economy authorized the opening of a public tender to employ 739 environmental agents, representing an 18% increase compared to the current number of agents.

Cerrado - Deforestation Notice (Km²)



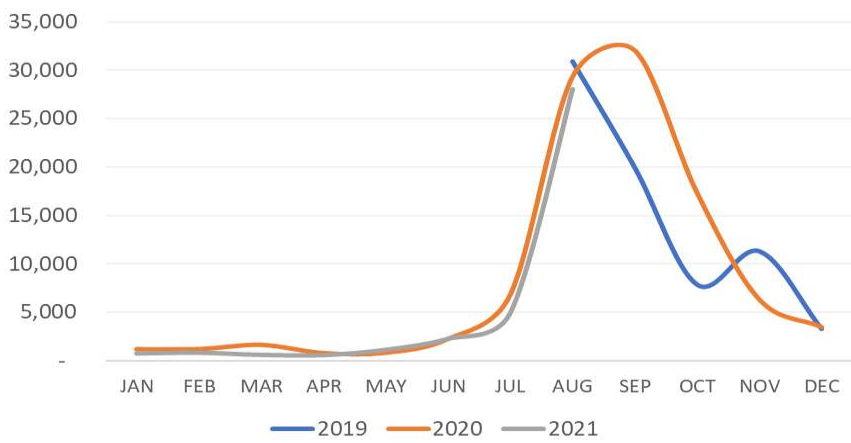
Source: INPE (National Institute for Space Research)

Amazonia Legal - Deforestation Notice (Km²)



Source: INPE (National Institute for Space Research)

Monthly Active Fires Detected by Satellites



Source: INPE (National Institute for Space Research)

- The Federal Government authorized the use of the 3,000 personnel from the Armed Forces and 700 members from the National Force in operations to combat environmental crimes in the Legal Amazon.
- Regarding wildfires, the Federal Government suspended the use of fire for agricultural practices throughout the country for 120 days (July to October) when the number of fire outbreaks increases.



## THE LAST PAGE

### The Amazon Bioeconomy Fund

- ❑ The Agriculture, Forestry and Other Land Use (AFOLU) sector is a major source of GHG emissions in Amazon countries and improvements in AFOLU processes are a foundational element of their low-carbon development strategies and biodiversity action plans. Deforestation and degradation are endangering the Amazon biome and the natural capital it supports, threatening economies and increasing vulnerabilities of these countries.
- ❑ In an effort to address these issues, representatives from Bolivia, Brazil, Ecuador, Colombia, Peru, Guyana and Suriname signed a cooperation agreement in 2019, the Leticia Pact, committing to promoting actions to ensure the protection of the Amazon. These include the promotion of sustainable use of forests and production systems, including value chains, as well as sustainable business development.
- ❑ For the vastly biodiverse Amazon countries, rich in native natural resources, the potential is significant. An analysis carried out in preparation for this proposal suggests that opportunities exist in targeted countries for debt and equity finance to sustainable bioeconomy businesses of over US\$10.3 billion. Yet, partly related to their relative novelty, the related businesses face important barriers that prevent their development.
- ❑ Special financing terms and conditions are critical to partly offset incremental costs undertaken by private actors and make investments viable. Resource mobilization is contingent to the use of somewhat innovative and sophisticated instruments, especially related to risk mitigation, for which some grant element is considered necessary. Also, the relatively incipient stage of development of these business models and the complexities of coordinating the various actors involved call for highly specialized technical cooperation support.
- ❑ To make this possible, the Green Climate Fund (GCF) Board approved, on October 06, 2021, **The Amazon Bioeconomy Fund**, project to promote innovative bio-businesses that help conserve natural resources, boost climate resilience and improve local livelihoods in the Amazon.
- ❑ The Amazon Bioeconomy Fund will support private investment in bio-businesses and forest management by providing financing and incentives to promote the valuing of natural capital and forest assets across markets. GCF resources will be instrumental in attracting private capital to viable projects that deliver socio-economic and environmental benefits, as well as building knowledge and capacity within local governments, and along the finance and production value chains. The public sector can play an important role in allocating resources in sectors most relevant to their development goals, where private participation is most needed.
- ❑ Bio-business projects may encompass multiple sectors (agriculture, forestry, aquaculture, agroforestry, non-timber forest production, etc.). The intended use of funds is expected to be consistent with productive investments by private businesses (production start-up and equipment, facilities, accreditation or certifications, and so on).