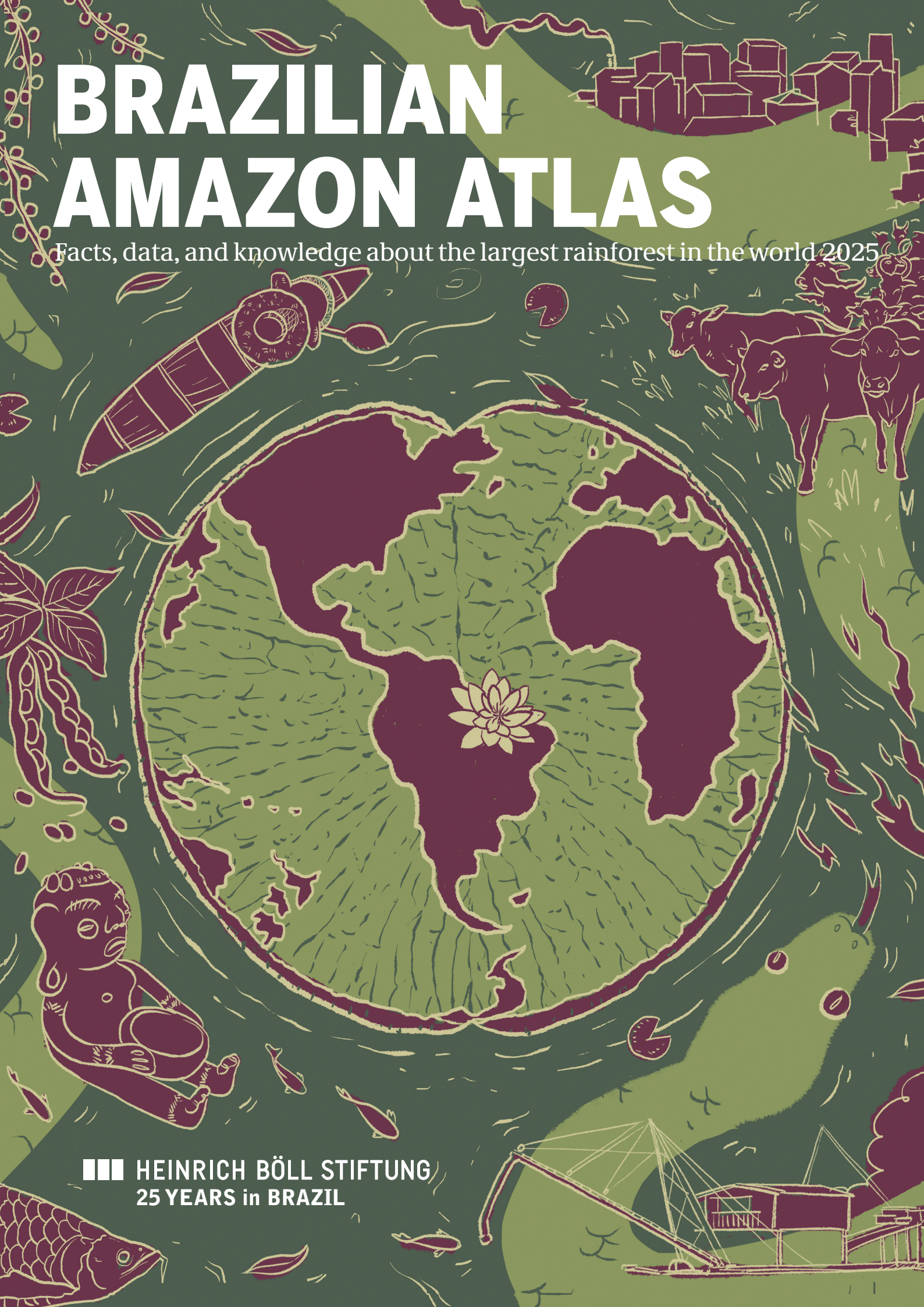


# BRAZILIAN AMAZON ATLAS

Facts, data, and knowledge about the largest rainforest in the world 2025



■■■ HEINRICH BÖLL STIFTUNG  
25 YEARS in BRAZIL

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# BRAZILIAN AMAZON ATLAS

Facts, data, and knowledge about the largest rainforest in the world

*In memory of:*

*Anacleto Pires da Silva*

Leader of the Santa Rosa dos Pretos quilombo in Itapecuru-Mirim, Maranhão, and defender of human, social, and environmental rights. She passed away in September 2024, shortly after writing the article "Pulsing with the Heart of the Earth" for this Atlas.

2025

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The Amazon is a common home for the people who inhabit it. It is a body-territory, because its people are also land, water, and forest. To stop the destruction of the biome, it is necessary to understand this sense of belonging, expanding the limited way of thinking about human relations shaped by capitalism and colonialism.

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# GLOSSARY

## AGRARIAN/AGRICULTURAL FRONTIER

A region of expansion of agricultural and livestock production by encroaching on nature through the degradation of territories with preserved biodiversity.

## AGRIBUSINESS

A set of operations and economic activities related to the production, processing, and marketing of agricultural and livestock products.

## AGROECOLOGY

A social movement, practice, science, and way of life that mobilizes ecological principles and methods to support the development of more sustainable agrifood systems, contributing to food sovereignty, land redistribution, gender equality, and socio-environmental justice.

## AMAZON BASIN

The largest river basin in the world, located in the territories of Brazil, Bolivia, Colombia, Guyana, French Guiana, Peru, Suriname, and Venezuela.

## AMAZONIAN DARK EARTH

A type of fertile, dark soil found in the Amazon region, created from the millennial human action of forest management.

## ANTHROPOGENIC FOREST

A forest modified by human action, whereby the relationship with native peoples is one of exchange and reciprocity. The Amazon is such an example, as it has been cultivated and managed for millennia.

## BIODIVERSITY

The variety of living beings, including diversity of species and ecological interactions between them.

## BIOFINGERPRINTS

Signatures that prove the modification of landscapes by human action.

## BIOPIRACY

The illegal financial exploitation of natural and biological resources, including the knowledge of traditional peoples and communities.

## BODY-TERRITORY

A political concept that defines the extension between a person's body and the territory in which they live, in biological, mental, social, and cosmological realms.

## COMMON GOODS

This name identifies social systems that maintain sets of environmental goods governed by a community, implemented through collective actions, as opposed to individual property.

## COP 30

The Conference of the Parties is a series of annual meetings of signatory countries of the United Nations Framework Convention on Climate Change (UNFCCC). The 30th edition (COP 30) will be held in Belém, Pará, between November 10th and 21st, 2025.

## CLIMATE FINANCE

A set of financial resources intended to support actions to adapt to and mitigate climate change.

## CLIMATE CHANGE/CRISIS/COLLAPSE/EMERGENCY

Changes in planetary temperature and climate patterns caused by human activity in the context of post-industrial capitalist production, including the excessive exploitation of natural resources, increased greenhouse gas emissions, and deforestation. Climate change, climate crisis, climate collapse, or climate emergency are expressions used to identify the increasingly critical and unavoidable nature of these changes.

## CONSERVATION AREAS

Public or private areas protected for the conservation of biodiversity. There are different types of conservation areas, which are divided into Full Protection Areas or Sustainable Use Areas by the traditional peoples and communities that live there.

## DEFORESTATION ARC

A region that has historically led the deforestation rates of the Amazon biome. It covers 500,000 km and extends from the southeast of the State of Pará to the west of the Legal Amazon, encompassing the states of Mato Grosso, Rondônia, and Acre, where deforestation is a reality.

## DEMOGRAPHIC VOID

The terms “terra nullius” and “no-man’s land” refer to an ideology that makes the original population of a given region invisible. It guided colonization processes in different parts of the globe. It was widely used in the colonization of the Amazon during the Brazilian military dictatorship.

## DEVELOPMENTISM

This economic theory and management practice views economic growth – through industrial production and infrastructure – as the main political goal for society. The developmentalist model has guided political management for the Legal Amazon region in recent decades.

## ECONOMY OF CRIME

This theory considers crime as a sector of the economy. In the Amazonian context, it is used to describe the regional economic dependence on illegal activities that constitute environmental crime.

## FINANCIALIZATION OF NATURE

A new way of generating value, turning nature into prosperity and transforming it into a financial asset through so-called nature-based solutions. Carbon markets are the best-known examples of these solutions.

## FLYING RIVERS

Water vapor masses formed in the Amazon through the evapotranspiration of the forest that travel across other regions of Brazil and Latin America and are responsible for a significant portion of the rainfall in these regions.

## FOOD CULTURE

The set of practices, knowledge, and traditions related to the diet of a certain people.

## FOOD INSECURITY

The lack of regular and permanent access to quality food in sufficient quantity for a healthy life.

## FOREST DEGRADATION

The loss of the forest’s ability to perform its original functions, including contributing to the climate balance and water and carbon cycles, due to wildfires or deforestation.

## FUNAI

The National Foundation for Indigenous Peoples (FUNAI) is an official Indigenous agency of the Brazilian federal government, which coordinates and is the main executor of the protection and promotion of the rights of Indigenous peoples in Brazil.

## GREENWASHING

This term defines marketing practices carried out by companies or organizations that present themselves as environmentally responsible by publicizing results of sustainability promotion actions that exaggerate, distort, or even show false changes.

## IBAMA

The Brazilian Institute of the Environment and Renewable Natural Resources is a Brazilian government agency that works to preserve and conserve the country’s natural heritage.

## INCRA

The National Institute for Colonization and Agrarian Reform (INCRA) is a Brazilian government agency that works to implement agrarian reform, certify quilombola lands, and regulate national land tenure.

## INDIGENOUS LANDS

Territories legally demarcated by the Brazilian federal government whose exclusive possession and usufruct are permanently guaranteed to Indigenous peoples.

## LAND GRABBING

The illegal practice of taking possession of public or third parties’ lands through false property titles. It is usually identified as the first phase of the cycle of environmental crimes.

## LEGAL AMAZON

A geopolitical boundary that encompasses nine Brazilian states that belong to the Amazon basin. It was established by the Brazilian federal government in 1953 for the planning of developmentalist measures.

## LEGAL RESERVE

An area in rural properties that must be designated for the conservation of vegetation cover and native biodiversity. In the Legal Amazon, an area of 80% of properties must be preserved as a Legal Reserve.



## **LIVING WELL**

The translation of neologisms from the Indigenous languages Quichua Sumaq Kawsay and Aymara Suma Gamaña, which presupposes the systematization of Indigenous Latin American cosmologies, summarized by the valorization of reciprocity between humans and nature, thus supporting non-predatory forms of social organization.

## **MAJOR DEVELOPMENT WORKS**

Infrastructure projects built in the wake of developmentalist strategies, such as roads and hydroelectric plants. The Amazon was and continues to be the stage for these constructions, which generate significant socio-environmental impacts.

## **MINING**

It was originally an economic activity of artisanal mineral extraction as opposed to extraction at industrial scale. Currently, this activity is almost entirely represented by illicit mineral extraction practices, mainly those related to gold.

## **NEOEXTRACTIVISM**

A developmentalist model based on the extraction of natural resources, combining activities such as agribusiness and mining.

## **ONTOLOGIES/COSMOLOGIES/ COSMOPERCEPTION/EPISTEMOLOGIES**

The first term defines models of representation of being and reality. The second comprises the representation of knowledge of the origin and structure of the universe and of all existing things. The third describes how different ethnic groups conceive the world. The fourth characterizes the study and organization of knowledge and its forms.

## **ORGANIZED CRIME**

Illegal activities carried out by economically or even politically structured groups. In the Amazon, drug trafficking factions have also come to dominate environmental crime.

## **ORIGINAL PEOPLES**

A term that refers to those who inhabited a territory before the arrival of colonizers. In Brazil and the Amazon region, it is used as a synonym for “Indigenous peoples.”

## **PAN-AMAZON**

A region that includes all the countries that encompass the Amazon biome in their territories: Bolivia, Brazil, Colombia, Ecuador, Guyana, French Guiana, Peru, Suriname, and Venezuela.

## **POINT OF NO RETURN OF THE AMAZON**

The threshold of degradation beyond which the biome enters an irreversible process, being unable to recover naturally.

## **QUILOMBOLA PEOPLES**

Remaining peoples of maroon communities (known as quilombos in Brazil) formed by enslaved Africans who resisted slavery.

## **REDD AND REDD+**

Reducing Emissions from Deforestation and Forest Degradation (REDD) are sets of economic incentive mechanisms for reducing greenhouse gas emissions. REDD+ includes financial compensation for increasing forest carbon stocks, the so-called carbon credit market.

## **TRADITIONAL PEOPLES AND COMMUNITIES**

Culturally distinct groups that recognize themselves as such, with their own forms of social organization, occupation, and use of their territories as a condition for their cultural, social, religious, ancestral, and economic reproduction.

## **TERRITORIALITY**

The relationship between social groups and space, involving cultural, symbolic, and identity-based meanings ascribed to the territory.

## **UNDESIGNATED LANDS/FORESTS**

Public areas (owned by the Brazilian federal or state governments) that have not yet been designated for sustainable use or conservation and are often targeted by land grabbers.

## 15 FAST FACTS

# ABOUT THE LARGEST RAINFOREST IN THE WORLD

The Amazon biome is the **LARGEST RAINFOREST** and the **LARGEST FRESHWATER SYSTEM** IN THE WORLD, and it contains **HALF OF ALL LIVING SPECIES ON THE PLANET**. The Legal Amazon is an administrative region created by the Brazilian government in 1953.

1

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**MOST OF THE AMAZONIAN POPULATION LIVES IN CITIES.** Urban populations were formed by different **MIGRATION BOOMS** linked to the cycles of exploitation and construction of **MAJOR DEVELOPMENT WORKS**.

3

These cycles corresponded to the different phases of **COLONIZATION OF THE AMAZON**. Among them, there were developmentalist projects of the Brazilian military dictatorship (1964–1985) that were based on the fiction that the region, with millennia of Indigenous occupation, would be a **DEMOGRAPHIC VOID**.

**INDIGENOUS PEOPLES WERE RESPONSIBLE FOR “PLANTING” THE AMAZON FOREST**, contributing to the management of its biodiversity and to food security in the region.

4

5

The majority of the Brazilian Indigenous population lives in the Amazon, where there is also the greatest diversity of Indigenous languages, many of which are threatened with extinction. **INDIGENOUS LANDS REPRESENT FOREST PRESERVATION ARCS.**

6

The Amazon also has **A GREAT DIVERSITY OF TRADITIONAL PEOPLES AND COMMUNITIES**. Among them are the maroon peoples (also known as quilombolas) – descendants of enslaved Africans – and the riverside population.

7

Predatory neo-extractivism sectors cause major socio-environmental impacts in the area. **AGRIBUSINESS IS THE MAIN SECTOR RESPONSIBLE FOR WILDFIRES AND DEFORESTATION** in the region. More than 90% of the deforestation of the forest is due to the creation of pastures.





The resistance of this knowledge preserves the forest and its **GLOBAL CLIMATE EFFECTS**, such as the distribution of rainfall by means of **FLYING RIVERS**. The advance of deforestation indicates a **POINT OF NO RETURN** that will jeopardize this climate maintenance.

Mitigating climate change depends on the **FINANCING OF LOCAL INITIATIVES AND ORGANIZATIONS** of traditional peoples and communities, **UNLIKE THE FINANCIALIZATION OF NATURE (CARBON MARKET AND INDUSTRIALIZED BIOECONOMY)**, which have not demonstrated effectiveness in protecting the Amazon up to now.

The historical fight of social movements is marked by violence. **THE LEGAL AMAZON IS THE MOST DANGEROUS REGION IN THE WORLD FOR HUMAN AND ENVIRONMENTAL RIGHTS DEFENDERS**, with high rates of conflicts and murders.

Defending these movements involves **VALUING LOCAL KNOWLEDGE SYSTEMS** based on an **ANCESTRAL CONNECTION** with ancestors, territories and their beings.

These **CRIMINAL ACTIVITIES** can only exist through **MULTIPLE RELATIONS WITH THE LEGAL ECONOMY AND THE LOCAL GOVERNMENT**.

The political polarization involving the **FAR-RIGHT WING, NEO-PENTECOSTAL MOVEMENT, AND AGRIBUSINESS** versus **ENVIRONMENTALISM AND CULTURAL AND ONTOLOGICAL DIVERSITY**, is becoming increasingly evident in the Amazon.

In addition, **INDUSTRIAL MINING** and the construction of major development works, such as **ROADS AND HYDROELECTRIC POWER PLANTS**, also generate significant socio-environmental impacts.

At the same time, illegal activities such as mining have multiplied on Indigenous and protected lands, leading to violence and severe health issues. Meanwhile, **ORGANIZED CRIME HAS TURNED TO ENVIRONMENTAL CRIME A MEANS OF LAUNDERING PROFITS FROM DRUG TRAFFICKING**.

# INTRODUCTION

Since the Portuguese occupation, the Amazon region has served as a container for projections brought from outside – beginning with the very name “Amazon,” derived from Greek mythology, given to the largest river in the region by the Spanish captain Francisco de Orellana in the 16th century. Other nicknames for the region did not consider the inhabitants who lived and cultivated the forest for thousands of years either. These included “gateway to paradise” and “Eldorado,” nicknames given by colonizers, and “green hell,” the latter given by the Brazilian military dictatorship (1964–1985) that commanded its neocolonization centuries later. Throughout this time, the practices and ontologies of the local inhabitants continued to be suppressed, whether through catechization or genocide, while their territories were violently seized and privatized, based on destructive notions, or even supposedly sustainable ones, although still immersed in the ideal of development.

The Amazon has transformed itself, integrating the various changes with an admirable degree of resilience. However, new threats are emerging, still in the wake of developmentalist promises of progress. Mining and infrastructure projects, combined with the advancement of the agribusiness production model and its extensive monocultures, are increasingly depleting natural resources, imposing a turning point on the Amazon. This is happening at the exact moment when solutions are finally being sought for the imminent climate collapse – both means of mitigation, through carbon absorption, and ways of adapting to the global civilizational crisis.

Consequently, many are turning their attention to the region and to those who, despite being under constant threat, through essential multi-species interaction, have managed to preserve it and keep it standing: Indigenous and traditional peoples.

As a German political foundation, we have closely followed all these changes and tensions since we first started operating in Brazil in 2000. We seek to support and promote dialogue on the various issues surrounding resistance in the Amazon region, such as human rights, the rights of Indigenous peoples, biodiversity, agroecology, climate justice, and flying rivers. We always value the role of those who have been confronting predatory economic sectors for generations, often succumbing at the hands of their representatives. For us, the defense of the territorial rights of these peoples and their ways of living must be at the center of the debates on any solution to the challenges faced by the Amazon.

With this Brazilian Amazon Atlas, we seek to deconstruct stereotypes about the region. This content aims to contribute to an urgent change in perspective, so that people in Brazil and all over the world can get to know the Amazon again – this time from the perspective of the region’s diverse inhabitants. To this end, we gathered together an editorial board made up of scholars, activists, and communicators from the Amazon – or those who have been working in the region for decades – to identify local authors and topics to be addressed. As a result, the 32 articles in this Atlas were produced by a majority of authors from different parts of the Amazon. Such choices also took into account racial, ethnic and gender diversity.

Furthermore, this Atlas represents a change in perspective for the Foundation: It is the first atlas of the Heinrich Böll Foundation entirely conceived and produced in the Global South. It is a publication enriched with local knowledge and science that challenges Western scientism.

We hope that this **Brazilian Amazon Atlas** can serve as a gateway to knowledge of the region and as an instrument for learning about the complex relationships that make up this immense territory. From this, we hope that it can



foster debates and dialogues, as well as inspire solutions to the different challenges, in order to encourage a sustainable and self-determined future for the Amazon and its peoples.

In a year marked by the first COP to be held in the Amazon region, COP 30, this material will also serve to emphasize that the protagonism of the peoples responsible for the millennial protection of the region is key to multilateral climate negotiations – and, ultimately, to planetary survival.

Finally, to help readers navigate the content, we have included a glossary and a summary of the articles in the section “15 Fast Facts,” present on the previous pages. We would like to thank Aiala Colares, Angela Mendes, Elaíze Freitas, João Paulo Tukano, José Héder Benatti, Karina Penha, Kátia Brasil, and Marcela Vecchione for their excellent contributions as members of

“This content aims to contribute to an urgent change in perspective, so that people in Brazil and all over the world can get to know the Amazon again – this time from the perspective of the region’s diverse inhabitants.”

the editorial board to the production process of this Atlas, including the complex and sensitive epistemological debates that were essential to its collective construction. Part of this debate makes up the editorial written collectively and presented below.

We invite our readers to join us in this change of perspective and to engage mentally and emotionally with the Amazon presented here. We would also like to extend an invitation: Learn about the work of the organizations, networks, collectives, and movements that partner with the Foundation and are mentioned here and on our website, for they are tirelessly working to defend the peoples and territories of the Amazon.

**Imme Scholz**, President of the Heinrich Böll Foundation

**Regine Schönenberg**, Director of the Heinrich Böll Foundation Office in Brazil

**Marcelo Montenegro**, Coordinator of Socio-environmental Justice at the Heinrich Böll Foundation Office in Brazil

**Julia Dolce**, Editor of Socio-environmental Justice at the Heinrich Böll Foundation Office in Brazil

# CHANGING THE COURSE OF THE WATERS

**T**he Amazon stands as one of the last frontiers of abundant natural resources and biodiversity. Consequently, it is a place of severe imposition of interests between neoliberal economic sectors that threaten the forest and its beings – including a significant human population. In Brazil, there are almost 28 million people in this region, including more than 180 Indigenous peoples, quilombos, riverside communities, and a wide range of other traditional peoples and communities that possess vast knowledge and sustainable practices.

Considering these interests involves complexifying the vision that the rest of Brazil, as well as the world, has constructed in relation to the Amazon region and its dynamics. This Atlas serves as a tool for this process. In its 32 articles, written by more than 50 authors (mostly Amazonian researchers and thinkers), it confronts the idealized visions inherited from colonization that persist to this day, reducing this intricate web of life to a void, an uninhabited and primitive territory destined to be violently integrated into Western society.

In recent decades, the indisputable scientific paradigm of the centrality of the Amazon biome for planetary climate balance has also elevated the region to a field of dispute in multilateral discussions. At the same time, the Amazon has made international headlines due to successive and alarming records of forest degradation, with devastating impacts on biodiversity and local ways of living.

As the data in this Atlas show, between 2019 and 2022, the Amazon had record deforestation, mainly to clear pasture for cattle raising. Illegal mining in protected areas (mainly in Indigenous lands in the Amazon region) increased by 90%. In addition, citizens encouraged by the rise of the far-right armed themselves – between 2018 and 2022 the number of people registered to carry

weapons in western Amazonia increased by 1,020%. At the same time, the Amazon accounted for more than one-fifth of the murders of environmental defenders worldwide: 39 activists were murdered in the region in 2022.

In 2023, the world witnessed the distressing scenes of the humanitarian crisis experienced by the Yanomámi Indigenous peoples, whose territory was taken over by illegal mining activities in previous years. That same year, the Amazon was pummeled by an intense climate crisis marked by extreme droughts and rivers reaching their lowest levels ever recorded, which, in addition to the death of animals, impacted its extensive river infrastructure, leading to a shortage of drinking water and food, in addition to difficulty in accessing public services.

Before the region could fully recover from damages, another drought struck the region in 2024. In the same year, the Amazon biome experienced the highest number of fires in the previous 17 years, and the impact of the smoke on air quality harmed the health of thousands of people, as it was transported through the atmosphere to other states in the central-west, southeast, and south regions of Brazil. Other biomes that make up the Legal Amazon, such as the Pantanal and the Cerrado, also recorded an unprecedented number of fires.

Thus, recent years seem to have painted a bleak future for the Amazon and its population, whether due to the impacts of climate collapse in the region or the political disputes that set not only the pace of intensification of environmental crimes (increasingly organized by drug trafficking factions in the territories), but also the economic interests that guide large projects for the region.

On the other hand, the Amazon is a territory of an effervescent mobilization of social movements, collectives, and socio-environmental organizations that have become

frontline in discussions involving both regional territorial management and the global climate agenda. This mobilization involves valuing the thinking models of peoples and communities, who build relationships with the territory and its beings that are quite different from those that guide the sectors responsible for the imminent climate collapse.

In this scenario, we begin 2025 standing on the eve of an unprecedented event: the first United Nations Conference of the Parties to be held in Brazil. More than that, COP 30 will take place in the Amazon, between November 10th and 21st, in the city of Belém, in the State of Pará. Just like the Amazon, COPs have become arenas of conflict between the interests of neoliberal sectors, developmentalist agendas, and the struggle of socio-environmental organizations.

Therefore, this edition of the event also plays an important role in the process of complexifying the international image of the different Amazon regions. In this sense, the Brazilian Amazon Atlas, published in Portuguese and English, proposes a thorough examination of the region for foreigners – whether geographical or otherwise – serving as a contribution to the defense of the peoples who are fighting for socio-environmental justice.

If the imminence of a climate collapse comes in the wake of the lack of empirical knowledge about ecosystems, sustained by the false dichotomy between humans and nature, then modern science itself, born in this paradigm, is not capable of responding to it. Thus, its interlocutors, who operate under the same dichotomy, are equally inadequate. For this reason, the texts that make up this Atlas offer not only a local but also an ontological contribution, based on the authorship of several authors from Indigenous, quilombola, and riverside communities who challenge the construction of another relationship with nature.

“Unlike other Atlases published by the Heinrich Böll Foundation, this publication aims to spark an epistemological discussion.”

The process of creating this Atlas is the result of months of collective work between the authors, the Heinrich Böll Foundation team, the design team, and this editorial board, made up of scientists, researchers, communicators, and activists who also grew up or have been working for decades for socio-environmental justice in different parts of the Amazon.

Unlike other Atlases published by the Heinrich Böll Foundation, this publication aims to spark an epistemological discussion, combining both an interdisciplinary science and knowledge that, historically, has been made inferior, persecuted, or even destroyed by the construction of a Western model of colonizing and Eurocentric science.

This publication aims to disrupt this order, presenting both structural facts about the Amazon biome, its colonization and management, as well as conjunctural analyses that help in understanding the dense sociopolitical and economic issues that govern the region today, in addition to ancestral knowledge that presents possible paths for the climate impasse, in contrast to the alternatives that make up the very system that built it.

The Amazon is standing at a crossroads: We either embrace its end or we strengthen those who present these alternatives, changing the course of history, just like Boiúna (also known as the Great Snake, an Amazonian myth of Indigenous origin and several versions, depicted on the cover of this Atlas), which is said to be capable of changing the course of the waters, shaping the world with its tail in a creative force comparable to its capacity for destruction.

**Editorial Board of the Brazilian Amazon Atlas**

# ON THE PERIPHERY – BUT GLOBALLY LINKED FOR A LONG TIME

**The Amazon rainforest has historically been a place of speculation for international economic interests. Today, to consider a global cooperation for its preservation, it is necessary to ensure local protagonism in the debate, complexifying the simplistic and colonial image of the region.**

**W**hat does the world have to do with Amazonia? For some, it may seem infinitely far away – an “empty” space on the world map. Of course, it is the largest contiguous rainforest on Earth, traversed by the river basin with the greatest volume of freshwater on the planet. A green lung or a hostile wilderness? An exotic paradise far from the hustle and bustle of modern life or a land full of raw materials? For centuries, the Amazon region has inspired fantasies worldwide. In the minds of the powerful, it has always been a playground for strategic speculation. The interests of the local people have only played a minor role in this, and their diverse everyday realities remain mostly hidden. However, although it may appear to be an extreme periphery, Amazonia has always been connected to the world.

Products such as manioc, which was part of the Columbian Exchange, come from Amazonia. Rubber from Amazonia was one of the most important raw materials of industrialization, and to this day, as the example of the palm fruit Açaí shows, products from Amazonia become global “fashions”. Yet, this interconnection with the world was (and is) unequal and one-sided in most cases. Rubber brought wealth to only a few in Amazonia, while most people had to endure the hardest working and living conditions, debt peonage, and exploitation.

In general, the relationship between the Amazon periphery and the world can be written as a history of infrastructure and violence. This is exemplified by the road construction in the 1970s, which was supposed to open up the Amazon – a “land without people” for “people without land,” according to the false colonial “alternative” of the corporate-military dictatorship, supported by the United States, for the actually necessary agrarian reform. However, it was not only small-scale farmers who migrated from the south and southeast of Brazil, but also numerous investors and, above all, speculators, including a great deal of foreign capital that was used in Amazonia as if it were a new “playground” (land speculation, meat production, resource extraction).

Over the years, the pressure on the Amazon region increased with the large-scale projects for resource extraction (e.g., the Carajás iron ore mine), energy produc-

tion (the dams and hydroelectric power plants in the Amazon region, such as Belo Monte, where foreign companies make good money, are among the largest in the world) and, in particular, from its southern margins, the rapid expansion of world market-oriented soybean cultivation (frequently associated with fires, deforestation, and land grabbing). Even today, the infrastructure issue (roads, railways, waterways) is central in the discourse on Amazonian “development”. However, the focus is always on the goods that the world market demands, not on the people who live there. This has evidently led to serious human rights violations, including forced displacement, environmental damages, and the systematic absence of participation rights or prior consultation in most projects.

Amazonia is increasingly moving away from a region that has lived on and with the river for generations and becoming more like a region that lives on and with the road. This is associated with rainforest destruction, biodiversity loss, and climate change. And this also connects Amazonia with the world: There is hardly another region where the multi-scalar interdependence between globalization and global environmental change are so evident.

From a domestic standpoint, the Amazon Forest also constitutes a significant bargaining asset in international economic and climate negotiations, given its role as the world’s largest carbon sink, except for the oceans. This context reveals a fundamental tension between the two opposing development paradigms that mobilize not only governments, local elites, and transnational corporations, but also indigenous people and local communities, grassroots movements as well as (national and international) NGOs: on one hand, the Amazon as one of the “last frontiers” of extractive and speculative capitalism; on the other, as a site for self-determined, sustainable development, increasingly framed as part of the common heritage of humanity. In addition – and adding yet another layer of complexity – there are also mixed proposals related to market-based climate solutions, such as the expansion of the carbon market as a new asset.

Ultimately, it is the conflict between regional “development” and bioeconomy on the one hand, driven by growth and modernization, and sustainability in the sense of a path based on endogenous potential and self-determination on the other, that makes Amazonia a “battlefield of interests.”

In view of these complex, ever-changing constellations, which are subject to the most diverse interests, it is difficult to speak of “one” Amazonia today. There are many Amazonias: In the minds of most people, a rural Amazonia dominates. However, the vast majority of Amazonia’s inhabitants now live in cities. In these urban centers, stark income inequality coexists with infrastructure deficits – along with a vibrant and unique culture.



## AMAZONIA AND MULTI-SCALE CONNECTIVITIES

Local/regional environments under the pressure of external influences.

**1876** Henry Wickham smuggles rubber seeds from the Amazon to Kew Gardens, London.



**1907** Construction of the Estrada de Ferro Madeira-Mamoré begins and the 1st rubber boom is coming to an end.

**1920** Fordlândia, Henry Ford's rubber plantation on the Rio Tapajós, is installed.

**1942** Washington Accords: "Rubber soldiers" start a short 2nd "rubber boom" in the Amazon.

**1970** With PIN (Programa de Integração Nacional), highway construction, agricultural colonization, the promotion of cattle ranching, and the military dictatorship start the definite incorporation of the Amazonian periphery.



**1978** The Amazon Cooperation Treaty (OTCA) aims to strengthen cooperation among the eight Amazon basin countries.

**1978** American billionaire Daniel Keith Ludwig transfers a cellulose factory and a power plant to his – ultimately unsuccessful – mega-project on the Rio Jari.

**1982** Grande Carajás, the gigantic mining and infrastructure program in eastern Amazonia, subjugates eastern Amazonia to the globalized economy.

**1984** Polonoroeste: The World Bank is involved in road construction and rural regional development in western Amazonia.



**1992** The launch of the PPG7 (Pilot Program to conserve the Brazilian rainforest) initiates a new phase of international cooperation in Amazonia.

**2004** The implementation of PPCDAm (Preservation and Deforestation Control Action Plan) marks the beginning of a phase of controlling, combating, and reducing rainforest destruction in Amazonia.



**2008** The Amazon Fund replaces PPG7 and implements new financing models for international climate projects.

**2010** PAC 2 (Growth Acceleration Program) aims to expand infrastructure in Amazonia (construction and asphaltting of highways, hydroelectric power plants).



**2016** Beginning of the dismantling of sustainability policies for Amazonia and the strengthening of neoliberal development (e.g., expansion of private harbor terminals for soy exports).

**2023** Reviving Amazon sustainability policies and returning to global climate governance.

**2025** COP 30.



FLAVIA DO AMARAL VIEIRA AND MARTIN COY

The Amazonia of the forest peoples is clearly distinct from the Amazonia of the migrants who have come in recent decades, bringing with them their aspirations, lifestyles, and values. Having resisted colonial genocide, approximately 180 Indigenous peoples currently live in the region, along with other isolated groups. Alongside them are so-called traditional populations who depend on the extraction of natural resources for their livelihoods. The social context has slightly changed in recent years, with these populations becoming increasingly prominent in defending their lands and rights, bringing their own perspectives into the public debate. On the other side, there are the Amazonias of the soybean farmers, the cattle ranchers, the small farmers, the gold prospectors: frontiers, which often overlap, but also exclude and displace each other. Therefore, Amazonia is a highly dynamic patchwork of very different ideas about how to interact with nature and very different ideas about a good life. What appears to be so homogenous seen from afar, is, on closer inspection, an enormous reservoir of perceptions, knowledge, and values. At a time when diverse proposals for the region are multiplying, it is time to rethink the rules, instruments, and goals of international cooperation for/in the Amazon and to envision new models.

In the context of the climate emergency, proposals that value the ancestral technologies of forest peoples – who possess deep knowledge of resilience and adaptation – deserve greater attention. It is imperative to consider climate justice and, crucially, the necessity of moving beyond the colonial notion of "the other," when thinking about "Amazonians." This involves constructing inclusive possibilities by strengthening initiatives rooted in local culture and income generation, ensuring that local people are meaningfully included in decision-making processes. Nonetheless, bringing these into fruitful dialogue, on the ground and in multi-scalar exchange, instead of the conflicts that still dominate in many places, remains a major challenge. ●

*For decades, the Amazon has been the scene of international extractive projects or infrastructure projects supported by foreign corporations that leave severe socio-environmental impacts on the region.*

# THE GEOGRAPHY OF THE LARGEST RAINFOREST IN THE WORLD

**The creation of political and economic boundaries to carry out developmental projects is part of the history of territorial management in the Amazon. These boundaries tear apart the set of ecosystems that make up the biome, causing socio-environmental damages.**

**T**he Amazon Biome can be understood as a network of ecosystems formed by the largest rainforest in the world, a biological reserve that corresponds to 50% of all living species on the planet. The Amazon is not restricted to Brazilian territory only, for it also extends into neighboring countries. In Brazil, however, the biome occupies almost 50% of the national territory, covering 6.9 million km<sup>2</sup>, spanning across nine Brazilian states. Historically, the management of this enormous territory involved the creation of other political and economic boundaries. Among them is the Legal Amazon.

Whereas the Amazon biome and the Amazon rainforest extend into neighboring countries that border the Brazilian territory, the Legal Amazon is a Brazilian category established in the 1950s through a political project whose main objective was to combat the economic underdevelopment of this part of the country. In addition to the division of the region belonging to the Legal Amazon, the Amazon region was further subdivided into eastern Amazon and western Amazon. The former includes the states of Pará,

Maranhão, Amapá, Tocantins, and Mato Grosso. The latter comprises the states of Amazonas, Acre, Rondônia, and Roraima.

These territorial division categories served mainly for territorial management implemented from the 1960s to the 2000s by the Superintendence for the Development of the Amazon (SUDAM). The agency conducted a series of colonization projects in the Amazon region, mainly through the construction of large-scale national integration projects, including highways. During this migratory process, the settlers were characterized as trailblazers and pioneers, and the local population – mainly Indigenous peoples – and their territorial relationship and ways of life were rendered invisible. The Brazilian federal government viewed the Amazon as an immense area to be tamed and explored in the name of progress.

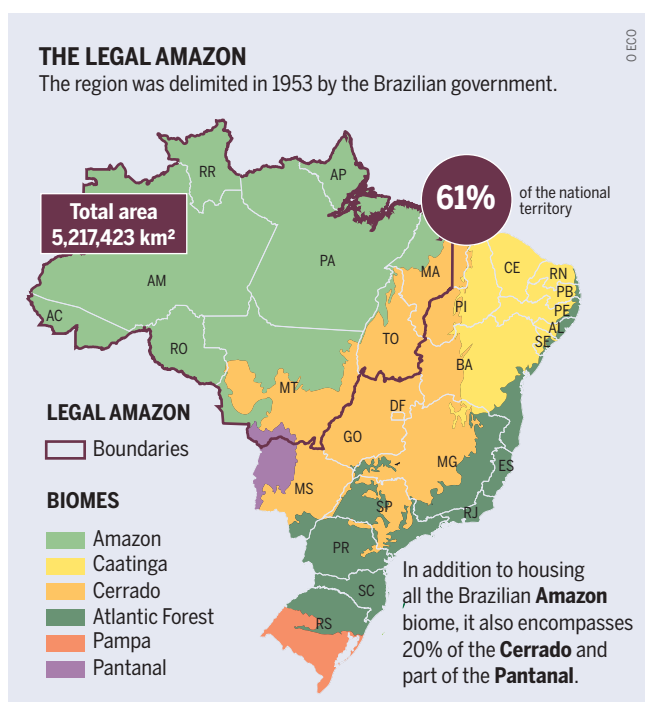
Meanwhile, the environmental issue was gaining international attention, and the Brazilian government, pressured by external demands, sought to reduce the environmental impacts caused by the disorderly occupation of the Amazon. In order to curb the high rates of deforestation, the federal government introduced Planaflo, a new program whose main objective was to organize the Amazon territory so that its management could be properly executed, addressing both economic and environmental concerns.

In the late 1980s, with the growing presence of environmentalists in the political arena, there was a gradual change in the territorial management of the Amazon region. This scenario led to the creation of environmental management agencies, the main one being the Brazilian Institute of the Environment and Renewable Natural Resources (IBAMA), in addition to deforestation regulations for the biome, such as the requirement of a Legal Reserve of 80% for properties located in forest areas.

These regulations are necessary because different regions of the Amazon rainforest are classified as zones of agricultural frontier expansion. Driven by the neo-extractivist economy, materialized in large monoculture properties, the agricultural frontier displaces and uproots peoples and communities from their territories, degrades the environment through illegal deforestation, and is marked by higher rates of socio-environmental conflicts.

Thus, the processes of expansion of the frontier of global capital driven by the logic of agribusiness in the Brazilian Amazon are permeated by exclusive, unequal, and com-

*The establishment of the Legal Amazon served as an instrument for territorial and strategic planning, aiming at the socio-economic development of the states and municipalities in the region.*



## UNDERSTANDING THE LEGAL RESERVE

A tool for protecting natural spaces, the Legal Reserve stipulates higher percentages of preservation in rural properties in the Legal Amazon, depending on the biome where the property is located.

Amazon rainforest areas



Cerrado areas



Grassland areas



The Brazilian Forest Code allows **three exceptions** to these rules:

- In the case of the municipality where the property is located having 50% of its native vegetation intact. In this case, the mandatory percentage of Legal Reserves in the properties drops to 50%;
- In the case of properties smaller than four fiscal modules, they can maintain the Legal Reserve with the remaining forest in 2008;
- Properties located in areas of consolidation of the Ecological-Economic Zoning may have their Legal Reserve reduced by up to 50%.



The **deficit** of Legal Reserves in Brazil is **16.3 million hectares**. The **Amazon** leads this deficit (**57%**), with **9.4 million hectares** deforested that should be Legal Reserves.

MARTINS, HERON. 2023. TERMÔMETRO DO CÓDIGO FLORESTAL.

bined relations that extend across agrarian, forested, and water spaces.

In this way, the logic based on the expansion of agrarian frontiers to intensify economic flows in global markets increases deforestation rates and land and territorial disputes, in addition to (re)producing the leveling of an anti-Amazon notion, gradually crystallizing a cartography of agrarian and territorial conflicts.

Such accelerated processes, linked to new territorial structures, generate spatial consequences of a social and economic nature, aiming to address a social demand linked to the poor distribution of land. Thus, from the global to the local level, rural and urban dynamics intertwine and shape their socio-economic, territorial, and demographic elements. Therefore, it is essential that the Amazon be understood based on its vital geographical condition of expansion of the capital frontier in the macro-regions influenced by agribusiness.

A more recent example of the expansion of the agribusiness frontier and the agrarian and territorial conflicts resulting from this process is in the triple frontier and macro-region known as AMACRO, which comprises three Brazilian states: southern Amazonas, eastern Acre, and northern Rondônia. It is noticeable that the agrarian landscape of this region has been undergoing spatial and territorial metamorphoses of a multi-scale and multi-dimensional nature, due to the expansion of soybean production, following deforestation and the subsequent displacement of livestock farming, which expands into new areas, following the logic of frontier expansion.

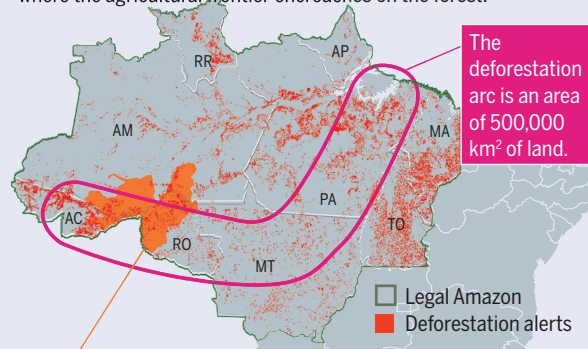
*AMACRO is a project launched in 2021 by the Superintendence for the Development of the Amazon, which envisages the creation of a "special zone for sustainable development." However, scientific research has classified the region as the newest deforestation hotspot in the Amazon.*

*The guarantee of the Legal Reserve is provided for in the Brazilian Forest Code of 2012 and is the target of dispute by several bills that attempt to reduce mainly the percentage related to the Amazon region.*

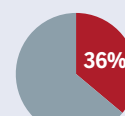
Therefore, the logic of displacement of activities linked to neo-extractivism occurs through the opening of new pioneering fronts, mainly driven by the failed agrarian reform and land regularization policies and by the increasing criminalization of the land struggle, as well as by the insertion of the Amazon into the international land market. ●

## THE DEFORESTATION ARC AND THE NEW AGRICULTURAL FRONTIER

The highest deforestation rates in the Amazon occur in regions where the agricultural frontier encroaches on the forest.



A region named **AMACRO** (acronym for the three states that comprise it) represents the newest agricultural frontier in Brazil. It covers 32 municipalities and overlaps with 93 Conservation Units and 49 Indigenous lands.



In 2022, the **AMACRO** region accounted for 36% of deforestation in the **Legal Amazon**.

IPAM; O ECO: IMAZON



# AMAZONIAN WATERS

**The hydrological cycle of the Amazon forms the largest freshwater system in the world, distributing rainfall across much of South America and being directly interconnected to the global climate. Thus, deforestation and threats to aquatic ecosystems impact both locally and globally.**

**T**he water cycle in the Amazon is regulated by the seasonal warming of the Southern Hemisphere, which drives the transport of moisture from the equatorial Atlantic Ocean to the continent, giving rise to the so-called “South American Monsoon.” The monsoon rains determine the periods of flooding, high water, ebb, and dry seasons in the flood cycle of the Amazon rivers. The forest recycles and distributes the monsoon rains across much of the South American continent, through the so-called flying rivers – air masses that transport large volumes of water vapor. This forms the largest freshwater system in the world. Thus, the rivers are dependent on the existence of the Amazon rainforest.

Freshwater ecosystems in the Amazon basin include large rivers, lakes, and creeks, as well as seasonal aquatic environments, such as floodplains and waterlogged forests, or those with saturated soils, such as marshes (meadows and interfluvial fields). The main aquifers in the Brazilian Amazon – Alter do Chão and Içá – are located in sedimentary basins along the main trunk of the Amazon River, serving as the primary source of water for municipalities and communities, in addition to contributing significantly to the maintenance of part of the ecosystems. The physical and chemical diversity of the Amazon waters is vast and increases with the decrease in the order of the rivers.

The aquatic ecosystems of the Amazon rivers are interconnected through the annual flood pulse, which creates a transition zone between the aquatic and terrestrial environments, enabling the flow of water and the transport of sediments. The Amazon rivers support the greatest diversity of freshwater fish on Earth, accounting for approximately 15% of all described and valid freshwater species. In addition to fish, there are other vertebrate species associated with aquatic and seasonally flooded ecosystems, such as the capybara, the neotropical otter, the giant otter, the river dolphin, the yellow-spotted river turtle, the matamata, the anaconda, alligators, and several types of birds. The annual migrations of fish (known as piracemas), birds, and insects, as well as the flowering and fruiting of riparian forest trees, are vital biotic resources for human agroecosystems and other natural ecosystems in the Amazon basin.

This intricate and dynamic system is under threat. For instance, the damming of rivers for hydroelectric power generation interrupts the natural cycle of floods and droughts, the migration corridors of aquatic organisms, and blocks the transport of sediments and nutrients. Part of the life inhabiting aquatic ecosystems is also critically threatened by the direct and indirect impacts of land use changes and large infrastructure projects, the invasion of exotic species, mining and, more recently, climate change. Ongoing climate changes on the planet are affecting the Amazonian aquatic ecosystems through increased temperatures and more frequent extreme droughts. Deforestation and the increasing number of roads are causing the fragmentation of watercourses, altering their structural

*The Amazon River flows into the Atlantic Ocean, creating a delta-estuary with a predominance of freshwater, where flooding is influenced by daily tides, with levels ranging between 4 and 6 meters.*

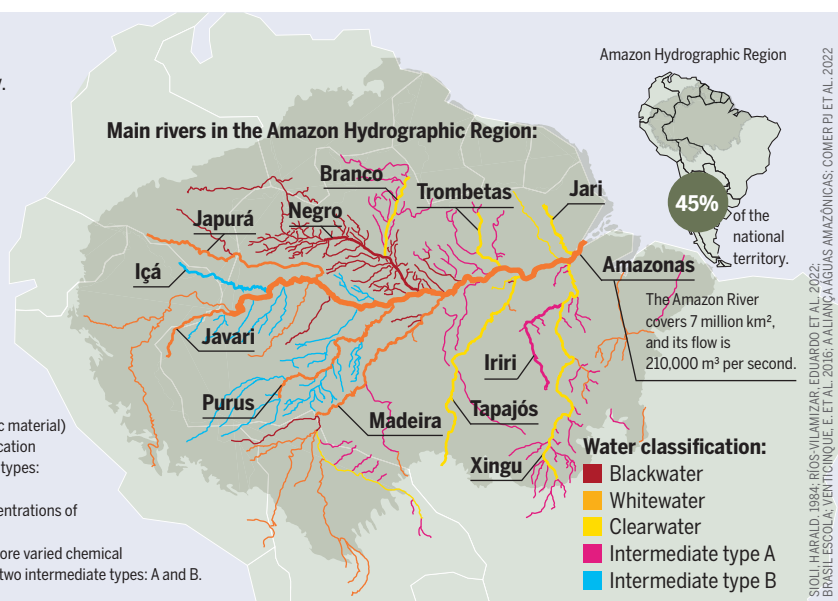
## A WATER BIOME

Rivers are an essential part of Amazonian biodiversity.



Monthly rainfall can be more than 200 mm in March and less than 50 mm in November. Average annual rainfall can vary from 1,800 to 3,000 mm, according to the region.

The colors of river waters are the result of physical and chemical transformations, indicating factors such as suspended solids (inorganic material) and dissolved organic material. The most widely used scientific classification of Amazonian waters is that of Harald Sioli (1950), who identified three types: whitewater (high concentration of suspended solids), blackwater (high concentration of dissolved organic material), and clearwater (low concentrations of suspended solids and dissolved organic material). More recent research that analyzes hydrochemical data has shown a more varied chemical composition in Amazonian waters, also dividing the region's rivers into two intermediate types: A and B.

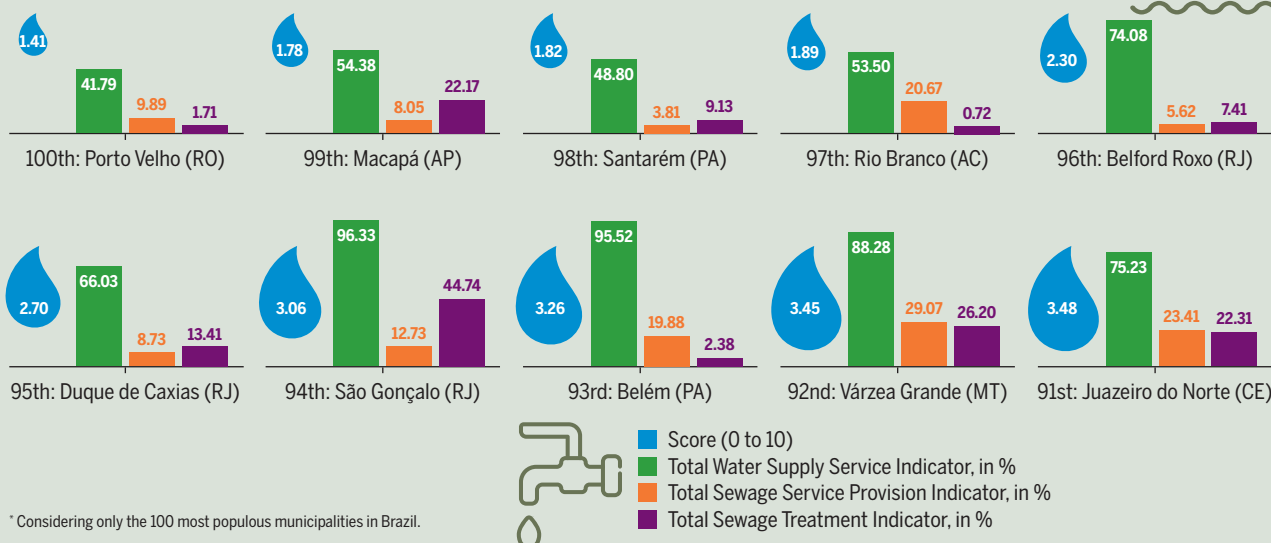


SIOLI, HARALD. 1954. RIOS-VILAMAZAR. EDUARDO ET AL. 2022. BRASIL ESCOLA. VENTURINQUE, E. ET AL. 2016. AALIANÇAAGUAS AMAZÔNICAS; COMER PJ ET AL. 2022



## AT THE BOTTOM OF THE BASIC SANITATION RANKING

This ranking shows that 6 of the 10 municipalities with the worst basic sanitation in the country are in the Legal Amazon.\*



characteristics and resulting in the extirpation of species that inhabit them. Pollution also has growing negative impacts, whether through the input of toxic residues from agricultural and industrial pesticides or the discharge of untreated sewage.

It is urgent to prioritize actions to maintain soil moisture, surface water, and groundwater quality; protect Conservation Units, Permanent Preservation Areas, and Legal Reserves; and continue with the demarcation of Indigenous territories. Several initiatives have been proposed to recognize rivers as subjects of legal rights, given their crucial role in the social and biological diversity of the Amazon. The recognition of the legal status of rivers in the Amazon began in Colombia; is present in the organic laws of Guajará-Mirim, in the State of Rondônia; and was mentioned in the Public Civil Action for the licensing of the Belo Monte hydroelectric power plant in Brazil. The plant generated significant conflicts over the sharing of water from the Xingu River, greatly impacting on the way of life of traditional and urban communities and aquatic ecosystems and increasing the risk of extinction of several fish species.

The Amazon rivers are part of the territories of many original peoples. These peoples often recognize the rivers as an extension of themselves, as a body-territory. The river is like a school of culture and life, teaching people how to swim, fish, and navigate. They also learn about the timing of the rains, the reproduction of the yellow-spotted river turtles, the falling of fruits into the water, and the migration of fish. The lives of people, animals, and plants in the Amazon depend on the natural flood cycles of the rivers, which are biocultural territories essential for food sovereignty, navigation, exchange networks, leisure, cultural reproduction, and distinct ways of life that are typically Amazonian. For example, the Jurúna/Yudjá people of the Volta

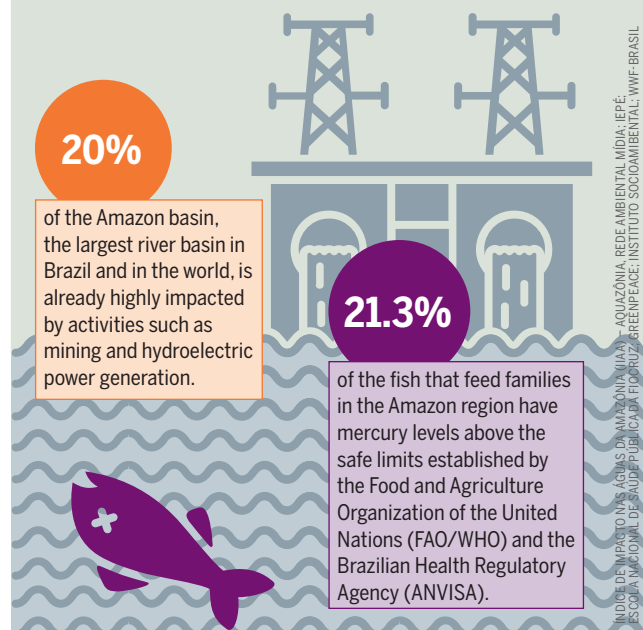
*Part of the Amazonian aquatic biota is critically threatened by the direct and indirect impacts of predatory activities.*

*The Brazilian average for the total water supply indicator is 95.68%, but in the northern region there are municipalities with indicators below and close to 50%.*

Grande of the Xingu River are known as “the owners of the river, with canoes instead of feet,” but their river-body-territory, culture, and riverside identity are being destroyed by the diversion of the waters of the Xingu River by the Belo Monte hydroelectric power plant. All these aspects must be considered in planning and efforts to conserve the waters, rivers, forests, and cultures of the peoples of the Amazon. ●

## WATER AND FISH

Mining and hydroelectric power plant activities have serious impacts on the Amazon rivers, aquatic life, and those who depend on these animals for food.



# FROM TERRITORY TO CHAOS

**The colonization of the Amazon created a land chaos based on the notion that the region was “no-man’s land.” Today, the interests of these same groups responsible for this chaos continue to threaten efforts to allocate land for protection and the recognition of traditional rights.**

**T**he Amazon has historically been recognized as a region where traditional, Indigenous, and original populations are constantly at risk in their territories and cannot rely on the government to resolve socio-environmental problems. In fact, more than any other biome in Brazil, the Amazon has undesignated public lands and high rates of land conflicts. These uncertainties related to land and territory have persisted in the Amazon since the colonial period, whose fundamental pillar was the seizure of territories and the violent exploitation of land, forests, and waters.

This colonial project was updated in the 20th century, during the civil-military dictatorship in Brazil, and continues to be sophisticated. But why, then, has this land chaos persisted even with the return of democratic governments, the availability of new georeferencing technologies, the

digitalization of property records, and the land use plans? To answer this question, it is necessary to better understand how these uncertainties regarding land are produced and reproduced.

Since the emergence of private property in Brazil in 1850, access to land has been governed by an expensive and bureaucratic process that restricted property registration to wealthy individuals – those with social, political, and monetary capital. This benefited white individuals, who held privileges both during and after the period of slavery. However, after the Proclamation of the Republic in Brazil in 1889, the methods of mapping and registering property experienced little progress.

The adoption of a land registration system in Brazil, later consolidated in the Latin model of land registration law, was a bureaucratic alternative aligned with procedures that reinforced the class-based and racialized structure of Brazilian society. The federal government delegated the authority to draft wills and deeds to notary offices controlled by families who managed not only the records, but also access to information.

*The offensives that enable the regularization of invaded public areas as private properties are systematically updated.*

## LAND GRABBING PAYS

Timeline of the main laws and legal instruments that granted amnesty to land grabbing and usurpation.

**1850**

### Land Law

Privatized the titles of lands given by the Brazilian emperor (known as *sesmarias*), establishing private property as the main land ownership model in Brazil.

**1931**

### Decree No. 19,924/1931

Regulated the vacant lands (remaining areas of *sesmarias* transferred to the federal government’s domain), preventing new appropriations, but legalizing previously appropriated lands through a mere declaration of possession.

**1964/1985**

### Military Dictatorship

The federal government turned land grabbing into a routine practice, mainly in the Amazon region, through colonization projects by the National Institute for Colonization and Agrarian Reform, within the scope of the National Integration Program (PIN) and the Land Redistribution Program (PROTERRA).

**2012**

### New Forest Code

(Law No. 12,651)  
Created conditions for the privatization of public lands and environmental regularization of deforested areas.

**2009**

### Legal Land Program

(Law No. 11,952, derived from Provisional Presidential Decree 458)  
Created to facilitate land regularization of federal public lands occupied in the Legal Amazon, guaranteeing titling of appropriations made until December 2004.

**2008**

### Provisional Presidential Decree 422

(converted into Law No. 11,763)  
Provisional Presidential Decree 422 (converted into Law No. 11,763)  
Enabled the legalization of up to 1,500 hectares of appropriated public lands in the Amazon.

**2006**

### Public Forest Management Law

(Law No. 11,284/2006 and Law No. 14,590/2023)  
Provides for the allocation of public lands owned by the federal government for forest concessions for private use, especially timber-related purposes. Its amendment in 2023 also includes the allocation of public forests for private carbon projects.

**2017**

### Provisional Presidential Decree 759

(converted into Law No. 13,465)  
Extended the amnesty for land grabbers, moving the cutoff date for regularization to July 2008, and increased the allowable land area for appropriation to 2,500 hectares, with the possibility of titling as private property.

**2019**

### Provisional Presidential Decree 910 (lapsed)

Enabled the broad transfer of public lands invaded by land grabbers until December 2019.

**2021**

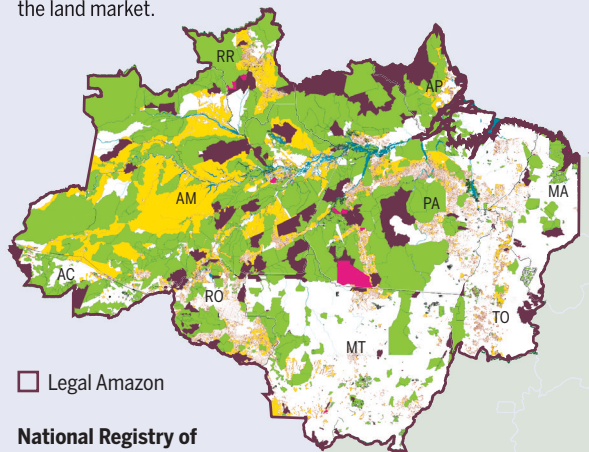
### Titula Brasil Program

Launched by the Brazilian Ministry of Agriculture and Livestock, the program aims to speed up the land regularization process through a partnership between the National Institute for Colonization and Agrarian Reform and municipal governments, delegating to municipalities the responsibilities of land regularization of areas owned by the federal government.

PIETRO, GUSTAVO. 2020

## THE ISSUE OF UNDESIGNATED LANDS

Undesignated lands are areas owned by the federal government that have not been demarcated for Indigenous populations or other traditional populations, assigned to settlement projects, or protected through Conservation Units. These areas are highly sought after by the land market.



### National Registry of Public Forests, 2022:

- Fully protected
- Undesignated
- Military use
- Sustainable use

The Amazon rainforest has **143 million** hectares of undesignated lands or lands whose designation still remains uncertain, **28.5%** of the Legal Amazon. Land grabbers have already taken over **23%** of these lands.

INFORMAZONIA: GRUPO DE PESQUISA REEXISTÊNCIA, NAEA (UPPA); IMAZON-IPAM

The demand for land organization through intervention by the federal government, that is, land governance, continued during the Republican period with the aim of maintaining large estates and relocating impoverished rural families to other regions, mainly to meet the needs of European immigrant settlers, notably white individuals.

As part of the colonial project that emerged during the Imperial period of Brazil to develop the future whitened Brazilian nation, colonization was driven by these two interests: favoring European immigration and allowing the maintenance of large estates. The relationship between European immigration and land chaos, therefore, became an institutionalized initiative of the government.

The first forms of colonization in the 20th century were based on the assumption of a demographic void, that is, the interior of Brazil was no-man's land (*terra nullius*) and that it could be "distributed." This fueled the project of occupying roadside lands by white migrants, followed by the hand-over of these lands for the establishment of companies. In this context, the Amazon became the stage for the combination of immigration, colonization, and integration of Brazil, which spanned from the "March to the West" under President Getúlio Vargas in 1938 to the military governments between 1964 and 1985: These governments were responsible for opening large highways and creating the National Institute for Colonization and Agrarian Reform,

*The crime of land grabbing consists of the illegal appropriation of public or third-party land through false property titles. In Portuguese, the term "grilagem" (land grabbing) originates from an ancient practice of placing these titles in boxes with crickets (grilos, in Portuguese), allowing the insects to yellow the paper, creating the illusion that the titles were old.*

*State governments hold primary responsibility for undesignated lands in the Amazon, and most state-level legislation encourages the continued encroachment onto public lands.*

which distributed hundreds of thousands of hectares – where several traditional peoples already lived – to companies and large landowners.

The Amazon as *terra nullius* is a discourse and a repeated practice promoted by governments and companies that have effectively served their own interests. Establishing this notion of *terra nullius* means to deny ancestral, traditional, and long-standing presences and relationships with the land. This impacts the denial of Indigenous lands, territories of quilombos, traditional communities, and squatters.

Since 1984, with the National Agrarian Reform Plan, and the status attributed to the environment and ethnic rights by the 1988 Constitution, the approach to land and territory has changed. The land use planning policies implemented since then, still relying on international cooperation, have faced the challenge of overcoming land chaos. This requires confronting aristocratic groups and emerging capitalist companies, which have taken advantage of the land uncertainty in the Amazon to promote land grabbing.

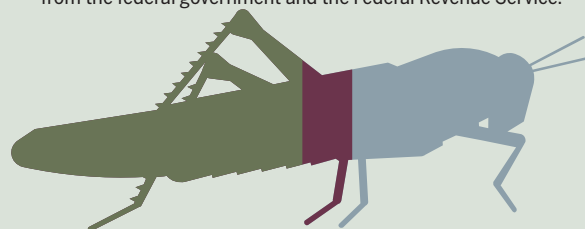
In the early 2000s, significant progress was made in combating this land disorder through policies that designated lands for various types of Conservation Units, such as Extractive Reserves, National Forests, Settlement Projects (whether conventional or environmentally differentiated), as well as Indigenous lands and quilombola lands. However, challenges persist, particularly regarding attempts at setbacks, such as the reduction, requalification, and cancellation of these legal instruments for land designation.

Some federal lands (plots) collected in the 1970s in the Amazon only had their records updated with georeferencing by the Federal Government in 2022. The regularization (titling) of these areas occurs only when the buyer initiates the onerous and bureaucratic registration process, which ultimately erases any prior relationship with the land. The concept of *terra nullius* both as discourse and practice is reiterated to promote the idea that land use and designation are always reserved for certain people, according to their social class and race. ●

## THE WHITE PAPER ON LAND GRABBING

Published in 1999 by INCRA, the document aimed to return tens of millions of hectares of land that had been grabbed to public property.

The study cross-referenced the analysis of satellite images of properties with more than 100,000 hectares with property records from the federal government and the Federal Revenue Service.



The study concluded that 100 million hectares of land had been grabbed in the country.

■ Amazonas (55%) ■ Pará (9%)

KATO, KARINA ET AL. FUNDAÇÃO HEINRICH BÖLL, 2022

# THE BIOFINGERPRINTS OF THE AMAZON

**Millennial changes in the Amazonian landscape attest to the role played by the original peoples in shaping the forest and reveal the ancestral knowledge that continues to be applied by the Indigenous population in the region.**

The Amazon can be envisioned as a labyrinth due to the countless rivers, creeks, lakes, channels, and anabranches. These places experience the cyclical seasons of rising, flooding, ebbing, and drying of the rivers, spanning from the triple border between Brazil, Colombia, and Peru to the left bank of the Xingu River. This phenomenon is important for the ecological balance of the region, and the peoples of ancient Amazonia transformed these spaces and places into biofingerprint landscapes.

Biofingerprint landscapes encompass both the material and immaterial cultures of the ancestral peoples who have inhabited the Amazon forests for nearly 13,000 years. These landscapes are present in all Amazonian ecosystems, from floodplains to dry land. Since the 1940s, archaeological research has been revealing a series of interventions in the spaces-places, including forests that bear the fingerprints of these ancestral peoples.

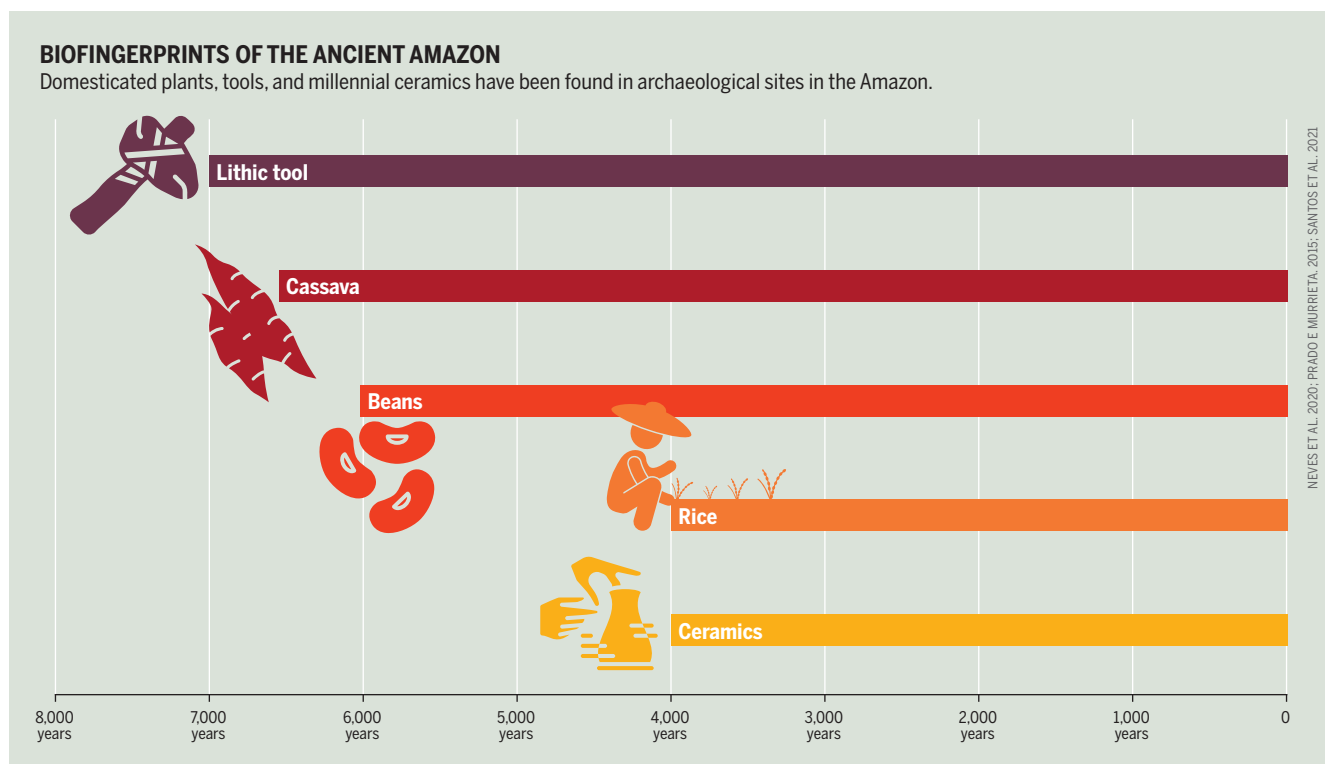
The biofingerprint signatures embedded in forests are landscapes modified by human actions. These actions

consisted mainly of the relocation of seeds and seedlings of existing plants from the dry land ecosystem to floodplain areas. The archaeological sites within these ecosystems are full of a wide diversity of plants, which are easily recognized by contemporary native peoples and those who manage archaeological sites today. These sites serve as open-air laboratories, holding an immense wealth of knowledge for understanding both the past and the present. In addition to domesticated plant species, lithic tools (made entirely or partially of stone) and ceramics were found in these archaeological sites, which further revealed the environmental history of ancient Amazonia.

With regard to domesticated plants in ancient Amazonia, archaeobotanical studies have revealed evidence of food residues from tamed/domesticated plants. At the Monte Castelo shell mound archaeological site, located on the Branco River, a tributary of the right bank of the Guaporé River in Rondônia, excavations have uncovered much information regarding plant domestication, including cultivated cassava stem and starches extracted from cassava roots.

Another discovery from archaeological research is the “Indigenous bread,” also known as “ancestral beiju”: This is

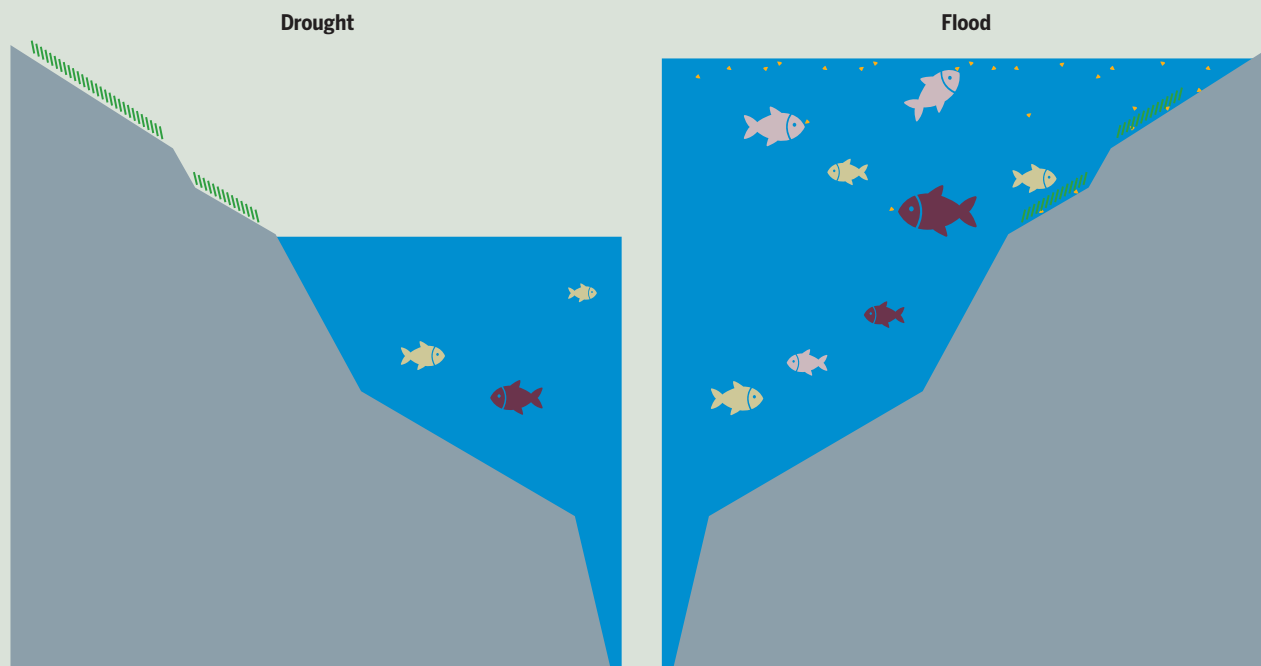
*Biofingerprint data attest to the ancestral human participation in the construction of what we view today as the Amazon biome.*





## THE RICE CYCLE IN THE AMAZON LANDSCAPE

A domesticated crop of ancestral management, rice is part of the life cycle of other species in the forest.



In lakes, creeks, channels, and along the riverbanks, both in floodplain and dry land ecosystems, it is common to observe green carpets of rice emerge as the waters recede. When the waters begin to rise, the rice fields release their seed pendulums. Between March and late April, fish such as sardines, pacu, red-bellied pacu, and tambaqui feed on this rice.

DA SILVA, CARLOS AUGUSTO

a cooked dough made from cassava, mixed with starch and chestnuts, which was buried in the ground as part of an Indigenous ritual offering to Mother Earth during the fallow period in the fields. In addition to the cassava stems from both bitter and sweet varieties, which have been cultivated for thousands of years in the Amazon, archaeobotanical research has revealed other species managed by ancestral peoples. These include pineapple, açaí, bacaba palm fruit, white and pink sweet potatoes, peanuts, chestnuts, cocoa, guarana, cubiu, pumpkin, pepper, genipap, crajiru-caioé, tucumã, piquiá, patauá, urucuri, mucajá, mumurumu, andiroba, copaiba, sucuba, tomato, passion fruit, corn, beans, rice, and more.

As ancestral peoples settled in their lands, they also developed alternatives to achieve stability and created technologies to meet social demands. To meet these needs, they crafted rock artifacts for various daily activities. This was the beginning of lithic tools.

Research from the first half of the 20th century in the Amazon concluded that lithic tools were not very common due to the limited availability of raw materials in certain parts of the forest. However, research conducted since the 1990s has shown that ancestral peoples produced interesting tools to meet their social needs. This is attributed to cultural exchanges between Indigenous peoples. For instance, peoples from the upper Negro River region maintained contact with those from the upper Amazonas-Solimões River and adjacent areas, which facilitated the supply of raw material.

During archaeological excavations conducted by the Central Amazon Project, coordinated by archaeologist Eduardo Góes Neves, in Iranduba, Amazonas, in 2002, an

*Between May and June, during the peak of the river flood, rice detaches from the flooded soil. Depending on the wind, its seeds drift along the river, flowing upstream or downstream and, thus, distributing its seeds through the waters. By this time, the vibrant green hue has faded, giving way to yellowish landscapes – biofingerprints that symbolize a womb of life within the seeds.*

arrowhead estimated to date between 7,000 and 6,500 B.C. was unearthed at the Dona Stella Archaeological Site. Other tools, such as axe blades, pestles, scrapers, whisks, wedges, among others things, were identified in archaeological sites in both floodplains and on dry land. Thus, rock tools were the foundation of cultural industries developed to meet the demands of intensive labor in the Amazon. This likely contributed to the rich diversity of plants found in these sites today, a phenomenon that science has come to describe as “bioeconomy.”

Archaeological ceramics emerged in the Amazonian social environment during the Holocene, with an estimated age of 6,000 years B.C., as people developed alternatives for storing food, water, beverages, and seeds. Excavations at archaeological sites have unearthed Sinimbu and Bacabal ceramics. Sinimbu ceramics, found at the first site layers – about six meters deep – are small lumps of burnt clay associated with the stove trivet. On the other hand, Bacabal ceramics are decorated pieces dating back 4,000 years. These are examples of records of such bio-ancestral signatures from ancient Amazonia, which prove the ancestral nature of Indigenous knowledge behind landscape cultivation and preservation. Such evidence reveals less predatory ways of interacting with the forest. ●



# ANCESTRAL KNOW-HOW

**The Amazon rainforest was planted by the original peoples over millennia, and the maintenance of the ecosystems depends on the knowledge of these peoples. One of the tools in this process is Amazonian dark earth, the name given to ancestral anthropogenic soils rich in nutrients.**

**T**he Amazon, the largest rainforest in the world, is a landscape that has been managed by Indigenous peoples for thousands of years. More recently, the so-called traditional peoples have also contributed to this science. These peoples have a unique relationship with natural resources in their way of life, promoting the maintenance of ecosystems and their environmental services through cultural reproduction. Archaeological studies suggest that indigenous peoples have inhabited what is now the Brazilian Amazon for at least 11,200 years. The native peoples of the Amazon used their knowledge, science, and technology to generate, amplify, and maintain biodiversity and agrobiodiversity, enhancing soil fertility. One of the results of this process is the well-known Amazonian dark earth – nutrient-rich anthropogenic soil that is essential for plant management, which proves this distinct relationship between humans and nature, rooted in the care for our shared home.

Amazonian dark earth has an anthropic horizon, resulting from the accumulation of organic material due to intense human activity over prolonged periods in ancient settlements. This is evidenced by the presence of pre-Columbian ceramics, along with high levels of organic carbon, calcium, phosphorus, magnesium, and higher pH. Currently, this type of soil is associated with more intensive cultivation, short fallow periods (use and abandonment of the area), and multiple use cycles in the Amazon. In addition, backyards and farms established on these soils display distinct agrobiodiversity compared to surrounding areas.

Studies have shown that Indigenous peoples significantly modified the Amazonian landscape before the European conquest, managing the environment to promote the creation of oligarchic forests dominated by useful species. The Amazon region was also an important center for the domestication of cultivated plants, with at least 83 native species containing populations with some degree of domestication. Estimates suggest that pre-conquest food production sustained at least eight million people. Today, Indigenous and traditional communities continue to preserve genetic diversity while actively generating and enhancing variability in an ongoing process.

The case of cassava (*Manihot esculenta* Crantz) is a good example. Cassava, a species domesticated by natives in the central Amazon, has become the primary crop for Indigenous peoples and traditional communities in the Amazon. Managed through the slash-and-burn agriculture system, this production system consists of slashing and burning vegetation, followed by a fallow period for forest recovery. These secondary forests hold great significance for these communities. Cassava has great economic and cultural value for traditional and Indigenous communities living far from urban centers, as they cultivate a large number of popular varieties (ethnovarieties). Studies show that the management practices and diversity of cassava varieties cultivated by different cultural groups, traditional peoples, and Indigenous communities, are influenced by ecological, socio-economic, and cultural factors.

Cassava varieties are grouped into two large categories: the wild, bitter or, as they are called in the Amazon, simply cassava, and the mild, sweet or, as they are called in the Amazon, *macaxeiras*. The difference between the two

*Indigenous peoples are responsible for slowing the destruction of the Amazon rainforest. Indigenous lands occupy 13.9% of Brazilian territory but accounted for 19.5% of Brazil's native vegetation in 2020.*

## FOREST ISLANDS

Comparison between the devastation of native vegetation in Indigenous lands and in private lands between 1985 and 2022.

Loss of native vegetation  
on Indigenous lands

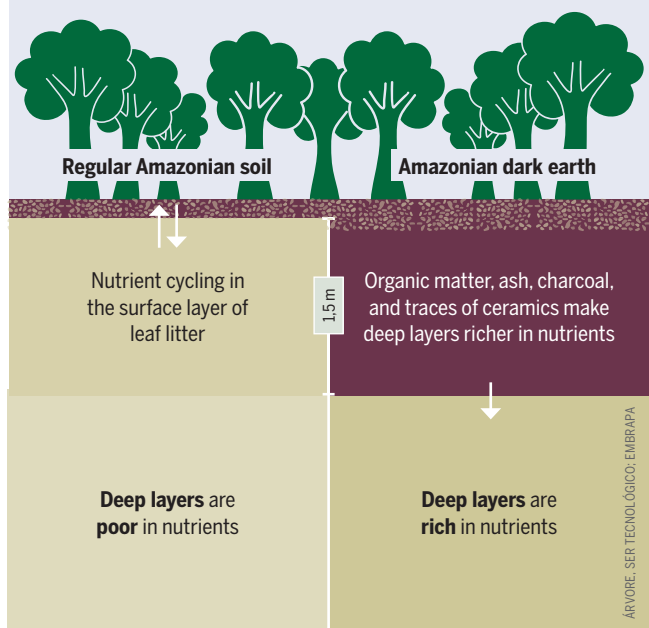


Loss of native vegetation  
on private lands



## AMAZONIAN DARK EARTH

In different parts of the Amazon region, the original characteristics of the soil were modified by prehistoric Indigenous activity, resulting in a soil richer in nutrients.



Amazonian dark earth also serves as anthropological and archaeological evidence of the existence of dense and complex populations in the Amazon region. The composition of the Amazonian dark earth may include bones, animals, fish, ashes, straw, bark and even human excrement.

orientation, and local culinary traditions. Short-cycle, low-starch varieties are more commonly grown in more fertile soils, while long-cycle varieties are more associated with less fertile soils.

Soil fertility is also correlated with the intensity of use: In more fertile soils (Amazonian dark earth) the number of consecutive planting cycles is greater and the duration of fallow periods is shorter. In less fertile soils, the fallow period is longer and the number of consecutive cycles is lower. The orientation of production toward the market influences the characteristics of the cultivation system: Families with a greater share of their production directed toward the market tend to cultivate fewer varieties in larger areas, primarily occupied by “commercial” varieties. The production of cassava derivatives plays a decisive role in the cultivation of some varieties. There is a considerable diversity of cassava managed by the Indigenous communities of the lower Tapajós River, indicating their knowledge of managing their collections according to their soils and the orientation of production toward the market and local cuisine. Tacacá is an example of an Amazonian recipe based on cassava. It is present in two ingredients of the dish: tucupi, a liquid extracted from bitter cassava, and tapioca starch.

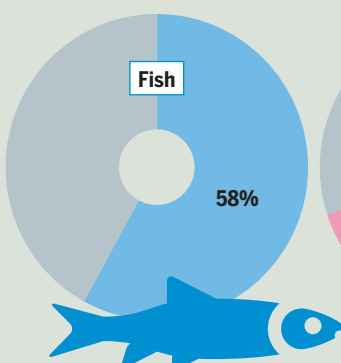
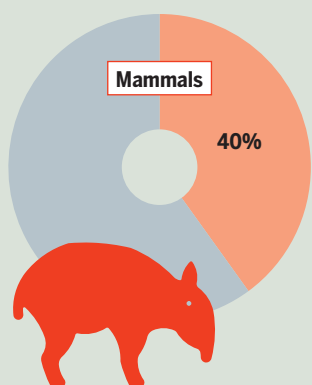
Strengthening and disseminating the worldview and way of life of traditional peoples and communities in the Amazon is essential in combating the climate emergency, because where there are traditional peoples and communities, there is biodiversity. ●

*This immense biodiversity is under threat: In a decade, the number of species found in the Amazon that are threatened with extinction has grown by more than 65%.*

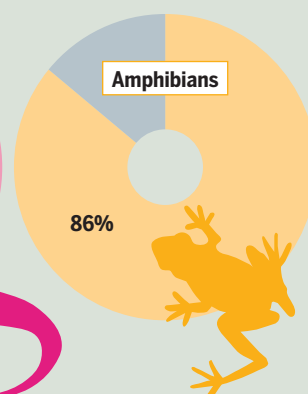
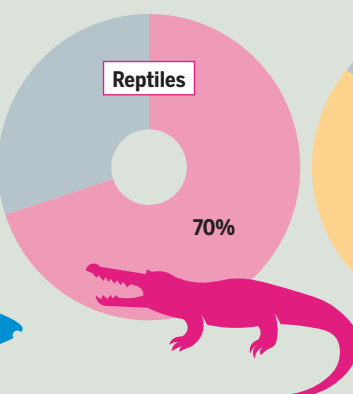
## NUMBER 1 IN BIODIVERSITY

The Amazon rainforest represents one-third of the rainforests in the world and is home to more than half of the planet's biodiversity.

Endemism rates in the Amazon:



**8,345 species of plants and animals**



Between 2014 and 2015 alone, **381 new species** of vertebrates and plants were discovered in the Amazon.

IPAM: WWF BRASIL/INSTITUTO AMIRAUÁ/NEGO: ESPÉCIES AMEAÇADAS DE EXTINÇÃO NO BRASIL 2022 - IBGE

# INDIGENOUS ONTOLOGICAL REFLECTIONS

Since the onset of colonization, Indigenous peoples have been treated as “blank slates” that must be taught from a Western perspective. Nowadays, the Indigenous presence in universities is reshaping this historical model of education and knowledge.

**T**he diversity of Indigenous peoples around the world is a treasure in the history of humanity. The knowledge they develop is deeply intertwined with their understanding of their territories. Their reflections and practices are passed down through a methodology of teaching by speaking, showing, and doing, and learning by listening, seeing, and doing – both in daily life and in ceremonies. Before the arrival of European colonizers, Indigenous social structures were shaped by their understanding and organization of time and space, labor, festivals, ceremonies, healing practices, disease prevention, danger mitigation, and reassurance of the importance shared by humans and other beings.

The work performed by the first Catholic missionaries aimed to catechize the Indigenous peoples and lead them to assimilate European culture. The Jesuit missionaries developed the schooling and literacy of the Indigenous peoples, teaching them the knowledge of the peoples of Europe, their languages, customs, and life practices. Some missionaries learned the Indigenous language to understand them better, but often with the intention of developing strategies domination and place them at the service of merchants. This

practice of evangelization and schooling spread throughout Brazil, setting the pillars of the government’s education policy in Indigenous territories – a model that persists to this day. This policy treats the Indigenous peoples as “blank sheets” upon which civilization must be inscribed, equipping them with skills and a worldview fashioned according to the perspective of the Western colonizers.

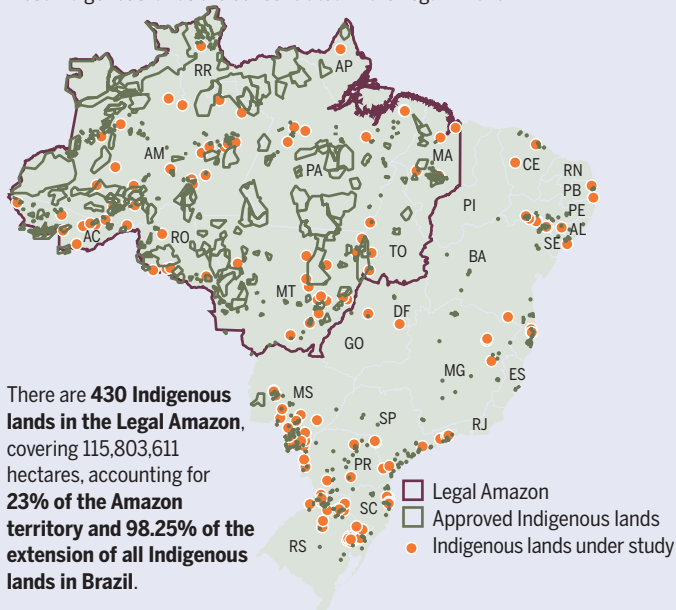
Nowadays, Indigenous peoples who enter universities strive to change the historical model of education. Even within European scientific institutions, they seek alternative ways and pathways to discuss and demonstrate their knowledge. From this perspective, there is both an individual and collective effort to find categories specific to the Indigenous thinking to explain their understanding of the world – without falling into the trap of translating their worldview through the concepts and terms rooted in the Judeo-Christian or scientific traditions.

It is also important to highlight the “listening method,” which emphasizes remembrance and attentive participation in conversation circles, where elders share their knowledge and expertise within the community. In addition, Indigenous peoples seek to express themselves through various forms of language beyond the formal writing required by academic institutions.

*Data from the Socio-Environmental Institute shows that 32% of Indigenous lands in Brazil have not yet been established. Under the government of President Jair Bolsonaro, no Indigenous lands were approved.*

## INDIGENOUS LANDS IN BRAZIL

Most Indigenous lands are concentrated in the Legal Amazon.



## STEP BY STEP OF THE DEMARCATION PROCESS

### 1st Identification and delimitation

The claimed area is studied by a multidisciplinary technical team from FUNAI to identify and delimit the territory. At this stage, it is possible to contest at an administrative level and FUNAI is responsible for providing a reply.

### 2nd Declaration

Submission of FUNAI's report to the Ministry of Justice and Public Security for evaluation and issuance of a declaratory ordinance.

### 3rd Physical demarcation

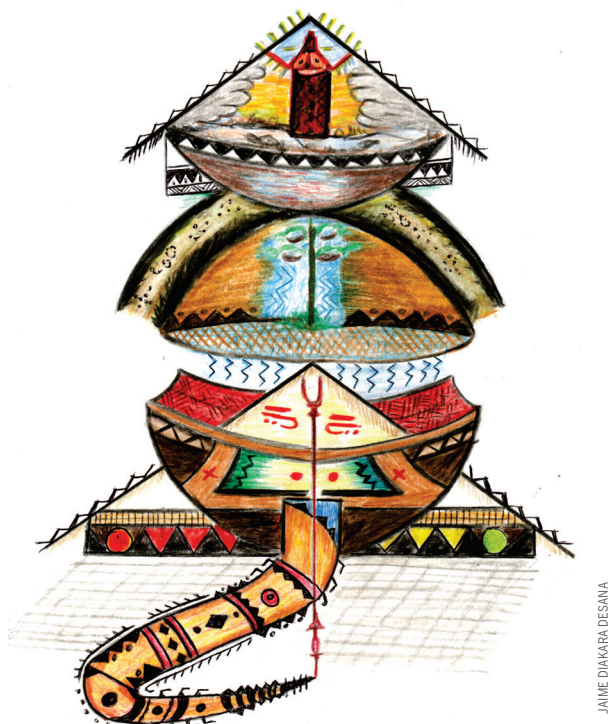
If there is a declaratory ordinance, the process returns to FUNAI for the physical demarcation of the area by means of markers (plaques).

### 4th Approval

The process is forwarded again to the Ministry of Justice and Public Security for review and then to the Presidency of the Republic for approval.

### 5th Registration with the Public Secretariat of the Federal Government and real estate councils

Registration of the Indigenous land with the Secretariat of Assets of the Federal Government and in the real estate notary offices as a public land for the exclusive use of the relevant Indigenous people.



JAMIE DIAKARA DESANA

Through a drawing, we demonstrate above an example of the form and content of an Indigenous narrative of the Desana people, of the eastern Tukáno linguistic family of the upper Rio Negro region in the State of Amazonas. This illustration depicts a different cosmology, which escapes the reach of the scientific logic of writing.

The image above, in its entirety, represents the body of the universe. The first gourd, at the bottom of the figure, signifies life, fertility, and abundance – rooted in the origin of the world, life, and the transformation of humanity. According to the Desana people, there are three types of gourd: *ümüsi dihtaru koasoro*, *ümüsi pahti koasoro*, and *dohôtoari pahti koasoro*. The first gourd, *ümüsi dihtaru koasoro*, symbolizes the lake of the universe, from which emerged seven other gourds containing the colors of life (blue, yellow, green, white, brown, red, black). These colors stand for the main constituent elements of the cosmos: water, light/sun, forest, air/cloud, earth, resins, vital liquids, and night.

This primordial lake was dark, filled with smoke and clouds, and within it lay the body of the sun, which suckled the gourds that floated on the waters. This lake sheltered all the beings on Earth. The upside-down gourd, *ümüsi pahti koasoro*, is the universe itself – a space where stars and beings dwell. A black arch marks its edge, symbolizing the constellations (Milky Way), each of which contains its own origin story and domain. These constellations guide the rainy and dry seasons, mark the timing of collective ceremonies (rituals), and signal the dangers and threats to human lives. At the center of the image, there is a dark-colored *akhó mürôño*, the “rain palm tree.” In the mouth of the gourd there is a sieve, responsible for the shape of the raindrops that fall to the earth.

*Although they still face racism and various challenges in the university environment, Indigenous researchers have increasingly positioned themselves against epistemicide and in favor of valuing traditional Indigenous knowledge.*

*The temporal framework thesis establishes that Indigenous peoples would only have rights to the lands they occupied or were already disputing on the date of the promulgation of the Brazilian Federal Constitution, namely, October 5th, 1988. Members of the Parliamentary Front for Agriculture have been trying to approve bills with this thesis for years.*

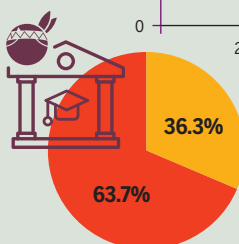
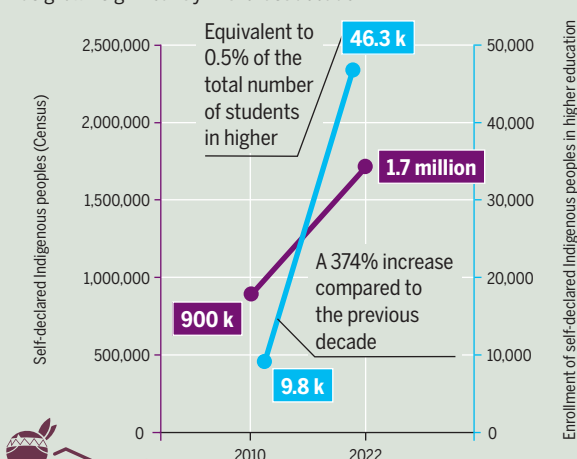
The third gourd, *dohôtoari pahti koasoro*, stands for the origin of the seven demiurges and cultural heroes: *Abe*, *Deyubari Goãmu*, *Baaribo*, *Buhsari Goãmu*, *Wanani Goãmu*, and the two women, *Amo* and *Yugupô*. Together, they are responsible for the creation and protection of the cosmos, its species, and all the living beings, including animals and plants. For instance, *Baaribo* is the owner and protector of the plants of the farm and farm-grown foods. This gourd also symbolizes the woman’s womb, representing the genesis and gestation of humanity.

The maloca house, depicted at the bottom of the image, represents the terrestrial platform where humans reside. The staff that supports the house – used in rituals – is fixed at the center of the universe and the terrestrial body. It represents the backbone of *Abe*, the cultural hero, leader and connoisseur of the universe. The stylized image of a snake, with its tail tip touching the staff at the center, symbolizes the bed of the aquatic platform known as *wāmüdia*. From this platform emerged the canoe of the transformation of humanity, originating in the Atlantic Ocean – where the city of Rio de Janeiro is located today – and journeying toward the Ipanoré Waterfall in the upper Rio Negro region.

Indigenous reflexivity is the knowledge continually developed by native specialists, expressed in the paintings of ritual houses, benches, rhythm staffs, gourds, ayahuasca pots, maracas (a type of Indigenous rattle), rattle staffs, as well as in ongoing dialogues between wise elders and new generations. ●

## INDIGENOUS PEOPLES AT UNIVERSITIES

The population of Indigenous students at Brazilian universities has grown significantly in the last decade.



Share of Indigenous students enrolled  
 In the public education system  
 In the private education system

CENSO 2022: INEP



## TRADITIONAL PEOPLES

# THE DIVERSITY OF IDENTITIES IN THE FOREST

**In the Amazon, traditional peoples and communities encompass a wide range of multiethnic populations that maintain their own dynamics with and within their territories, forging their identities through non-predatory agro-extractive activities.**

**H**istorically, little thought or importance was given to the human element in the Amazon. However, the way of life of the peoples of the waters and forests who inhabit the Amazon has been fundamental to the conservation of the existing socio-biodiversity in the region.

The Indigenous peoples, who also refer to themselves as original peoples, are the main preservers of Amazonian biodiversity. In addition to them, other populations dwell in this biome and are recognized as traditional peoples. What unites these peoples and communities are some characteristics that they have kept for generations, such as ethnic or collective identities, cultural rites, sustainable use of natural resources, and the conservation of forests, natural fields, rivers, flora, fauna – all deeply tied to their relationship with the territory.

These are peoples who have lived and coexisted across different times and spaces, forming relationships forged and often marked by territorial conflicts but, above all, by interactions among themselves. With the European colonial invasions, centuries of external movements – especially by Europeans attracted by the opportunities to explore the region's timber, mineral, and plant resources, significantly impacted local demographics. This was mainly due to the exploitation of both free and slave labor, involving Indigenous peoples and Africans kidnapped and trafficked to Brazil between the 16th and 19th centuries.

As a form of resistance, both Indigenous ethnic groups were forced to relocate to more remote regions, leading to the formation of quilombos and mocambo settlement. This migration fostered the exchange of knowledge and

technologies between these peoples, contributing to the subsistence and integration of Afro-diasporic people into the Amazon biome. Around the late 19th and early 20th centuries, the northern region received a new wave of migrations, encouraged by the Brazilian government, driven mainly by major development works, such as rubber extraction. This resulted in a new multi-ethnic configuration, with the arrival of male and female workers, primarily from the northeast region.

It is worth noting that for a long time this multi-ethnic Amazonian society retained characteristics of a predominantly regional occupation, with communities formed through religious missions, villages, quilombos, and mocambos settlements. These settlements were distributed along the riverbanks and creeks, relying primarily on fishing and artisanal hunting for subsistence. These populations adapted to the dynamics of Amazonian flood and drought cycles by constructing sustainable, elevated homes on stilts or floating houses, which demonstrates their adaptability to the dynamics of the Amazonian flood and drought cycles, which also facilitated access to water and the loading and unloading of goods. Consequently, many of these groups today refer to themselves as riverside communities.

Nevertheless, in the Amazon, the multiethnic reality is reflected in the diverse identities adopted by these peoples. In addition to Indigenous peoples, quilombos, and riverside dwellers, other terms are linked to the activities carried out in the territories, such as rural workers, family farmers, rubber tappers, babassu coconut crackers, chestnut gatherers, and artisanal fishermen, among others. For a long time, the isolation of these groups contributed to their permanence in an uncolonized state. Nevertheless, it also hindered the development of organizational forms to

*Convention 169 of the International Labour Organization was the first binding international treaty to specifically address the rights of Indigenous peoples.*

### THE RIGHT TO FREE, PRIOR, AND INFORMED CONSENT

Brazil is a signatory to Convention 169 of the International Labour Organization (ILO), which establishes the obligation to consult traditional peoples and communities in the case of works, actions, policies, or programs that affect their territories.

1989

June 27th

Convention 169 of the ILO is adopted in Geneva.

1991

September 5th

It comes into force internationally in the signatory countries.

2002

June 20th

It is approved in Brazil by Legislative Decree No. 143.

2003

July 25th

The decree comes into effect after the instrument is ratified by the Executive Director of the ILO.

2004

April 19th

It is enacted by legislation by Decree No. 5,051/2004.

2009

November 5th

It is currently in force by Decree No. 10,088.

CONVENÇÃO 169 DA OIT: GOVERNO FEDERAL



## THE TRADITIONAL AMAZONIAN PEOPLES

There is an immense diversity of traditional peoples and communities in the Amazon. They are also known as peoples of the forest and the waters.



Indigenous peoples



Quilombola communities



Riverside peoples



Family farmers



Rubber tappers



Andiroba collectors\*



Açaí collectors\*\*



Babassu coconut crackers\*\*\*



Piassava collectors\*\*\*\*



Chestnut collectors



Artisanal fishermen



Traditional midwives

\* Extractive communities that organize themselves around the extraction of andiroba.

\*\* Collectors of palm fruits, such as açai.

\*\*\* Group of women who collect fruits from babassu plantations.

\*\*\*\* Groups that extract fiber from the piassava palm tree to make brooms.

LADISLAU CLAUDIANE: INSTITUTO SOCIEDADE, POPULAÇÃO E NATUREZA

confront territorial conflicts. This isolation favored the establishment of a system of domination over these groups, both by the federal government and private capital.

Despite such challenges, these peoples have developed strategies for resistance and preservation of their identity, culture, and collective subsistence practices, especially through oral traditions. In the face of new invasions and threats to their territories and livelihoods, they also organized themselves into unions, associations, cooperatives, and movements to resist marginalization. These collective efforts pushed for the establishment of an environmental agenda in Brazil, which not only helped bring visibility to these groups, but also secured significant achievements, such as the creation of the first extractive reserves in Brazil – areas where traditional peoples both conserve the forest and sustain themselves from its resources.

These communities consist of groups with diverse ethnic or social identities who sustainably extract products from the forest and rivers. Through regional struggles, combined with national and international pressure, a national policy aimed at the sustainable development of traditional peoples and communities was enacted (Decree No. 6,040, of February 2007).

However, even after more than 15 years since its enactment, the implementation of this policy remains a challenge for most of these peoples. This is due to the fact that it involves confronting the political and economic interests of sectors that expropriate their territories, as well as the absence or inefficiency of public policies implemented by the federal government.

According to the Atlas of Pan-Amazonian Socio-Territorial Conflicts, traditional peoples account for more than half of those affected by conflicts in the Pan-Amazon. The main causes of these conflicts stem from the activities carried out by exploitative capitalist sectors. Despite this

*Agribusiness accounted for 60% of the recorded causes of conflicts mapped in Brazil by the Atlas of Pan-Amazonian Socio-Territorial Conflicts.*

*The Ministry of Social Development defines traditional peoples and communities as culturally distinct groups that identify themselves as such, having their own forms of social organization. These groups occupy and use territories and natural resources as a condition for their cultural, social, religious, ancestral, and economic reproduction, relying on knowledge, innovations, and practices generated and passed down by tradition.*

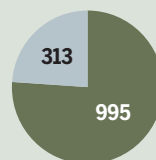
scenario, traditional peoples and communities continue to fight for their rights, particularly the right to land. Guided by the logic of living well, which implies a worldview where there is no rigid separation between human beings and nature, they seek to establish a relationship of respect with all elements of the forest that nourishes them abundantly. ●

## CONFLICTS IN THE PAN-AMAZON

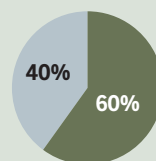
A survey analyzed 1,308 active conflicts in the Pan-Amazon between 2017 and 2018.

131,039 Brazilian families have been affected by these conflicts.

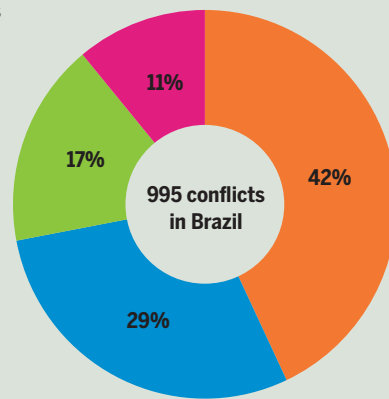
### Number of conflicts



### Territorial area



Legend for territorial area:  
 ● Brazil  
 ● Other countries in the Pan-Amazon



Legend for community types:  
 ● Small farmers  
 ● Traditional communities  
 ● Indigenous communities  
 ● Maroon communities

ATLAS DE CONFLITOS SOCIOTERRITORIAIS DA PANAMAZÔNIA

## MIGRATIONS

# THE EFFECTS OF MEGAPROJECTS IN THE AMAZON OF AMAPÁ

**The developmentalist project for the Amazon involves the construction of large-scale projects that drive significant migratory flows. In the State of Amapá, the construction of hydroelectric power plants has attracted thousands of migrants, resulting in a range of socio-environmental issues.**

The Amazon has become a strategic place for large-scale exploitation projects driven by a colonialist perspective that prioritizes resource extraction and foreign profit. The region has a long history of mega-projects and continues to face numerous socio-environmental impacts resulting from their implementation. The labor demands of these projects drive massive migratory flows to areas that were originally sparsely populated. The arrival of these migrants overwhelms local infrastructure, such as healthcare, security, and housing systems, increasing social inequality and generating tensions and conflicts with local populations. Deforestation and various forms of interference in the territories of traditional communities also contribute to these challenges, disrupting the life of local communities. As a result, there is a disconnect between expectations of “progress” and the actual effects on local populations, who increasingly face poverty, displacement, and social instability.

Amapá is one of the main states in the Brazilian Amazon that stands out among the other states due to its association with mega-projects aimed at the exploitation of natural resources. The creation of the Federal Territory of Amapá in 1943 occurred during the same historical period as the expansion of mining and industrial activities. The Mining Industry and Trade Project (ICOMI), the Jari Project, and the construction of hydroelectric power plants are some of the mega-projects carried out in the State of Amapá. Population explosion and socio-environmental conflicts are among the effects of these initiatives which, despite developmentalist promises, failed to improve the quality of life of the local population.

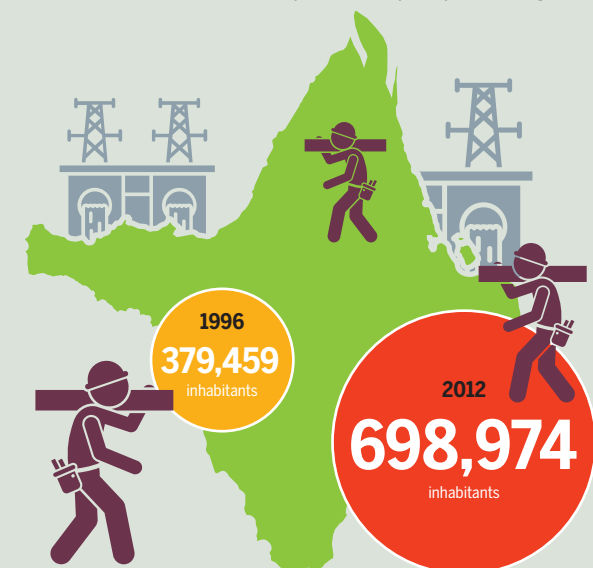
In 1947, the public tender for the exploitation of the manganese reserve was won by ICOMI, which fueled a significant migratory flow. The population growth of Amapá was exponential, rising from 37,477 inhabitants in 1950 to 175,634 in 1980. The municipality of Serra do Navio, originally a village for ICOMI workers, exemplifies the creation

of mining towns design to support mega-projects. Thousands of people, mainly from northeastern Brazil, migrated to Serra do Navio in search of employment. In addition to such a population explosion, the region experienced deforestation, loss of biodiversity, water pollution, and damage to Indigenous and riverside communities.

The Jari Cellulose Project aimed to create an agro-industrial complex in the region and, in 1967, began acquiring a vast area, which was cleared for cellulose production, cattle raising, and rice cultivation. The acquisition triggered repression against family farmers and riverside communities who inhabited the territories. In 1971, a conflict erupted between Jari security guards and the residents of Beiradão – a cluster of wooden houses on the banks of

### LOTS OF HYDROELECTRIC POWER PLANTS, LITTLE ELECTRICITY AND A DEMOGRAPHIC BOOM

The migration of workers to build hydroelectric power plants in Amapá led to an 84.2% increase in the state's population over 16 years. However, the state continues to experience frequent power outages.



Starting on November 3rd, 2020, a blackout left Amapá in the dark for

**20 days**



**13 out of 16 municipalities** were affected

Almost **800,000** people were impacted

The concessionaire Linhas de Macapá Transmissora de Energia was fined

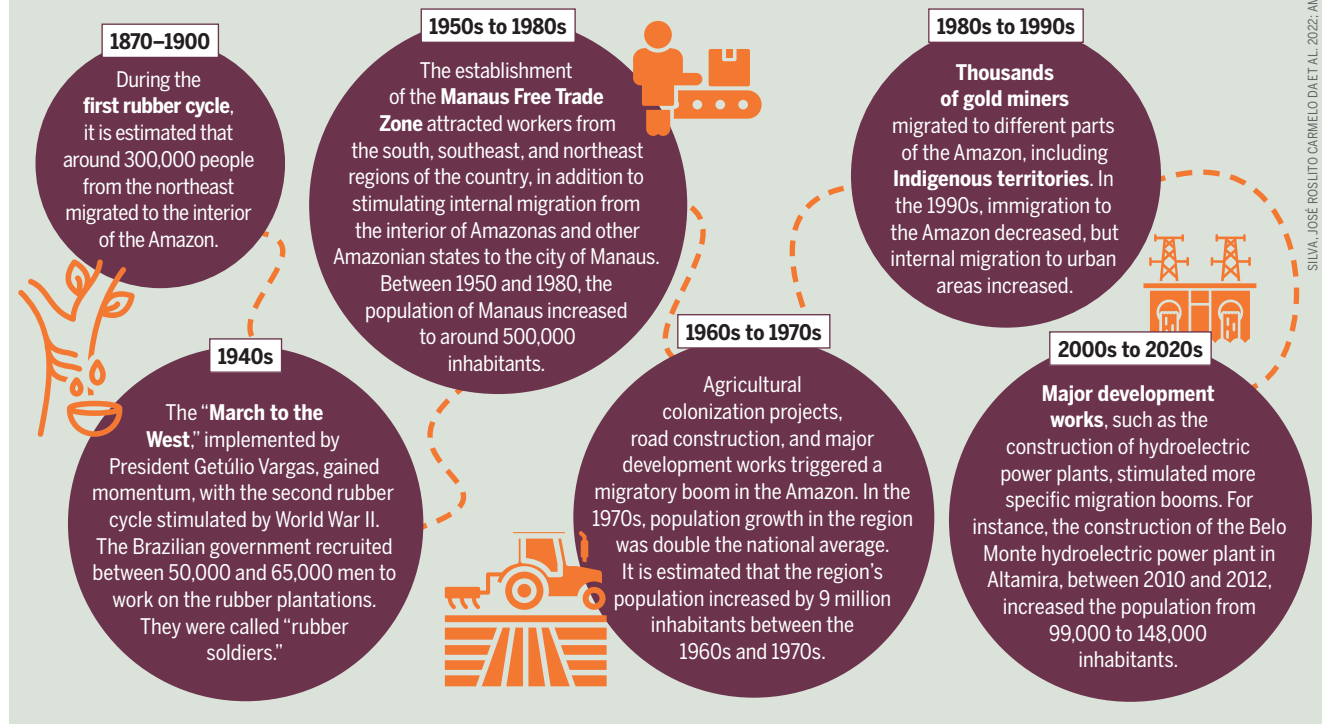
**R\$3.67 million**

IDEC: PODER 360

*After the construction of the hydroelectric power plants, the state also underwent a significant rural exodus.*

## MIGRATION CYCLES IN THE AMAZON

Different economic cycles have resulted in migratory booms to the Amazon region over the last two centuries.



the Jari River, in Laranjal do Jari. Reports describe security guards armed with revolvers prohibiting small farmers from carrying out their agricultural activities. This repression reflects the institutional violence of the Brazilian military dictatorship. The issues encountered in the ICOMI Project were once again repeated, accompanied by intense migration, severe social inequality, and rural violence.

The justification for the exploitation of natural resources by mega-enterprises lies in their perceived relevance to the national growth. As a result, the history of mining and timber mega-enterprises in the Amazon repeatedly reveals the federal and state governments as enablers of natural resource exploitation projects, even in the face of worsening social inequalities. The socio-environmental problems resulting from such mega-enterprises continue to accumulate, yet the argument persists.

Recent mega-projects in Amapá include four hydroelectric power plants: Ferreira Gomes Energia, Coaracy Nunes, Cachoeira Caldeirão (Araguari River), and Santo Antônio do Jari (Jari River). The narrative of progress also contextualizes these hydroelectric power plants and justifies the continued exploitation of the natural resources in Amapá, despite the reality faced by the local population, which has been impacted by socio-environmental damage caused by these projects, such as fish mortality, forced displacement, and population explosion.

During the period that encompassed the environmental studies and the licensing process for the hydroelectric power plants, Amapá's population doubled. Between 1996 and 2000, municipalities near the dams, such as Porto Grande and Ferreira Gomes, experienced population increases of 53.55% and 46.41%, respectively. The intense rural exodus triggered by the construction of the plants strained security, health, and housing systems, significantly impacting

*Migratory flows stimulated by new economic cycles in the Amazon have historically been accompanied by intense socio-environmental disruption, primarily impacting the region's Indigenous peoples.*

public administration and, consequently, the daily lives of Amapá's residents.

The hydroelectric power plant scenario is a stark demonstration of the disconnect between the discourse of development and local reality. Despite the presence of four hydroelectric power plants, Amapá has frequent power outages, which disrupt the lives of its population. Exporting energy to other regions is common, and there is no legal mechanism to ensure that a portion of the energy is allocated to the area of production. The mega-projects have failed to bring economic development and do not even ensure a stable electricity supply, but they have displaced riverside communities, caused conflicts with local inhabitants, and harmed aquatic and terrestrial environments, among other issues.

In short, each new mode of production through mega-projects in the region has led to the exploitation not only of natural resources, but also of the local population, resulting in a population explosion and a multitude of socio-environmental damages. Although the political-economic structure has been sustained by the exploitation of natural resources for export and to boost the gross domestic product, with support from the federal government, the mitigation and compensation processes proposed for these impacts have proven insufficient to prevent or reduce damage to ecosystems and biodiversity, as well as the loss of territories and ways of life of traditional communities. ●

# A MULTILINGUISTIC UNIVERSE UNDER THREAT

**Brazil is home to a wide range of Indigenous languages, with the Amazon hosting the majority of them. These languages help to spread ancestral knowledge about the biome. However, both the languages and this knowledge face significant threats.**

**B**razil, which is the country with the greatest biodiversity on the planet, is also among the 10 countries with the greatest linguistic diversity, with an emphasis on Indigenous languages. Most of the Indigenous languages spoken in Brazil are found in the Amazon, which is home to two-thirds of the country's original languages. This diversity is both numerical and genetic, as these languages belong to approximately two dozen distinct linguistic families, all with representatives in the Amazon.

The linguistic landscape of the Amazon includes the largest Amerindian genetic groupings (languages that have a common origin) in Brazil: the Tupi, Macro-Jê, Arawak, Karib, and Pano (or Kuin) families, each encompassing about 20 or more languages. There are also many medium and small language families spoken exclusively in the Amazon, such as the Yanomámi, Tukáno, Arawá, Nadahup, Katukina, Nambikwára, Txapakúra, and Mura families. The region is also home to so-called isolated languages, which are not related to any other native language. This is the case of Tikuna, the Indigenous language with the largest number of speakers in Brazil – around 47,000 – and is also spoken by populations in Peru and Colombia. The Amazon's linguistic diversity further includes Indigenous sign languages and whistled languages, such as those used by the Ikolen people (also known as the Gavião, who live in Rondônia). Whistled languages are primarily employed during walks in the

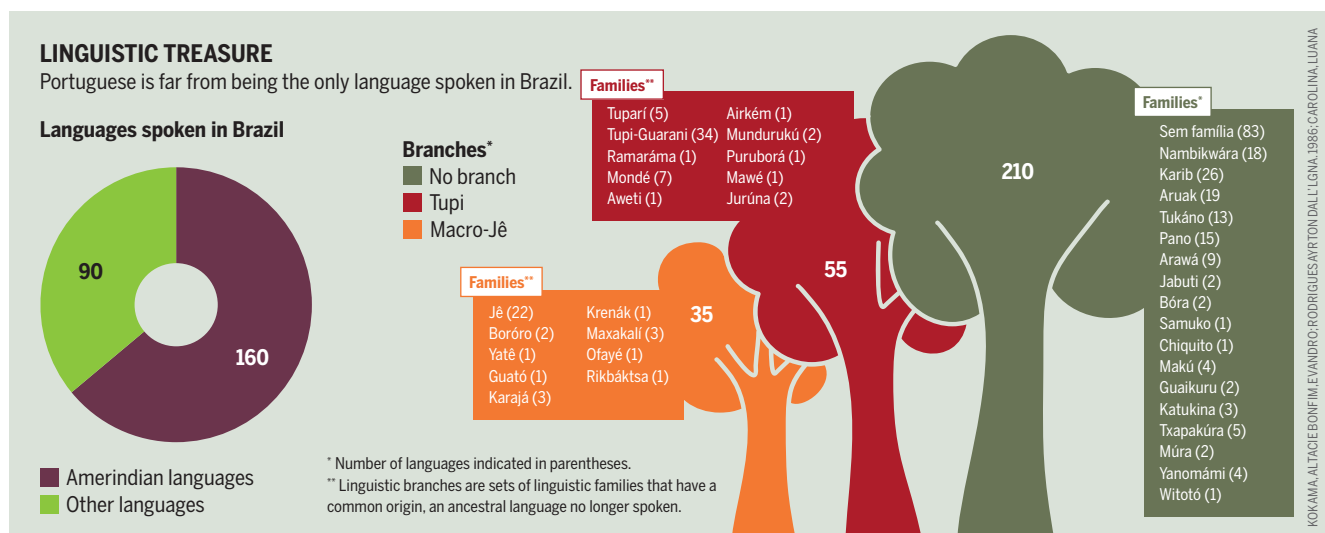
forest and while hunting, such as those used by the Ikolen people (also known as the Gavião, who live in Rondônia). Whistled languages are primarily employed during walks in the forest and while hunting, as they enable communication over long distances without acoustic loss and blend seamlessly with the forest's natural sounds.

The three main hotspots of Indigenous language diversity are found in the Amazon: the Upper Rio Negro (AM), the Upper Xingu (MT), and the Guaporé-Mamoré region (RO). These regions are considered linguistic and cultural areas, characterized by multilingualism and the intense exchange of artifacts, rituals, and people of different ethnolinguistic origins. For example, the Upper Rio Negro is marked by linguistic exogamy, that is, marriages must occur between people who speak different languages, whether within the same linguistic family or between different linguistic families.

The Upper Xingu is distinguished by its intense ceremonial exchanges, particularly in rituals such as the Kwarup or the Huka Huka fight, alongside a high incidence of inter-ethnic marriages, which fosters multilingualism. As for the Guaporé-Mamoré region, which also includes the Bolivian Amazon, it is one of the areas with the greatest linguistic diversity in the world. Most languages in this region are endangered and lack comprehensive linguistic and cultural documentation, representing one of the greatest challenges for preserving Amazonian linguistic diversity.

Another important element of the Amazonian linguistic landscape is Nheengatu, spoken by approximately 19,000 people across various parts of the Amazon. Nheen-

*The World Atlas of Languages, published by UNESCO in 2006, revealed that 190 of these languages are threatened. Only 305 of them were catalogued by the Brazilian Institute of Geography and Statistics (IBGE) in 2010.*





## NHEENGATU

The general Amazonian language has been revived.

Early 17th century

Nheengatu developed in the State of Grão-Pará and the district of Maranhão as a tool for colonization, based on Jesuit missions with the Tupinambá people.

1835

It was criminalized after the Cabanagem Revolt.

2010

Nheengatu is on the list of severely **endangered languages** in the Atlas of the World's Languages in Danger, published by UNESCO.

2022

The **Nheengatu Language Academy** was created.

2023

The National Council of Justice translated the **Federal Constitution** into **Nheengatu**.

KOKAMA, ALTACI E BONFIM, EVANDRO, NEXO

gatu, or the general Amazonian language, is part of a unique linguistic phenomenon that emerged from contact between European colonizers and Indigenous populations belonging to the Tupi-Guarani family: the general languages. These languages served as the colony's administrative medium in missions, exploratory expeditions, and negotiations with non-allied Indigenous groups and non-Tupi-Guarani speakers, generically referred to as *Tapuia*. *Nheengatu* became the primary language of social interaction in the Amazon, used by the small Portuguese contingent, the growing mixed-race population, and Indigenous groups. Currently, *Nheengatu* is the mother tongue of Indigenous peoples of the Upper Rio Negro region, such as the *Baré*, *Warekena*, and part of the *Baniwa*, as well as those from the *Tapajós* region.

Another crucial issue for the Amazon that deserves to

*The first application for teaching *Nheengatu* was created in Brazil in 2021, after nearly four centuries of expansion and threats to the language.*

be highlighted is the relationship between language and ancestral knowledge about the biome. Biological diversity is intertwined with anthropic activity, making it a biosocial phenomenon. Indigenous languages play a decisive role in this process, as they are the product of centuries of long and profound human coexistence within specific environments, generating highly specialized knowledge. As oral languages, they embody the worldview of their peoples and communities. These languages contain specialized lexicons related to fish, forest plants, cultivated crops, animals, minerals, geographic landmarks, in addition to tools and utensils for hunting, fishing, farming, and navigating the territory.

Each language also offers complex classification systems for living beings, developed over millennia through observation, research, and reflection unique to each culture. Thus, linguistic and environmental preservation are deeply interconnected, as Indigenous languages encode the accumulated experiences of each people within their specific territories. The loss of a language implies the loss of knowledge crucial to addressing the current climate and environmental crisis. The protection of Indigenous genetic heritage must therefore be accompanied by efforts to safeguard intellectual and intangible heritage, including linguistic data. Many of these languages are at different stages of documentation and description, and several face the risk of intergenerational transmission failure. The COVID-19 pandemic, which disproportionately affected Indigenous elders and leaders, emphasized the vulnerability of these languages, many of which are primarily spoken and remembered by the oldest members of the population.

*The Amazon region is home to the most Indigenous linguistically diverse areas in Brazil.*

## HOTSPOTS OF INDIGENOUS LANGUAGES AND MUNICIPALITIES

The regions with the greatest Indigenous linguistic diversity in the country.

The region includes languages from the *Tukano*, *Arawak*, and *Nadahup* families, in addition to *Nheengatu*.

The region has more than 50 languages representing 8 different linguistic families and 11 isolated languages.

The following languages can be found in the region: *Tupi*, *Karib*, *Arawak*, and *Trumai*. These are considered isolated languages, in addition to *Jê* languages in other areas of the Xingu Park.

Bonfim (RR)

Macuxi and Wapichana

Cantá (RR)

Macuxi

São Gabriel da Cachoeira (AM)

Baniwa, *Nheengatu*, *Tukano* and *Yanomami*

Santo Antônio do Içá (AM)

Tikuna

Monsenhor Tabosa (CE)

Tupi-*Nheengatu*

Barra do Corda (MA)

Tenetehara/Guajajara

São Feliz do Xingu (PA)

Mebêngôkre/Kayapó

Tocantínia (TO)

Akwê-Xerente

Miranda (MS)

Terena

Tacuru (MS)

Guarani

Legal Amazon  
Upper Rio Negro  
Guaporé-Mamoré  
Upper Xingu

● Brazilian municipalities with Indigenous languages among their official languages

KOKAMA, ALTACI E BONFIM, EVANDRO, PROJETO COLABORA



# THE DESTRUCTURING OF COMMUNITIES BY CITIES

**The pre-colonial human presence in the Amazon proves that there is no contradiction between the preservation of the forest and human presence. However, regional arrangements of villages and communities are increasingly threatened by the imposition of cities, which also endanger the forest.**

Following the publication of archaeological discoveries accumulated over the last three decades, there is now a consensus on the existence of a low-density, agrarian, and tropical urbanization that predated colonization in the Amazon. Many Indigenous peoples coexisted and communicated by means of the rivers, from the mouth of the Amazon River to the Andes. Rivers were the primary means of transportation, and their floodplains provided abundant food, such as fish, chelonians, and fruits. The narratives of European travelers make it clear that watercourses guided the positioning of human settlements.

Rivers, villages, farms, and forests complemented one another in shaping a landscape that was both molded by human activity and, in turn, influenced human generations. The village was the space for socialization and domestic life, while the river and forest served as production areas, supporting gathering, agroforestry cultivation, and fishing. From this perspective, it becomes easier to grasp that urbanization and forests are not necessarily contradictory – especially when the forest itself is produced by human interaction and serves as the primary provider of their essential resources.

Before Portuguese colonization, human settlements were small, located short distances from one another, and connected by rivers and land routes. The largest settlements were positioned at the confluence of two rivers, strategically placed for territorial control. The maintenance of this legacy today can be attributed to the incorporation of Indigenous villages into religious missions. Although religious leaders altered the layout of these settlements – introducing land allotments, for example – they preserved their original locations. In the 18th century, the Pombaline government expelled the missionaries but upheld the territorial organization inherited from forest-dwelling peoples. By adopting urbanization as a colonization strategy, the Pombaline administration established towns and cities on the sites of former missions, replacing Indigenous place names with Portuguese ones.

Although the colonizers aimed to promote large-scale plantations, they ultimately relied on the extraction of ready-made forest products. For centuries, colonizers learned from Indigenous peoples how to collect and consume these resources. The commercial value of certain forest products justified the description of economic cycles based on their export to Europe. This trade, in turn, provided the means to develop infrastructure and equipment similar to those of industrial cities, despite their different social formation and environmental context.

*In addition to the population increase in the Legal Amazon between 1960 and 2022 representing 187% of the national average in the same period, the rural exodus in the Amazon region has also intensified in recent decades.*

## THE AMAZON IS BECOMING MORE URBAN

Most of the Amazon population lives in urban areas.

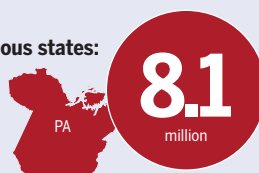


The **urban population** of the Amazon represents about **75%** of the total population of the region.



The population density in the Amazon region is **5.5 inhabitants per km²**.

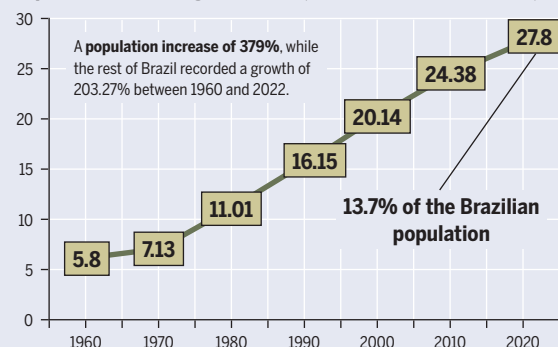
Most populous states:



Least populous states:



## Population of the Legal Amazon (in millions of inhabitants)

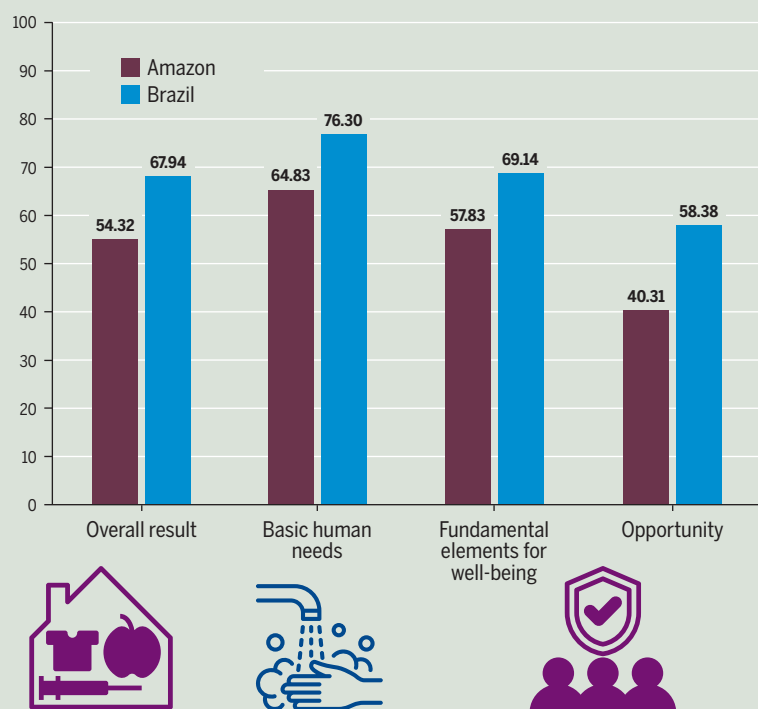


AMAZÔNIA 2030; CENSO 2022

## SOCIAL PROGRESS IN THE AMAZON

The Social Progress Index compiled indexes from different social dimensions for both the Amazon and Brazil in 2023.

### Overall result and Social Progress Index dimensions for the Amazon and Brazil in 2023



Of the 12 components of the Social Progress Index 2023, six have a low average index (below 60). They are: **Water and Sanitation, Personal Security, Access to Information and Communication, Individual Rights, Individual Freedoms, and Access to Higher Education.**

Regarding the **Environmental Quality** component, the recent increase in deforestation during the period analyzed for the Social Progress Index 2023 (August 2020 to July 2022) contributed to an index of **63.96**.



None of the nine Amazonian states surpassed the national average. Among the **15 municipalities with the lowest scores**, several are strongly linked to **deforestation, forest degradation, and social conflicts**.

IPS AMAZÔNIA - IMAZON

The so-called economic cycles came to represent cycles of exploitation and export of natural resources. For instance, the prosperity of the rubber cycle enabled the importation of sanitation solutions, energy supply, road paving, transportation infrastructure, and the private subdivision of land.

In the 20th century, Brazilian colonization led to widespread deforestation, increasingly redefining the forest as a rural space. The goal was to explore and accumulate public lands, even though they were already inhabited by people who had been stripped of their humanity by racism. The transformation of the forest into a rural area – driven by agrarian reform and major development works – displaced native populations to the outskirts of cities. This reinforced the perception of the city as the embodiment of urbanization, the space where new urban planning techniques should be applied.

A glimpse of this change occurred when large projects were supported by *company towns* – self-sufficient infrastructure hubs designed to house the most skilled workforce – while improvised settlements built by workers over three decades evolved into mid-sized cities.

Although the majority of the Amazonian population now lives in cities, the percentage of rural inhabitants is typically twice the national average, due to the legal classification of villages and communities as rural settlements. The cities of Manaus and Macapá (in the states of Amazonas and Amapá, respectively) concentrate 60% of their states' populations, whereas Belém, the capital of the State of Pará, concentrates 30%, experiencing population loss to its metropolitan surroundings. In this metropolis, 2022 data indicate a population increase on the islands, areas

*The Social Progress Index was designed according to the notion that development measures based on economic indicators are insufficient, since they do not demonstrate consequences such as environmental degradation, increased inequality, exclusion, and social conflicts.*

structured around villages, and communities. In Manaus, the Indigenous population is growing, and in cities such as Santarém, conflicts between native interests and commodity producers reveal that the same groups control both urban transformation and changes in so-called rural spaces.

Nevertheless, along the channels of the large rivers, villages and communities preserve the legacy of pre-colonial urbanization while continuing to supply cities with food. These areas complement urban centers, forming micro-networks that require mobility solutions and service provisions just as much as urban areas do. In this sense, the Amazon is characterized by dispersed regional formations that allow for the existence of green interstices, which act as microclimate regulators and providers of ecosystem services and food. However, due to a lack of understanding, these formations are being dismantled and replaced by cities that are losing vegetation cover both internally and externally.

Extensive occupation is the most beneficial practice for the market. However, it degrades ecosystems by incorporating native territories and dispossessing communities of their means of production, in addition to driving them into poverty. At the same time, these populations are gradually permitted to fill in floodplains, enabling high-cost macro-drainage systems to make these areas commercially viable. As a result, resilience and adaptability to contemporary crises – particularly climate crises – are being lost. ●

# THE APPEAL OF NATIONAL SECURITY IN THE AMAZON

**The military discourse of defending national security and sovereignty centers on controlling the Amazon as its primary project. The history of governance in the region and its borders is deeply intertwined with the interests of the Brazilian Armed Forces and the military-driven violence.**

The historical formation of what is now known as the Amazon dates back primarily to the colonial period and disputes between Spain and Portugal. One of the earliest marks of colonial occupation and exploitation was the metropolitan interest in extracting botanical, mineral, and faunal resources. Alongside economic, religious, and political interests, military strategy played a central role in the conquest, occupation, and exploitation and possession of the region. This was most evident in the construction of a network of military fortifications stretching from the northeastern coast through São Luís, Macapá, and Belém, reaching as far as Fort Príncipe da Beira (in present-day Rondônia). The fortification efforts began after 1750, with the signing of the Treaty of Madrid between Portugal and Spain, which recognized Portuguese sovereignty over vast territories west of the Tordesillas Line. In response, Portugal sought to secure its access to the region by fortifying the mouth of the Amazon River.

With the process of Brazilian independence underway in the early 19th century and its subsequent consolidation,

the nation-state and private enterprises maintained a similar approach to Indigenous territories and the region's natural resources as in the colonial period. Despite acting in an erratic, indecisive, and often secondary manner, Brazil sought – amidst spontaneous movements of settlers driven by survival and the rubber boom – to establish treaties in the latter half of the century to secure its borders and safeguard the economic and fiscal benefits of extractive exploitation in the Amazon. One such treaty was the Ayacucho Treaty (1867), by which Brazil recognized the present-day State of Acre as Bolivian territory. A year earlier, another measure granted Bolivia and Peru free navigation on the Amazon River. These agreements took place during the Paraguayan War (1864–1870), as the Brazilian imperial government strategically used Acre and the Amazon River as bargaining chips to ensure Bolivia and Peru's neutrality and prevent them from siding with Paraguay in the conflict.

However, Acre came to the forefront again in the late 19th and early 20th centuries, as it was already inhabited mainly by Brazilians – alongside the Indigenous populations that had long lived there – and armed conflicts between Brazilians, Peruvians, and Bolivians intensified

*The struggle for territory in Alcântara is regarded as one of the most significant cases of the quilombola cause in Brazil, according to the Map of Conflicts published by the Oswaldo Cruz Foundation. Although the base is currently underutilized, the Armed Forces continue to push for its expansion.*

## MILITARY BASE ON QUILOMBOLA LAND

The Alcântara Space Center in Maranhão was built on quilombola lands.

SEPTEMBER 1980

Home to 32 quilombos, the area was declared of "public utility" for the construction of the center.

2003

A fire caused by an accidental rocket launch killed 21 people. Since then, the base has remained underutilized.

2008

The Technical Report on the Identification and Demarcation of the Quilombola Land of Alcântara was published.

2023

Due to a lack of rockets, the center managed to place only one satellite in orbit.

APRIL 2023

The Brazilian government officially recognized that it had violated the rights of the quilombola communities in Alcântara. An interministerial working group was created to propose land titling measures for these communities.

JANUARY 2024

Quilombola organizations temporarily withdrew from the working group, demanding a halt to technical studies.

SEPTEMBER 2024

Signing of the Alcântara Agreement – a Term of Conciliation, Commitments, and Reciprocal Recognitions between the Brazilian federal government and quilombola communities.



Since 1986, 312 quilombola families have been **displaced from their lands** for the construction of the center. These families were relocated to military-planned agro-villages, far from the coast.

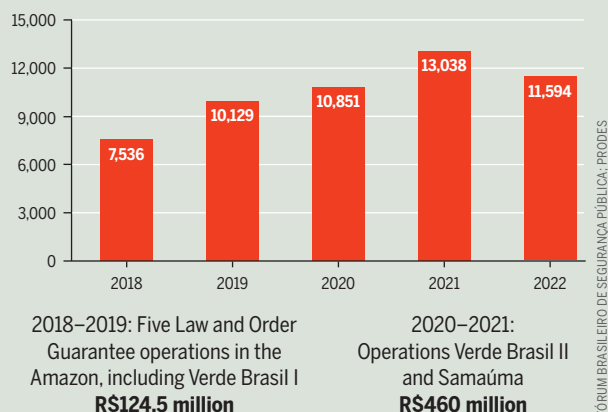


Alcântara has the largest quilombola population of any municipality in Brazil, with 85% of its **17,000 quilombola individuals** residing in nearly 200 communities.

## MILITARY IN COMMAND

Law and Order Guarantee operations placed the Armed Forces in charge of combating environmental crimes in the Amazon between 2018 and 2022. However, results were not significant.

### Deforestation in the Legal Amazon (km<sup>2</sup>)



in the border region. This led to the military occupation of Acre by the Brazilian government and the subsequent Treaty of Petrópolis (1904), which definitively incorporated the region into Brazil as the country's first Federal Territory. This allowed the Brazilian government to establish administrative and fiscal control over Federal Acre (1904–1962), which remained under near-exclusive military governance for almost six decades. In addition to Acre, two new Federal Territories were created in the Amazon in 1943: Guaporé (present-day Rondônia) and Amapá, both governed primarily by military rulers and located in border regions.

Added to this was the narrative of a resource-rich region left unprotected from international greed, a theme that became a recurring political banner after World War II, with a strong nationalist appeal. This notion became central to Brazilian military thought, particularly after the 1964 coup. In the wake of the national security ideology, large-scale projects were subsequently implemented, whether directly linked to the military or not. Examples include the Trans-Amazonian Highway; the National Integration Program, which aimed to resettle migrant populations in the region; the Polamazônia program; and various mining and hydroelectric power plant projects. Traditional and Indigenous populations were deeply affected by these developments, suffering from epidemics, loss of territory, and cultural erosion, as well as various forms of abuse, including enslavement and rape.

Between 2018 and 2022, studies and official documents indicate that institutional actions positioned the Armed Forces as the primary actor in combating deforestation, wildfires, land grabbing, invasions of Indigenous lands, and illegal mining in the Amazon. As a result, agencies such as the National Foundation for Indigenous Peoples, the Chico Mendes Institute for Biodiversity Conservation, and the Brazilian Institute of the Environment and Renew-

*The military rhetoric of “national security” and “national sovereignty” supports the majority of the management policies in the Amazon territory.*

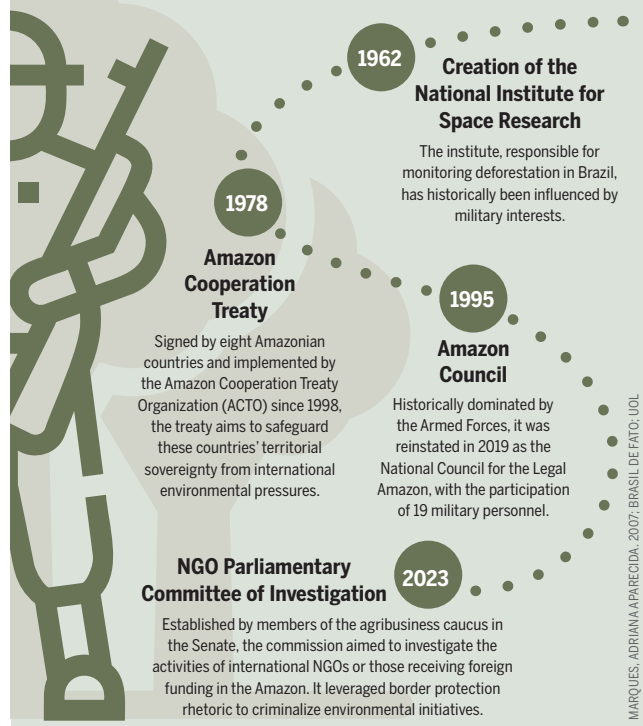
*The PRODES project uses satellite technology to monitor deforestation caused by clear-cutting in the Legal Amazon. Since 1988, it has produced annual deforestation rates based on the increase in deforested areas identified through satellite imagery.*

able Natural Resources suffered from neglect, dismantling, and loss of credibility. These institutions were led by military personnel lacking expertise in environmental and Indigenous policies. In 2021, a Law and Order Guarantee operation was launched in the Amazon, further expanding these dysfunctional and interventionist measures by assigning the Armed Forces responsibility for combating environmental crimes. Additionally, the Ministry of the Environment transferred financial resources directly to the Ministry of Defense.

Today, according to official data, the Brazilian Amazon hosts 63 military organizations and approximately 30,000 military personnel to oversee a land border spanning more than 15,000 km. This vast territory is further complicated by an extensive and porous hydrographic network that facilitates the entry of illegal drugs and weapons, with their trade controlled by large criminal organizations. This reality reinforces the recurring narrative within military sectors regarding the geopolitical and strategic need of ensuring Brazilian sovereignty over a region rich in minerals, biodiversity, and freshwater sources. Nevertheless, despite this military presence and the efforts of other federal and civil society organizations, effective border control, the containment of recurring illegal activities, and the safeguarding of the Amazon's natural resources remain far from an achievement worth celebrating. ●

## A HISTORICAL MILITARY RATIONALITY

Several initiatives have placed Amazonian territorial management under the control of the Brazilian Armed Forces, including:





# THE DEVELOPMENTALIST PROJECT ON THE AMAZON

**The climate crisis calls into question the ideology that shaped government policies for the Amazon. There is the need to prioritize alternative conflict models with current developmentalist projects focused on commodity exports and oil exploration.**

**D**espite the climate crisis, which imposes a sense of urgency on the planet, the Amazon continues to be viewed as a space to be occupied – a place for the conquest and intensive exploitation of natural resources and biodiversity. This ideology has formed the foundation for policies and plans across various governments and eras. It was the guiding conviction behind the “March to the West” program by President Getúlio Vargas during the New State period (1937–1945), and was later taken up by President Juscelino Kubitschek, who designed the Belém-Brasília Highway – approximately 2,000 km through the forest – to open the borders of the central-west region and achieve the definitive integration of the northern states into the market and development.

This highway represented the main geopolitical project of Brazilian modernization. This model was later adopted by the military governments after 1964, with the construction of major highways linked to colonization and national integration programs. These government policies led to large-scale territorial interventions, reshaping the patterns of human occupation in the forest and altering economic and power structures. Notable examples include the National Integration Program, the Grande Carajás Program,

and the Polamazônia and Polonoroeste Programs, all of which received financial support through tax incentives aimed at livestock farming, agriculture, timber exploitation, and the establishment of mining complexes.

From the 1960s onwards, large hydroelectric power plant projects were implemented one after another. While energy production for various uses is essential, it is crucial to pursue techniques that minimize socio-environmental impacts. The Amazon hosts the largest group of large-scale hydroelectric power plants projects in the country, characterized by substantial financing, rapid transformation of the vast territories where they are installed, and significant socio-environmental impacts. The following major projects stand out: Tucuruí (1984) and Belo Monte (2016) in Pará; Balbina (1989) in Amazonas; Jirau (2013) and Santo Antônio (2016) in Rondônia; and Lajeado (2002) in Tocantins. All of these projects faced strong opposition from social movements and environmentalists due to the socio-environmental consequences they caused during various phases of implementation.

These impacts include the forced displacement of social and ethnic groups, intense migration of workers attracted to the construction sites, widespread unemployment in the post-construction period, a significant increase in lawsuits filed in Labor Courts, and greater demand and pressure on public services. Additionally, there is deforestation, disruptions to the ecological and food chains of fauna, changes in the flora, and degradation in the quality of water and its flows. Overwhelming scientific reports have challenged the social, environmental, and technical viability of projects such as Belo Monte and Balbina, two of the most emblematic cases. Indigenous peoples, quilombolas, riverside populations, and rural residents mobilized across various fronts. Although the conditions validated by the Prosecution Office were acknowledged, they were often disregarded in most legal proceedings, with procedural bias favoring environmental licenses.

The Amazon currently occupies a central position, serving as a convergence point for the interests of large corporations in the production chains of grains, meat, and ores. It has become one of the most important corridors for the export of agricultural and mineral commodities in Brazil. Soybean production is expanding across the Amazon states, rapidly driving the process of land succession. There

## FERROGRÃO RAILWAY

The railroad project, which connects the cities of Sinop and Miritituba – in the states of Mato Grosso and Pará, respectively – aims to facilitate the flow of soybean production, integrating the logistics network of the grain chain in the region. The denunciation of socio-environmental impacts has, so far, slowed down its approval.



*A survey by InfoAmazonia, based on data from the Pará State Secretariat for the Environment and Sustainability, indicates that between 2014 and 2022, when the technical feasibility study for Ferrogrão railway began, the agency issued 6,972 fines within a 50 km radius of the railroad route, compared to 2,389 fines in the previous period (2005–2013).*



## BELO MONTE

The construction of the Belo Monte Hydroelectric Power Plant affected five municipalities and flooded 66,000 hectares.

Belo Monte diverted nearly  
**80% of the water from the Volta Grande of the Xingu River**

across a 130 km stretch between the two dams.

The project cost  
**R\$19 billion.**

It displaced **tens of thousands of people**, including hundreds of riverside families.

The project directly impacted  
**2 Indigenous lands.**

The courts have halted the plant's operations  
**7 times**  
due to the failure to comply with provisional remedies imposed on Concessionária Norte Energia to mitigate socio-environmental impacts.

Of the 47 provisional remedies,  
**34 were never complied with.**

IBAMA has fined the hydroelectric power plant  
**36 times**  
since 2012.

INSTITUTO SOCIOAMBIENTAL (ISA); MINISTÉRIO PÚBLICO FEDERAL; REVISTA VELA

The construction of five hydroelectric power plants in the Xingu basin was already planned in the 1980s. In 1989, the Indigenous peoples of the region mobilized against the installation of these plants by organizing the “Meeting of the Indigenous Peoples of the Xingu.” At the time, the Indigenous woman Yuíre Kayapó became widely recognized for her act of resistance, rubbing her machete in the face of the then-director of Eletronorte, José Antônio Muniz Lopes.

Finally, it is important to mention the oil exploration activities in the Upper Amazon region and along the Atlantic coast of Pará and Amapá. As of November 2024, following the research and prospecting phase, the project was in the auction and concession stage. The movement of geopolitical and economic interests, along with their alliances and strategies, particularly in a pre-COP 30 context, amid increasing extreme weather events worldwide and the urgent need for energy transition policies, raises important questions. How can we maintain the oil exploration model along the Amazon coast without irreversibly damaging the environment, especially considering the climate collapse we are already facing? And what role should Brazil play in international climate negotiations?

It is also important to question the current infrastructure policy for the Amazon, which continues to be centered on large-scale construction projects. In recent decades, this policy has guided the trajectory and socio-economic dynamics of deforestation, as well as the mapping of conflicts. Understanding this situation, which stems from the hegemonic (and unsustainable) development model, requires political responsibility to urgently promote energy transition processes and value alternative experiences and models of organizing life with sustainability and socio-environmental justice. ●

is a noticeable increase in both national and international interest in acquiring land for large-scale grain production, with investments focusing on the futures market. This dynamic puts significant pressure on the land market, driving land deals and, most notably, land grabbing.

Massive public and private investments in infrastructure projects are being directed toward transportation, ports, transfer stations, roads, railways, and cold storage facilities. The New Growth Acceleration Program (PAC 3) continues to follow the ideals of developmentalism and modernization. One such project, the Ferrogrão railway (EF 170), crosses Indigenous lands and protected areas to facilitate the flow of agricultural commodities, particularly. Given the scale of the project, the resources provided by the federal government, and its potential to attract various agents and create conflicts, it is crucial to monitor and control deforestation induced by the project. This requires strengthening land and territorial planning in the region, along with ensuring social participation and community oversight.

In 2023, the Xingu+ Network highlighted the need to reassess the technical, economic, and environmental feasibility studies of Ferrogrão railway, as well as the socio-economic studies. It also emphasized the importance of recognizing Free, Prior, and Informed Consultation and Consent as the mechanism to facilitate participation in decision-making processes.

*Petrobras appealed IBAMA's decision, which demanded analyses of the impacts of the project on Indigenous peoples. The Brazilian federal government supports oil exploration at the mouth of the Amazon.*

## OIL AT THE MOUTH OF THE AMAZON RIVER

The oil exploration project at the mouth of the Amazon River has sparked a conflict between environmentalists and the Brazilian federal government.



A study by Petrobras indicates that block FZA-M-59 on the Equatorial margin of the mouth of the Amazon in Amapá may contain over

**5.6 million** barrels of oil.

Petrobras estimates that the exploration area in the region could yield

**14.8 million** barrels of oil.

IBAMA

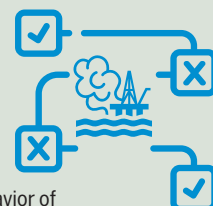
**denied the exploration license**  
for the block.

IBAMA's assessments indicate that the **environmental impact** in block 59 is at **maximum level**.

**18 negative impacts**

were recorded, **four** of which were classified as **high magnitude**.

Among these is the disruption of the behavior of **aquatic mammals and turtles** in the region.



PETROBRÁS; PODER 360; GREENPEACE

# DEGRADING THE FOREST

**Deforestation and wildfires are major threats to Amazonian biodiversity. Timber exploitation makes the forest more susceptible to fires, starting a cycle of degradation that eventually destroys it. Creating protected areas is vital to curb this loss.**

**T**he Amazon is home to an immense wealth of biodiversity, and its destruction would lead to the loss of most of that biodiversity. While the deforestation of the Amazon rainforest is widely recognized, a lesser known but potentially more dangerous threat is the degradation caused by wildfires, logging, and droughts exacerbated by climate change. Cutting down a tree is a conscious decision, and government measures can help discourage such actions. However, forest loss becomes much harder to prevent when trees are being destroyed by fires and drought. One major factor contributing to forest degradation – timber exploitation – can, in fact, be controlled.

Whether legal or illegal, logging creates openings in the forest canopy, allowing sunlight and wind to penetrate. It also leaves behind dead branches from harvested trees and those accidentally felled during logging operations. These factors increase both the likelihood of a fire starting and the intensity of its spread. Previous fires have a similar effect, setting off a vicious cycle where successive fires can eventually wipe out entire forests. Climate change is expected to extend the dry season in the Amazon, intensify-

ing droughts and rising temperatures – factors that further weaken the forest’s ability to withstand fires. The ongoing expansion of livestock farming in the region also heightens the risk of fires by fragmenting the forest into small patches with dry edges and deadwood. Additionally, fires used for initial land clearing or pasture maintenance often escape into the forest, providing a dangerous ignition source.

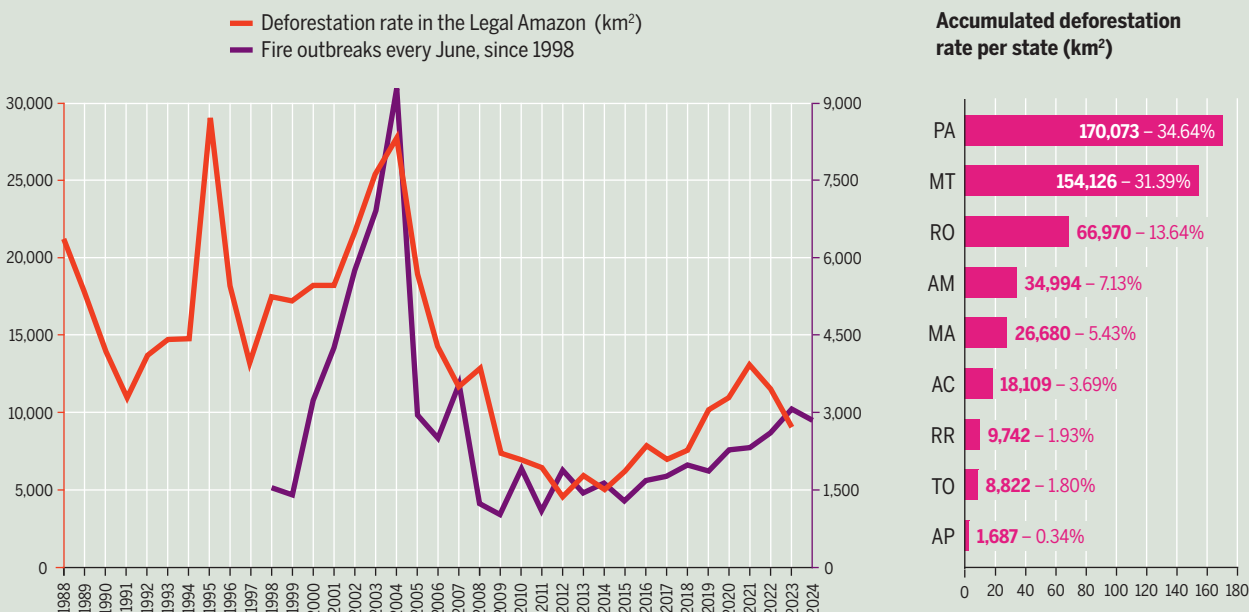
The loss of socio-biodiversity, along with the forest’s carbon stock – which plays a critical role in preventing global warming – and the loss of its water cycling function, which provides rainfall not only for the Amazon but also for other regions of Brazil and Latin America, are key reasons to stop the ongoing destruction of the Amazon rainforest.

Understanding the forces driving deforestation and implementing effective measures to combat them is essential to mitigating its impacts. Currently, most discussions focus on curbing illegal deforestation through inspections and fines. When other measures are considered, the conversation typically shifts to forest restoration. Unfortunately, this approach is counterproductive in the Amazon context. Restoring one hectare of degraded land in the Amazon costs far more than preventing the loss of one hectare of original forest. Moreover, the benefits of restoration, both per hectare and per real invested, are much smaller in terms of socio-biodiversity and climate. The resources available for

*During the government of former President Jair Bolsonaro, deforestation rates in the Amazon began to grow again for the first time since 2006.*

## THE AMAZON: DEFORESTED AND ON FIRE

The National Institute for Space Research monitors fire outbreaks and annual deforestation rates in the Amazon.



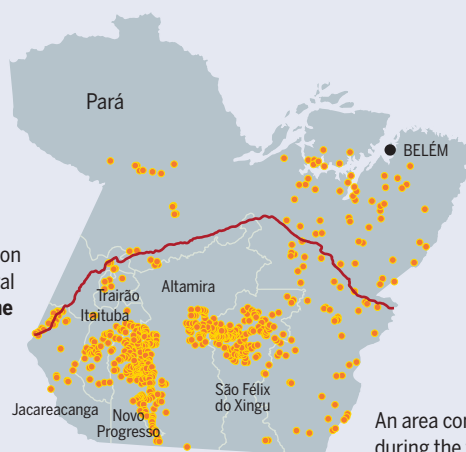
## DAYS OF FIRE

Between August 10th and 11th, 2019, rural producers in Pará mobilized politically to set fire to the Amazon rainforest. In 2024, record numbers of wildfires were also reported, with suspicions of organized criminal activity behind many of the outbreaks.

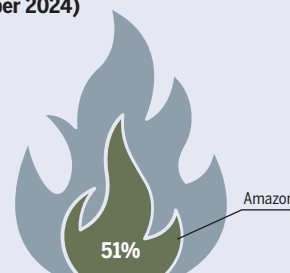
**1,456 fire outbreaks** were recorded in Pará between August 10th and 11th, 2019. 53 affected Indigenous lands. 534 affected Conservation Units.

50% of the fire outbreaks recorded on Fire Day in 2019 occurred within rural properties (207), but **only 5% of the properties were notified.**

● Heat source recorded  
— Trans-Amazonian highway



**Fire outbreaks (January to September 2024)**



An area comparable to the State of Roraima was burned in Brazil during the first nine months of 2024. The peak was in September, with **10.65 million hectares burned.**

GREENPEACE BRASIL: BDQUEIMADAS - TERRABRASILIS

environmental actions are always insufficient, and every real spent on restoration means one less real to prevent deforestation.

Stopping deforestation will require addressing the underlying causes driving this process. While there are many contributing factors, focusing on the most significant ones is the logical approach. Half of the recent deforestation has occurred on undesignated public lands. Illegal deforestation on these lands is highly profitable and has been rapidly increasing in the Amazon. This trend is further encouraged by a series of laws, either approved or pending in the National Congress, that aim to make land grabbing more flexible. The main actors in this process are large land grabbers and livestock farmers.

The Rural Environmental Registry, established in 2012 by the new Forest Code, greatly facilitates land grabbing by allowing individuals to register rural properties online with a self-declaration, without on-site inspections. Although the Rural Environmental Registry itself has no legal value as proof of possession or ownership, it effectively aids in illegal land occupation. Additionally, the legislation encourages land grabbing by pardoning over 40 years of environmental crimes. Allowing the current system to persist could lead to massive future deforestation in the Amazon. The legalization of illegal occupations – often referred to as “regularization,” which misleadingly suggests a legal right to the claimed lands – promotes further invasions of public lands.

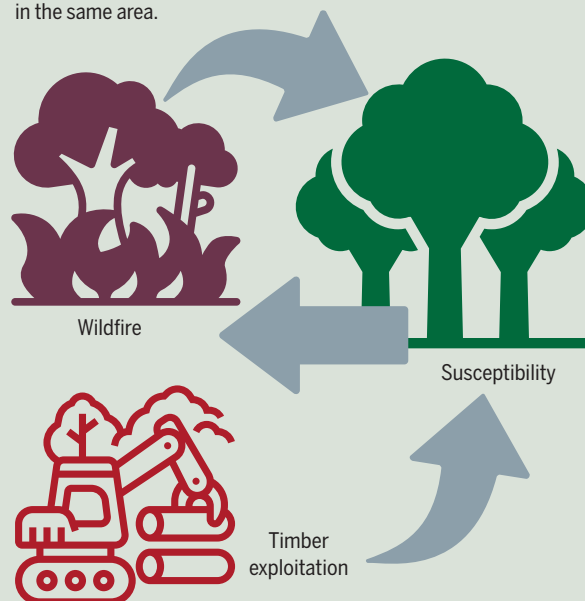
The eastern and southern parts of the Brazilian Amazon, known as the “deforestation arc,” are already heavily deforested, with what remains of primary forest in these areas being severely degraded. The relative preservation of other regions so far is primarily due to their difficult access for illegal deforesters. However, these remaining forest ar-

*The smoke column from Fire Day in 2019 was so intense that, on August 19th, it reached São Paulo, turning day into night in the city.*

eas are now under threat, particularly from planned infrastructure projects such as the reconstruction of the BR-319 Highway (Manaus–Porto Velho) and associated local roads, which would open these regions to the deforestation arc. To protect biodiversity and curb deforestation, creating new Indigenous lands and Conservation Units is essential. However, the regularization of illegal occupations has often taken precedence over the recognition of territorial rights for Indigenous peoples, quilombolas, and traditional communities. ●

## THE FOREST AND THE FIRE

Areas deforested by timber exploitation are more susceptible to fire. Once a wildfire occurs, it increases the risk of subsequent fires in the same area.



NEPSTAD, DANIEL ET AL. 2000

*Wildfires become more frequent and more damaging as the forest's susceptibility to fire increases, a vulnerability that is exacerbated by both timber exploitation and past wildfires.*

# AGRARIAN DYNAMICS AND INEQUALITIES IN THE AMAZON

**Soybean monoculture and livestock farming dominate the Amazonian productive structure. The Gross Value of Production for these sectors is rising, driven by high grain prices and development policies. In contrast, deforestation is on the rise, while the value of family farming production is declining.**

The agrarian economy of the Legal Amazon has grown rapidly in recent decades. Between the 1995 and 2006 censuses, the annual increase in the Gross Value of Agricultural Production (GVP) was 5.2%, rising to 7.7% between 2006 and 2017, and reaching 13.6% per year by 2022. During this period, GVP at constant 2020 prices surged from R\$34 billion to R\$250 billion. This growth was accompanied by a profound restructuring of production modes, intense land concentration, and significant increases in deforestation and related emissions.

As a result, the productive structure of the Amazon has become heavily skewed toward employer-based agriculture – agribusiness – centered on wage labor, at the expense of rural, minor, and small-scale family farming. This trend persisted in the years following the 2017 census, driven by a significant increase in GVP, with one-third of the growth attributed to rising prices fueled by global market demand. By 2022, agribusiness accounted for 90% of the region's agrarian economy, while the share of rural family farming declined from 47% to just 10% over the same period.

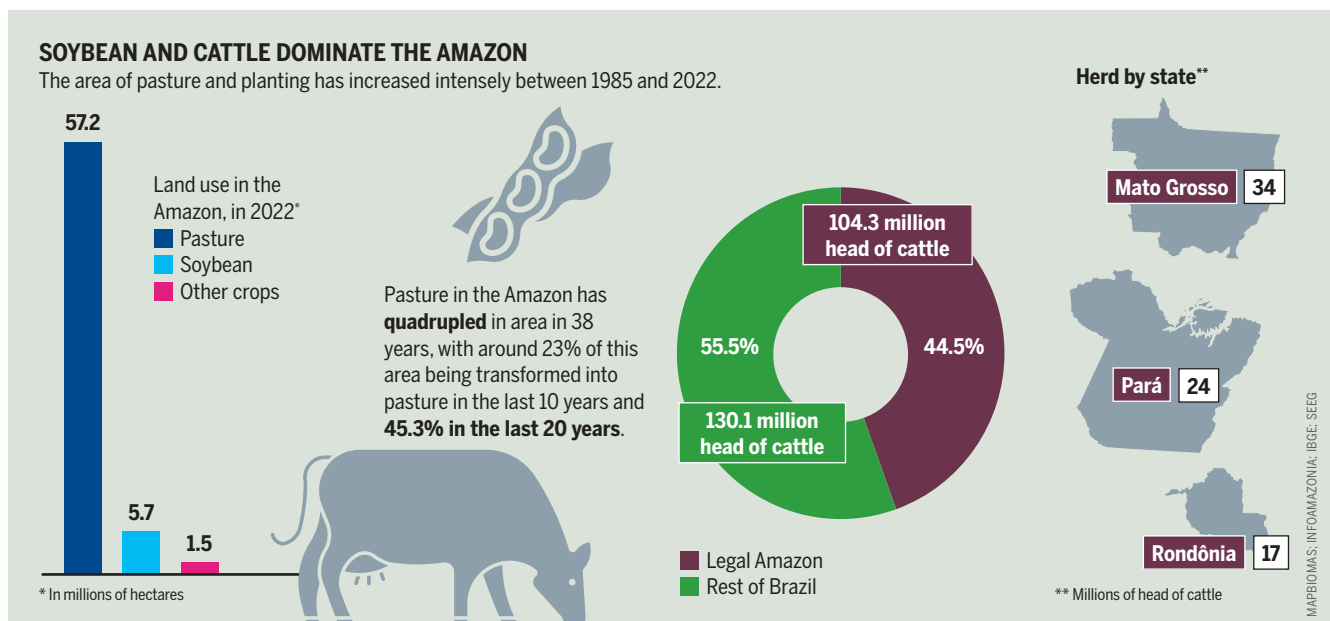
The land controlled by establishments driving this dynamic has reached colossal proportions, expanding from

119 million hectares in 1995 to 131 million in 2017. Of this total, 79% belonged to agribusiness establishments. In 2017, agribusiness agents controlled 103 million hectares, including 59 million hectares of deforested land and 44 million hectares of forest. Assuming the total land area remained unchanged, the proportion of deforested land has increased significantly in recent years. In 2017, it stood at 59%, already well above the 20% limit established by the Forest Code for the region. By 2019, this figure had risen to 63%, and by 2022, it had reached 71%. This expansion resulted in the clearing of 14 million hectares of forest, generating substantial environmental impacts.

Agribusiness in the Amazon evolves along three socio-technical trajectories, referred to here by the acronym STT. These include the socio-technical trajectory focused on production systems centered around grain cultivation (STT-Grains), the socio-technical trajectory structured around beef cattle farming (STT-Livestock Farming), and the socio-technical trajectory based on homogeneous plantations of permanent crops and silviculture (STT-Plantations).

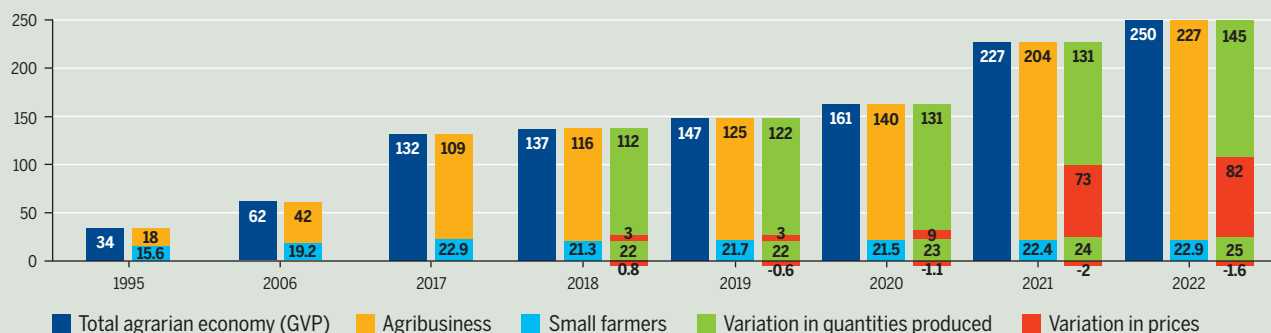
Among these, STT-Grains, characterized by grain production with intensive use of mechanical and chemical resources, experienced the fastest growth. The GVP increased by 10% year-on-year between the 1995 and 2017 Agricultural Census, and in the following years, this growth more than doubled. As a result, there was greater land conversion and increased farmer involvement in this socio-techni-

*Agribusiness is one of the main causes of deforestation in the Amazon region.*

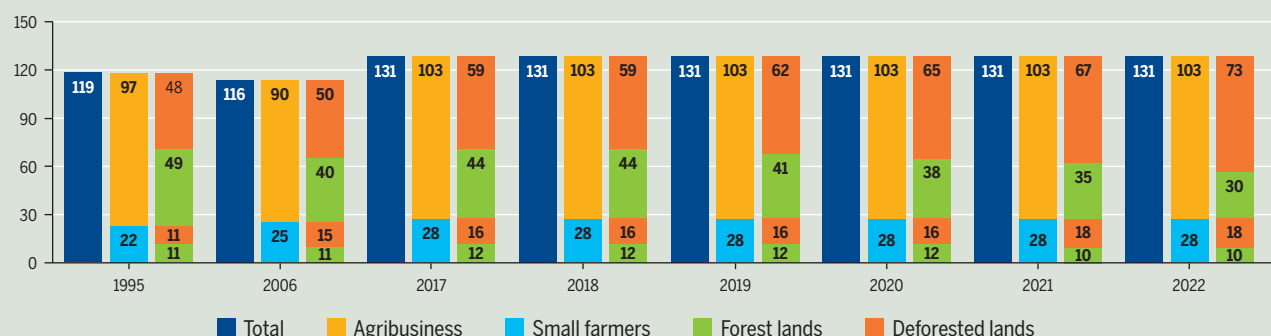


## AGRIBUSINESS AND THE ECONOMY IN THE LEGAL AMAZON

Agribusiness has an increasing share of the GVP in the Legal Amazon, while the participation of small farmers has stagnated. The result not only reflects an increase in the quantity of food produced, but also an appreciation in prices. Meanwhile, the production of small farmers has faced price devaluation.\*



Deforestation of millions of hectares in areas occupied by agribusiness has increased over the years, while it has remained stagnant in areas occupied by small farmers.



\* Evolution of the GVP illustrating the shares explained by the rise in prices and in quantity produced at constant 2020 prices.

CENSO AGROPECUÁRIO DE 1995, 2006 E 2017; IBGE - PRODUÇÃO AGRÍCOLA MUNICIPAL; IBGE - PRODUÇÃO EXTRATIVA VEGETAL E DA SILVICULTURA; SISTEMA SUDRA

cal trajectory, driven by grain price increases of 10% in 2020 and 45% in both 2021 and 2022. The rising demand for land in this trajectory intensified deforestation, reaching nearly 7 million hectares cleared for soybean and corn cultivation. The success of STT-Grains was largely due to the productivity gains from the soybean-corn intercropping system. These developments were supported by public policies that provided technical assistance and financing at privileged levels.

The second fastest-growing and most significant agribusiness production structure in the Amazon is STT-Livestock Farming. Its GVP grew by 3.8% per year between 1995 and 2006, doubling its growth rate to 7.8% per year in the following intercensal period. By 2017, it accounted for 25% of the region's agrarian economy. Since then, the trajectory's production value has increased by a factor of 2.3, while its demand for new land – 34 million hectares in 2017 – expanded by approximately 7 million hectares by 2022. This growth represents about 40% of all deforested land in the Legal Amazon that year. The net CO<sub>2</sub> emissions associated with this deforestation, as well as common pasture management techniques in STT-Livestock Farming – including land clearing through wildfires – accounted for no less than 60% of agriculture and livestock emissions between 1995 and 2006, rising to 65% between 2006 and 2017.

Despite its characteristics that do not align with the principles of sustainable development, the relationship between STT-Livestock Farming and development policies has been privileged, much like that of STT-Grains. In 2017, 20% of agricultural establishments following this trajectory

*From a balanced situation in 1995, when it accounted for 53% of the agricultural GVP in the Legal Amazon, agribusiness grew to represent 83% of the sector's economy by 2017. Meanwhile, family farming's share declined from 47% to 17% over the same period.*

ry received technical assistance – compared to just 9% for family farming. STT-Livestock Farming had 34% of its GVP financed in 2017, nearly triple the amount in 2006, more than double that of family farming, and the highest proportion among all other socio-technical trajectories in the agribusiness sector. STT-Grains and STT-Livestock Farming have expanded in close cooperation. The former has absorbed lands already deforested by the latter, which is responsible for the significant net CO<sub>2</sub> emissions previously mentioned. In turn, profits from land transactions with producers and investors in STT-Grains have supported STT-Livestock Farming's competitiveness and expansion.

A third agribusiness trajectory, STT-Plantation, has shown very modest economic performance, growing at a rate of just 0.7% per year and reducing its share of the agrarian economy from 6% to 3% between 2006 and 2017. Despite deforestation rates of 50%, its permanent vegetation cover results in relatively favorable carbon balances. However, this trajectory receives the least public funding and technical assistance within the agribusiness sector. In 2017, no more than 17% of its establishments received technical assistance, and only 21% of its GVP received financing. ●



# ILLEGAL MINING IN THE MUNDURUKU TERRITORIES

**Mining has been growing in the Amazon, especially in Indigenous lands, causing a series of socio-environmental impacts. The Tapajós River basin is among the most affected regions, where the Munduruku people continue to resist violence and environmental contamination.**

According to 2022 MapBiomass data, 92% of Brazil's mined area is in the Amazon, with the majority dedicated to gold extraction. This reflects a historical trend of expanding mining activity in the region, which has quadrupled since 2010. Between 2018 and 2022, mining in the Amazon intensified within Indigenous lands officially demarcated and recognized by the Brazilian federal government, driven by policies of the government of former President Jair Bolsonaro (2019–2022) and a record surge in gold prices during the COVID-19 pandemic. This scenario highlights the predatory extraction that has defined the new character of illegal mining in Indigenous lands in Brazil over the past six years. In Brazil, the mining activity is known as “garimpo” – a Brazilian term originally used to describe alluvial mineral extraction with rudimentary tools – which has, in recent decades, evolved into a mechanized and capital-intensive operation. As a result, *garimpo* has acquired characteristics typical of industrial mining, leading to an expansion in extraction scale and socioenvironmental impacts.

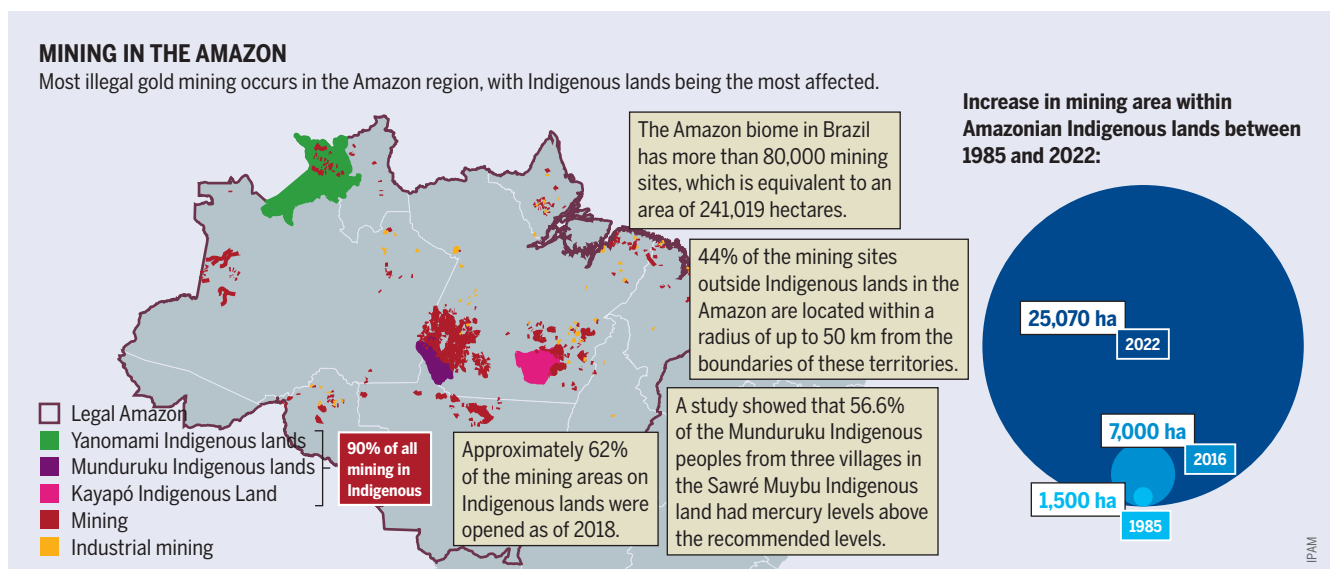
Mining in Indigenous lands in Brazil is illegal under the Brazilian Federal Constitution. The push to legalize mining in these territories was central to the advancement of the Temporal Framework Bill, a legal thesis that restricts Indig-

enous peoples' land rights to those occupied as of October 5th, 1988 – the date of the Brazilian Federal Constitution's promulgation – among other provisions. Although the bill was sanctioned and enacted as Law No. 14,701 in 2023, the legalization of mineral extraction within Indigenous lands and protected areas remains highly controversial.

Currently, mining is linked to human trafficking, sexual exploitation, and slave-like working conditions. It is also facilitated by groups with characteristics of criminal organizations, such as the absence of traceability mechanisms in gold trading and the influence of powerful lobbying efforts. Mining expansion has been further enabled by government policies, particularly the presumption of good faith principle established by Law No. 12,844/2013. Until May 2023, this law allowed gold-buying companies to declare the metal's origin using only a paper form, without verification, effectively promoting gold as a means for money laundering.

Mining on the Tapajós River, in southeastern Pará, is emblematic due to its long history of mining activity and the resulting environmental devastation. The Tapajós Basin is considered the world's largest mineral province in terms of area and has historically had the highest concentration of miners in the Brazilian Amazon. The Munduruku people have traditionally occupied the Tapajós Basin for centuries. The municipality of Itaituba, which includes part of their territory (Sawre Muybu and Sawre Ba'pim Indigenous lands, and the Praia do Índio and Praia do Mangué

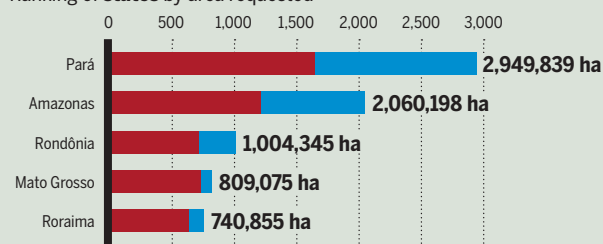
*The extraction of natural resources from Indigenous lands is prohibited. The regulation of mining sites and activities in these territories has been the subject of several legislative proposals in recent decades.*



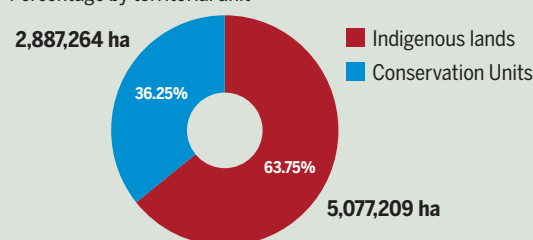
## MINERAL EXPLORATION IN THE AMAZON

Brazilian legislation prohibits mining in protected areas. However, hundreds of mining application processes have been registered in these areas in recent years.

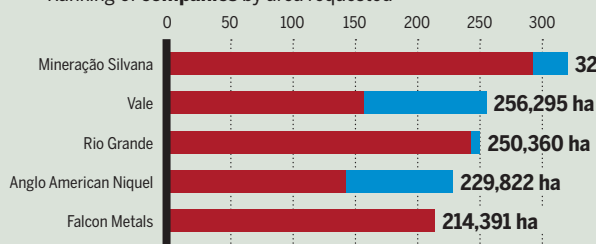
Ranking of **states** by area requested



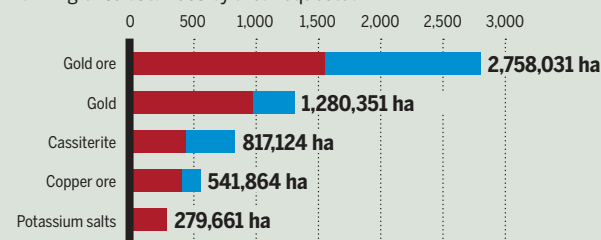
Percentage by territorial unit



Ranking of **companies** by area requested



Ranking of **substances** by area requested



AMAZÔNIA MINADA – INFOAMAZÔNIA/AMAZON WATCH-AGÊNCIA NACIONAL DE MINERAÇÃO

reserves), has the highest concentration of mining activity in Brazil, followed by Jacareacanga, where the Indigenous lands belonging to Munduruku, Sai Cinza, and Kayabi peoples are located.

The first major mining boom in this basin occurred in the 1980s. However, gold mining in the Amazon began earlier, in the 1970s, driven by military government policies aimed at population expansion and investment stimulation. The creation of the Tapajós Mining Reserve – covering approximately 29,000 km<sup>2</sup> in the municipality of Itaituba – in 1983 by the National Department of Mineral Production (later replaced by the National Mining Agency in 2017) underscores the region's strategic importance for mineral extraction.

In 2019, during the second major surge of mining in the Brazilian Amazon, the Tapajós region witnessed increased deforestation due to gold mining in the Munduruku and Sai Cinza Indigenous lands. Mining permit requests to the National Mining Agency intensified. In May 2021, the local government of Jacareacanga encouraged pro-mining demonstrations, which led to armed attacks on the Fazenda Tapajós village in the Munduruku Indigenous territory. Two months earlier, the headquarters of the Wakoborūn Association, the Ipereg Ayū Movement, and other Munduruku resistance organizations – groups that had publicly opposed mining – were vandalized. During this period, Munduruku leaders faced a growing wave of death threats as a result of their reports on illegal mining activities in their territories. According to a survey conducted by the Munduruku people themselves, at least 18 leaders are currently under direct threat.

In this context, the Munduruku continue to suffer devastating consequences to their health. The use of backhoes,

*Mercury is a toxic metal whose commercialization is prohibited in Brazil. The country is a signatory to the Minamata Convention, which restricts its use. It is used by miners in the process of separating gold from sediment.*

*Despite the ban on mining in protected areas, the National Mining Agency maintains thousands of valid applications for these areas in its system, as it understands that there is a chance that the “resource will be provided.”*

dredgers, and other machinery pollutes and destroys the main sources of drinking water for the people. Mining also provides ideal conditions for the reproduction of the mosquito that transmits malaria. Adding to the health crisis is the chronic exposure of the Munduruku people to mercury. Called *azougue*, it is used in mining to “purify” the gold and makes fish, the main source of protein for the people, the main channel of contamination. It mainly affects the nervous system of newborns and children.

The Munduruku people have resisted illegal gold mining on their lands since at least the 1980s, intensifying their actions in the 2010s with the implementation of independent inspections. Without the support of the competent agencies, they continue to implement initiatives to defend their territory. ●

## ILLEGALITIES IN THE GOLD PRODUCTION CHAIN IN BRAZIL

A significant portion of the gold traded in Brazil comes from illegal mining. Studies indicate that the use of mercury in illegal mining activities has contaminated Indigenous peoples.



Of the 174 tons of gold traded between 2019 and 2020, **49 tons** come from areas with evidence of irregularities.



For each gram of gold produced, **1.3 to 8 grams** of mercury are used. Between 2018 and 2022, 185 tons of mercury of unknown origin were used in Brazilian mines.

PORTAL DA TRANSPARÊNCIA DO OURO; MANZOLI, BRUNO ET AL. 2021; MINISTÉRIO PÚBLICO FEDERAL; INSTITUTO ESCOLHAS; FICRUIZ

## ROADS

# BR-319: A ROAD TO THE END OF THE AMAZON

**The construction of roads in the Amazon accelerates deforestation and land grabbing, threatening biodiversity, ecosystem services, and traditional populations. Among these projects, the paving of the BR-319 highway stands out as a significant threat, endangering one of the last remaining intact forest areas and pushing the Amazon beyond the tolerable deforestation threshold.**

**T**he Amazon region has unique vegetation types and geographic characteristics, with its vast rivers serving as the primary access routes and means of economic integration. Despite these singularities, in the 1970s, the Brazilian dictatorial government promoted road construction as a strategy for occupation and the expansion of agriculture and livestock farming in the region. The first highways built were the BR-010 (Belém–Brasília) and BR-364 (São Paulo–Acre), inaugurated in 1960, followed by the Transamazônica (BR-230) in 1972, which connects Lábrea, in the south of Amazonas, to Altamira, in Pará, and extends to João Pessoa, in the country's northeast.

In 1976, the BR-319 highway was inaugurated, linking Porto Velho, the capital of the State of Rondônia, a municipality within the notorious deforestation arc, to Manaus, the capital of the State of Amazonas, where it intersects with the Transamazônica highway in the municipality of Humaitá. That same year, the BR-163 highway (Cuiabá–Santarém) was inaugurated, although its paving was only completed in 2024. Road expansion plans continued with the construction of the BR-174 highway (Manaus–Boa Vista), which was completed in 1977. Its construction came at the cost of the

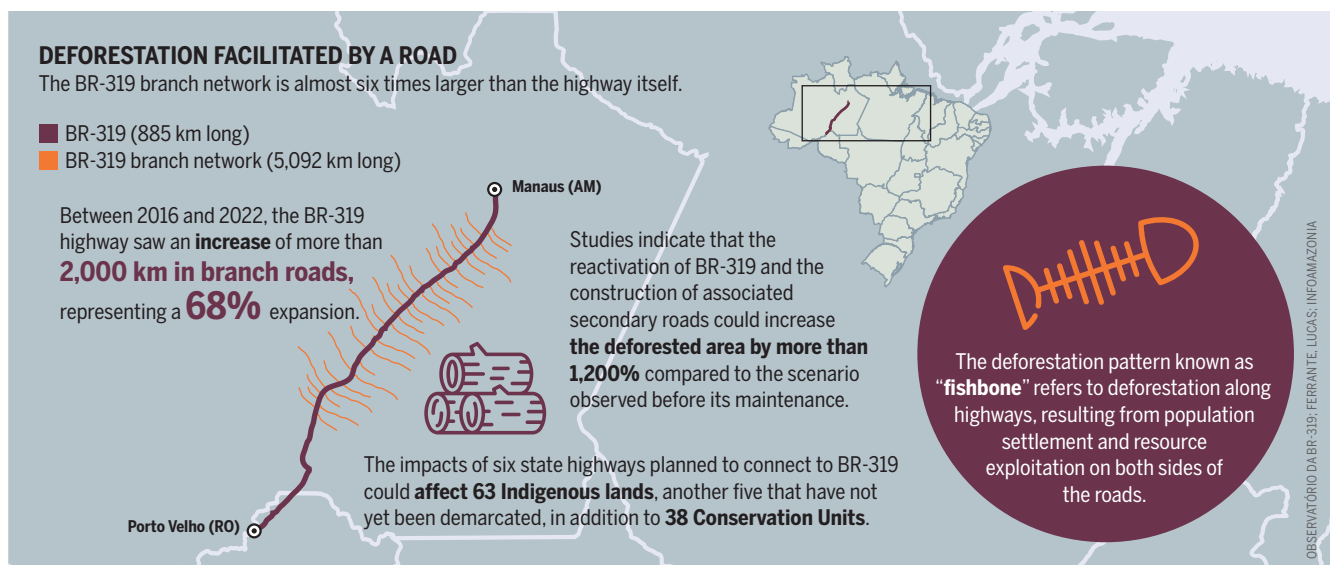
massacre of the Uaimiri-Atroari Indigenous peoples, who now reside in a reserve that is bisected by the road.

The construction of these highways led to a sharp increase in deforestation, forest degradation, illegal timber extraction, land grabbing, the spread of endemic diseases, and rising violence, including the presence of hitmen along their entire length. In short, highways in the Amazon region have never fostered the development of the municipalities they connect; instead, they have deepened social, economic, and health disparities. This process has been characterized by constant violations of the rights of traditional peoples, escalating violence, and worsening environmental degradation.

One of the cases that has recently gained notoriety due to the promise of repaving is the BR-319 highway. Although construction began in 1973 and it was inaugurated in 1976, the highway became impassable in 1988 due to lack of trafficability and economic unviability. This, in turn, helped preserve the large block of forest between the Purus and Madeira rivers.

In 2015, a new maintenance license was issued for the BR-319 highway without the necessary controls and environmental studies, leading to a significant increase in deforestation in the region. The area around the highway began to attract squatters and land grabbers, who, in addition to engaging in land speculation, took advantage of the improved infrastructure to expand illegal deforestation and timber extraction activities. The lack of environmental inspection and governance, along with the irregular

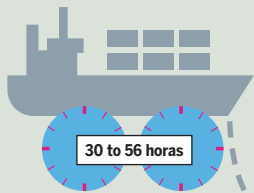
*The paving of the BR-319 highway is a political project defended by developmentalist sectors and has divided the Amazon population.*



## IMPROVE TRANSPORTATION?

A study revealed that transporting oxygen via BR-319 highway worsened Manaus' health crisis during the COVID-19 pandemic.

**River transportation**  
(via Madeira River)



30 to 56 horas



**Land transportation**  
(via BR-319 highway)



96 horas

A study indicates that the National Department of Transport Infrastructure neglected the most efficient route for delivering oxygen during the second wave of COVID-19 in Manaus. Instead of using the Madeira River – whose navigability was in ideal conditions at the time – the agency opted for BR-319 highway, a decision that may have impacted the number of deaths.

The chosen route implied additional costs of R\$1.5 million.

FERRANTE, LUCAS E FEARNSIDE, PHILIP 2023.

River transportation of people and cargo has historically been the most used means in the Amazon region. There are more than 16,000 km of navigable rivers in the region.

the plenary session of the Chamber of Deputies. This proposal seeks to classify the BR-319 highway as “critical infrastructure essential to national security,” mandating the issuance of permits for construction and the immediate allocation of resources for the project. Lacking proper technical justification, the bill disregards ministerial authorities and national legislation. Additionally, it seeks to redirect funds intended for environmental preservation, such as those from the Amazon Fund, to finance a project with significant environmental impacts on the Amazon rainforest. The Federal Attorney General has urged the administration under the oversight of President Luiz Inácio Lula da Silva to adopt stronger measures to protect isolated Indigenous populations in the region. However, the Brazilian federal government has expedited the environmental licensing process without implementing necessary protection mechanisms for the affected traditional communities.

The multiple impacts of the BR-319 highway demand that decision-makers assess the project based on technical criteria. However, the ambitions of local politicians and the federal government have clashed with scientific arguments. The underlying motivations include plans to build additional roads branching from BR-319 to facilitate access to oil and gas exploration areas in the Amazon, as well as the opportunity to open more land for speculation – benefiting a select group with privileged access to land regularization. Additionally, these developments would weaken the recognition of Indigenous lands and traditional communities. A noteworthy example is the proposed AM-366 highway, which would grant access to the Trans-Purus region, considered the last intact portion of the Amazon rainforest. Scientific studies overwhelmingly indicate that this trajectory would lead to an irreversible ecological and climate collapse, not only in the Amazon but on a global scale. ●

granting of forest management licenses without proof of land ownership, enabled large-scale predatory timber exploitation. This scenario facilitated the conversion of vast forested areas into pasture and agricultural land, intensifying environmental degradation and threatening both biodiversity and the traditional peoples of the Amazon.

The BR-319 highway is the only major infrastructure project in Brazil without an economic feasibility study. Initially justified as essential for national security, this argument has been refuted by military authorities, as the highway is far from any international border. Three independent studies have demonstrated that the road is ineffective for regional transportation, with cabotage proving to be a cheaper and more efficient alternative.

On December 18th, 2023, under urgent proceedings, Bill 4,994/2023 was added to the agenda for discussion in

*The total cost of the road paving projects is US\$26 billion.*

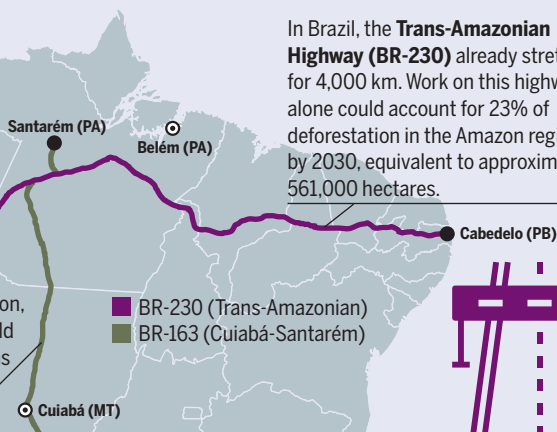
*Researchers indicate a lack of solid data and reliable technical feasibility studies for the projects.*

## THE THREAT OF PAVING

There are 75 road paving projects in the Amazon basin across five countries, totaling 12,000 km of planned roads.



**BR-163 highway (Cuiabá-Santarém)**, the main route for soybean transportation, if expanded to the planned 496 km, could result in the emission of 400 million tons of carbon by 2030.



In Brazil, the **Trans-Amazonian Highway (BR-230)** already stretches for 4,000 km. Work on this highway alone could account for 23% of deforestation in the Amazon region by 2030, equivalent to approximately 561,000 hectares.

They could cause deforestation of **2.4 million hectares**.

Brazil leads the ranking with **24 projects**, impacting **1.42 million hectares** of additional deforestation.

VILELA, THAIS ET AL. 2020; MONGABAY



# DYNAMICS OF CRIMINAL FACTIONS IN THE AMAZON REGION

**There are significant drug trafficking routes passing through the Brazilian Amazon. Controlling these routes and local markets has become a primary objective for criminal factions. As drug traffickers professionalize their operations and expand their involvement in environmental crimes, the region is undergoing a process of increasing internal violence.**

Studies indicate that organized crime has been active in the Amazon basin since the 1980s. During that time, the region served as a key corridor for cocaine trafficking into Brazil from Andean countries, primarily Bolivia, Colombia, and Peru – still the world’s largest cocaine producers today. The role of the Amazon region, or Pan-Amazon, in criminal dynamics is unique due to its vast territorial extension of approximately 6.74 million km<sup>2</sup>, which spans beyond Brazil into Bolivia, Colombia, Ecuador, Guyana, Peru, Venezuela, Suriname, and French Guiana.

The absence of an integrated regional security policy, combined with inadequate management of the transition from traditional informality to formalized modernity, has facilitated the expansion of transnational organized crime in the Amazon. Transnational crime involves the various connections established along trafficking routes, driven by the global dynamics of illegal markets, with the Amazon serving as a key hub connecting South America, Africa, and Europe.

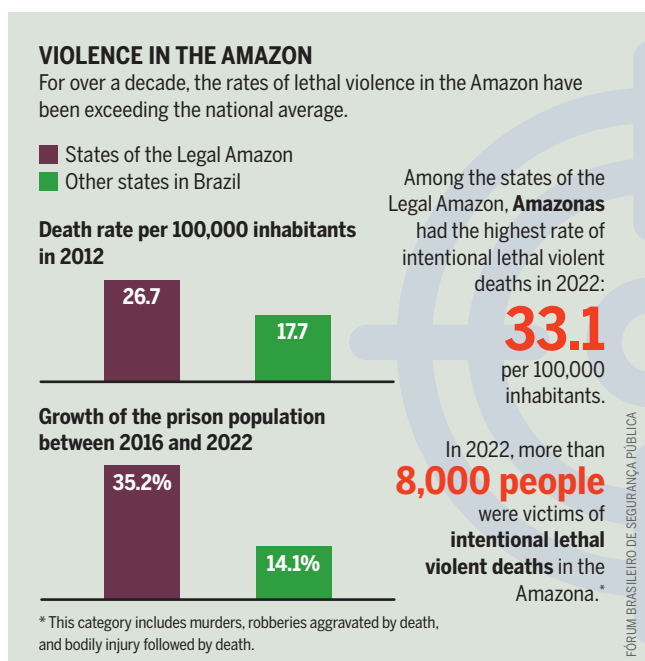
In recent years, reports from the United Nations Office on Drugs and Crime (UNODC) have indicated that Brazil is the world’s second-largest consumer of cocaine, being second only to the United States. This global market structure has driven a significant shift in the internal organization of criminal groups in the Brazilian Amazon, as controlling major drug trafficking routes has become a primary objective for criminal factions – both to supply the domestic market and to meet international demand.

In this context, criminal factions that once operated mainly in southeastern Brazil have expanded their presence in the Amazon, including Primeiro Comando da Capital from São Paulo and Comando Vermelho from Rio de Janeiro. Additionally, regional criminal factions such as Família do Norte in Amazonas and Comando Classe A in Pará have emerged, asserting territorial control, forming alliances, and clashing with non-regional criminal groups – significantly contributing to violent conflicts in the region.

Violence, both as a means of managing conflicts and in its relationship with nature, has been a defining characteristic of Amazonian history when it comes to its occupation. The unchecked assertion of power over land – rooted in patrimonialism and clientelism – intersects with the operations of criminal factions and militias. Nowadays, violence against Indigenous peoples, quilombolas, and other traditional communities occurs at the crossroads of security forces, business interests, and political networks, reinforcing a criminal form of governance.

The expansion of drug trafficking in the Amazon has been accompanied by escalating violence in rural areas, driven by these criminal factions. However, two key aspects stand out: (1) the growing intersection between drug trafficking and environmental crimes, and (2) the serious threat that drug trafficking poses to the territories and ways of life of Indigenous peoples, quilombolas, and river-side communities.

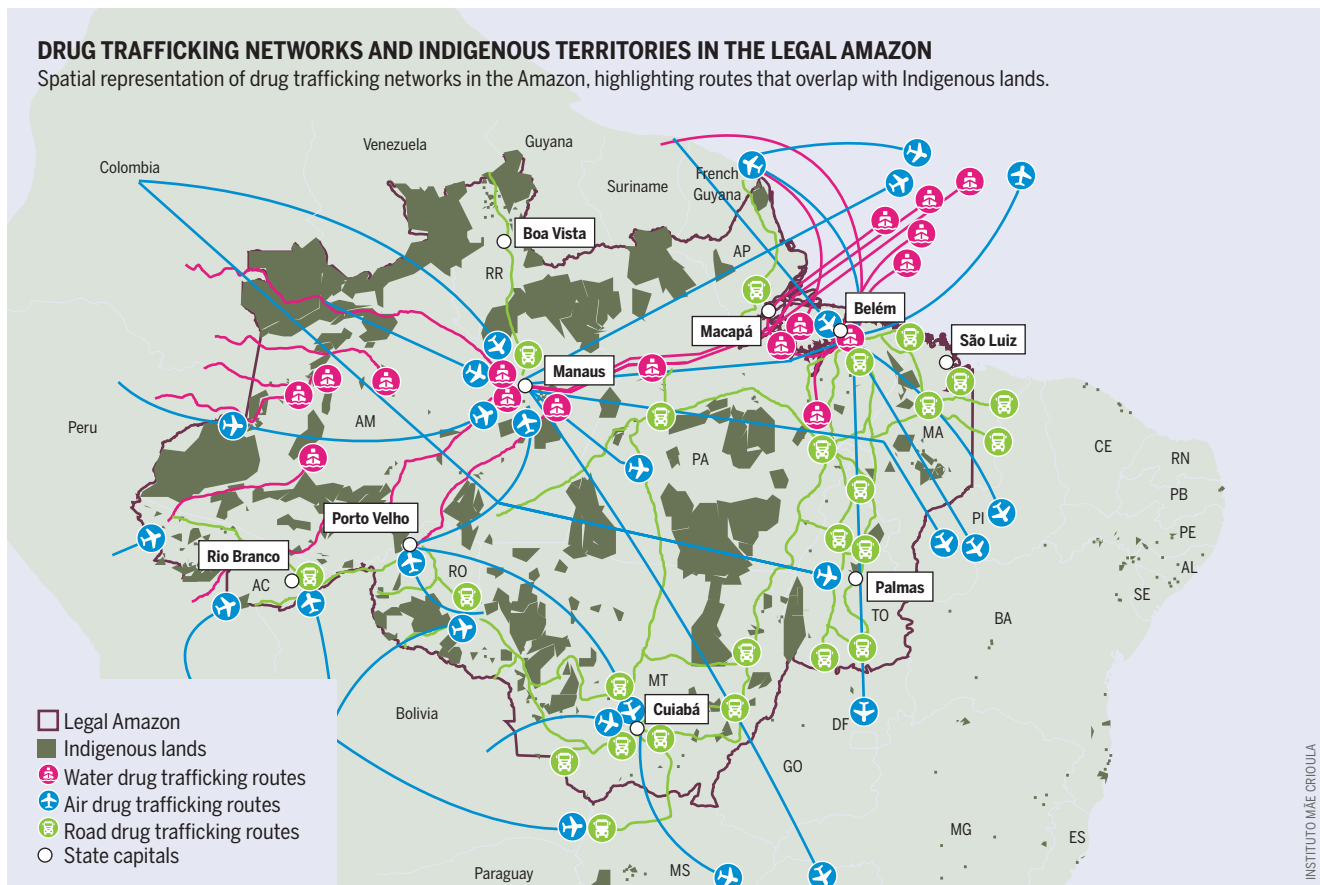
The relationship between drug trafficking and environmental crimes occurs through illegal activities such as illegal timber exploitation, mineral smuggling (manganese and cassiterite), and land grabbing. These activities have been financed by organized crime in recent years, mainly as a money laundering strategy. Regarding the threat to Indigenous territories, the most notable are the expansion of illegal gold mining and the invasion of these



*The report concluded that the inter-institutional coordination between public security forces and environmental enforcement agencies in the Amazon lacks the operational capacity and integration needed to effectively curb the expansion of organized crime in the region.*

## DRUG TRAFFICKING NETWORKS AND INDIGENOUS TERRITORIES IN THE LEGAL AMAZON

Spatial representation of drug trafficking networks in the Amazon, highlighting routes that overlap with Indigenous lands.



territories by members of criminal factions, who recruit young Indigenous peoples and alter the daily lives of the communities. Also noteworthy is the proximity to these peoples generated by the various means of transporting drugs, whether via roads close to or connected to the Indigenous lands, via the rivers that connect them, or by the use of aircraft that land on clandestine runways illegally built in protected areas. In this way, the spread and territorialization of criminal factions and militias in the Amazon has contributed to the professionalization of violence that weakens Amazonian institutions and populations, as well as alternatives for protecting human rights and implementing a fair climate policy.

As a backdrop, it is important to consider the development models aimed at the region, which have been violating the territorial rights of traditional populations in an authoritarian and conservative manner for centuries, causing environmental damage and producing vectors of inequality that are now being appropriated by organized crime, of which drug trafficking is just one of the activities highlighted here. Therefore, it is imperative to analyze other criminal dynamics associated with the unresolved land issue that still represents the main problem in the Amazon, leading the biome to processes of deterioration, such as savannization, and its populations to criminalization. ●

*Most municipalities are dominated by one of these two major criminal organizations: Comando Vermelho from Rio de Janeiro or Primeiro Comando da Capital from São Paulo. Additionally, 80 municipalities are actively disputed between rival criminal factions.*

*Drug trafficking routes cross borders and converge at strategic points – cities that function as key “hubs” of interaction.*

### THE RISE OF ORGANIZED CRIME IN THE AMAZON

Most of the population in the Amazon region lives in areas controlled by criminal organizations, which extend their influence from drug trafficking to illegal mining.



**22** Brazilian and international criminal factions operate in the region.



**178 municipalities** in the Legal Amazon report gang activity (Santana, in Amapá, was ranked the most violent municipality in the country in 2024).

**59% of the population**

lives under the control of at least one criminal group.



**8.3 million inhabitants** experience extreme violence.

# LAND, POWER, AND ENVIRONMENTAL CRIME

**In the Amazon, land control and political power are deeply intertwined. Many municipalities were established through ventures that promoted environmental crimes – connections that persist to this day.**

Since the military regime in Brazil, the process of municipalization in the Amazon has politically benefited land grabbers and illegal logging companies. In Pará, many municipalities emerged from settlements that developed around these enterprises. This is the case of Pau d'Arco, which originated from the establishment of the Marajoara logging company, and Rio Maria, a municipality

that formed around the Maginco logging company.

This process led to the rise and consolidation of local political power by company representatives, farm managers, and other authority figures. The presence of farm managers as mayors has significantly shaped the region's political structure. For instance, the municipality of Redenção was governed from 1985 by the former manager of Mata Geral's projects, who acquired nearly 20% of the Conceição do Araguaia area by reinvesting profits from logging and illegal land sales. Similarly, the manager of the Campo Alegre farm was elected mayor of Santana do Araguaia during the same period. In Xinguara, the former manager of the Quagliato Group, a leading company in cattle farming, was elected mayor in 1990.

Control over land provides access to political power and, through electoral negotiations, to public funds. Some of the first major land grabbers, such as Lanari do Val, the Malzoni family, and the Lunardelli family, were among the earliest beneficiaries of the tax incentive system established by the Superintendence for the Development of the Amazon in 1966. This agency, linked to the Ministry of Planning, operated under Law No. 5,174, which exempted industrial, agricultural, livestock farming, and basic service activities from income tax and federal fees while also waiving import duties and taxes on machinery and equipment. In practice, the Superintendence for the Development of the Amazon became a political mechanism for allocating resources to land grabbers, who became known as “sudamzeiros,” a term that alludes to the acronym of this agency in Portuguese, namely, SUDAM.

The arrival of soybean cultivation in the 1990s and 2000s strengthened the election of certain caucuses to the National Congress. With their legislative backing, the appropriation of public lands accelerated, facilitating the reintegration of illicit profits – such as those from drug trafficking – into the legal economy through the purchase and sale of farms and the exponential growth of livestock farming. A key example is Leonardo Dias Mendonça and his partner Wilson Torres, who owned cattle farms and 17 companies while securing public contracts in São Félix do Xingu and other municipalities in southeastern Pará.

The expansion of large-scale mining, with its growing capacity for environmental destruction, has further increased opportunities for money laundering. There is no effective control over the volume of gold extracted. Meanwhile, new actors within organized crime, including criminal factions, provide drugs, illicit capital, and security services to the mining sector.

*The intricate network of environmental crimes and illegal activities reveals a strong connection to non-environmental crimes.*

## THE ECOSYSTEM OF ENVIRONMENTAL CRIME IN THE AMAZON

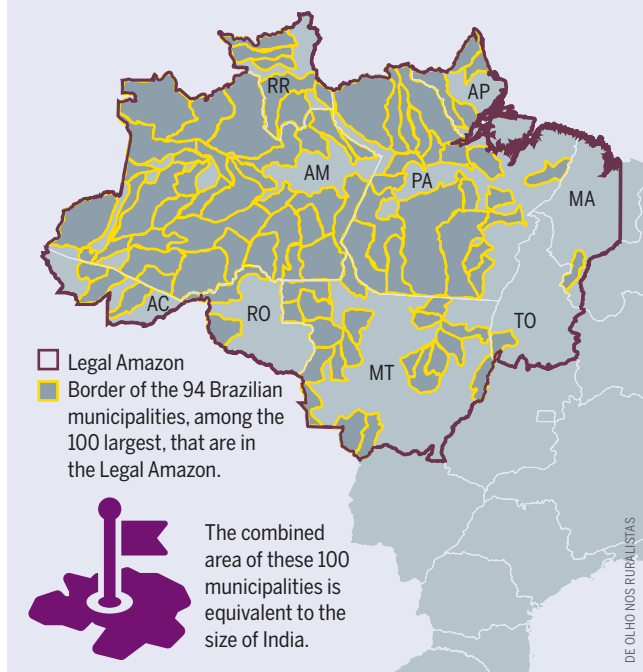
Analysis of the interactions between illicit economies in the forest based on Federal Police operations data in the Legal Amazon from 2016 to 2021.

### The criminal ecosystem of illegal deforestation\*



## THE GIANTS

The 100 largest municipalities in Brazil account for 37% of the country's territory, with most of them located in the Legal Amazon.



Additionally, there has been a recrudescence of land grabbing and violence in protected areas, Indigenous and quilombola lands, and agrarian reform settlements. Several legislative proposals, most notably the Temporal Framework thesis, seek to marginalize Indigenous, quilombola, and riverside communities, as well as agrarian reform beneficiaries, who contest land ownership with powerful landholders. The Rural Environmental Registry is even being used to claim mining sites and farms within Indigenous lands. The political connections available to these groups facilitate land grabbing, completing the cycle.

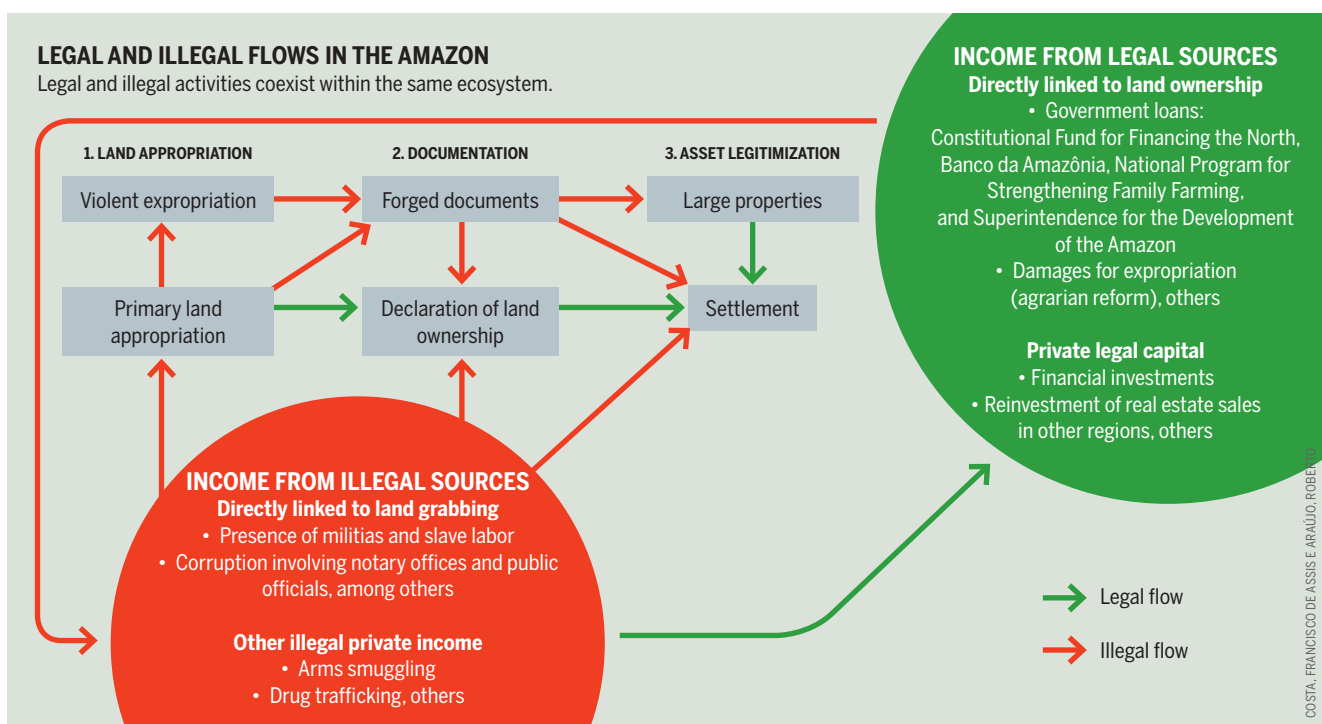
*The lack of resources to combat environmental crime and promote basic rights across vast territories presents a major challenge.*

There is, therefore, a direct link between the criminal activities underpinning the land-grabbing system – such as the misappropriation of public lands and forests, slave labor, labor exploitation, the murder of rural leaders, intimidation, and unauthorized judicial evictions – and deforestation. In fact, criminals establish control over land by clearing vegetation to speculate on its value, integrating it into the market as a commodity.

The close ties between these illicit economies and other illegal activities – including cocaine trafficking, illegal mining, and wildlife trafficking – are part of a broader cycle of territorial appropriation by economic groups that profit from these ventures. Representatives of the Executive and Legislative branches exercise increasing control over administrative mechanisms that allow illicit income and assets to be converted into legal property. Through corruption and political bargaining, they also gain privileged access to legally sourced public funds, such as state financing for economic activities, public tenders, and constitutional transfers. These dynamics form the foundation of the land market and environmental destruction in the Amazon, fostering a state of “land chaos” that institutions appear powerless to combat, as they are often subject to the interests of those who benefit from the situation.

It is crucial to consider this structure of illegality when analyzing emerging markets based on “value simulation,” such as carbon markets intended to protect vegetation. Without this understanding, their possibilities and limitations within the regional context will remain unclear. ●

*The processes of land appropriation, documentation, and asset legitimization in the Amazon play a crucial role in laundering illicit profits and converting them into legal income.*





## VIOLENCE AGAINST DEFENDERS

# THE LIVES OF THOSE PROTECTING THE FOREST HANG BY A THREAD

**The Legal Amazon is the most dangerous region in Brazil for defenders of human and environmental rights. Agribusiness, illegal mining, and timber exploitation are behind many murders that remain unpunished.**

**T**he prevailing imagery of the Amazon consists of lush forests, Indigenous peoples, and an abundance of water. However, one of the most pressing issues that must be included in this narrative and gain global relevance is the violence against environmental and human rights defenders.

Defenders, as we refer to them here, are individuals who advocate for or work toward the realization of environmental and human rights, as well as fundamental freedoms recognized both nationally and internationally. They contribute to improving social, political, and economic conditions, raising awareness about rights, and shaping policies to protect and promote environmental and human rights. And there is a particular group of defenders who

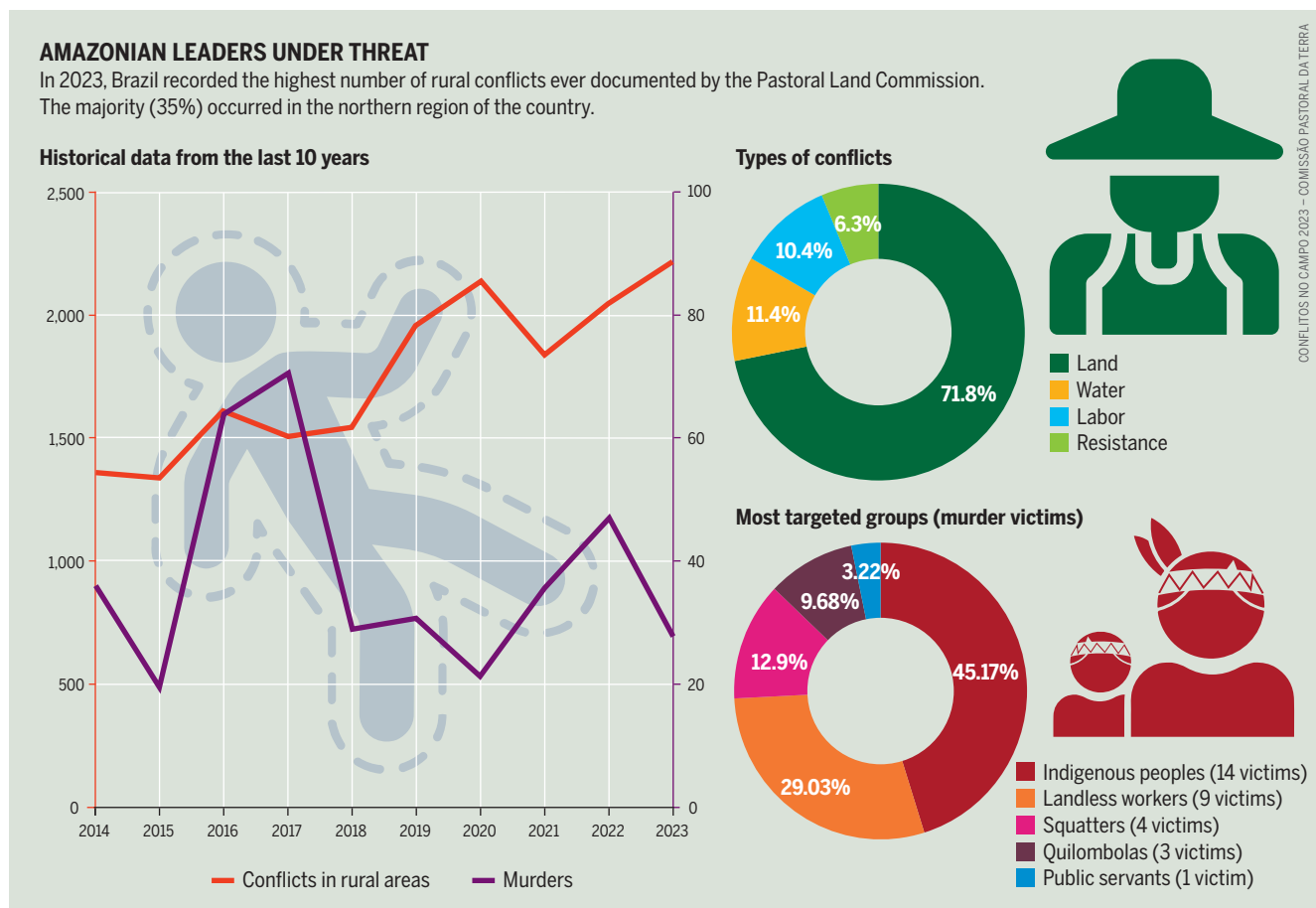
frequently faces threats and obstacles due to the causes they champion and the demands they make.

According to Global Witness, between 2012 and 2022, 1,910 male and female defenders lost their lives while protecting the planet. Latin America accounts for 88% of these murders worldwide, with Colombia registering the highest number of murders, followed by Brazil. In 2022 alone, 34 defenders were killed in Brazil, more than a third of whom were Indigenous peoples (36%), while over a fifth were small farmers (22%).

The Legal Amazon is the most dangerous region for defenders in Brazil. Data from Global Justice indicates that, over the past four years, four of the five states with the highest number of recorded attacks against defenders are in the Legal Amazon: Rondônia, Maranhão, Pará, and Tocantins.

The most prevalent rights violations are linked primarily to land conflicts, followed by labor and water disputes.

*In 2023, the number of rural conflicts increased by 8% compared to 2022. Over the past decade, rural violence has intensified by 60%.*



## IMPUNITY IN RURAL VIOLENCE

Most murders of forest defenders go unpunished, with both perpetrators and those who ordered the crimes rarely facing justice.

Between 1985 and 2021,

**1,536 recorded murders**

resulted in

**2,028 deaths.**

Only 147 cases were ever brought to trial, meaning approximately

**90% of these crimes**

involving murder remain unprosecuted.

Only 39 individuals who ordered these murders were convicted, while 34 were acquitted.

Among those who carried out the murders, 139 were convicted, whereas

**244 were acquitted.**

Some of the Amazon defenders who were murdered in recent decades



COMISSÃO PASTORAL DA TERRA

Nearly half of these violations involve threats (49.4%), followed by physical attacks (16.8%) and murders (14.4%). Murders represent just the tip of the iceberg, as countless attacks against defenders go unreported.

The Brazilian government has taken steps to mitigate violence against defenders, with the creation of the National Policy for the Protection of Human Rights Defenders, Communicators, and Environmentalists as its main initiative. However, reports from civil society organizations emphasize the need to strengthen the governmental structure responsible for implementing this program, as well as the urgency of ratifying the Escazú Agreement – the first environmental treaty in Latin America and the Caribbean. This agreement not only promotes access to information and public participation, but also establishes specific mechanisms for protecting environmental defenders.

The primary causes of this violence are linked to agribusiness, followed by mining and logging. These three sectors are also significant contributors to global greenhouse gas emissions, underscoring the direct link between the struggle of human and environmental rights defenders and the fight against climate change.

Historically, violence in Brazil dates back to Portuguese colonization, but it was during the government of President Getúlio Vargas (1930–1945) that the first efforts to colonize the Amazon were undertaken, motivated by strategic national interests. Getúlio Vargas initiated a continuous cycle of government incentives for forest exploitation. The Brazilian military dictatorship (1964–1985) further deepened this process under the pretext of national security, opening the Amazon to multinational companies from the United States, Japan, Canada, and Norway. This period marked an occupation of the region driven by external forces, enforced through violence and coercion.

The Brazilian agrarian issue remains a central factor. Defined as a set of rural problems intertwined with the

*The majority of murders recorded by the Pastoral Land Commission occurred within the Legal Amazon. The State of Pará has the highest number of recorded cases (497), followed by Maranhão (173).*

country's broader social structure, it has profound impacts on both rural and urban areas. The consolidation of a powerful agrarian elite, which controls land, wealth, and political influence, has resulted in the expulsion of rural populations.

The process of “opening” the Amazon prioritized individual and external economic interests to the detriment of the collective rights of its inhabitants, leading to expropriation, threats, and territorial violations. This facilitated the establishment of a development model built on environmental destruction, land dispossession, and violence against environmental and human rights leaders, with the primary goal of supplying raw materials to foreign markets.

Consequently, prominent defenders of the Amazon have been murdered, including Chico Mendes, José Cláudio Ribeiro, Maria do Espírito Santo, Sister Dorothy Stang, Paulo Paulino Guajajara, and, more recently, Dom Phillips and Bruno Pereira. Many of these crimes remain unresolved within the justice system.

This development model was structured around the construction of roads, waterways, ports, hydroelectric power plants, mining operations, and other extractive projects. These initiatives accelerated the expansion of monoculture farming and livestock farming into Amazonian territories, driving deforestation and fires. This, in turn, led to the loss of forest cover, the displacement of Indigenous and traditional communities, and widespread human rights violations. In this context, violence has become a systemic tool. ●

# SANITARY PRECARIZATION THREATENS THE AMAZON

**The expansion of predatory activities has severe health impacts in the Amazon, where access to public healthcare is hindered by territorial peculiarities and precarious basic sanitation services. Promoting healthcare access and valuing traditional knowledge are essential to combating this situation.**

**D**ue to its vast territory, sociocultural diversity, and unique climate, vegetation, and topography, sanitary challenges in the Amazon have historically been complex and contrasting. These disparities are evident not only in comparisons between urban and rural populations, access to healthcare services in municipalities of different sizes, and living conditions between Indigenous and non-Indigenous peoples, but also in the health indicators of the general populations in the north compared to those in the southeast and south of Brazil.

Over the last four decades, and in the context of extreme climate change, the Amazon biome has faced critical threats from the predatory expansion of agribusiness, industrial fishing, illegal logging, and gold extraction, as well as the widespread burning of vast forest areas. These

activities, to varying degrees, have had negative impacts on human health, whether through the release of potentially toxic waste into the air, water, and soil or by altering human interactions with different living organisms, as seen in the spread of endemic diseases both within and beyond urban centers.

In the northern region, according to the 2017 National Sanitation Survey by the Brazilian Institute of Geography and Statistics, only 16.4% of the daily volume of sewage generated was treated – the lowest percentage among all regions of Brazil. This data aligns with the high incidence of diseases related to inadequate environmental sanitation. It is no coincidence that, in 2021, hospitalizations for dengue fever in the north increased by 27% compared to 2020, going against the national trend of decline. A similar pattern is observed in hospitalizations for leptospirosis, as well as for diarrhea and gastroenteritis of presumed infectious origin.

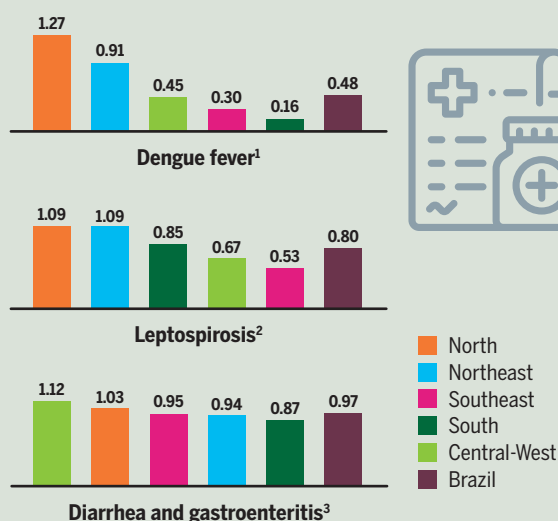
In this precarious sanitation scenario, a range of infectious and neglected diseases – endemic to regions with low human and social development – are associated with disabilities, illness, and preventable deaths. Among the most impactful in terms of disease burden are malaria, tuberculosis, HIV/AIDS, and yellow fever. The Amazon's sanitary landscape has also witnessed the tragic emergence of epidemics caused by emerging and re-emerging diseases, such as the 2024 Oropouche fever outbreak, which reached an unprecedented 5,644 confirmed cases by September 3rd – accounting for 71.2% of the national total.

Beyond its undeniable impact on mortality, particularly in Manaus, where it caused catastrophic collapses in funeral, hospital, and outpatient services, the COVID-19 pandemic appears to have exacerbated healthcare and socioeconomic vulnerabilities, creating conditions for further public health crises. In this context, the excess suicides among women aged 30–59 (a 27% increase between March 2020 and February 2022), as well as the approximately 70% rise in maternal deaths in the northern Amazon during the same period, reflect the severity of this syndemic crisis. These figures underscore the profound setback in “Health and Well-Being” indicators – goals that Brazil had committed to improving under the Sustainable Development Goals.

Another serious threat is vaccine refusal, particularly among children who are one year old and upward. By the end of 2022, vaccination coverage for the tetraviral vaccine (measles, mumps, rubella, and varicella), the DTP vaccine (diphtheria, tetanus, and pertussis), and the hepatitis A vaccine stood at less than 7%, 55%, and 60%, respectively. These

## CONSEQUENCES OF SANITARY WEAKNESS

Ratio of hospital admissions due to leptospirosis, dengue fever, diarrhea, and gastroenteritis of presumed infectious origin in 2021 compared to 2020, by region.



<sup>1</sup> Classical dengue fever

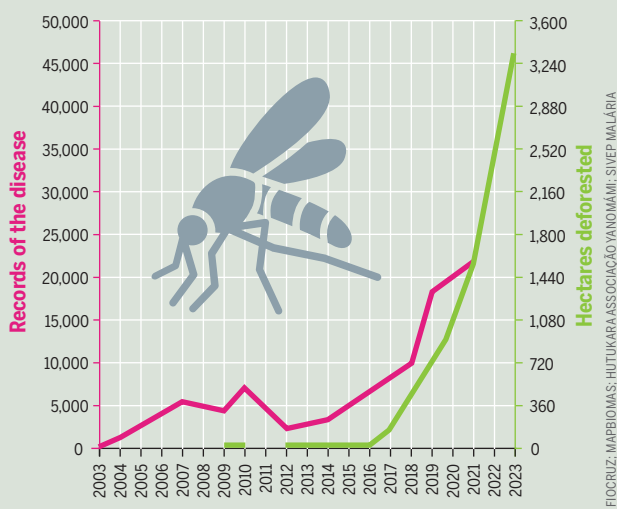
<sup>2</sup> Icterohemorrhagic leptospirosis, other forms, and unspecified leptospirosis

<sup>3</sup> Diarrhea and gastroenteritis of presumed infectious origin

*The Amazon region's climatic, geographic, and social particularities further compound these health challenges.*

## MINING BRINGS MALARIA

The expansion of illegal mining has led to an increase in autochthonous malaria cases in the special Indigenous health districts of Roraima.



*Mining activity profoundly alters the local ecosystem. The large pits dug by miners in search of gold fill with water from the Amazon rains, creating ideal breeding grounds for mosquito proliferation.*

Finally, the vast array of health and disease indicators in the Amazon reveals one of the most unfavorable health scenarios in the country. This is marked by premature mortality, which may contribute to decreased productivity, increased early retirement due to disability, higher expenditures on entirely preventable chronic diseases, and a decline in the quality of life and well-being of Amazonian populations. Therefore, ensuring timely and quality healthcare access in the Amazon – especially in communities with limited or nonexistent primary, medium, and high-complexity healthcare networks – is as crucial as guaranteeing the sustainable protection of the environment.

Likewise, the knowledge systems of the peoples inhabiting these Amazonian territories must be recognized and valued. It is essential to acknowledge specialists such as Indigenous shamans and midwives, along with their healthcare and healing technologies. According to archaeological debates, Indigenous peoples have been present in this territory – now called Brazil – for at least 12,000, 14,000, or even 17,000 years. Over this time, they have developed technologies for pottery making, food processing and handling, wood carving, plant cultivation, and the art of healthcare and healing. ●

*The Bahserikowi Indigenous Medicine Center was founded in 2017 by anthropologist João Paulo Barreto Yukano. It offers care based on Indigenous practices, including blessings and the use of medicinal plants. The specialists working at the center come from the Yepamahsã (Yukano), Utãpirô-porã (Yuyuka), and Umukori-mahsã (Desana) peoples.*

rates are not only lower than those observed in other regions of Brazil, but also fall far short of the 95% coverage target.

Another pressing issue is food insecurity. Data indicate that the northern region has the highest proportion of severe food insecurity, at 25.7%. In Amapá and Pará, this figure exceeds 30% of the population. It is no coincidence that, in 2021, the number of deaths due to malnutrition among children under five in the north increased by 36.8% compared to 2020, whereas in Brazil as a whole, the increase was 11%.

Like other chronic non-communicable diseases, diabetes mellitus – linked to obesity, sedentary lifestyles, and unhealthy eating habits – poses a serious challenge in the Amazon region. The regional mortality rate stands at 33.1 per 100,000 inhabitants, reaching 40.3 per 100,000 in the State of Amazonas, a figure 50% higher than the national average.



## INDIGENOUS MEDICINE



Indigenous knowledge systems are complex – so much so that, for those unfamiliar with them, they may seem to have no logic. As a result, studying specific topics such as Indigenous Medicine without falling into the traps of jargon that define it as “traditional,” “ancestral,” or “ancient” – terms that often imply something from the past, remote, magical, or religious – is always a challenge.

Like any other form of medicine, the healthcare and healing practices of Indigenous peoples are guided by theories, principles, and concepts that encompass both concrete and abstract elements (including phytochemical and metaphysical aspects). These practices are carried out by specialists who undergo rigorous training to master their craft. Each Indigenous group has its own institutions for educating and training these specialists, ensuring they receive in-depth knowledge under the guidance of an experienced mentor.

The notions of disease and health are not limited to the biological realm. On the contrary, they involve cosmopolitical aspects that connect the

individual to a broader network of relationships – with other beings, animals, spaces, family members, and people. This perspective moves away from the purely biological approach of the biomedical model, which focuses on the body alone.

Studies among the Indigenous peoples of the Upper Rio Negro region reveal that healthcare and healing technologies primarily include: Bahsesse (blessings), metachemical and metaphysical formulas evoked by specialists for protection, treatment, and healing, as well as the use of medicinal plants.



BARRETO, JOÃO PAULO



# THE WAYS OF THINKING AND WORSHIPING ON THE FRONTIERS OF AGRIBUSINESS

The expansion of economic fronts in the Amazon also involves the expansion of cultural and religious dynamics. Authoritarian ways of thinking, often linked to prosperity theology, impose homogeneous landscapes and suppress the rich diversity of Amazonian territories and knowledge.

The history of the Amazon is marked by a violent geography of territorial expansion driven by economic fronts that have been – and continue to be – established with complete disregard for the human and non-human life they encounter along the way. This process of drawing borders and destroying life-sustaining territories is rooted in a political and economic choice: the belief that the only viable path to so-called development is through the export of primary goods. As a result, regions such as the

Amazon are transformed into sacrifice zones.

It is no longer possible to rely on conceptual euphemisms to describe these catastrophic realities. Therefore, we will call this historical, permanent, and ongoing project of capitalist expansion in the Amazon what it truly is: a war – a capitalist war against life – manifesting in two fundamental ways: war as a driver of environmental collapse and war as a force of authoritarianism. This text focuses on the latter. The businesses that fuel this war have never coexisted well with democracy, as they thrive on violent and traumatic transformations of the spaces they occupy – changes that are impossible to achieve without force, legal disobedience, or the reformulation of laws.

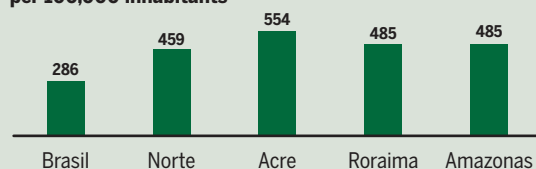
Nevertheless, this is not the only dimension of author-

*The rapid growth of Evangelicalism is most intense in the Amazon region. However, Catholic believers still make up 50% of the population in the north.*

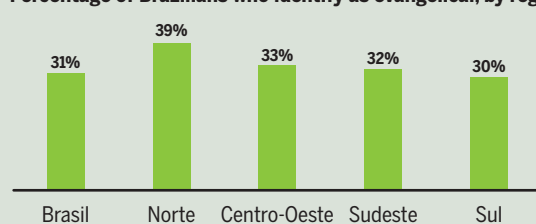
## FAITH IN THE AMAZON

The northern region has the highest proportion of religious temples and the largest evangelical population index in Brazil.

Average number of religious establishments per 100,000 inhabitants



Percentage of Brazilians who identify as evangelical, by region

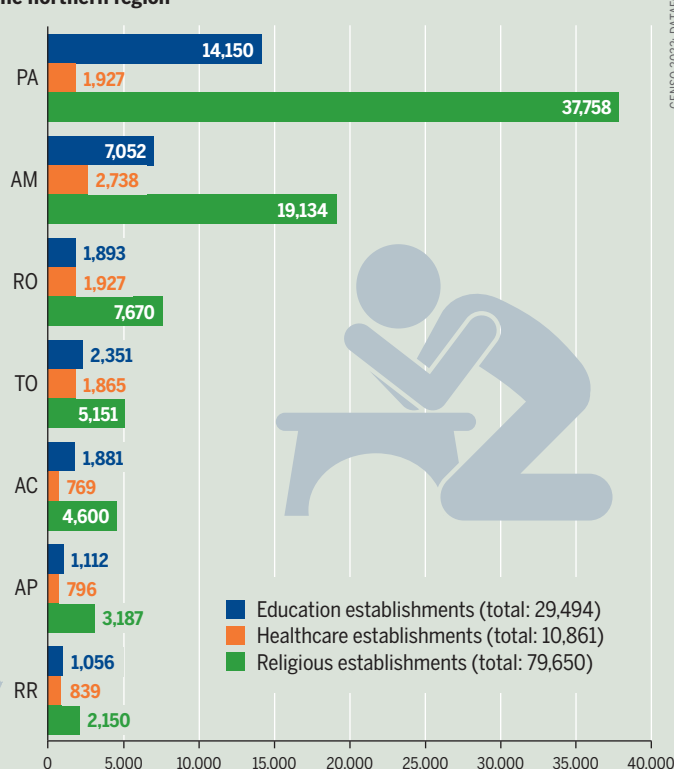


Missionary projects and evangelical churches are rapidly expanding in remote areas, particularly within Indigenous lands.

In Atalaia do Norte, Amazonas – a municipality with 15,000 residents, of whom 50.76% are Indigenous (part of the Vale do Javari Indigenous land is within the municipality) – the presence of evangelical churches has grown significantly. As of December 2023, the urban area alone had **44 missionary projects and evangelical churches**, compared to just 14 evangelical churches in 2013.



Ranking of education, healthcare, and religious establishments in the northern region

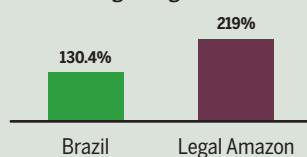


CENSO 2022. DATAFOLHA-AGÊNCIA PÚBLICA

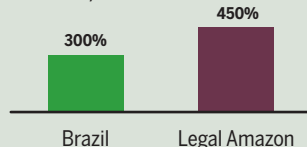
## TARGET SHOOTING

The increase in the registration of hunters, shooters, and collectors, in addition to shooting ranges, in the Legal Amazon is particularly significant. This phenomenon is most pronounced in municipalities with a history of socio-environmental conflicts.

### Increase in gun registrations\*



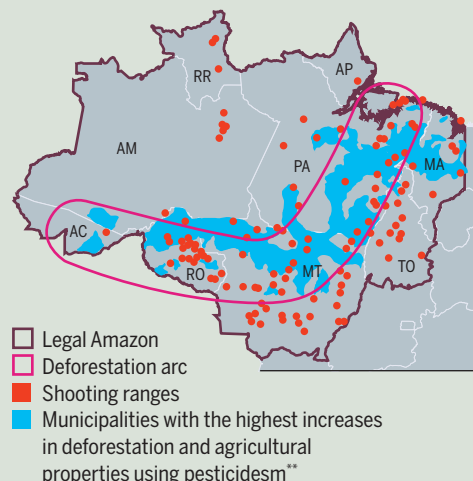
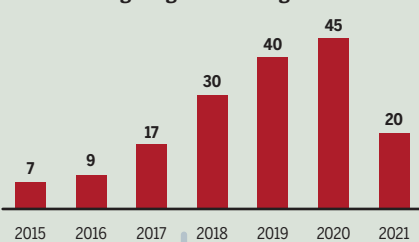
### Growth in the number of hunters, shooters, and collectors\*



\* Between 2018 and 2021

\*\* Historical series up to 2022 for deforestation and up to 2017 for pesticide use

### New shooting ranges in the Legal Amazon



INSTITUTO GARAPÉ: THE INTERCEPT BRASIL; PRODES; BOMBRADI; LARISSA; MALHEIRO; BRUNO.

itarianism produced by war. It is essential to understand that the spatial expansion of capitalist warfare also extends to musical tastes, ways of eating, dressing, and behaving, as well as attitudes toward property defense and worship. This mode of spatial production is deeply rooted in cultural dynamics, such as the circuits of agricultural festivals, the rise of university country music, and the proliferation of shooting ranges – phenomena that accompany the expansion of cattle ranching, soybean farming, and other monocultures. These elements help legitimize a subjectivity that is resistant to diversity, authoritarian in nature, and closely tied to pro-gun ideologies. This subjectivity is also reinforced through the spread of wholesale networks, which standardize agribusiness products as cheap food options – bringing toxic substances to the table. It is further sustained by the political influence of labor unions, which shape employment and income discourses. Additionally, the expansion of evangelical churches, particularly neo-Pentecostal movements, follows economic fronts, spreading prosperity theology as a means of legitimizing this authoritarian worldview.

This capitalist war, therefore, propagates a subjectivity that embraces authoritarianism. It manifests in the use of chains on tractors to clear forests, reducing trees to mere obstacles; in the act of land grabbing, which transforms the illegal into the legal; in the spraying of pesticides over monoculture fields surrounded by communities, where all species deemed unprofitable – including human lives – are treated as disposable pests; and in the hiring of private security firms to guard properties, further normalizing the militarization of private land defense. These actions reinforce and normalize such actions and way of thinking.

In this process of expanding an authoritarian subjectivity, the principles of prosperity theology – such as the individualization of success, the framing of achievements and failures as personal choices of faith, the interpretation of the world as a holy war between good and evil, and the defense of the triad “God, Homeland, and Family” – intersect with narratives constructed to justify war. These narratives promote the idea that success is solely the result of individual effort and frame agribusiness, mining, and other industries that commodify life as forces for the greater good of the

*In Brazil, sport shooters are legally permitted to own up to 60 firearms, while sport hunters are limited to 30. The only species legally allowed for hunting in the country is the wild boar. In 2019, Brazil had a total of 1,536 wild boars, with only 125 located in the Legal Amazon.*

“Homeland,” as they generate jobs, income, and a future. Consequently, these industries are portrayed as needing protection from those deemed “obstacles” to development – such as social movements, Indigenous peoples, environmentalists, and even environmental agencies.

This convergence nurtures the foundations of authoritarianism by normalizing the transformation of nature into an obstacle, the perception of those who are different as enemies, the militarization of social life, the glorification of violence, and the dismantling of all forms of community living in the name of defending private property.

The networks of relationships that sustain this capitalist war against life devour Amazonian worlds, destroy connections that sustain life, and, like an ecocidal machine, disrupt the vital cycles and flows of matter and energy that maintain the Amazon’s ecological stability. The production of this environmental collapse is also the production of a way of thinking and acting that normalizes the damming of a river or the destruction of a mountain as an engineering success, that regards deforestation and pesticide spraying as triumphs of agronomic necroscience. Capitalist war unquestionably shapes authoritarian subjectivities. We must think differently, and the Amazon – with its environmental, ethnic, cultural, and linguistic plurality – invites us to do so.

Restoring knowledge that is produced with life, rather than working against it, to the center of the debate means placing the Amazon at the heart of global discourse. It means a whole-souled embracing of a theoretical and political legacy built by peoples and communities for whom the interconnectedness of beings with the world is the reference for understanding the planet, rather than anthropocentrism; for whom abundance is the foundation for thinking about the economy, rather than scarcity; and for whom complementarity, care, and reciprocity define relationships, rather than competition or the pursuit of prosperity. ●

# COP 30: POINT OF NO RETURN

**Climate governance has been captured by solutions that involve the financialization of nature. The first COP in the Amazon is an opportunity to face head-on the impacts and contradictions of these projects, betting on the rights and territorial sovereignty of Amazonian populations.**

**T**he prospect of COP 30 being held in Brazil, in the capital of the State of Pará, Belém, in 2025, has put the Amazon back at the center of the debate on international climate and environmental governance. In fact, the issue of defending forests – and the Amazon in particular – has always played a key role and is intertwined with the scientific and political trajectory that led to the consolidation of a regime to “govern the climate” – an achievement of such magnitude and scope that it is unparalleled in history.

At the time of the Earth Summit in Rio de Janeiro in 1992, when the conventions on climate change (UNFCCC) and biodiversity (CBD) were signed, followed by the United Nations Convention on Combating Desertification (UNCCD), there was a major campaign for a specific legal instrument on forests – which was vehemently rejected by Brazil, arguing that efforts are needed to focus on the energy and technological transition and on overcoming the global fossil fuel matrix, in addition to addressing issues related to the sovereignty of countries that own rainforests. In Brazil, historically, the issue of national sovereignty over the Amazon has been a key theme in the national identity, a mobilizing force in the political imagination, as well as a strategic territory for the country’s development project –

for better or for worse.

Three decades later, the context could not be more different. The Amazon has established itself as perhaps the most valuable environmental asset in the new climate economy – virtually a symbol of the global environmental cause. In practice, the Amazon currently represents the largest continuous stretch of rainforest in the world. It is also a source of strategic resources, particularly freshwater and biodiversity. Furthermore, its lands are geostrategically positioned to meet the new demands of global commodity trade, which has driven the development of new logistical routes – such as waterways, railways, and ports – to support the expansion of agribusiness, hydroelectric power plants, and mining industries.

Under intense pressure from the current development model and from both old and emerging global value chains, the forest may have already embarked on the path toward its “point of no return,” as warned by a study published in the journal *Nature* in February 2024.

The future of forests currently occupies a very prominent place on the climate agenda. In recent years, the centrality of the role of forests in the planet’s global temperature regulation system has come back into the spotlight with force, with the incorporation of the REDD+ mechanism under the umbrella of nature-based solutions. These include the biological capture and sequestration of carbon, carried out through the photosynthesis of trees, in schemes that essentially monetize and financialize nature under the aegis of the “restoration” economy, linked to the carbon and biodiversity markets. To illustrate this horizon, the Brazilian National Bank for Economic and Social Development announced that it plans to finance the restoration of 6 million hectares in the Amazon by 2030 and a further 18 million hectares by 2050, and that it expects to rely substantially on investments from the private sector and the capital markets.

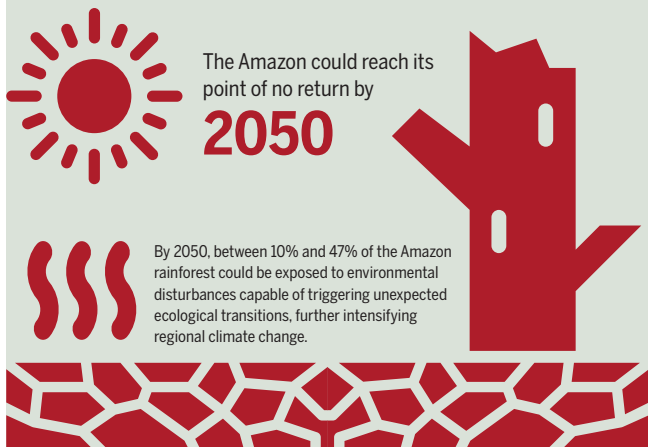
Over the past few decades, the central and unavoidable debate on the transition away from fossil fuels has been overshadowed in negotiations by the role that ecosystems play in regulating the global climate system. Evidence of this is the growing scientific, political, and economic commitment to the cost-efficiency, effectiveness, and scalability of nature-based solutions, as well as the mobilizing force behind such solutions as a way of engaging countries and territories of the Global South to contribute to a global effort in a new economic cycle. In this new cycle, rainforests are priority territories because, from the perspective of natural sciences and the provision of ecosystem services, they are areas of vast productive potential and hold a stra-



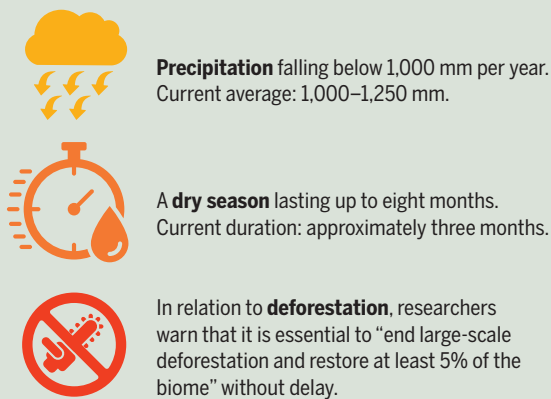
*The Amazon rainforest is essential for the formation of rainfall on the continent. With the advance of deforestation, the entire rainfall regime is impacted, causing extensive socio-environmental damage.*

## AMAZON'S POINT OF NO RETURN

The concept defines the critical level of deforestation and climate change in the Amazon that would impair the forest's natural regeneration, disrupt the rain cycles vital for its sustainability, and lead to desertification.



### Indicators of the Amazon's point of no return



REVISTA NATURE, 2024; G1

*The 2024 drought in the Amazon is considered the most severe in history in terms of socio-economic impacts. The drought affected 69% of the region's municipalities, affecting around 770,000 people and causing losses exceeding R\$620 million.*

with it a new set of contradictions regarding new forms of value generation related to emerging businesses and economic opportunities arising from mechanisms for financing and combating climate change, driven by new historical patterns of accumulation, expressed through markets based on the fictitious commodity of "carbon."

The occasion of COP 30 represents a historic opportunity for the Amazon to directly confront the contradictions of both the current destructive development model – aiming to reverse the trajectory of deforestation – and the externalities of climate governance, as well as the impacts of false solutions.

It is necessary to avoid the "breaking point" of the Amazon rainforest system, as well as the drivers of violence linked to the advance of false solutions, the financialization of nature and carbon markets, the expropriation, enclosure, and privatization of land and common goods, and the violation of territorial rights and the sovereignty of peoples and populations around the globe. The true solutions to climate change lie in guaranteeing access to land for Indigenous peoples and local populations, ensuring territorial sovereignty, and safeguarding local productive practices aimed at sustaining ways of life rooted in the territory. It is on the survival of socio-biodiversity that the reproduction of the biome ultimately depends. ●

*Mitigating greenhouse gas (GHG) emissions is essential for Brazil to achieve its goals. However, mechanisms such as REDD (Reducing Emissions from Deforestation and Forest Degradation) and REDD+ (which includes the carbon market), which created to financially compensate developing countries for their emissions, have impacted the sovereignty of traditional peoples over their territories.*

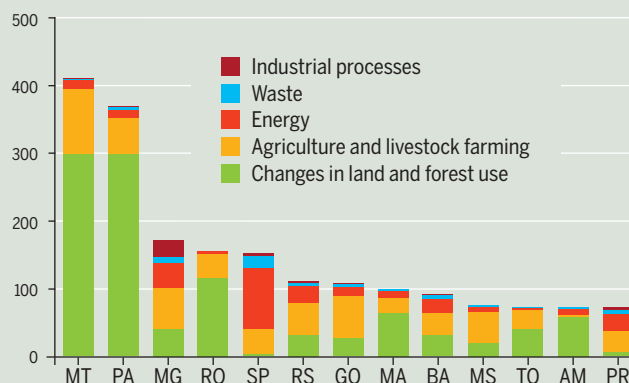
tegic asset for this new global economic cycle driven by decarbonization, in which forests are now a global financial asset.

From a critical perspective of political science and the sociology of climate change, this emphasis has brought

## CHAMPIONS IN GHG EMISSIONS

The states located in the Legal Amazon lead in GHG emissions in Brazil. This is because the sectors with the highest emissions in the country are part of the agri-food system: "Changes in land and forest use" and "Agribusiness."

### GHG emissions in Brazil in 2023, by state (in millions of tons of CO<sub>2</sub>)



### REDD and REDD+ mechanisms: A brief timeline

- 2005** United Nations Framework Convention on Climate Change (UNFCCC): A proposal emerges with the aim of incorporating the issue of deforestation and forest degradation.
- 2007** COP 13: The mechanism is included in the Bali Action Plan as one of the elements for designing the post-Kyoto Protocol phase of the climate regime.
- 2008** It becomes central to the COP debate.
- 2013** It is formalized in the Warsaw Framework.
- 2015** It gains a specific article in the Paris Agreement.

SISTEMA DE ESTIMATIVAS DE EMISSÕES E REMOÇÕES DE GASES DE EFEITO ESTUFA (SEEG) – 2023; MORENO, CAMILA



# FINANCIALIZATION OF THE AMAZON: TOWARD FALSE SOLUTIONS

**Amid the accelerating climate crisis, the pursuit of quick and seemingly easy solutions has increasingly positioned the market as the preferred response. However, this is not necessarily the best choice, as it tends to negatively affect people who depend directly on nature for their survival, autonomy, and cultural identity.**

In recent years, we have witnessed a growing movement in which the market is capitalizing on natural resources, transforming socio-biodiversity into a financial asset. This process is part of a broader shift in the institutions of the global economy, which promote new forms of valuation mediated by the financial system and the ecological crisis (pollution, climate, and biodiversity).

Particularly, in light of the accelerating climate crisis, the urgency to provide solutions has favored the market as the immediate response. Within this context, the financial system has been creating unprecedented forms of exploitation for the accumulation of wealth. This occurs at a high social cost and has triggered multiple forms of violence – especially against groups whose cosmological systems are rendered vulnerable by the current chaotic situation.

Thus, when nature is transformed into a financial asset, the impacts of this economic decision go beyond the availability of natural resources or even its conception as a sanctuary. They also affect the peoples who depend on it for their survival, autonomy, and counter-modern cultural identity. This process generates a specific form of exploitation that is not limited to material aspects or the surplus

value of labor – it extends to the cultural and subjective dimensions of the communities and individuals involved.

In general, amid a modernity in ruins, colonial policies reemerge, taking on comprehensive contours – ranging from a renewed wave of faith in market prices to solve the ecological crisis.

In the effort to shape a collective response to the ecological crisis, diverse cultures have often been confined to two main registers: on the one hand, they are subjected to a controlled representation, leading to a certain freezing of identities. On the other hand, they are market-oriented, a situation from which they are expected to act as entrepreneurs of themselves and investors in conservation projects.

In one case or another, the result tends to be the homogenization of differences among Indigenous peoples, traditional communities, and rural populations. Financial logic not only reorganizes the economy, but also broadly redefines ways of life and pragmatism, pressuring ancient forms of existence to conform to a representation that serves the market – in the name of the climate.

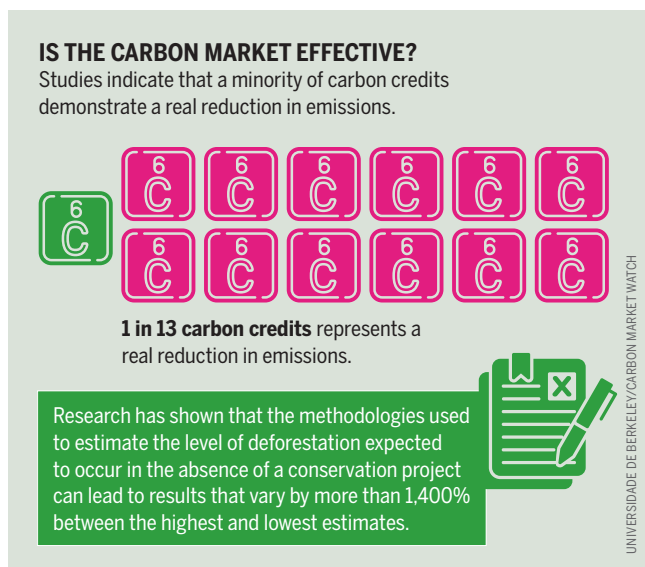
Far from making room for the pluriversity that has been offering concrete responses to the ecological crisis, the influence of finance on the reproduction of socio-biodiversity continues to fuel the very problem that has brought us to the current state of ecological catastrophe: a dual conception of the relationship between humans and nature – or even of nature itself as either a sanctuary to be preserved or a resource to be exploited.

In fact, it is precisely on the basis of this duality that all people are called to an irresistible national project, organized, on the one hand, through integration into the market and, on the other, through the ecological imperative. At a time when progressive political projects are in decline, sustainability has emerged not as a pathway to deep transformation, but rather as a means of repositioning a late and faltering modernity.

In the Brazilian Amazon, commercial bioeconomy and carbon markets are relevant topics in debates on sustainable development.

On the international scene, the bioeconomy is widely associated with biotechnology and the promotion of scientific and industrial innovations aimed at decarbonizing the global economy by encouraging circularity. In the Brazilian context – and particularly in the Amazon – it takes on the contours of a development model that combines social justice, job creation, and environmental sustainability.

*Researchers recommend that the funds earmarked for the acquisition of carbon credits be invested instead in forest protection projects led by traditional and Indigenous communities.*



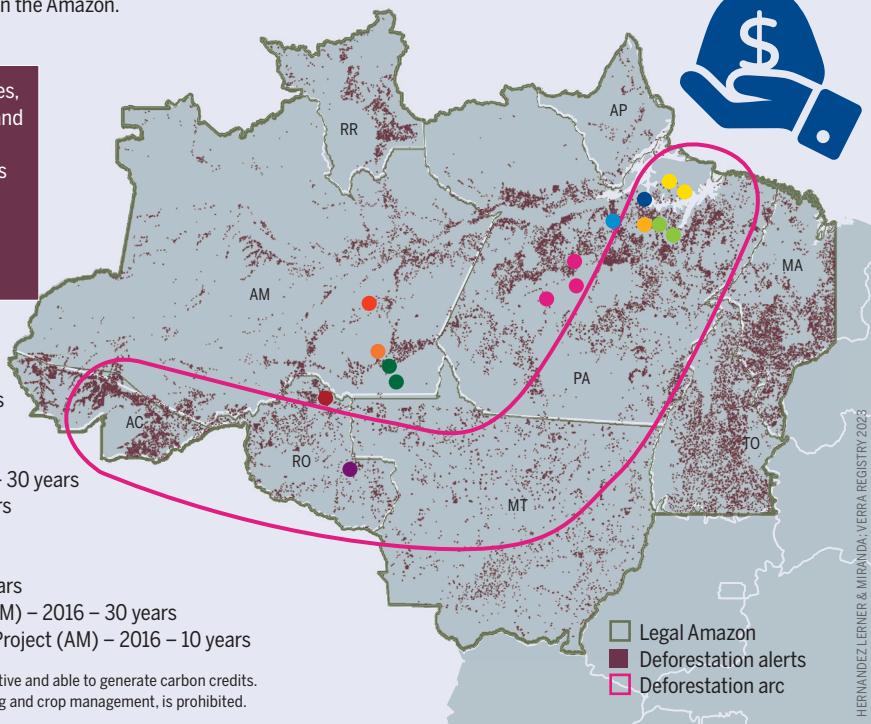
## OVERLAP OF CARBON CREDIT PROJECTS IN AREAS OF COLLECTIVE USE

Distribution of 11 Verified Carbon Standard carbon credit projects registered on the Verra platform with geospatial overlap in areas of collective use in the Amazon.

Of these projects, five are in extractive reserves, three in Sustainable Development Reserves, and two in Indigenous territories. Not all projects explicitly indicate their involvement with areas of collective use in their project development documents, which highlights weaknesses in the transparency and accessibility of the information provided by the platform.

- Boa Fé REDD (RO) – 2020 – 10 years\*
- Ecomapuá Amazon REDD – 2003 – 30 years
- Pacajal REDD+ (PA) – 2009 – 40 years
- Ribeirinho REDD+ (PA) – 2017 – 30 years
- RESEX Rio Preto Jacundá REDD (RO) – 2012 – 30 years
- Rio Anapu-Pacaja REDD (PA) – 2016 – 30 years
- RMDLT Portel REDD (PA) – 2019 – 40 years
- Samaúma REDD+ (AM) – 2020 – 30 years
- Suruí Forest Carbon (RO/MT) – 2009 – 30 years
- Sustainable Forestry Management Plan (PA/AM) – 2016 – 30 years
- The Juma Sustainable Development Reserve Project (AM) – 2016 – 10 years

\* The duration refers to the period in which the project will be active and able to generate carbon credits. During this period, deforestation, even of small areas for planting and crop management, is prohibited.



HERNANDEZ LERNER & MIRANDA - VERRA REGISTRY 2023

However, biodiversity, treated as a genuinely Brazilian commodity for export, continues to be shaped by an atrocious mode of production in the structuring of its value chains. Under the demand to scale up the traditional rural economy, the bioeconomy reconfigures the productive practices of culturally distinct social groups, often standardizing originally socio-biodiverse methods of production.

The analysis of the açaí supply chain provides evidence of how the international commercialization of this product transforms local socio-cultural dynamics, while also threatening the food and nutritional security of communities. Similarly, the recent genetic sequencing of cupuaçu allows for the artificial reproduction of the fruit's qualities – such as flavor, texture, and aroma – which means there will be no immediate economic benefit for its producers. Even so, the scaling up of production enables the “cupuaçu brand,” much like what occurred with the “açaí brand,” to reach global markets and the shelves of supermarkets in the so-called developed world. Treating these plant species and their human histories as a “brand” or “financial asset” leads to their deterritorialization, severing them from the inter-species relationships that once defined them.

Carbon markets, particularly the so-called voluntary ones, emerged from research and lobbying efforts by American corporations seeking to develop forms of environmental law that could be presented more flexibly, with private and pro-market governance. Often regarded as solutions to reduce greenhouse gas emissions, these markets allow polluting industries to offset their emissions without actually reducing them. When imposed on territories inhabited by traditional populations designated as specially protected areas, carbon markets require long-term land immobilization. As a result, other relationships

*When areas of common use are treated as financial assets, forests become targets of speculation, and differentiated ways of life – including land use and management regimes – are rendered invisible.*

with the territory – such as bonds with non-human beings, rituals, division of labor, food culture, and more – are constrained. Outside the territory, the financial transactions involving pollution credits and certificates – which reconfigure the value of plant photosynthesis as a financial asset – occur without public oversight or regard for the public interest.

A study by the law firm Hernandez Lerner e Miranda, with data from the Verra certification agency, reveals that carbon markets in Brazil have significant negative impacts. Of the 69 projects analyzed, 11 overlap with areas of collective use, 22 with public areas, and 23 with private properties. The remaining 13 cases could not be analyzed due to lack of information. An analysis of a case in the municipality of Portel in Pará indicates that companies in the sector are linked to land grabbing and ignore the rights to Free, Prior, and Informed Consultation.

Echoing the past, the excessive confidence in the “carbon metric” and the self-regulatory power of the market paves the way for structural adjustments in the global economy. In this sense, promises regarding the redistribution of benefits and greater equity with respect and recognition of the self-determination of Indigenous peoples and traditional and rural communities still remain significant challenges. These dynamics highlight the tensions between transformative discourses and practices that, at times, reiterate historical inequalities, requiring a critical look for their effective and fair implementation. ●

# THE CHALLENGES OF COMMUNITY FUNDS IN THE AMAZON

**Organizations of traditional peoples and communities, family farmers, and smallholders have been encountering numerous barriers in accessing resources intended to address climate change. Community funds are being created in response to this demand.**

**B**etween 2011 and 2020, Indigenous peoples had access to only 0.13% of the resources allocated globally to climate change mitigation, according to a study by the Rainforest Foundation of Norway. Conventional climate finance mechanisms have proven to be failing to reach the peoples who have historically contributed to maintaining socio-biodiverse territories as an alternative to the climate crisis.

The financialization of nature is advancing, commodifying what was previously not on the market and transforming systemic capitalist crises into levers for capital accumulation. The debate on the climate emergency is permeated by this context, with two major axes. The first is the targets for reducing greenhouse gas emissions established by signatory countries to global and multilateral agreements. These are targets with little or no mechanism for monitoring their compliance and which contrast with studies that present the climate reality and its drastic consequences, even after reduction commitments. The second axis is the debate on financing to achieve these goals. Who will foot the bill for climate change mitigation and adaptation initiatives? This is where climate finance funds are situated, amid strategies that aim to provide resources for alternatives to climate change. Therefore, it is essential to

consider where these resources come from, how they will be made available, as well as to whom and for what they are intended to be used.

Climate finance is understood as the disbursement of resources aimed at direct or indirect initiatives to mitigate greenhouse gases or to produce adaptation to climate change. Although the “fund” mechanism is not new, the quantitative expansion of this instrument in the last decade has been favored by the search to channel resources earmarked for the climate emergency. A study by the Climate Policy Initiative shows that the resources raised for climate finance are growing, but their destination remains in conflict with what is intended to be achieved. The study also shows that most of the resources earmarked for public policy are private. The private origin of the resources for climate finance highlights the equally private interests embedded behind the discourse of environmental concern. Corporations and banks impose the logic of debt through loans rather than cooperation and donations, for the most part. The application of interest as a condition for the use of these resources is a lucrative source of climate market implementation, in addition to imposing crucial barriers to access by territorially based organizations.

Rural credit is the main domestic climate finance instrument aimed at land use actions. However, the notion of “land use” used here includes even uses that degrade it. The strengthening of subsidized agribusiness occurs

*Most of the funds raised for climate emergencies in Brazil come from the obligation of financial institutions to allocate resources to rural credit.*

## FINANCING THE FIGHT AGAINST THE CLIMATE EMERGENCY

An overview of climate finance for land use in Brazil highlights the predominance of private resources.

Between 2015 and 2020,

Brazil raised an average of

**R\$25 billion**

per year to address the climate emergency.

Most of these resources came from

**domestic sources** – approximately

**R\$23.8 billion**

per year, or 95% of the total.

Two-thirds of domestic financing, around

**R\$15.9 billion**

per year, came from private sources.



### Amazon community fund network

Eight funds form the network, with the aim of unifying the agenda of these funds in defense of territories and their peoples:

- Dema Fund
- Luzia Dorothy do Espírito Santo Autonomous Rural Women's Fund
- Timbira Indigenous Fund
- Mizizi Dudu Quilombola Fund
- Babassu Fund, originating from the Women's Movement of Babassu Coconut Crackers
- Podáali Indigenous Fund, originating from the Coordination of Indigenous Organizations of the Brazilian Amazon
- Rio Negro Indigenous Fund, from the Indigenous organization Federation of Indigenous Organizations of Rio Negro
- Puxirum Fund, from the Extractivists of the Brazilian Amazon

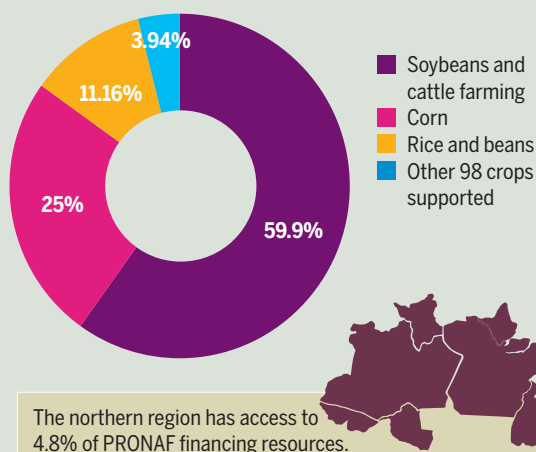
## THREATS TO FINANCING FOR FAMILY FARMING

Agribusiness receives most of the public funding in Brazil. The National Family Farming Program (PRONAF) was created to address this inequality, but data shows that agro-export monoculture has taken up space in this public policy.



In 2020, only **12.09%** of the 3,657,671 family farming establishments were able to have access to financing.

### PRONAF resources for family farming, by activity



INSTITUTO TRICONTINENTAL DE PESQUISA SOCIAL, NÚCLEO DE ESTUDOS EM COOPERAÇÃO (ECOOP), DA UNIVERSIDADE FEDERAL DA FRONTEIRA SUL

*There is an incentive for agribusiness production and logistics structures to pressure family farming to adopt their technological package to the detriment of diversified food production.*

The second fund is the Loss and Damage Fund, created in 2023 at COP 28. The fund is hosted by the World Bank and has received donations totaling US\$420 million from countries such as Japan, the United Arab Emirates, the United Kingdom, and Germany. In addition to the World Bank not being an independent resource management mechanism, with strong influence from developed countries, there is still no priority for access to resources by peripheral countries. These international funds have in common insufficient resources, little or no social control and popular participation mechanisms, and operating structures and enforceability that distance access to resources by territorially based organizations.

The origin of Community Funds in the Amazon stems from the demands of social movements, based on their historical strategies to combat environmental crimes, defend, demarcate, and title territories, strengthen identity and culture, as well as from a stage of advancement in their basic institutional structures and the need to support their autonomous actions. For instance, this is how the Dema Fund was conceived – as an initiative of social movements in the Trans-Amazonian and Xingu regions for socio-environmental justice and the interruption of illegal logging crimes. The Fund carries in its identity the memory of Ademir Federicci (also known as Dema), a rural activist from the Amazon rainforest who was brutally murdered in Altamira, Pará, on August 25th, 2001.

Headquartered at the Federation of Organizations for Social and Educational Assistance since 2003 and collectively managed by a committee composed of organizations and social movements, the Dema Fund supports collective and community projects in the Amazon on a wide range of topics and processes. These reflect the demands for strengthening territorial organization and, above all, the capacity of quilombos, agro-extractivists, and rural and Indigenous peoples to produce food that is vital for food security and popular sovereignty in the Amazon.

The various forms of climate finance that have become hegemonic, including rural credit, in addition to being centralized and bureaucratic, reinforce structural inequalities and must be constantly questioned and discussed by social movements. Likewise, corporate funds linked to multinationals and compensation funds reproduce the logic of dominant climate finance and have expanded in the Amazon region. In contrast, community funds contribute to the democratization of access to resources through multiple strategies for defending territories, agroecology as a production matrix capable of responding to the socio-biodiversity built over millennia in the Amazon region, and addressing the impacts of climate change as true solutions adapted to the needs of the territories. Agribusiness makes hunger its main course and seeks legitimacy by presenting false alternatives to the climate crisis. Thus, climate finance becomes the target of this dispute – not only concerning the allocation of resources but, above all, as a project for society. ●

through many fronts of public incentives, and rural credit is one of them.

Regarding international resources, which account for 5% of climate finance flows from 2015 to 2020, most of them come from international governments, climate funds, and multilateral banks. The Amazon Fund is the main instrument that receives these resources and directs them to support non-reimbursable land use initiatives aligned with what is considered mitigation and adaptation. However, the level of bureaucratic and environmental requirements of the Amazon Fund restricts direct access by small territorial organizations. The Amazon Fund received R\$726 million in donations in 2023, according to the Ministry of Environment and Climate Change, and its main donors are the United Kingdom, Germany, Switzerland, and the United States.

At the international level, there are two larger funds that support climate finance. The first is the Green Climate Fund, which was created in 2010 by 194 countries that are part of the United Nations Framework Convention on Climate Change. It is governed by 24 Council members, representing countries, and receives guidance from the Conference of the Parties (COP). Brazil was the first country to have access to it. Countries receive resources based on the presentation of evidence on reductions in deforestation and degradation. The amount approved was US\$96.4 million (approximately R\$500 million), but none of the incentive modalities were operationalized as planned until the first half of 2023 and, consequently, targets suffered significant delays, and a small portion of resources were disbursed to the project's final beneficiaries.



# NEW GENERATIONS IN THE AMAZON

**Lack of opportunities and socio-economic barriers contribute to the rural exodus of young people from the Amazon. Ensuring basic services and public policies is key to addressing this phenomenon, directly impacting the ability of young people – protagonists in this socio-environmental struggle – to remain in their own territories.**

Amazonian youth face significant challenges due to the lack of educational, professional, and social opportunities. This reality reflects a range of structural and historical issues that permeate the region, often resulting in rural exodus and the deterritorialization of young people. Forced migration to urban areas in search of better living conditions negatively impacts their cultural identity and weakens rural and traditional communities throughout the Amazon.

Rural areas in the Amazon frequently lack quality schools and institutions of higher education, limiting young people's access to a comprehensive education. Inadequate school infrastructure, a lack of specialized educational resources, and a shortage of qualified teachers make learning an arduous task for many. Without proper education, youth have few opportunities for personal and professional development within their communities of origin. The absence of basic services in rural areas further aggravates the situation. Difficulties in accessing healthcare, transportation, electricity, and basic sanitation make life in these communities less attractive and more challenging. Without these essential services, the quality of life for young people is severely compromised – further encouraging migration.

There is also a socio-economic limitation that prevents young people from envisioning a prosperous future within their own communities, pushing them to seek employment in urban centers. This dynamic contributes to growing urbanization and a concentration of young people in metropolitan areas – where they often encounter new challenges, such as social marginalization and precarious labor conditions.

The sociocultural impact of rural exodus and the deterritorialization of youth is equally profound. Migration leads to the erosion of cultural identities and the loss of local traditions, weakening community bonds and interrupting the transmission of traditional cultural practices. Rural communities lose vital sources of renewal, while young people face the difficult task of adapting to unfamiliar urban environments, often contending with prejudice and socio-economic hardship.

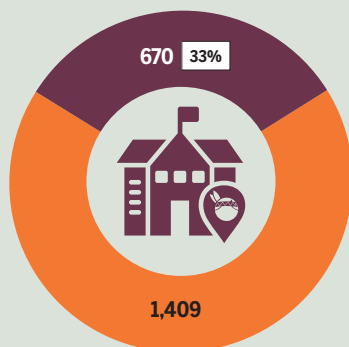
Another critical challenge is the co-optation of young people into environmental crime, a direct reflection of persistent social and economic inequalities. Deforestation, illegal mining, and predatory hunting and fishing are among the illicit activities that attract Amazonian youth – often as a result of the lack of socio-economic opportunities. Criminal organizations exploit the vulnerability of these young people by offering quick financial returns in exchange for their involvement in environmentally destructive practices. This dynamic has devastating consequences not only for

*The 2014 National Education Plan established strategies and goals to be achieved by 2024. One of them was to promote the provision of elementary education for rural, Indigenous, and quilombola populations. This goal, however, remains far from being met.*

## INDIGENOUS EDUCATION IN THE AMAZON

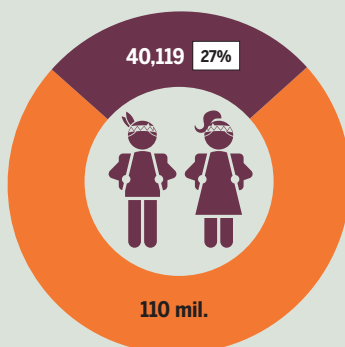
The Brazilian Federal Constitution guarantees Indigenous peoples the right to differentiated, specific, and bilingual education.

### Schools on Indigenous lands

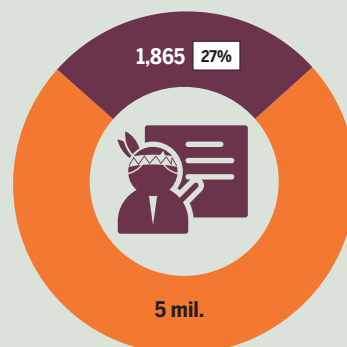


However, 600 of the schools operate **without having their own buildings**. In the northern region, 65% of Indigenous schools do **not operate in their own buildings**.

### Indigenous students



### Teachers\*



■ State of Amazonas  
■ Other Brazilian states

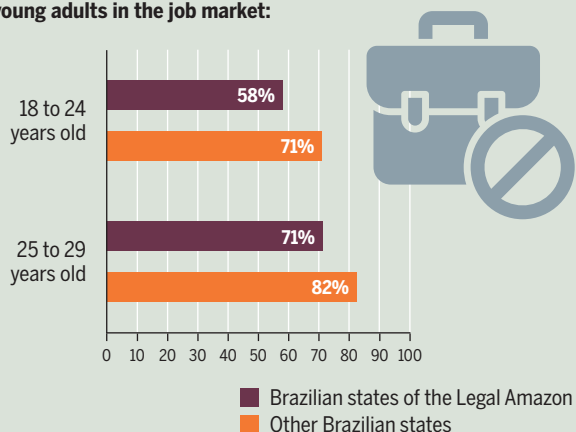
\* Teachers working in schools located on Indigenous lands, 85% of whom are Indigenous

## (UN)EMPLOYMENT IN THE AMAZON

The difficulty of entering the job market is 13% higher in the states of the Legal Amazon compared to the rest of the country.

AMAZÔNIA 2030

### Participation of young people and young adults in the job market:



\* The index refers to young people who have some type of job, whether formal or informal, in addition to those who are trying to enter the job market.

High unemployment rates among Amazonian young people make it easier for them to be recruited into the illegal market related to environmental crimes.

and implementation of sustainable development strategies are vital to creating an environment where young people can thrive without having to leave their roots behind.

In contrast to this challenging reality, the protagonism of Indigenous youth in the resistance and defense of ancestral territories, the preservation of the forest, and the pursuit of climate and social justice stands out. Driven by a deep sense of responsibility toward their lands and cultures, these young people organize themselves into resistance movements that seek to protect their communities from external threats. This leadership is strongly influenced by relationships with elders and reverence for ancestors, who play a fundamental role in shaping young Indigenous leaders by transmitting traditional knowledge and values that guide the fight for environmental preservation. This intergenerational transmission of knowledge strengthens cultural identity and community cohesion – vital elements for resilience against external pressures. In addition, ancestral teachings provide a holistic understanding of the environment, recognizing the interdependence between humans and nature, and promoting a comprehensive approach to environmental conservation.

The cultural resilience of Indigenous communities is a key factor in opposing threats to their territories. By valuing and integrating traditional knowledge into the environmental struggle, Indigenous youth not only protect their lands, but also reaffirm their identity and rights as Indigenous peoples. The dialogue with social movements and non-governmental organizations increases the visibility of their causes and strengthens the pressure for public policies that respect and guarantee Indigenous territorial rights. ●

The two largest capitals in the northern region are, comparatively, much “older” in terms of average age: Manaus (30) and Belém (35).

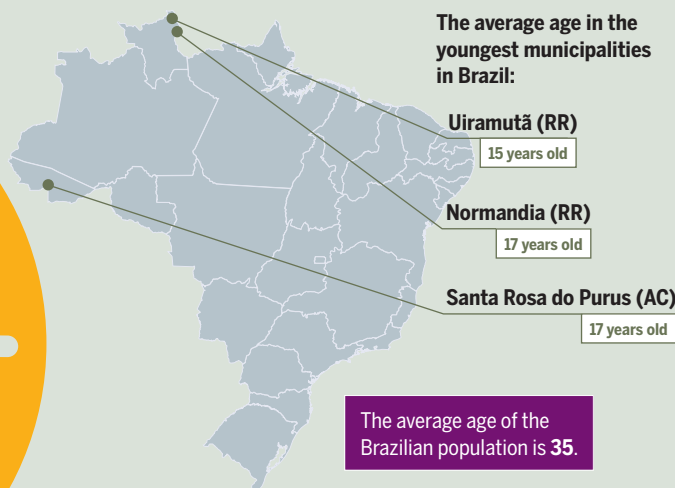
the forest, but also for local communities. Participation in such crimes frequently exposes young people to violence, instability, and exploitation, perpetuating cycles of exclusion and marginalization.

Addressing these challenges requires an integrated approach that strengthens education opportunities, fosters local economic development, and promotes cultural appreciation. Investments in school infrastructure, as well as technical and vocational training, can empower young people to become agents of change within their own communities, helping to prevent forced migration. Additionally, promoting local entrepreneurship and sustainable economic alternatives can create jobs and generate income, keeping these young people within their territories.

Improving infrastructure and basic services in rural areas is equally essential. Public policies that foster the active participation of youth and communities in the planning

## A YOUNG AMAZON

The 2022 census indicates that the northern region is the youngest in Brazil.



CENSO 2022, AGÊNCIA AMAZÔNIA REAL

# PROTAGONISTS OF SOCIO-ENVIRONMENTAL JUSTICE

**Amazonian women play an important role in their communities. Women-led organizations are on the front lines of the fight against neo-extractivism in the region. This fight is taking place in a context of high femicide rates, in addition to challenges related to institutional political participation.**

**T**he Amazon is a place of significant challenges for the women who live, work, and fight here. Women in the region face a reality marked by rights violations in multiple dimensions, reflecting the complex intersection of social, cultural, economic, and political factors. These violations involve not only gender-based oppression and inequality, but are also direct consequences of natural resource exploitation, which is intertwined with the oligarchic structures perpetuated in Amazonian society over the centuries.

In the Legal Amazon, women make up the majority of the population (50.2%) and play crucial roles in their communities. However, their institutional political participation has historically been limited by cultural, social, and economic factors. For instance, in the first round of the 2024 municipal elections, women represented only 15.5% of the mayors elected across Brazil, with even lower averages in some states of the Legal Amazon. In Acre, just 4.55% of elected mayors were women. In Rondônia, only 5.88% of those elected to the executive branch were women. Regarding municipal councils, women accounted for 18.24% of elected city councilors nationwide in 2024, but states such as Pará and Rondônia fell below this average, with 17%

and 16% of elected city councilors, respectively.

Their underrepresentation is aggravated by discriminatory and sexist practices, such as the lack of public policies aimed at promoting gender equality and restricted access to education and political training for women.

On the other hand, there is a growing mobilization of women from the countryside and the forest, who are organizing themselves into networks and seeking representation in community councils, rights councils, associations, and cooperatives, thereby advancing in the struggle for space within decision-making spheres. They become protagonists in the fight for the recognition of their rights, and since their ways of life are intertwined with the preservation of their territories, they also defend the land, water, and forest. Thus, Amazonian women – Black, Indigenous, riverside, and quilombola women, whether rural or urban workers – have stood out in social movements of resistance and survival against the advances of neo-extractivism.

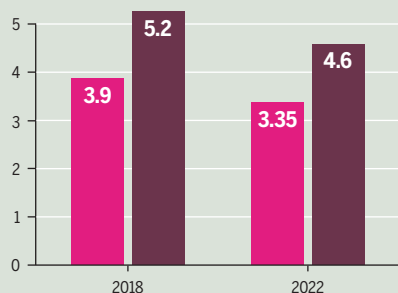
In Amazonas, for example, the Permanent Forum of Women of Manaus brings together more than 30 women's organizations – including the Ecofeminist Movement Maria sem Vergonha, the Movement of Black Women of the Forest (Dandara), the Association of Alternative Income Generation Groups of Manaus, the Movement of Solidary Women of Amazonas, and the Brazilian Union of Women – which have historically been at the forefront of demonstrations for rights and justice. They have mobilized against the construction of dams and the exploitation of minerals

*A report concludes that legal violence affects Amazonian women disproportionately compared to women in other regions of Brazil.*

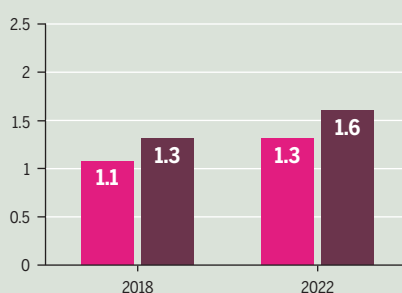
## VIOLENCE AGAINST WOMEN IN THE AMAZON

The Amazon region stands out with alarming data on gender-based violence.

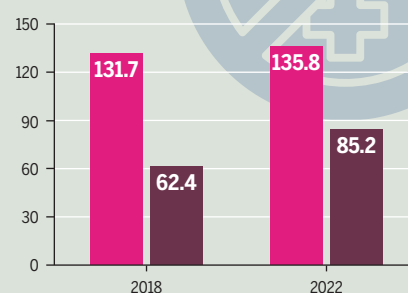
### Homicide of women\*



### Femicide\*



### Physical violence\*



\* Rate per 100,000 women

Rest of the country  
Legal Amazon

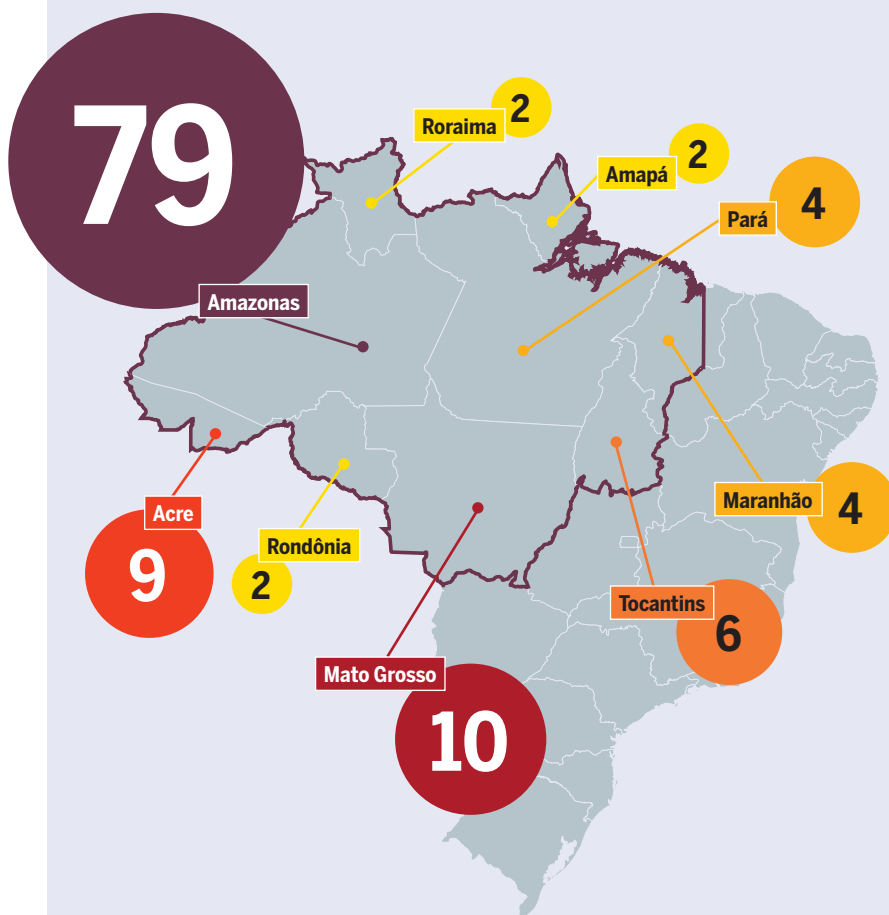
INSTITUTO IGARAPÉ

## FEMALE RESISTANCE

Mapping of formal and informal organizations, groups, and collectives led by Indigenous women in the Brazilian Amazon in 2023.

There are 118 organizations/groups located across the nine states of the Amazon:

Economic activities developed by the organizations



HANDICRAFTS



BEEKEEPING



AGRICULTURE



INDIGENOUS FASHION



SEWING



CULINARY



ARTS



PACKAGING

FUNDAÇÃO AMAZÔNIA SUSTENTÁVEL (FAS)

in their territories. Notably, they have also participated in mobilizations against the privatization of water supply services in Manaus since the late 1990s, culminating more recently in the occupation of the headquarters of Amazônia Energia in 2018.

During the COVID-19 pandemic, the struggles of Amazonian women also stood out. During the quarantine period, the Permanent Forum of Women of Manaus protested at the State Legislature of the State of Amazonas, demanding vaccines, mask donations, emergency aid, and the suspension of all work activities. In Amapá, a state accessible only by air and river, there was a shortage of alcohol, gloves, masks, and personal protective equipment during the pandemic. Women from various organizations, especially the Black Women's Institute of Amapá, drew on the ancestral wisdom of their peoples through medicinal plants and balsamic products (elixirs, syrups, teas, and others), which were essential for relieving pain, boosting immunity, and saving lives.

All this organization is only possible through training and empowerment initiatives that have been fundamental in strengthening women's protagonism on different fronts of struggle. Workshops, training courses on human rights, natural resource management, and community leadership, as well as training on the solidarity economy and

*Many of the organizations, groups, and collectives led by Indigenous Amazonian women work with sustainable economic activities.*

reproductive rights, are some of the strategies adopted to promote women's participation in decisions that directly affect their lives.

These actions aim to transform not only the individual reality of women, but also to foster social changes that can lead to greater gender equality and environmental justice. As a result, many women become targets and are murdered in attempts to silence their fight against sexism, racism, LGBTphobia, gender-based political violence, or developmentalist programs. The figures for female homicides and feminicides in the Amazon are higher than the Brazilian average.

Even though they are invisible in the historical narrative and face inequality in political participation and gender-based violence, Amazonian women are powerful builders of change. Their engagement is essential not only for the Amazon, but also for creating possibilities for a more just, egalitarian, and sustainable world. The resistance of Amazonian women is a symbol of resilience and hope in the face of social ills. ●



# SUSTAINABILITY AND RESILIENCE

**In the Amazon, scientific agroecological knowledge is combined with the ancestral knowledge of traditional peoples and communities in forest management. This fusion results in several initiatives that stand as resistance to the advance of agribusiness.**

**A**groecology is a science that mobilizes ecological principles and methods to support the development of more sustainable agri-food systems. The concept of agroecology has expanded in recent years, following the evolution of debates that highlight the impossibility of isolating “islands of success” in production while disregarding broader issues such as land concentration, processing, markets, labor and gender relations, consumption, and waste generation.

In the Amazon – recognized for the biodiversity of its ecosystems and the diversity of the peoples and communities that inhabit it – scientific agroecological knowledge merges with the knowledge historically constructed through the direct relationship between humans and nature. To understand agroecology in the Amazon, it is necessary to analyze the historical process of its occupation, the relationships between organizations and institutions and the Amazonian populations, and the challenges for advancing the practices adopted on the forest floor.

Part of the knowledge mobilized in agroecology comes from ancestral practices in the management and design of agroecosystems carried out thousands of years ago by Indigenous peoples. In this sense, the countless social and scientific systematizations already developed in the field of agroecology are rooted in ancestral Indigenous produc-

tion and food systems, and, more recently, in those of African peoples brought as slaves to the Amazon.

Traditional production and food systems – such as agroforestry systems and productive home gardens – are unequivocal examples of these contributions, as Amazonian dark earth and cultural forests. Thus, a significant part of the development of agroecology in the Amazon is associated with these practices and their evolutionary processes. The agroecological transition in these territories must incorporate this knowledge, enhance it, and revalue ancestral wisdom. This movement is the essence of agroecology on the forest floor, where *puxirums*, *mutirões*, and other collective practices of work, its care, and reciprocity set the tone for a vision of the commonplace individuals in the territories.

However, over the past 50 years – especially during and after the Brazilian military dictatorship – the Amazon has undergone a broad territorial occupation project marked by various forms of anthropic activity (deforestation, wildfires, water contamination and population exposure to mercury from mining, the expansion of monoculture soybean and oil palm plantations, construction of hydroelectric power plants, grain ports, roads in protected areas, and the intensive use of pesticides). These processes have been aggravated by the evident signs of climate change, making the region a significant stage for the impacts of human actions. This transformation of the landscape has introduced new challenges in terms of the sustainability of agri-food systems.

*Agroecology is inspired by ancestral and collective practices of agroecosystem management. In the Amazon, puxirum is one of these tools.*

## SLAVE LABOR X PUXIRUM\*

The Amazon accounts for almost half of the rescues of workers in slave-like conditions. Agribusiness is the main driver of this data.

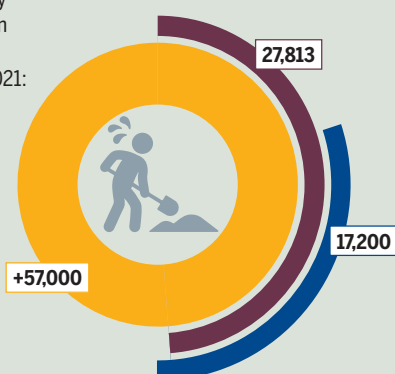
Agroecology in the Amazon incorporates the practice of “*puxirum*.” A term synonymous with the Portuguese word “*mutirão*” (that is, collective effort), *puxirum* is commonly used in different regions of the Amazon to describe the gathering of people for communal work, such as harvesting or building.



Workers freed from slave-like conditions by inspection groups from the Ministry of Labor, between 1995\*\* and 2021:

In total, 2,721 inspection operations took place in the Legal Amazon during this period.

■ Brazil  
■ Legal Amazon  
■ Cattle farms

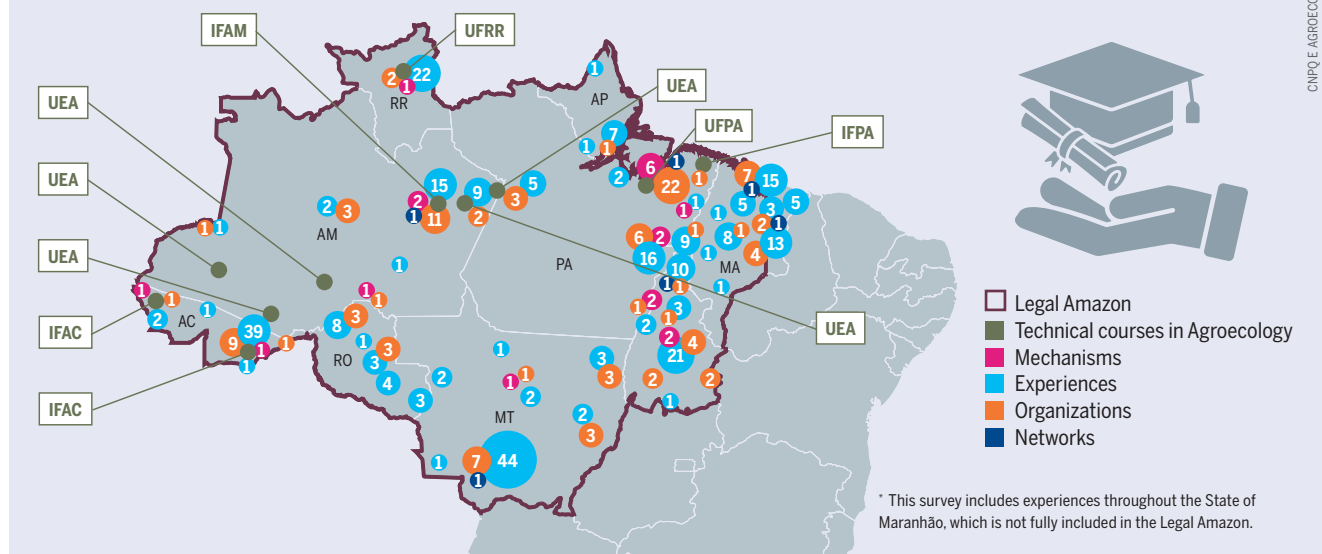


\* Both “*puxirum*” and “*mutirão*” originate from the Tupi word “*moty’rã*,” which means “work in common.”

\*\* The year in which Brazil created instruments to combat slave labor.

## AGROECOLOGY IN THE AMAZON

There are 6 technical courses (in 11 campuses) and 508 agroecology initiatives in the states that make up the Legal Amazon.\*



Family farmers are currently striving to reclaim parts of their territories through ecologically-based practices, such as implementing agroforestry systems in their various forms or adopting forest and scrubland management systems that combine native vegetation with food crops. At their core, the diversification of production and the reduction or replacement of industrial inputs have proven effective in driving agroecological transitions in the Amazon.

In the political dimension, resistance initiatives are also diversifying and can be understood beyond institutional politics itself. The social construction of markets based on short supply chains – such as local fairs and the implementation of institutional purchasing programs such as the Food Acquisition Program and the National School Feeding Program – has become an important alternative for making the economies of farmers in the Amazon more dynamic. The added value generated by small-scale agro-industries organized by family farming cooperatives has gained traction in recent years, particularly through socio-biodiversity products such as açaí, Brazil nuts, and others.

Women play a key role in agroecological activities in the Amazon, particularly in territories where productive home gardens, the conservation of native plant and animal resources, and the processing of agrobiodiversity and socio-biodiversity products are practiced. They are increasingly organizing themselves into associations, cooperatives, or other forms of representation, seeking to influence public policies that ensure the continuity of local production methods.

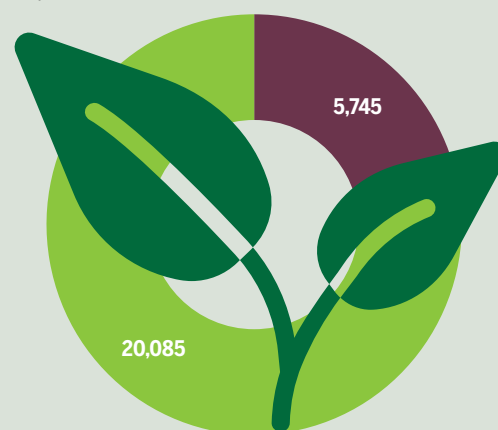
Thus, agroecology emerges as a pathway for strengthening socio-environmental resilience in the Amazon. To achieve this, it is essential to reinforce and integrate socio-technical networks composed of a growing number of pub-

*Agroecology research has been expanding in universities, as the acceptance of its knowledge as a science grows. In parallel, several initiatives seek to promote agroecology in Amazonian territories.*

lic education and research institutions, non-governmental organizations, and organizations of farmers, Indigenous peoples, and traditional communities. These actors must work together through transdisciplinary actions aimed at adopting the principles of agroecology from a territorial perspective. In this context, it is crucial to create and strengthen instruments to promote agroecological activities through state and regional policies focused on agroecology and socio-biodiversity, integrated with the National Policy for Agroecology and Organic Production. ●

## ORGANIC CERTIFICATION IN THE AMAZON

Certified organic producers in the states that make up the Legal Amazon represent 22% of the total number of certified producers in Brazil.



■ Certified organic producers in the states that make up the Legal Amazon

■ Certified organic producers in other states in Brazil

*The National Policy for Agroecology and Organic Production determines that there are three ways to guarantee the quality of organic food: certification by audit, certification by Participatory Guarantee Systems, and certification by Social Control Organizations.*

# A HISTORICAL LANDMARK IN GLOBAL FOOD SUPPLY

**Food culture is defined as a series of ancestral and symbolic practices related to the relationship between peoples and the cultivation and preparation of their food. Originating in the Amazon, the concept underwent a long journey before being recognized.**

In 2021, the Observatory for the Human Right to Adequate Food and Nutrition published the first survey on food insecurity among Indigenous populations living in urban areas of Brazil. Preliminary results revealed that 70% of the Indigenous population dwelling in Belém, Pará, were experiencing hunger, and that at least 40% of children were consuming no more than two meals a day. This context of food insecurity highlights a series of complex issues, including the disruption of these peoples' cultural food practices.

Until 2013, food culture was not officially recognized as a cultural expression in Brazil. There was no investment in food as culture, whether through public funding, grant programs, or similar mechanisms. The concept was formally acknowledged that year during the III National Conference on Culture, when a motion was approved introducing

the notion of food culture. This concept emerged from interviews conducted with communities in the Marajó region during the first decade of the 2000s, as part of a participatory cultural mapping project on the food cultures of the Amazon region in Pará. These conversations revealed that the term "gastronomy" did not resonate in that context, as it failed to capture the depth and complexity of the knowledge, technologies, metaphysics, practices, spirituality, handicraft, territorialities, movements, identities, and diversities that shape food – especially among Indigenous peoples and traditional communities.

Treating gastronomy as a synonym for culture proved incoherent. The term, by its very etymology, refers to a science. Moreover, not all practices associated with gastronomy justify its classification as a cultural expression. Fast food, genetically modified foods, and synthetic substances, for instance, are examples of practices that lack the symbolic and identity-related dimensions that underpin the concept of culture.

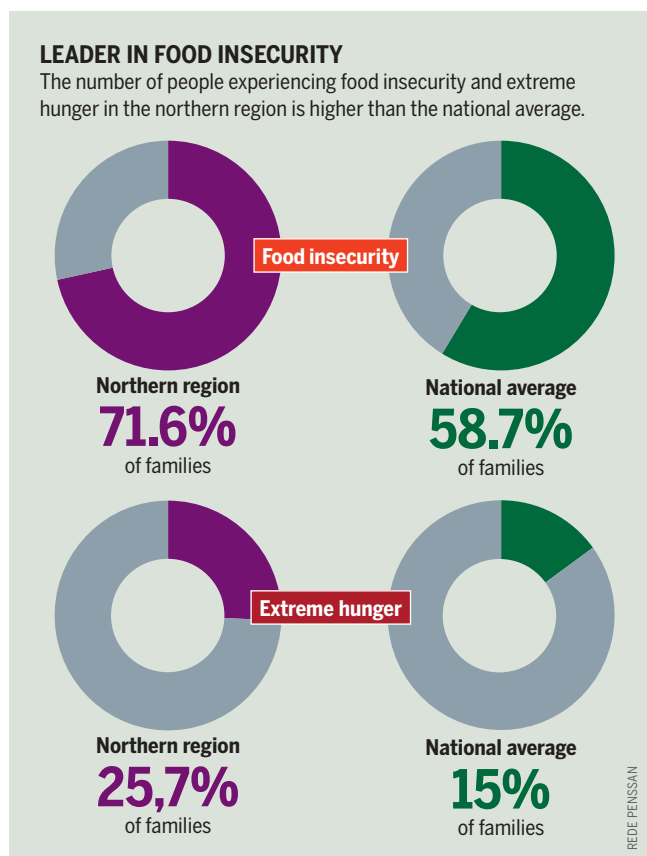
However, the illusionism of agri-food empires has historically worked to equate gastronomy with culture, even though these same systems are responsible for the expropriation of cultural and genetic heritage and for exercising symbolic domination. As they advanced over local cultures, these empires encountered resistance in the form of organic intellectuals, who articulated the concept of food culture, distinguishing it from gastronomy. This distinction anchored food culture in the framework of rights, grounded in international protocols and agreements to which Brazil is a signatory.

From the Amazon to the world, food culture points have emerged – spaces guided by organizational principles distinct from those of conventional restaurants. Today, some of these food culture points have been consolidated in Brazil for over 15 years. One of the most prominent and successful examples is Iacitá Amazônia Viva, located in Belém.

It is important to highlight the direct contributions of the concept of food culture to food security and sovereignty. These include the decriminalization of artisanal products from Brazilian family farming, advocacy for the revision of the basic food basket to include items such as cassava and its derivatives, the establishment of the Permanent Commission for Food Culture, and the guarantee of representation on the National Council for Food and Nutrition Security.

Internationally, the concept of food culture was included in the Aichi Biodiversity Targets (2010–2020), established during COP 10 on biodiversity. These targets outlined concrete actions to halt the global loss of biodiversity. Food culture is now recognized as a safeguard for the protection and promotion of Brazilian socio-biodiversity

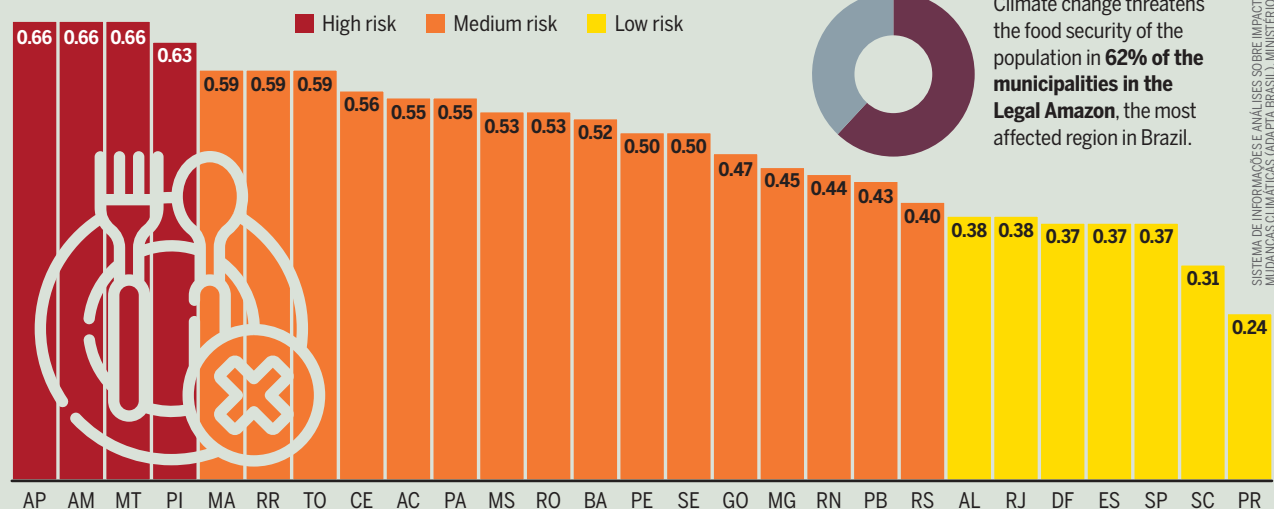
*In the northern region, the State of Pará has the highest number of people experiencing hunger, totaling 2.6 million individuals.*



## THE SITUATION GROWS WORSE IN THE AMAZON

Climate change jeopardizes the food security of the population in 62% of the municipalities in the Legal Amazon, making it the most affected region in the country.

Ranking of vulnerability to food insecurity due to climate events, by Brazilian state:



and for the reduction of climate change impacts. Furthermore, the Food and Agriculture Organization of the United Nations has begun to recognize food culture as a key pillar in the fight against hunger and in the pursuit of food sovereignty. The concept has also contributed to discussions within the International Treaty on Intellectual Property and Associated Traditional Knowledge (WIPO/2024).

In 2023, during the National Conference on Food and Nutrition Security, the Free Conference on Food Culture was held, where the concept of food culture was collectively redefined in plenary as: to know, to do, to speak, to cultivate, to create, to prepare, to care for, to heal, and to enchant. This renewed definition embraces ancestry, spirituality, territoriality, and central symbolic and identity-based dimensions. As such, food culture is understood as a set of practices, manifestations, and cultural expressions related to food that intersect with productive, socio-economic, health, and human rights dimensions, as well as socio-environmental and climate justice, land and territory issues, and the struggles against misogyny, patriarchy, structural racism, and the criminalization of artisanal and religious food practices.

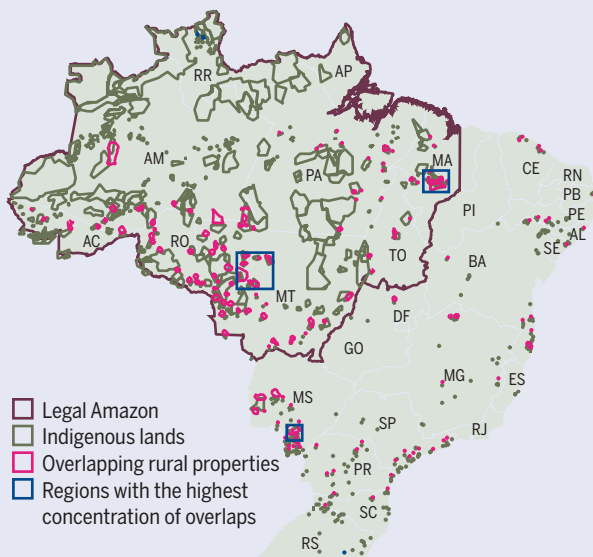
Therefore, food culture is inseparable from food security, the self-determination of peoples, and the pursuit of good living. However, the Ministry of Culture has made only limited progress and has merely acknowledged the political significance of this issue, particularly for Indigenous peoples and traditional communities, with special emphasis on the Amazon region. ●

*Scene of the Guarani Kaiowá genocide, the State of Mato Grosso do Sul has the highest number of land overlaps in Brazil: 630 in total. It is followed by states in the Legal Amazon: Mato Grosso (247) and Maranhão (189). These same states also top the ranking in terms of area affected: Mato Grosso (371,500 hectares), Maranhão (244,900 ha), and Mato Grosso do Sul (238,900 ha).*

*The vulnerability index measures both a population's adaptive capacity to climate change and its sensitivity to its effects, including aspects such as food production, agricultural establishments, and the quality of food products.*

## AGRICULTURE INVADES INDIGENOUS LANDS

A cross-referencing of land databases reveals 1,692 overlapping farms on Indigenous lands. Big names in agriculture appear in the data.



**1,692** overlapping farms on Indigenous lands, corresponding to **1.18 million hectares**.

Of this total, **95.5%** are in territories pending demarcation. Only **18.6%** of the overlapping area is used for agricultural production.

DE OLHO NOS RURALISTAS



# THE RESISTANCE OF TRADITIONAL TERRITORIES AND THE PROTECTION OF NATURE

**The struggle for common goods resists the privatization of territories and living beings, challenging the current legal system and proposing a new configuration – one that respects systems of coexistence between humans and non-humans.**

**T**he term “common” is not new and has been discussed in various theoretical contexts, with different philosophical, legal, and religious connotations. In the 21st century, it represents a critique of the current structure of private property and exclusion, and is understood as a space for autonomy, cooperation, and self-governance. The term is also known as “common goods,” referring to social systems that manage a set of environmental goods collectively governed by a community, materialized through collective actions. There is community resistance to the individual ownership of these goods, in response to enclosures, privatization, as well as patenting, commercialization, and biopiracy. The struggle of Indigenous peoples in Brazil is an example of resistance against the destruction of nature and, especially in the Amazon, involves the protection of socio-biodiversity and the defense of common goods.

The different conceptions of the common goods are presented as an alternative to the climate crisis and also as a critique of the idea of protecting certain assets (such as water, air, forests, or land) in isolation. The main concern regarding this fragmented perception is the fact that ecosystems are interconnected, and their effects are local, regional, and global.

Also called the “common good of humanity,” this conception contrasts with the modern paradigm of development, which is limited to material and scientific progress, based on the notion that we live on a planet with inexhaustible natural resources at the service of human needs, and centered on a competitive economy. It is presented as a proposal for “living well,” aiming to achieve a balanced social dynamic among individuals, genders, and social groups, in harmony with nature, through the reconfiguration of living conditions. In this sense, the common good of humanity is understood as a process – a social construction – rooted in concrete experiences and social struggles.

The greatest example comes from Indigenous peoples who, for millennia, have lived in harmony with nature and have been guided by three basic principles: reciprocity, solidarity, and collective rights, where the notion of the common good has prevailed. The common good of humanity recognizes the importance of worldviews and practices rooted in respect for nature and collective life, as observed among Indigenous peoples of Latin America. By questioning private ownership of the means of production, it seeks to establish interculturality in its construction.

In general, the discussion about the common goods is related to cooperation and collective actions, seeking to serve as a counterpoint to prevailing contemporary ideas.

*According to the 1992 Convention on Biological Diversity, biopiracy can be characterized by the exploitation, manipulation, export, and/or international commercialization of biological resources.*

## BIOPIRACY: THE PLUNDERING OF AMAZONIAN LIFE AND KNOWLEDGE

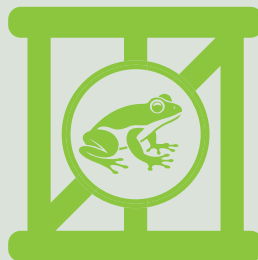
The international treaty approved in 2024 addresses intellectual property, genetic resources, and Indigenous traditional knowledge.

**May 24th, 2024**

The Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge was approved in Geneva.

- It is the **first treaty** to include specific provisions for the protection of the knowledge of Indigenous peoples and local communities.
- Its approval followed **decades of negotiations**.
- The treaty was signed by **190 countries, including Brazil**.
- It establishes that patent applicants whose inventions are based on genetic resources or associated traditional knowledge must disclose the country of origin, the original source of these resources, and which Indigenous peoples or local communities provided the traditional knowledge used in the research.

Research found evidence of biopiracy involving the knowledge of Indigenous peoples in the Amazon regarding the secretion of the Kambô frog.



Scientific name of the frog:

***Phyllomedusa bicolor***

The analgesic and antibiotic properties of the animal's secretion are traditionally used by around 15 Indigenous peoples.

Research uncovered evidence of **11 patents** registered in developed countries – which may constitute the appropriation of genetic resources.



UNIVERSIDADE FEDERAL DE JUÍZ DE FORA: GOVERNO FEDERAL: CONVENÇÃO SOBRE DIVERSIDADE BIOLÓGICA DE 1992: TRATADO DE PROPRIEDADE INTELECTUAL, RECURSOS GENÉTICOS E CONHECIMENTOS TRADICIONAIS ASSOCIADOS EM GENEBRA

## COMMON GOODS AND RELATED CONCEPTS

### Anthropocene

This concept refers to a new geological era characterized by the impact of humanity on Earth. The term was popularized in 2000 by Dutch chemist Paul Crutzen, Nobel Prize winner in Chemistry in 1995. Some academic debates suggest naming the current era “Capitalocene” or “Plantationocene,” highlighting the rise of capitalism or the plantation system as key markers of this impact.

### Coviability and multispecies landscapes

These terms refer to the multiple arrangements through which humans and non-humans can coexist in a persistent, functional, and equitable manner within complex socio-ecological systems.

### Common good

One of the pillars of the term “common good” is the use value that arises when a given good or service is directed toward satisfying the vital needs of human beings, in contrast to the capitalist logic of exchange value. Such fundamental goods or services would not be treated as commodities, but rather defined and managed by the community – at different levels – through democratic processes.

### Living well

A translation of the Quechua neologism “sumaq kawsay” and the Aymara term “suma qamaña,” it presupposes the systematization of Indigenous Latin American cosmologies, summarized by the valorization of reciprocity between humans and nature, supporting non-predatory forms of social organization. It is provided for in the 2008 Constitution of Ecuador and the 2009 Constitution of the Plurinational State of Bolivia, both of which recognize nature as a subject of rights.

BENATTI, JOSÉ E. MACHADO, ALTAMIRAS MARTINS; DATAPB; ACOSTA, ALBERTO



One example is common lands, which in modern times have become marginalized physical spaces. Indigenous, quilombola, and traditional community lands are experiencing this lack of legal recognition. When not demarcated, they are left vulnerable to predation. The fight for the common goods does not aim to reestablish an absolute state, but rather to strengthen communities and local experiences. It involves the notion of belonging – understanding that even if one does not directly benefit from a given resource, the interactions and interconnections ensure that everyone will benefit in some way.

The recognition of community control over a territory has gained important territorial, social, environmental, and legal significance on both the national and international stages. In Brazil, as in several Latin American and European countries, this phenomenon is recurrent. Thus, the current discussion on the territorialization of the common goods and community management – and its relative peculiarity within the existing legal framework – represents a new configuration of the legal regime of property and reflects pluralistic values.

Nowadays, several studies have demonstrated the importance of protecting common goods – especially those found in the territories of traditional peoples and communities – to ensure social and biological diversity (i.e., socio-biodiversity) and, at the same time, mitigate the climate crisis. These marginalized social groups are characterized by valuing and living in harmony with nature – a true coviability. Thus, the common goods explicitly express interspecies coexistence and multispecies interdependence.

The fight for the common goods in Brazil gained prominence with socio-environmentalism, emerging as a distinct proposal. Allied with certain environmental NGOs,

*At the international level, institutions such as the Intergovernmental Panel on Climate Change (IPCC) have demonstrated the direct relationship between the protection of traditional territories and biodiversity, highlighting that Indigenous lands are fundamental to ensuring biological diversity.*

it broadens the concept of protecting natural spaces by incorporating sustainable development and the protection of traditional territories, along with the constitutional recognition of the territorial rights of Indigenous peoples, quilombolas, and traditional communities.

How can the agendas of social and environmental justice be reconciled? In the face of proven environmental destruction and the real threat of the extermination of nature itself as a common good, the importance of a paradigm shift becomes evident. A sustainability model guided by the philosophy and epistemology of native peoples may point toward a break from this reality.

As Indigenous leader Ailton Krenak rightly states, we need to create narratives, stories, and actions to prevent the end of the world. The Guarani believe that as long as they dance, sing, and practice their rituals, the world will not be destroyed. Davi Kopenawa, in turn, is emphatic in stating that as long as white people do not learn from Indigenous peoples, the fall of the sky draws nearer and nearer. In the fight against the climate crisis, mitigation and compensation actions are not enough; it will be necessary to transform the current economic system, and the shortest path lies in respecting the teachings built through the coexistence of humans and non-humans in the stewardship of common goods. ●

# PULSING WITH THE HEART OF THE EARTH

The Amazon is a common home for the people who inhabit it. It is a body-territory, because its people are also land, water, and forest. To stop the destruction of the biome, it is necessary to understand this sense of belonging, expanding the limited way of thinking about human relations shaped by capitalism and colonialism.

The Amazon is essential to life on the entire planet. This importance, however, needs to be considered based on the different types of knowledge that have historically diversified this region through many ways of life. These ways of life are what have kept the forest standing; they are the strength and foundation of Amazonian life. This diversity of ways of life, however, has been attacked by different cycles of plunder. The commercialization of what is most sacred to the Amazonian peoples has been the means of destroying their territories. Through the exploitation of spices, rubber, cattle, minerals, and many other activities unrelated to this land, peoples were enslaved and had their territories divided, traversed, and destroyed. They still survive in resistance, and that is why they write. This text was written based on oral tradition, through a collective effort to systematize ideas from lives and minds.

Anacleto Pires Silva and her family wrote these words from the quilombola territory of Santa Rosa dos Pretos, in the municipality of Itapecuru-Mirim in Maranhão, a territory that resulted from the struggle of enslaved Black people who freed themselves and reinvented their freedom in the Amazon. The territory is tributary to the stories of resistance of Negro Cosme, the quilombola leader of the Balaiada revolt, which broke out in the then-province of Maranhão between 1838 and 1841. The territory of Santa Rosa dos Pretos is filled with multiple capitalist enterprises, but it still pulses with the heart of the land, with its ancestors and its rhythms. These words were written for those who, like her people, will not succumb to violence because they still carry the strength of ancestral memories. Anacleto wanted her voice to be heard in the world so that the seed of resistance she planted would germinate in the hearts of those who read it. For this reason, the text to be presented first points out the source of oppression, and then speaks of liberation.

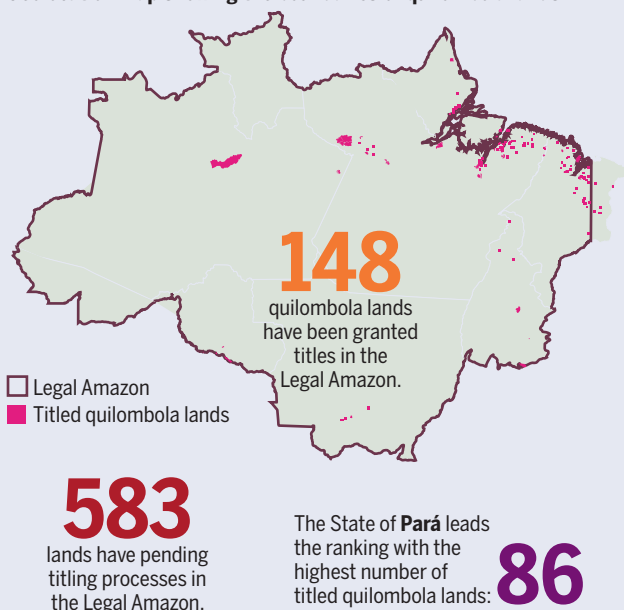
“The history of slavery in the Amazon does not begin with the peoples uprooted from Africa. Before us, Indige-

*In May 2023, there were 1,082 pending land regularization processes for quilombola territories in Brazil. According to a survey by Terra de Direitos, at the current rate of titling, it would take 2,188 years to fully grant titles to all these properties.*

## QUILOMBOLA AMAZON

The data below show the number of quilombos titled by the National Institute for Colonization and Agrarian Reform in the Legal Amazon and communities still undergoing the titling process.

Geolocation map showing the boundaries of quilombola lands:



## STEP-BY-STEP OF TITLING

### 1st Quilombola self-definition

A certificate of self-recognition is issued by the Palmares Foundation.

### 2nd Preparation of the report

The Technical Report for Identification and Delimitation is elaborated.

### 3rd Publication of the report

The Technical Report for Identification and Delimitation is published in the Federal Official Journal and the State Official Journal.

### 4th Ordinance issued by INCRA

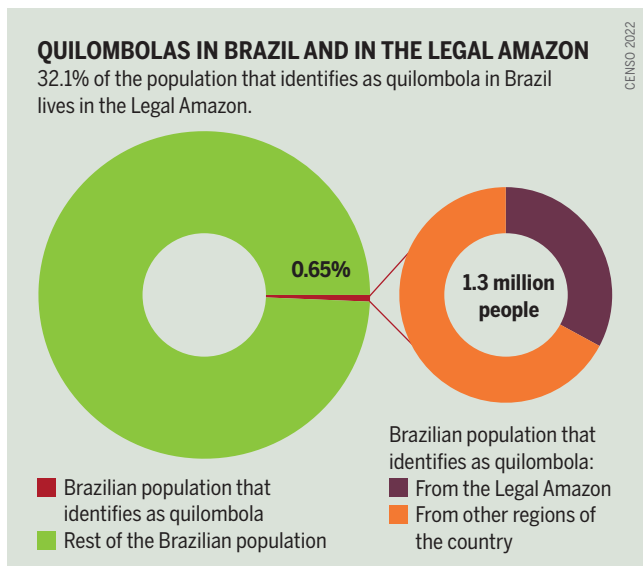
Ordinance issued by INCRA, officially recognizing the boundaries of the quilombola territory.

### 5th Expropriation decree

Presidential order of expropriation for social interest regarding private properties located within the quilombola territory.

### 6th Titling

The President of INCRA grants the collective land title in the name of the legally constituted association.



The quilombola population in the Legal Amazon is 427,000 people. The majority live in the states of Maranhão and Pará, with 269,074 and 135,033 people, respectively.

more mining activities, more livestock farming, more mining sites, more soy, more roads, more railways. We know these processes are like razors that cut and bleed the territories that produce life and, in doing so, make the world ill. Therefore, we must desire more healthy food and more connection with the knowledge that brought us this far.

“There is only a way out with nature, through the understanding that everything that exists permeates your body/territory/spirituality in a heartbeat, because we are also earth, water, and forest. Quilombola knowledge is not a knowledge of ownership, but of the collective; it is not a knowledge of having, but a knowledge of being; it is not a knowledge of death, but a knowledge of life; it is not a knowledge of sorrow, but a knowledge of celebration. Quilombolas live on faith, strength, trust, belief, and courage in facing the project of death. This cycle of life is unshakable when it comes to caring for, defending, and protecting nature. In our labor and struggle, we do not tire out, and we will not give up. We are part of the life cycle, and our ancestral knowledge has always known this – even though they tried to bury our memories. Life continues in knowledge, and that is why we speak and will continue to speak. That is why our learning comes from listening, seeing, and feeling the connections with nature. We are defending the words of our ancestors so that the Amazon will live on.

“We need to break free from the same old routines and move forward in building a new world – one that will be the key to stopping merely surviving and starting to live the fullness of life, harmony, sharing, companionship, collectivity, responsibility, commitment, social justice, love, and peace in the terrestrial universe, within the bowels of the earth, in the veins of the heart that is our Amazon. We need to preserve the foundations and pillars of the earth so that the sky does not fall!” ●

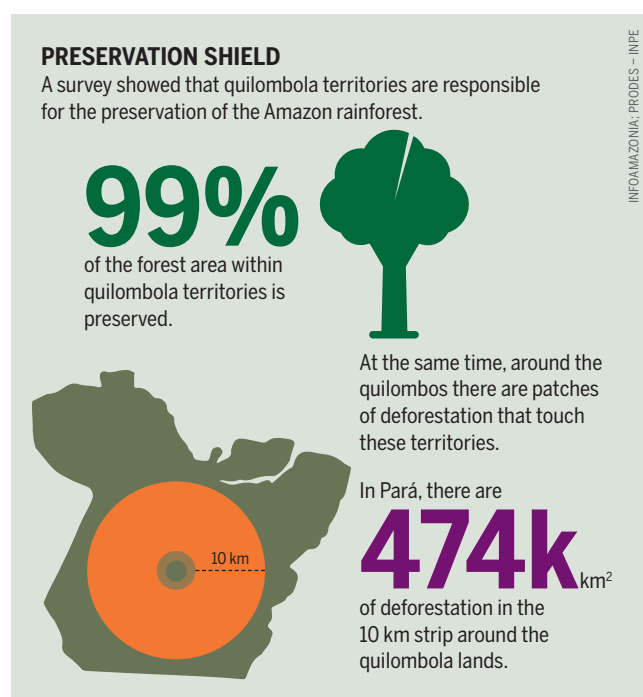
nous peoples were subjected to slavery by the church, the state, and the federal government, and settlers. This is a history marked by structural racism that acts as a means of sustaining the silencing and erasure of the identity of quilombola people, Indigenous peoples, and many other peoples through the slavery system that still exists today, through the obstacles of denialism and the violations of bodies/territories, of different territorialities, tearing peoples away from their original connection with nature.

“This structural racism aligns closely with capitalist and colonialist fundamentalism. It fuels the attempt to erase the identity of peoples and guides life on the planet through its ideological stance of psychological dominance rooted in its own imagination. It instills the idea of ‘having’ through deliberate premeditations marked by greed, hatred, and ignorance of the knowledge of the original peoples of the Amazon. The greatest expression of this fundamentalism is found in human relations disconnected from the land – without belonging, without the heart beating in rhythm with the heart of the territory, without setting foot on the ground of knowledge.

“Because of this limited way of thinking about existence, the so-called human loses the sensitivity of life, ceasing to exercise their being and beginning to define themselves based on what they have: ‘I am a doctor, a prosecutor, a judge,’ among others. This reveals the governing power of capitalism, which strengthens the project of death through the dust of human and environmental destruction, through the disconnection from the socio-environmental.

“But the world still has a way out, and it is our collective voice that must stop death. Our commitment is to care for and protect our common home – the territory – a place of love and peace with the land/body/water/forest. To do this, we must hold those responsible for death accountable. That is why society as a whole cannot continue to demand

*The highest levels of forest preservation are found in the quilombos of Santa Fé do Guaporé and Jesus, located in the State of Rondônia. There, 53 families rely on family farming for their livelihoods. These quilombos have preserved 98% of the forest within their territories. The deforestation points indicate areas where land has been cleared.*





# CONNECTIONS WITH ANCESTORS EXPERIENCED IN THE PRESENT

**Indigenous cosmoperception involves a kinship relationship between humans and other living beings. It is knowledge passed down through ancestral connections, which occur both in the spiritual realm and through the relationship with the environment.**

**D**espite the invasion of our territories and the implementation of a policy of identity erasure, we are recovering connections with our ancestors to rebuild our Indigenous present, which many call ancestry. In recent times, the word “ancestry” has been appropriated by capital and used as a commodity. It has also been widely employed as an academic concept. We, Indigenous peoples, who live the connection with our ancestors, know that what academia presents as theory is an experience we have lived since times beyond recorded history.

It is the time of the elders’ memory, which transcends all measured time. It is a different time, passed on through dreams, through feeling, and through living in interconnection with the entire environment. It is linked to a time of enchantment, of the spiritual atmosphere, which shapes a cosmology and cosmoperception of the world that is fully connected to the present. Therefore, ancestry cannot be defined solely in academic terms – it must be felt and lived. Its essence remains as a thread connecting generations, rooted in a cultural and spiritual world that resists commercial trivialization.

In this sense, to escape the wear and tear of the term, it is enough to bring forth what allows us to continue existing: the connection with our ancestors. This connection teaches us the Indigenous cosmoperception, according to which, in relation to the environment, humans are not superior to other living beings in the forest, the waters, and all biomes. These beings breathe, relate to each other, and are our relatives. They teach us how to live. Feeling the sacredness of the trees, the waters, the birds, of all living and spiritual beings is to be connected to the entire environment. We do not always learn this teaching through a materialized, physical realm. Often, the learning takes place in the spiritual sphere, with the spiritual beings. It happens through dreams, or even while we are awake and feel the strength of Mother Earth. We feel the connection with the wind dancing through the trees, with a sunrise or a sunset.

Being connected to our Indigenous ancestors also means becoming aware that, before we were born, we could have been water, forest, wind, fruit, or animal – and that, after our passage to the realm of the spiritual beings, we may become a great snake in the depths of the waters. We may become a bird or another spiritual being, as we be-

lieve. And we know we would need nothing else if we simply observed how all the creatures of Mother Earth relate to one another.

Listening to the words of Ailton Krenak, who puts Indigenous thinking about Mother Earth into dialogue with Gaia Theory – a hypothesis that proposes that the Earth is a complex and self-regulating living system – it is possible to perceive our connection with the planet as a living organism that can continue to exist independently of human beings. It is also possible to perceive that humans are slowly killing it, by considering themselves superior to it and promoting the idea that it is necessary to destroy forests and rivers of all biomes to create superficial environments through modern technologies. Based on this idea, humans establish the notion of “living well” at the expense of the Earth, and in opposition to our Indigenous well-being, through which we maintain our territories, our food, and our culture.

This opposition between “living well” and “well-being” arises from the way we relate to the environment as a whole. Under capitalism, this relationship is exploitative and destructive. Cities are built on top of our territories, sewage is dumped into rivers and seas, rivers are dammed to build hydroelectric power plants, and our lands are invaded for mineral extraction – bringing with them division among Indigenous and traditional peoples, as well as disease and death. In short, technology is used not to save the Amazon, the Caatinga, the Cerrado, the Pantanal, the Atlantic Forest, or the Pampas, but rather to destroy them for the pleasure of privatizing our collective and sacred spaces, turning them into resorts. The capitalist propaganda of “living well” is itself rooted in the extreme exploitation of labor, where people are encouraged to dedicate their lives to work – often precarious employment – in order to consume goods and buy into a version of “well-being” that they never truly enjoy.

“Good living” – conceptualized based on the worldview of the Indigenous peoples from the Andean region of Abya Yala (our common home), and also reflected in the Indigenous peoples of Pindorama (the land of many palm trees, which came to be called Brazil through colonization) – refers to the way in which each Indigenous people, in their own specific way, relates to the land, the waters, other human and non-human beings, their fields, or to gathering, fishing, and hunting. These practices take place within traditional food systems, free from poison and from the destructive exploitation of natural resources, celebrating the fruitage of the land and the gifts granted by our sacred entities.

In the poem “The Trees Are Our Relatives Too” by Geni Núñez, in addition to considering kinship with the trees, there is also a breaking of stereotypes about us, Indigenous peoples. It shows that, even with colonization and

Life is interconnected with the environment.

Life is interconnected with the environment.



We learn from our grandmothers and grandfathers, our mothers and fathers, our relatives – human people and animal people. In the magazine *Sacred Experience: Awakening Mura Ancestry*, Antorokay, a young Mura, speaks about sacred experience and shares how he learned to relate to the waters, the forests, and the struggle to defend the teachings passed down by those who came before him. This is how we maintain our connection with our ancestors

– engaging with the present while acknowledging all the colonial crossings. We do this without forgetting that our worldviews come from times and worlds in which animals are also people. Times and worlds that reach us through the knowledge built in the relationships between the relatives of that time and beyond – other times of human people, along with jaguar, dolphin, paca, armadillo, and tree people, as well as countless other beings. ●

# THE SATERÉ-MAWÉ INDIGENOUS WOMEN'S MOVEMENT

Traditional Amazonian peoples have been the protagonists of countless experiences of resistance. Social movements, organizations, collectives, and associations are some of the categories mobilized in this struggle. In this article, the Sateré-Mawé Indigenous Women's Association tells its story.

The experience of the Sateré-Mawé Indigenous Women's Association traces the fabric of social participation along the lines drawn with genipap dye and in the path of the seeds. The original territory of the Sateré-Mawé people lies in the central Amazon region, where the Andirá-Marau Indigenous land is now officially recognized. Additionally, part of the population resides in another Indigenous land, Coatá-Laranjal, as well as in urban areas of the State of Amazonas. The Sateré-Mawé Indigenous Women's Association is based in the capital of Amazonas, Manaus. Its history reveals the deep connection between women and the broader Indigenous movement's struggles for land, as they assert their rights, autonomy, and self-worth. Indigenous women actively participate in these struggles as transformative social subjects, gaining visibility in this construction that gives political meaning to their social practices.

In this context, one of the banners of the movement is the defense and promotion of Indigenous self-affirmation, as guaranteed by the 1988 Brazilian Federal Constitution in articles 231 and 232. The movement supports relatives who, regardless of where they are – whether due to forced displacement or other reasons – now recognize themselves as bodies and spirits bearing the Sateré-Mawé blood and soul, even if they no longer live in their traditional communities or speak their ancestral language. The women of this movement lead this struggle with the firm assertion that Indigenous peoples are not a people of the past – they are still here. They must be welcomed and understood along this path of resistance, reaction, and fight against identity denialism.

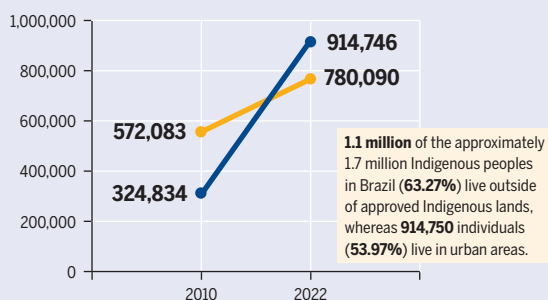
Due to the strong prejudice faced by Sateré-Mawé women, and in order to ensure voice and visibility – especially for those living in vulnerable urban areas – in 1992, the leader Zenilda Sateré-Mawé organized the creation of the Sateré-Mawé Indigenous Women's Association. In 1995, the association was legally registered. Among their objectives are the defense of rights such as educa-

*The non-village Indigenous population in Brazil faces prejudice and a series of difficulties in having access to public policies.*

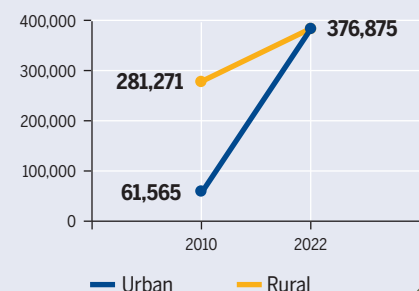
## INDIGENOUS PEOPLES IN URBAN AREAS

The Indigenous population living in urban areas has surpassed that of rural areas in Brazil. In the northern region, half of the Indigenous population resides in cities. Manaus is the municipality with the largest Indigenous population in the country, including a growing urban community.

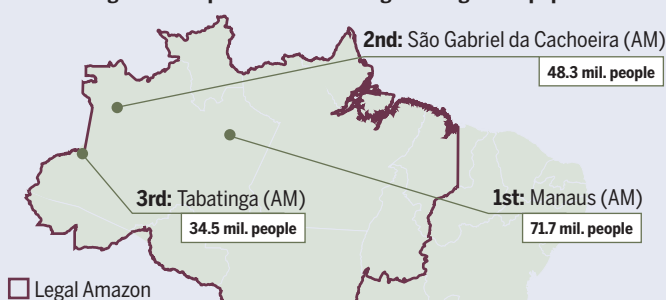
### Brazil



### Northern region



### Ranking of municipalities with the largest Indigenous populations:



Legal Amazon

### Parque das Tribos

The largest urban Indigenous community in Brazil, Parque das Tribos (Tribe Park), located in the western zone of Manaus, is home to:

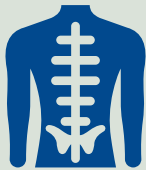
- Approximately 5,000 Indigenous peoples
- 35 different peoples, including the Sateré-Mawé
- Speakers of about 20 languages

In 2022, a survey conducted as part of a project by the Oswaldo Cruz Foundation revealed that approximately 97% of the Indigenous peoples in Parque das Tribos lived on approximately R\$600 per month, and 68% of Indigenous families were headed by women.



## CHRONIC DISEASES IN THE NON-VILLAGE INDIGENOUS POPULATION

A study revealed that 60% of the Indigenous population living outside villages, over the age of 20, has at least one chronic disease.



The most prevalent diseases are **high blood pressure (29.3%)**, **chronic spinal problems (20.6%)**, **high cholesterol (14.3%)**, **depression (10%)**, and **arthritis or rheumatism (10%)**.

**86.4%**

of the adult or elderly non-village Indigenous population depends exclusively on the **public health system**.



Among the non-village Indigenous population, **87.5%** live in urban areas, mainly in peripheral regions.

FACULDADE DE CIÊNCIAS MÉDICAS (FCM) E UNIVERSIDADE FEDERAL DE MINAS GERAIS (UFMG) – PESQUISA NACIONAL DE SAÚDE (PNS) – 2019

tion, health, and culture for these women and their families, territorial protection, as well as the strengthening of their ethnic identities and autonomy. Since its founding, the association has been dedicated to solidarity economy projects through the production and sale of Indigenous handicrafts, which play a role both in the preservation and continuation of their culture and in ensuring the subsistence of its members.

Zenilda Sateré-Mawé made history by creating one of the most important Indigenous women's associations in the Amazon. Her legacy is also rooted in her family tree, through her daughter, Regina Sateré-Mawé, and her granddaughter, Samela Sateré-Mawé. Samela was born and raised within the association. She emphasizes that she has always fully experienced the struggle, the collective, the meetings, the acts, and the manifestos. She states that this experience was essential to her formation as a woman, an activist, and an Amazonian, and that the influence of

*The Temporal Framework is a legal thesis that establishes that Indigenous lands can only be demarcated if the relevant peoples were either in possession of them or disputing them on the date of the promulgation of the Brazilian Federal Constitution, that is, October 5th, 1988. The thesis is included in Law No. 14,701/2023, which was partially vetoed by Presidente Luiz Inácio Lula da Silva and is currently being contested in the Federal Supreme Court.*

*According to the authors of the study, the data reflect the impact of social inequality on health, as a significant portion of the non-village Indigenous population lives on the outskirts of cities, under poorer socio-economic conditions.*

her grandmother and mother enabled her participation in the Indigenous movement.

With this horizontal perspective, Samela Sateré-Mawé actively commits to continuing the objectives of her ancestors, seeking alternative models of political organization and amplifying the voices of young Sateré-Mawé women through her participation in local, national, and international forums, meetings, and conferences. She also takes a stand in the media as an Indigenous activist and communicator, denouncing the federal government's economic policy and its environmental impacts on Indigenous lands. Samela's path follows Zenilda's philosophy, who stated that she created the association so that her granddaughters and future generations could carry on her work.

Thus, different generations are already mobilizing for the existence and resistance of Sateré-Mawé women, as well as of all Indigenous ethnic groups. Today, these members understand that, through the opportunities provided by their handicrafts, they are occupying new spaces in society, such as universities and government offices. Currently, the group of artisans belonging to this association produces items that reflect their Indigenous identity: necklaces, earrings, and bracelets made with local seeds. In addition, they create hand-painted t-shirts featuring traditional designs as prints. The artisans seek to apply their traditional dyes and patterns to the pieces they make. Thus, they carry on their own bodies the struggle in defense of the land and the environment, which also ensures their livelihood.

It is also worth noting that the experiences of struggle led by the women of this association, focused on defending their own ways of life, are also expressed through other objects made by the artisans, such as horns and maracas – traditional Indigenous musical instruments used in ritual practices. The sounds of these instruments have also served to strengthen social mobilizations, memorials, and the history of demands for land rights, existence, and Indigenous resistance in the cities. ●

## TEMPORAL FRAMEWORK AND CLIMATE THREATS

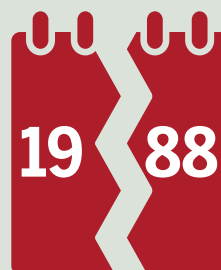
A study warns of the potential future destruction of native vegetation in the Legal Amazon if the Temporal Framework thesis – regulated by Ordinary Law 14,701/2023, which was partially vetoed by President Luiz Inácio Lula da Silva – comes into effect.

**Between 23 and 55 million hectares** could be deforested if the Temporal Framework is upheld.

This would result in the emission of **7.6 to 18.7 billion tons of CO<sub>2</sub>** – equivalent to 5 to 14 years of Brazil's total emissions.



In recent years, the Indigenous movement has mobilized widely to oppose the Temporal Framework thesis.



ALENCAR, A ET AL. – IPAM



# AUTHORS AND SOURCES OF THE TEXTS AND GRAPHICAL DATA

## 16-17 – INTERNATIONAL INTERESTS AND COOPERATION

by **Flávia do Amaral Vieira** (Tilburg University/ Universidade Federal do Pará) and **Martin Coy** (Department of Geography, University of Innsbruck)

### Graphs

p. 17: Flávia do Amaral Vieira and Martin Coy

### Text

FOLHES, Ricardo Theohilo; GONÇALVES, Marcela Vecchione (org). *Para além da COP 30: Tópicos sobre desenvolvimento na Amazônia em tempos de emergência climática*. 2024.

HECHT, Susanna; COCKBURN, Alexander. *The fate of the forest: Developers, destroyers, and defenders of the Amazon*. 2011.

LOUREIRO, Violeta Refkalefsky. *Amazônia: uma história de perdas e danos, um futuro a (re)construir*. 2002.

VIEIRA, F.A. *Política externa brasileira: da Rio-92 à COP30*. 2024

## 18-19 BORDERS

by **Amanda Michalski** (Study, Research and Extension Group on the State and Territories on the Amazon Border and Research Group on Territorial Management and Agrarian Geography of the Amazon of the Federal University of Rondônia/Pastoral Land Commission of Rondônia)

### Graphs

p. 18: O ECO. *O que é a Amazônia Legal*. 2014. <https://bit.ly/4fQkYff>

p. 19, top: MARTINS, Heron. *A Reserva Legal na Amazônia Brasileira: A real obrigação de conservação de vegetação nos imóveis rurais*. 2023. <https://bit.ly/4ijWMnx>

TERMÔMETRO DO CÓDIGO FLORESTAL. <https://bit.ly/4fPZak4>

p. 19, bottom: INSTITUTO DE PESQUISA AMBIENTAL DA AMAZÔNIA (IPAM). *Arco do desmatamento*. <https://bit.ly/3CQLd74>

O ECO. *Amacro: a nova (velha) fronteira do desmatamento na Amazônia*. 2021. <https://bit.ly/3B6V9c2>  
CHAVES, Michel E.D. et al. *AMACRO: The newer Amazonia deforestation hotspot and a potential setback for Brazilian agriculture*. <https://doi.org/10.1016/j.pecon.2024.01.009>  
*IMAZON*. <https://bit.ly/3OyREho>

### Text

COMISSÃO PASTORAL DA TERRA. *Caderno de Conflitos no Campo Brasil 2023*. 2024. <https://bit.ly/3Zzi8WG>

COSTA SILVA, Ricardo Gilson; LIMA, Luís Augusto Pereira; CONCEIÇÃO, Francilene Sales. *Territórios em disputas na Amazônia brasileira: ribeirinhos e camponeses frente as hidrelétricas e ao agronegócio*. 2018. <https://doi.org/10.4000/confins.13980>

COSTA SILVA, Ricardo Gilson; MILCHALSKI, Amanda. *A caminho do Norte: cartografia dos impactos territoriais do agronegócio em Rondônia (Amazônia ocidental)*. 2020. <https://doi.org/10.4000/confins.28017>

HAESBAERT, R. *O mito da desterritorialização: do “fim dos territórios” à multiterritorialidade*. 2004.

MILCHALSKI, Amanda. *Fronteira e Território Normado: União Bandeirantes uma agrocidade da Amazônia*. 2023.

MINISTÉRIO DO DESENVOLVIMENTO AGRÁRIO. *SUDAM. A Sudam e o Projeto AMACRO*. 2021. <https://bit.ly/3Vj4aFU>  
ROSS, Jurandyr. *Projeto Radam Brasil*. 2019.

## 20-21 – HYDROGRAPHY

by **Janice Muriel-Cunha** (Federal University of Pará), **Jansen Zuanon** (Santa Cecília University/National Institute for Amazonian Research), **Camila C. Ribas** (National Institute for Amazonian Research), **Cristiane C. Carneiro** (Federal Prosecution Office), **André Oliveira Sawakuchi** (Institute of Geosciences of the University of São Paulo), **Ingo D. Wahnfried** (Department of Geosciences of the Federal University of Amazonas), and **Josiel Juruna** (Independent Territorial Environmental Monitoring of Volta Grande do Xingu)

### Graphs

p. 20: SIOLI, H. *Introduction: History of discovery of the Amazon and the research of Amazonian waters and landscapes*. 1984.

RÍOS-VILLAMIZAR, Eduardo Antonio et al. *Hydrochemical classification of Amazonian rivers: A systematic review and meta-analysis*. 2022. <https://doi.org/10.14393/RCG217853272>

p. 21, top: INSTITUTO TRATA BRASIL. <https://bit.ly/41BZbUL>

p. 21, bottom: AQUAZÔNIA, REDE AMBIENTAL DE MÍDIA. *Índice de Impacto nas Águas da Amazônia*.

IEPÉ; FIOCRUZ; GREENPEACE; INSTITUTO SOCIOAMBIENTAL; WWF-BRASIL. *Análise regional dos níveis de mercúrio em peixes consumidos pela população da Amazônia brasileira – Um alerta em saúde pública e uma ameaça à segurança alimentar*. 2023. <https://bit.ly/41igtpG>

### Text

A ALIANÇA ÁGUAS AMAZÔNICAS. *O Estuário: o Amazonas se encontra com o Atlântico*.

AÇÃO CIVIL PÚBLICA N. 28944-98.2011.4.01.3900.

AGÊNCIA NACIONAL DE ÁGUAS (ANA). *Avaliação dos*

**Aquíferos das Bacias Sedimentares da Província Hidrogeológica Amazonas no Brasil (escala 1:1.000.000) e Cidades Pilotos (escala 1:50.000).** 2015. <https://bit.ly/4gjS7Qt>

ALBERT, J.S. et al. **Scientists' warning to humanity on the freshwater biodiversity crisis.** 2021. <https://doi.org/10.1007/s13280-020-01318-8>

BARTHEM, R.B. **Goliath catfish spawning in the far western Amazon confirmed by the distribution of mature adults, drifting larvae and migrating juveniles.** 2017. <https://doi.org/10.1038/srep41784>

COMER, P.J. et al. **Long-term loss in extent and current protection of terrestrial ecosystem diversity in the temperate and tropical Americas.** 2020. <https://doi.org/10.1371/journal.pone.0234960>

DAGOSTA, F.C.; De Pinna, M. **The fishes of the Amazon: Distribution and biogeographical patterns, with a comprehensive list of species.** 2019. <https://doi.org/10.1206/0003-0090.431.1.1>

DORIA, C.R.C. et al. **The invisibility of fisheries in the process of hydropower development across the Amazon.** 2018. <https://doi.org/10.1007/s13280-017-0994-7>

ÉZÉQUEL, C. et al. **A database of freshwater fish species of the Amazon Basin.** 2020. <https://doi.org/10.6084/m9.figshare.11920800>

GOULDING, M. et al. **Ecosystem-based management of Amazon fisheries and wetlands.** 2019. <https://doi.org/10.1111/faf.12328>

GOULDING, M. et al. **The Smithsonian atlas of the Amazon.**

HERRERA-R. Guido, A. et al. **The combined effects of climate change and river fragmentation on the distribution of Andean Amazon fishes.** 2020. <https://doi.org/10.1111/gcb.15285>

HESS, L et al. **Wetlands of the lowland Amazon basin: Extent, vegetative cover, and dual-season inundated area as mapped with JERS-1 Synthetic Aperture Radar.** 2015 <https://bit.ly/4fal7cl>

HU, Kexiang et al. **Hydrogeological characterisation of groundwater over Brazil using remotely sensed and model products.** 2017. <https://doi.org/10.1016/j.scitotenv.2017.04.188>

JUNK, W. J.; K. M. Wantzen. **The flood pulse concept: New aspects, approaches and applications – an update.** 2004. <https://bit.ly/4gfkCO>

JUNK, W. J. et al. **A classification of the major habitats of Amazonian black-water river floodplains and a comparison with their white-water counterparts.** 2015. <https://doi.org/10.1007/s11273-015-9412-8>

LACERDA, Luiz Felipe (Org). **Direitos da natureza: marcos para a construção de uma teoria geral.** 2020. <https://bit.ly/3CXudfk>

LLATRUBESSE, E.M. et al. **Damming the rivers of the Amazon basin.** 2017. <https://doi.org/10.1038/nature22333>

MELACK, J.; HESS, L. **Remote sensing of the distribution and extent of wetlands in the Amazon Basin. In: Amazonian floodplain forests: Ecophysiology, biodiversity and sustainable management.** 2010. <https://bit.ly/41dkyvf>

NEVES, E.G. **Sob os tempos do equinócio: oito mil anos de história da Amazônia Central.** 2020.

ROSÁRIO, F.F. et al. **Hydrogeology of the Western Amazon Aquifer System (WAAS).** 2016. <https://doi.org/10.1016/j.jsames.2016.10.004>

SCHÖNGART, J.; JUNK, W.J. **Forecasting the flood-pulse in Central Amazonia by ENSO-indices.** 2007. <https://doi.org/10.1016/j.jhydrol.2006.11.005>

SIDDIQUI, S. et al. **Flow regimes of the Amazon Basin. Aquatic conservation: Marine and freshwater ecosystems.** 2021 <https://doi.org/10.1002/aqc.3582>

THE AMAZON WE WANT. **Amazon assessment report.** 2021. <https://bit.ly/3CZpYjq>

VENTICINQUE et al. **An explicit GIS-based river basin framework for aquatic ecosystem conservation in the Amazon, Earth Syst.** 2016. <https://doi.org/10.5194/essd-8-651-2016>

VILLAMIZAR et al. **The distribution of river types in the Amazon basin.** 2020. <http://doi.org/10.14393/RCG217853272>

## 22-23 – LAND ISSUES by Pedro Martins (FASE)

### Graphs

p. 22: PIETRO, Gustavo. **Nacional por usurpação: a grilagem de terras como fundamento da formação territorial brasileira.** In: **A grilagem de terras na formação territorial brasileira.** 2020. <https://bit.ly/49gDeMG>

p. 23, top: PRIZIBISZCKI, Cristiane. **Floresta de ninguém.** ((o))eco . <https://bit.ly/4idDiam>

GRUPO DE PESQUISA REEXISTERRA – NAEA/UFPA.

BRITO, B. et al. **Dez fatos essenciais sobre regularização fundiária na Amazônia.** 2021. Imazon. <https://bit.ly/3DaIIML>

AZEVEDO-RAMOS, Claudia et al. **Lawless land in no man's land: The undesignated public forests in the Brazilian Amazon.** 2020. <https://doi.org/10.1016/j.landusepol.2020.104863>

p. 23, bottom: GREENPEACE. **Como “sinal verde” de Brasília fez avançar a grilagem na Amazônia.** p. 2021. <https://bit.ly/49tNnFY>

KATO, Karina et al. **A solução é a regularização fundiária? Privatização da terra, digitalização de registros e o papel do estado.** 2022. <https://bit.ly/3OJsM6E>

### Text

ARAUJO, R.A. et al. **Estado e Sociedade na BR 163: desmatamento, conflitos e processos de ordenamento territorial.** In: **Sociedade, Território e Conflitos: BR-163 em Questão.** 2008.

MARTINS, José de Souza. **Fronteira: a degradação do Outro nos confins do humano.** 2019.

MENDES, Josilene Ferreira. **O Direito vivo na luta pela terra.** 2015.

TORRES, Mauricio. **Dono é quem desmata: conexões entre grilagem e desmatamento no sudoeste paraense.** 2017. <https://bit.ly/41cSF6y>

## 24-25 – ARCHAEOLOGY

**by Carlos Augusto da Silva** (Graduate Program in Environmental Sciences and Sustainability in the Amazon of the Federal University of Amazonas)

### Graphs

p. 24: NEVES et al. A arqueologia do alto Madeira no contexto arqueológico da Amazônia. 2020. <https://doi.org/10.1590/2178-2547-BGOELDI-2019-0081>

PRADO, Helbert Medeiros; Rui Sérgio Sereni. **Presentes do passado: Domesticação de plantas e paisagens culturais na Amazônia pré-histórica**. 2015. <https://bit.ly/41oI3Sg>

SANTOS, Gilton Mendes dos. **Pão-de-índio e massas vegetais: elos entre passado e presente na Amazônia indígena**. 2021. <https://doi.org/10.1590/2178-2547-BGOELDI-2020-0012>

p. 25: DA SILVA, Carlos Augusto.

### Text

CARVAJAL, Frei Gaspar de [1504-1584]. **Relação do famosíssimo e muito poderoso rio chamado Marañón**. 2021.

JUNK, Wolfgang J. et al. **Várzeas Amazônicas: Desafios para um Manejo Sustentável**. 2020. <https://bit.ly/4iqkheo>

PORRO, Antônio. **O povo das águas: ensaio de etno-história amazônica**. 2016. <https://bit.ly/4f5otgZ>

NEVES, Eduardo Góes. **Sob os tempos do equinócio: oito mil anos de história na Amazônia Central**. 2022.

## 26-27 – ANTHROPOGENIC FORESTS

**by Raquel Sousa Chaves Tupinambá** (University of Brasília/Tupinambá Indigenous Council of the Lower Tapajós)

### Graphs

p. 26: MAPBIOMAS. Terras Indígenas contribuem para a preservação das florestas. <https://bit.ly/3BdahEG>

p. 27, top: ÁRVORE, SER TECNOLÓGICO. <https://bit.ly/4imcdLW>

EMBRAPA. Terra Preta de Índio ajuda a confirmar presença humana na Amazônia desde a antiguidade. 2023. <https://bit.ly/3Zo6dcZ>

p. 28, bottom: IPAM. A importância das florestas em pé. <https://bit.ly/3Zzz0fQ>

WWF BRASIL; INSTITUTO MAMIRAUÁ; NEXO. **Qual a dimensão da biodiversidade da região amazônica**. 2022. <https://bit.ly/4inlfbm>

IBGE. **Espécies Ameaçadas de Extinção no Brasil**. 2022. <https://bit.ly/3VmSsKe>

### Text

CHAVES, Raquel Sousa; JUNQUEIRA, André Braga; CLEMENT, Charles R. **The influence of soil quality and market orientation on Manioc (Manihot Esculenta) varietal choice by smallholder farmers along the lower Tapajós river, Pará, Brazil**. 2018. <https://doi.org/10.1007/s10745-018-9981-2>

CLEMENT, C.R.; MCCANN, J. M.; SMITH, N. J. **Agrobiodiversity in Amazonia and its relationship with dark earths**. 2003.

WOODS, W. Os solos e as Ciências Humanas: interpretação do passado. In: *As terras pretas de*

índio da Amazônia: sua caracterização e uso deste conhecimento na criação de novas áreas. 2009.

## 28-29 – ORIGINAL PEOPLES

**by Justino Sarmiento Rezende** (Tuyuka), **Jaime Moura Fernandes** (Desana), **Silvio Sanches Barreto** (Bará) and **Gilton Mendes dos Santos** (all members of Center for Studies of the Indigenous Amazon of the Federal University of Amazonas)

### Graphs

p. 28: INSTITUTO SOCIOAMBIENTAL. **Localização e extensão das TIs**. <https://bit.ly/4fYitYH>

FUNAI.

p. 29, top: Diakara Desana.

p. 29, bottom: CENSO 2022. INEP. **Levantamento Semesp com base em dados do Censo da Educação Superior do Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira**. <https://bit.ly/4gj23tt>

## 30-31 – TRADITIONAL PEOPLES

**by Claudiane da Silva** (Center for Afro-Brazilian and Indigenous Studies of the Federal Institute of Pará, Campus Breves/Marielles do Marajó Women's Collective)

### Graphs

p. 30: COVENÇÃO 169 DA ORGANIZAÇÃO INTERNACIONAL DO TRABALHO. <https://bit.ly/49nHFVZ>

p. 31, top: LADISLAU, Claudiane.

INSTITUTO SOCIEDADE, POPULAÇÃO E NATUREZA. **Povos e comunidades tradicionais da Amazônia**. <https://bit.ly/4g1nXlo>

p. 31, bottom: FORO SOCIAL PANAMAZÔNICO/ COMISSÃO PASTORAL DA TERRA (CPT). **Atlas de Conflitos Socioterritoriais da Panamazônia**. 2020. <https://bit.ly/41j5xId>

### Text

BRASIL. **Decreto nº 6.040, de 07 de fevereiro de 2007**. <https://bit.ly/3OComid>

CALEGARE, Marcelo Gustavo Aguilar; HIGUCHI, Maria Inês Gasparetto; BRUNO, Ana Carla dos Santos. **Povos e comunidades tradicionais: das áreas protegidas à visibilidade política de grupos sociais portadores de identidade étnica e coletiva**. 2014. <https://doi.org/10.1590/S1414-753X2014000300008>

DA SILVA, Jorge Fernandes. **A mestiçagem na região Amazônica versus Estatuto da Igualdade Racial**. 2019. <https://doi.org/10.47209/1519-6674.v31.n.1.p.175-188>

FERNANDES, Joyce Sampaio Neves; MOSER, Liliane.

**Comunidades tradicionais: a formação socio-histórica na Amazônia e o (não) lugar das comunidades ribeirinhas**. 2021. <https://bit.ly/4fWz92N>

FGV CPDOC. **A Igreja Católica e as missões**. <https://bit.ly/49kJN0u>

PORTAL UFRA. **Igarapé – caminho de canoa em tupi. Igarapé, o que tu sabe dele?**

RAMOS, C.A.; EULER, A.M.C. **Quarta baliza do agroextrativismo no estuário do rio Amazonas: da luta pela terra à consolidação da economia do açaí**. <https://>

[bit.ly/4fUKIYb](https://bit.ly/4fUKIYb)

REDE WWF. Reservas Extrativistas: o que são e qual é a importância da principal herança de Chico Mendes. REVISTA ACTIONAID. As lutas das quebradeiras de coco babaçu. <https://bit.ly/3VmX0jV>  
SBPC. Povos tradicionais e biodiversidade no Brasil. <https://bit.ly/3OF137q>  
SUDAM, GOVERNO FEDERAL. Legislação da Amazônia. <https://bit.ly/3ZDDjXB>

### 32-33 – MIGRATIONS

by **Marília Gabriela Silva Lobato** (Federal University of Amapá), **Arley José Silveira da Costa** (Fluminense Federal University) and **François Laurent** (Le Mans University)

#### Graphs

p. 32: IDEC. Amazônia Legal no escuro. 2021. <https://bit.ly/3ZD1CX4>  
PODER 360. Apagão no Amapá – 1 ano depois, responsáveis ainda não pagaram multas. 2021. <https://bit.ly/4f6fjae>  
LOBATO, Marília; COSTA, Arley José Silveira da.  
p. 33: DA SILVA, José Roselito Carmelo da; SCUDELLER, Veridiana Vizoni. Os ciclos econômicos da borracha e a Zona Franca de Manaus: expansão urbana e degradação das microbacias. 2022. <https://doi.org/10.33448/rsd-v11i6.29103>  
AMAZÔNIA 2030. A Dinâmica Demográfica da Amazônia Legal: Migrações na Amazônia Legal. 2022. <https://bit.ly/41hiGBC>

#### Text

ARQUIVO NACIONAL. Estudos de viabilidade de elevação dos atuais territórios do Amapá e Roraima à condição de estados da federação. Ministério do Interior. Secretaria Geral. Documento arquivado no Sistema Nacional de Informações sob a tipologia Confidencial nº 047557 85. 1984.  
FILOCREÃO, Antônio Sérgio Monteiro. Formação socioeconômica do Estado do Amapá. 2015.  
FOLHES, Ricardo et al. Conflitos fundiários na área de pretensão do Grupo Orsa. 2012. <https://bit.ly/41g2Aln>  
INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTATÍSTICA (IBGE). Estimativas IBGE 2012.  
LOBATO, Marília Gabriela Silva. Mitigação e Compensação na reprodução de um padrão colonial: o contexto dos discursos, planos e danos das hidrelétricas no rio Araguari. 2021. <https://bit.ly/3VizDHV>  
RAIOL, Osvaldino da Silva. A utopia da terra na fronteira da Amazônia: a geopolítica e o conflito pela posse da terra no Amapá. 1992.

### 34-35 – INDIGENOUS LANGUAGES

by **Altaci Kokama** (University of Brasília) and **Evandro Bonfim** (Federal University of Rio de Janeiro)

#### Graphs

p. 34: KOKAMA, Altaci; BONFIM, Evandro.  
RODRIGUES, Ayrton Dall'Igna. Línguas brasileiras – para o conhecimento das línguas indígenas. 1986. <https://bit.ly/3ZHgWQU>  
LABORATÓRIO DA VISUALIDADE E VISUALIZAÇÃO DA

ESCOLA DE BELAS ARTES DA UFRJ. Línguas Indígenas

Brasileiras. <https://bit.ly/3Vk3G2b>

IBGE. O Brasil Indígena. <https://bit.ly/3Bdat6S>

p. 35, top: KOKAMA, Altaci; BONFIM, Evandro.

NEXO. O aplicativo que ensina nheengatu, língua geral da Amazônia. 2024. <https://bit.ly/4eZp1EZ>

p. 35, bottom: KOKAMA, Altaci; BONFIM, Evandro.

PROJETO COLABORA. Brasil tem apenas 10 municípios com línguas indígenas oficiais. 2022. <https://bit.ly/41krBCu>

#### Text

Lüpke, F. et al. Comparing rural multilingualism in Lowland South America and Western Africa – anthropological linguistics. 2020. <https://bit.ly/3ZN4dwk>  
NEVES, Eduardo Góes. Sob os tempos do equinócio: Oito mil anos de história na Amazônia central. 2022.

### 36-37 – THE URBAN AMAZON

by **Ana Cláudia Duarte Cardoso** (Institute of Technology/School of Architecture and Urbanism/Graduate Program in Architecture and Urbanism of the Federal University of Pará)

#### Graphs

p. 36: AMAZÔNIA 2030. Fatos da Amazônia 2021. <https://bit.ly/3OF0iLC>  
CENSO 2022  
p. 37: SANTOS, D. et al. Índice de Progresso Social na Amazônia Brasileira (IPS Amazônia 2023). Imazon. 2023. <https://bit.ly/3ZyPF33>

#### Text

CARDOSO, A.C.D. A trama dos povos da floresta: Amazônia para além do verde. 2023. <https://doi.org/10.35699/2316-770X.2021.46237>  
CORREA, R.L. A periodização da rede urbana na Amazônia. 1987.  
COSTA, Francisco de Assis. A brief economic history of Amazon (1720-1970). 2019.  
IBGE. Censo Demográfico 2022. <https://bit.ly/3Zonp1I>  
PERIPATO, V. et al. More than 10,000 pre-Columbian earthworks are still hidden throughout Amazonia. 2023. <https://doi.org/10.1126/science.ade2541>  
PRÜMERS, H. et al. Lidar reveals pre-Hispanic low-density urbanism in the Bolivian Amazon. 2022. <https://doi.org/10.1038/s41586-022-04780-4>

### 38-39 – MILITARIZATION

by **Francisco Bento da Silva** (Center for Philosophy and Human Sciences of the Federal University of Acre)

#### Graphs

p. 38: CENSO 2022.  
AGÊNCIA PÚBLICA. Caso de quilombolas afetados por Base de Alcântara chega à Corte Interamericana. 2022. <https://bit.ly/41erCI3>  
O GLOBO. Ministros de Lula visitarão Alcântara (MA) após novo conflito entre quilombolas e militares sobre expansão de Base Espacial. 2024. <https://bit.ly/3ZAiA6X>  
p. 39, top: FÓRUM BRASILEIRO DE SEGURANÇA PÚBLICA.



**Cartografias das Violências na Região Amazônica.** 2023. <https://bit.ly/3P0atdX>  
PRODES/INPE.  
p. 39, bottom: MARQUES, Adriana Aparecida. **Amazônia: pensamento e presença militar;** BRASIL DE FATO. **Alvo de Bolsonaro, INPE é palco de disputa entre civis e militares desde a ditadura.** 2019. <https://bit.ly/4ioqUy7>  
UOL. **Mourão forma conselho da Amazônia com 19 militares e sem Ibama e Funai.** 2020. <https://bit.ly/3OFTixP>

#### Text

COSTA, João Craveiro. **A Conquista do deserto ocidental: subsídios para a história do território do Acre.** 1940. BRASIL DE FATO. **Militares já ocupam quase 60% das coordenações regionais da Funai na Amazônia Legal.** 2022. <https://bit.ly/3OGUmlk>  
MARQUES, Adriana Aparecida. **Amazônia: pensamento e presença militar.** 2007.  
PENIDO, Ana Oliveira; MATHIAS, Suzeley Kalil; BARBOSA, Lisa. **A defesa da Amazônia e sua militarização.** 2022. <http://dx.doi.org/10.18542/ncn.v25i1.9943>  
REIS, Arthur César Ferreira. **A Amazônia e a Integridade do Brasil.** 2001.

## 40-41 – MAJOR DEVELOPMENT WORKS

**by Edna Maria Ramos de Castro** (Center for Advanced Amazonian Studies of the Federal University of Pará)

#### Graphs

p. 40: INESC. **Você sabe o que é a Ferrogrão?.** 2020. <https://bit.ly/3VmQOsc>  
TERRA DE DIREITOS. **Trilhos do descaso para o Oeste do Pará: violações já aparecem no planejamento da Ferrogrão.** 2019. <https://bit.ly/4f4B9Ve>  
INFOAMAZONIA. **Ferrogrão afetará pelo menos 6 terras indígenas, 17 unidades de conservação e 3 povos isolados.** 2023. <https://bit.ly/3ZgFkY4>  
p. 41, top: INSTITUTO SOCIOAMBIENTAL. **Dossiê Belo Monte.** <https://bit.ly/4gok0qy>  
MINISTÉRIO PÚBLICO FEDERAL.  
REVISTA VEJA. **Por que Belo Monte continua operando mesmo com licença vencida.** 2023. <https://bit.ly/3DeTGkk>  
p. 41, bottom: PETROBRÁS.  
PODER 360. **Bloco na Margem Equatorial tem 5,6 bi de barris de óleo, diz estudo.** 2023. <https://bit.ly/3ZFfONC>  
GREENPEACE. **Impacto de exploração de petróleo na Foz do Amazonas é de nível máximo.** 2024. <https://bit.ly/3D0SbXf>

#### Text

ACSELRAD, Henri. **Planejamento autoritário e desordem socioambiental na Amazônia: crônica do deslocamento de populações em Tucuruí.** 1991.  
BAINES, Stephen. **Usina Hidrelétrica de Balbina e o deslocamento compulsório dos Waimiri Atroari.** In: **Energia na Amazônia.** 1996.  
CASTRO, Edna (org.). **Territórios em Transformação na Amazônia.** 2017. <https://bit.ly/4ghwcJC>  
CASTRO, Edna. **Expansão da fronteira, megaprojetos de infraestrutura e integração sul-americana.** 2012. <https://doi.org/10.1590/S0103-49792012000100004>

[doi.org/10.1590/S0103-49792012000100004](https://doi.org/10.1590/S0103-49792012000100004)  
CASTRO, Edna. **Produção de conhecimento sobre hidrelétricas na área de ciências humanas no Brasil.** 2018. <http://dx.doi.org/10.5801/ncn.v21i3.6123>  
CASTRO, Edna. **Neoeextractivismo en la minería, prácticas coloniales y lugares de resistencia en Amazonia, Brasil.** 2018. <https://doi.org/10.22370/rpe.2018.5.1236>  
CASTRO, Edna; CASTRO, Carlos Potiara. **Desmatamento na Amazônia, desregulação socioambiental e financeirização do mercado de terras e de commodities.** 2022. <http://dx.doi.org/10.18542/ncn.v25i1.12189>  
FEARNSIDE, Philip. **Hidrelétricas na Amazônia: impactos ambientais e sociais na tomada de decisões sobre grandes obras.** 2015. <https://bit.ly/4fdzNry>  
MILANEZ, Felipe. **Lutar com a floresta. Uma ecologia política do martírio em defesa da Amazônia.** 2024.  
RIBEIRO, Gustavo Lins. **Cuanto Más Grande Mejor? Proyectos de Gran Escala, una Forma de Producción vinculada a la expansión de Sistemas Económicos.** 1987. <https://bit.ly/4g1vDnN>  
SEVÁ, Oswaldo. **Conhecimento crítico das mega hidrelétricas: para avaliar de outro modo alterações naturais, transformações sociais e a destruição dos monumentos fluviais.** In: **Tenotã-Mô. Alertas sobre as consequências dos projetos hidrelétricos no rio Xingu.** 2005. <https://bit.ly/49rWYg8>  
SVAMPA, Maristella; VIALE, Enrique. **El colapso ecológico ya llegó: Una brújula para salir del (mal)desarrollo.** 2020. <https://bit.ly/4f4LUH5>

## 42-43 – DEFORESTATION AND WILDFIRES

**by Philip Martin Fearnside** (National Institute for Amazonian Research)

#### Graphs

p. 42: TERRABRASILIS. <https://bit.ly/4fYdAP4>  
SISTEMA PRODES/INPE.  
IMAFLOA. **Mais da metade da área com exploração madeireira no Pará não foi autorizada pelos órgãos ambientais.** 2020. <https://bit.ly/3VokTau>  
IBAMA. **Operação do Ibama desmonta fraude para “esquentar” madeira ilegal.** 2023. <https://bit.ly/3Vo2XwI>  
p. 43, top: GREENPEACE BRASIL. **Dia do fogo completa um ano, com legado de impunidade.** 2020. <https://bit.ly/3VmfLnv>  
BDQUEIMADAS/TERRABRASILIS. <https://bit.ly/4f0V1IL>  
p. 43, bottom: NEPSTAD, Daniel et al. **Avança Brasil: Os custos ambientais para a Amazônia – Relatório do projeto Cenários Futuros para a Amazônia.** 2000. <https://bit.ly/3ZAHd3n>

#### Text

ANDRADE, M.B.T.; FERRANTE, L.; FEARNSIDE, P.M. **Brazil's Highway BR-319 demonstrates a crucial lack of environmental governance in Amazonia.** 2021. <https://doi.org/10.1017/S0376892921000084>  
BARNI, P.E.; REGO, A.C.M.; SILVA, F.C.F. et al. **Logging Amazon forest increased the severity and spread of fires during the 2015-2016 El Niño.** 2021. <https://doi.org/10.1016/j.foreco.2021.119652>

- BERENGUER, E.; ARMENTERAS, D.; LEES, A.C. et al. **Drivers and ecological impacts of deforestation and forest degradation.** In: *Amazon assessment report 2021*. 2021. <https://doi.org/10.55161/AIZJ1133>
- BERENGUER, E.; FERREIRA, J.; GARDNER, T.A. et al. **A large-scale field assessment of carbon stocks in human-modified tropical forests.** 2014. <https://doi.org/10.1111/gcb.12627>
- CARRERO, G.C.; WALKER, R.T.; SIMMONS, C.S.; FEARNside, P.M. **Land grabbing in the Brazilian Amazon: Stealing public land with government approval.** 2022. <https://doi.org/10.1016/j.landusepol.2022.106133>
- FEARNside, P.M. **Biodiversidade nas florestas Amazônicas brasileiras: Riscos, valores e conservação.** In: *A Floresta Amazônica nas Mudanças Globais*. 2019. <https://bit.ly/6qLC>
- FEARNside, P.M. **Rios voadores e a água de São Paulo.** 2015 <https://bit.ly/3qykIsY>
- FEARNside, P.M. **As lições dos eventos climáticos extremos de 2021 no Brasil: 2 – A seca no Sudeste.** 2021. <https://bit.ly/3ZAHgfz>
- FEARNside, P.M. **The intrinsic value of Amazon biodiversity.** 2021. <https://doi.org/10.1007/s10531-021-02133-7>
- FEARNside, P.M. **Amazon environmental services: Why Brazil's Highway BR-319 is so damaging.** 2022. <https://doi.org/10.1007/s13280-022-01718-y>
- FEARNside, P.M. **Destrução e Conservação da Floresta Amazônica.** 2022. <https://bit.ly/3Bw8lnU>
- FERRANTE, L.; ANDRADE, M.B.T.; FEARNside, P.M. **Land grabbing on Brazil's Highway BR-319 as a spearhead for Amazonian deforestation.** 2021. <https://doi.org/10.1016/j.landusepol.2021.105559>
- FERRANTE, L.; FEARNside, P.M. **Brazil's new president and "ruralists" threaten Amazonia's environment, traditional peoples and the global climate.** 2019. <https://doi.org/10.1017/S0376892919000213>
- INPE. **PRODES – Coordenação-Geral de Observação da Terra.** 2023. <https://bit.ly/3ZBeNGh>
- JOLY, C.A.; SCARANO, F.R.; SEIXAS, C.S. et al. **1º Diagnóstico Brasileiro de Biodiversidade e Serviços Ecossistêmicos.** 2019. <https://bit.ly/4glEalk>
- LAURANCE, W.F.; CAMARGO, J.L.C.; FEARNside, P.M. et al. **An Amazonian rainforest and its fragments as a laboratory of global change.** 2018. <https://doi.org/10.1111/brv.12343>
- NEPSTAD, D.; CAPOBIANCO, J.P.; BARROS, A.C. et al. **Avança Brasil: Os Custos Ambientais para a Amazônia Relatório do Projeto Cenários Futuros para a Amazônia.** 2000. <https://bit.ly/4fSIEjk>
- QIN, Y.; XIAO, X.; LIU, F. et al. **Forest conservation in Indigenous territories and protected areas in the Brazilian Amazon.** 2023. <https://doi.org/10.1038/s41893-022-01018-z>
- TER STEEGE, H.; PITMAN, N.C.A.; KILLEEN, T.J. et al. **Estimating the global conservation status of more than 15,000 Amazonian tree species.** 2015. <https://doi.org/10.1126/sciadv.1500936>
- VAN DER ENT, R.J.; SAVENIJE, H.H.G.; SCHAEFLI, B.; STEELE-DUNNE, S.C. **Origin and fate of atmospheric moisture over continents.** 2010. <https://doi.org/10.1029/2010WR009127>
- VERA, C.; BAEZ, J.; DOUGLAS, M. et al. **The South American low-level jet experiment.** 2006. <https://doi.org/10.1175/BAMS-87-1-63>
- YANAI, A.M.; GRAÇA, P.M.L.A.; ZICCARDI, L.G. et al. **Brazil's Amazonian deforestation: The role of landholdings in undesignated public lands.** 2022. <https://doi.org/10.1007/s10113-022-01897-0>
- ZEMP, D.C.; SCHLEUSSNER, C.F.; BARBOSA, H.M.J. et al. **On the importance of cascading moisture recycling in South America.** 2014. <https://doi.org/10.5194/acp-14-13337-2014>

## 44-45 – AGRIBUSINESS

**by Francisco de Assis Costa** (Center for Advanced Amazonian Studies of the Federal University of Pará)

### Graphs

- p. 44: MAPBIOMAS. **Área de agropecuária no Brasil cresceu 50% nos últimos 38 anos.** 2023. <https://bit.ly/4gmRLJ3>
- INFOAMAZONIA. **Mato Grosso e Pará têm 25% das cabeças de gado e são maiores emissores de metano no país.** 2024. <https://bit.ly/4gfvTz9>
- SISTEMA DE ESTIMATIVAS DE EMISSÕES E REMOÇÕES DE GASES DE EFEITO ESTUFA (SEEG). <https://bit.ly/4ggTUG4>
- p. 45: COSTA, Francisco de Assis
- IBGE. **Censo agropecuário de 1995.** <https://bit.ly/4gjVMOh>
- IBGE. **Censo agropecuário de 2006.** <https://bit.ly/3B96M29>
- IBGE. **Censo agropecuário de 2017.** <https://bit.ly/4eXgFOI>
- IBGE. **Produção agrícola municipal.** <https://bit.ly/4fULzIn>
- IBGE. **Produção extrativa vegetal e da Silvicultura.** <https://bit.ly/3ZjLMO8>

### Text

- COSTA F.A. **Contributions of fallow lands in the Brazilian Amazon to CO2 balance, deforestation and the agrarian economy: Inequalities among competing land use trajectories.** 2016. <https://doi.org/10.12952/journal.elementa.000133>
- COSTA F.A. **Structural diversity and change in rural Amazonia: A comparative assessment of the technological trajectories based on agricultural censuses (1995, 2006 and 2017).** 2021. <https://doi.org/10.1590/0103-6351/6373>
- COSTA, F.A. et al. **Desenvolvimento Sustentável, Acordos Verdes e Bioeconomias na Amazônia: delineamentos para a ação programática a partir da economia agrária.** 2023. <https://doi.org/10.1590/0103-6351/6373>
- COSTA, F.A. et al. **Complex, diverse, and changing agribusiness and livelihood systems in the Amazon.** In: *Science panel for the Amazon (2021). Amazon assessment report 2021: Part II social-ecological transformations: Changes in the Amazon.* 2021 <https://bit.ly/3VpEZkZ>
- COSTA, F.A. **Intensificação da agropecuária aumenta ao invés de reduzir a pressão sobre a floresta amazônica: Paradoxo de Jevons impera nos casos da soja e do gado no Brasil (2001-2021).** 2023. <https://bit.ly/3VLY9ll>
- COSTA, F.A. **From the appropriation of public lands to the dynamics of deforestation: The formation of the**

land market in the Amazon (1970-2017). 2023. <https://doi.org/10.1590/0103-6351/7751>  
 GARRETT, R.D.; LAMBIN, E.F.; NAYLOR, R.L. The new economic geography of land use change: Supply chain configurations and land use in the Brazilian Amazon. 2013. <https://doi.org/10.1016/j.landusepol.2013.03.011>  
 GARRETT, R. D.; RUEDA, X.; LAMBIN, E.F. Globalization's unexpected impact on soybean production in South America: Linkages between preferences for non-genetically modified crops, eco-certifications, and land use. 2013. <https://doi.org/10.1088/1748-9326/8/4/044055>

## 46-47 – MINERAL EXPLOITATION

**by Ana Poço Munduruku** (Munduruku Ipereğ Ayü Movement), **Lucinete Saw Munduruku** (Munduruku Wakoborün Women's Association), **Luciane Kaba Munduruku** (Munduruku Wakoborün Women's Association), **Hildemara Kirixi Munduruku** (Munduruku Wakoborün Women's Association), **Rosamaria Loures** (Graduate Program in Social Anthropology of the University of Brasília/Munduruku Wakoborün Women's Association/Ipereğ Ayü Movement), **Ailén Vega** (Munduruku Wakoborün Women's Association), **Luah Sampaio** (Munduruku Wakoborün Women's Association), **Eliete Ramalho Gomes** (Munduruku Wakoborün Women's Association) and **Ediene Kirixi Munduruku** (Munduruku Wakoborün Women's Association)

### Graphs

p. 46: IPAM. As cicatrizes do garimpo em Terras Indígenas da Amazônia Brasileira. 2024. <https://bit.ly/3VoQuiT>  
 p. 47, top: INFOAMAZONIA/AMAZON WATCH/AGÊNCIA NACIONAL DE MINERAÇÃO. AMAZÔNIA MINADA. <https://bit.ly/41iDYih>  
 p. 47, bottom: PORTAL DA TRANSPARÊNCIA DO OURO. <https://bit.ly/4inBMwe>  
 MANZOLLI, Bruno et al/UFMG/MINISTÉRIO PÚBLICO FEDERAL. Legalidade da produção de ouro no Brasil. 2021. <https://bit.ly/3B45S78>  
 INSTITUTO ESCOLHAS. Garimpos brasileiros podem ter usado 185 toneladas de mercúrio ilegal. 2024. <https://bit.ly/4izdSor>  
 FIOCRUZ. Estudo analisa a contaminação por mercúrio entre o povo indígena munduruku. 2020. <https://bit.ly/3ZyRKvT>

### Text

INSTITUTO ESCOLHAS. Abrindo a caixa do garimpo. 2023. <https://bit.ly/3OENDrT>  
 INSTITUTO SOCIALMBIENTAL/WWF BRASIL. Nota técnica n.º 01/2023: competência para o licenciamento ambiental de atividades de garimpo de ouro aluvionar. 2023. <https://bit.ly/3D1tWIo>  
 LOURES, Rosamaria; ALARCON, Daniela Fernandes; TORRES, M. Desenvolvimento, para nós, não é destruir o nosso território”: o cerco ao Tapajós e a resistência do povo Munduruku. <https://bit.ly/3ZfiY9w>  
 MAPBIOMAS. Destaques do mapeamento anual de mineração no Brasil – 1985 a 2022: O avanço garimpeiro na Amazônia. 2023. <https://bit.ly/41iACvR>  
 MOLINA, Luísa Pontes; WANDERLEY, Luiz Jardim. O cerco

do ouro: garimpo ilegal, destruição e luta em terras Munduruku. 2021. <https://bit.ly/3ZjdM18>  
 MOLINA, Luísa Pontes. Terra rasgada: como avança o garimpo na Amazônia brasileira. 2023. <https://bit.ly/49pz9G8>

## 48-49 – ROADS

**by Lucas Ferrante** (School of Arts, Sciences and Humanities of the University of São Paulo / Federal University of Amazonas)

### Graphs

p. 48: OBSERVATÓRIO DA BR-319.  
 FERRANTE, Lucas.  
 INFOAMAZONIA. Com abertura de ramais planejados, impacto da BR-319 pode chegar a 40 terras indígenas e 38 unidades de conservação no Amazonas. 2023. <https://bit.ly/3B957JX>  
 p. 49, top: FERRANTE, Lucas e FEARNside, Philip Martin. Brazil's amazon oxygen crisis: How lives and health were sacrificed during the peak of COVID-19 to promote an agenda with long-term consequences for the environment, indigenous peoples and health. 2024. <https://doi.org/10.1007/s40615-023-01626-1>  
 p. 49, bottom: VILELA, Thais et al. A better Amazon road network for people and the environment. 2020. <https://doi.org/10.1073/pnas.1910853117>  
 MONGABAY. Projetos de estradas na Amazônia podem desmatar 2,4 milhões de hectares nos próximos 20 anos. 2020. <https://bit.ly/3ZDK6jS>

### Text

ANDRADE, M.; FERRANTE, L.; FEARNside, P.M. Brazil's Highway BR-319 demonstrates a crucial lack of environmental governance in Amazonia. 2021. <https://doi.org/10.1017/S0376892921000084>  
 FEARNside, P.M. et al. Região Trans-Purus, a última floresta intacta: 2 – A ameaça do Ramal de Tapauá. 2020. <https://bit.ly/3BdUPrS>  
 FEARNside, P.M. A Floresta Amazônica nas Mudanças Globais. 1st ed. Manaus: Editora do Instituto Nacional de Pesquisas da Amazônia. 2023. <https://bit.ly/3OF91gH>  
 FERRANTE, L.; FEARNside, P.M. Amazonia and the end of fossil fuels. 2023.  
 FERRANTE, L.; GOMES, M.; FEARNside. Amazonian indigenous peoples are threatened by Brazil's Highway BR-319. 2020. <https://doi.org/10.1016/j.landusepol.2020.104548>  
 FERRANTE, L. A road to the next pandemic: the consequences of Amazon highway BR-319 for planetary health. 2024. [https://doi.org/10.1015/S2542-5196\(24\)00163-3](https://doi.org/10.1015/S2542-5196(24)00163-3)  
 FERRANTE, L. Bills undermine Brazil's environmental goals. 2023. <https://doi.org/10.1126/science.adi9196>  
 FERRANTE, L. et al. Brazil's Highway BR-319: The road to the collapse of the Amazon and the violation of indigenous rights. 2021. <https://doi.org/10.12854/erde-2021-552>  
 FERRANTE, L. et al. Effects of Amazonian flying rivers on frog biodiversity and populations in the Atlantic rainforest. 2023. <https://doi.org/10.1111/cobi.14033>  
 FERRANTE, L. Lula's decision puts Amazonia, climate



goals, cultures and indigenous lands at risk. 2024.  
FERRANTE, L.; ANDRADE, M.B.T.; FEARNESIDE, P.M. Land grabbing on Brazil's Highway BR-319 as a spearhead for Amazonian deforestation. 2021. <https://doi.org/10.1016/j.landusepol.2021.105559>

FERRANTE, L.; BECKER, C.G. Brazil must reverse gear on Amazon road development. 2024. <https://bit.ly/4fisUoV>  
FERRANTE, L.; FEARNESIDE, P.M. Brazil's Amazon oxygen crisis: How lives and health were sacrificed during the peak of COVID-19 to promote an agenda with long-term consequences for the environment, Indigenous peoples, and health. 2023. <https://doi.org/10.1007/s40615-023-01626-1>

FERRANTE, L.; FEARNESIDE, P.M. Brazil's new president and "ruralists" threaten Amazonia's environment, traditional peoples and the global climate. 2019. <https://doi.org/10.1017/S0376892919000213>

FERRANTE, L.; FEARNESIDE, P.M. Brazilian government violates Indigenous rights: What could induce a change? 2021.

FERRANTE, L.; FEARNESIDE, P.M. Countries should boycott Brazil over export-driven deforestation. 2022.

FERRANTE, L.; FEARNESIDE, P.M. The Amazon's road to deforestation. 2020. <https://doi.org/10.1126/science.abd6977>

Ferrante, L.; ROJAS-AHUMADA, D.; MENIN, M.; FEARNESIDE, P.M. Climate change in the Central Amazon and its impacts on frog populations. 2023. <https://doi.org/10.1007/s10661-023-11997-x>

## 50-51 – ORGANIZED CRIME

**by Aiala Colares Couto** (State University of Pará/Brazilian Public Security Forum) and **Regine Schönenberg** (Heinrich Böll Foundation)

### Graphs

p. 50: FÓRUM BRASILEIRO DE SEGURANÇA PÚBLICA. Segurança pública e crime organizado na Amazônia Legal. 2023. <https://bit.ly/4gjPrm8>

p. 51, top: INSTITUTO MÃE CRIOLA. 2024

p. 51, bottom: FÓRUM BRASILEIRO DE SEGURANÇA PÚBLICA. Cartografias da violência na Amazônia. 2023. <https://bit.ly/41jfeA>

FÓRUM BRASILEIRO DE SEGURANÇA PÚBLICA. Anuário brasileiro de violência pública. 2024. <https://bit.ly/3D0od5u>  
REVISTA VEJA. Crime organizado se expande na Amazônia e põe em risco preservação da floresta. 2024. <https://bit.ly/4fZHYbS>

### Text

MACHADO, Lia Osório. Limites e fronteiras: da alta diplomacia aos circuitos da legalidade. 2000. <https://bit.ly/41j7swp>

SCHÖNENBERG, Regine. Drug trafficking in the Brazilian Amazon, in: Globalization, drugs and criminalization. 2002  
SCHÖNENBERG, Regine. Collateral damage of global governance on the local level: An Analysis of fragmented international regimes in the Brazilian Amazon, In: Governance beyond the law – the immoral, the illegal, the criminal. 2019.

SCHÖNENBERG, Regine. Factions shaping future: Causes,

forms and impacts of spreading organized criminal organizations in the Amazon. In: Brésil(s). Sciences humaines et sociales. 2024

UNODC. O relatório mundial sobre drogas. 2023. <https://bit.ly/4imk7VG>

## 52-53 – ECONOMY OF CRIME

**by Roberto Araújo de Oliveira Santos Junior** (Emílio Goeldi Museum of Pará)

### Graphs

p. 52: INSTITUTO IGARAPÉ. O ecossistema do crime ambiental na Amazônia: uma análise das economias ilícitas da floresta. 2022. <https://bit.ly/4fUuA8Y>

p. 53, top: DE OLHO NOS RURALISTAS. Os gigantes – os cem municípios que compõem 37% do território brasileiro. <https://bit.ly/4fUT0iT>

p. 53, bottom: COSTA, Francisco de Assis; JUNIOR, Roberto Araújo de Oliveira Santos.

### Text

AMÉRICO, M.C. et al. Pecuária e Amazônia: estratégias sociais e reestruturação do território nas frentes pioneiras: Rodovia PA-279 e região da Terra do Meio no Pará. In: Desenvolvimento sustentável e sociedades na Amazônia. 2011.

BENATTI, J.H.; ARAUJO SANTOS, R.; PENA DA GAMA, A. A grilagem de terras públicas na Amazônia brasileira. 2006.

CONCEIÇÃO, Katyanne V. et al. Government policies endanger the indigenous peoples of the Brazilian Amazon. 2021. <https://doi.org/10.1016/j.landusepol.2021.105663>

COSTA, Larrea et al. Land markets and illegalities: The deep roots of deforestation in the Amazon. <https://bit.ly/4imnBYg>

FERNANDES, M. Donos de terras: a trajetória da UDR no Pará. 1999.

MPF/PROJETO SUDAM.

## 54-55 – VIOLENCE AGAINST DEFENDERS

**by Ciro de Souza Brito** (Federal University of Western Pará)

### Graphs

p. 54: COMISSÃO PASTORAL DA TERRA. Conflitos no campo 2023. 2024.

<https://bit.ly/4f8glfj>

p. 55: TERRA DE DIREITOS; COMISSÃO PASTORAL DA TERRA. Acusado de envolvimento no caso do assassinato de militante do MAB Dilma Ferreira vai a julgamento no Pará. 2024. <https://bit.ly/4iznJDQ>.

### Text

BECKER, Bertha K. A Amazônia na estrutura espacial do Brasil. 1974.

BRITO, Ciro. A relevância do Brasil no combate às mudanças climáticas e na proteção de defensores ambientais. 2024. <https://bit.ly/4f4Nmt1>

CARDOSO, Fernando Henrique; MÜLLER, Geraldo. Amazônia: expansão do capitalismo. 2008. <https://bit.ly/49nodIM>



COMISSÃO INTERAMERICANA DE DIREITOS HUMANOS (CIDH). *Criminalização do trabalho das defensoras e dos defensores de direitos humanos*. 2015. <https://bit.ly/49ob6as>

GLOBAL WITNESS. *Sempre em pé: defensores da terra e do meio ambiente à frente da crise climática*. 2023. <https://bit.ly/4f4hh4H>

GONZÁLEZ CASANOVA, Pablo. *Colonialismo interno (uma redefinição)*. In: *Teoria marxista hoje: problemas e perspectivas*. Buenos Aires. 2007. <https://bit.ly/3Vms7HC>

IMAZON. *Linha do tempo: Entenda como ocorreu a ocupação da Amazônia*. <https://bit.ly/3OGAwGy>

MAPARAJUBA; COMISSÃO PASTORAL DA TERRA; SOCIEDADE PARAENSE DE DEFESA DOS DIREITOS HUMANOS; INSTITUTO ZÉ CLAUDIO E MARIA; TDD. *Diagnóstico sobre o Programa de Proteção a Defensores e Defensoras de Direitos Humanos no Estado do Pará*. 2023. <https://bit.ly/4f8bnzv>

MESQUITA, Benjamin. *A dinâmica recente do crescimento do agronegócio na Amazônia e a disputa por territórios*. In: *Terras e territórios na Amazônia: demandas, desafios e perspectivas*. 2011. <https://bit.ly/3Zol6vF>

MONTEIRO, Raimunda. *Amazônia: Espaço-Estoque, a negação da vida e esperanças teimosas*. 2021.

NASCIMENTO, Maycom; BRITO, Ciro de Souza. *Processos de desterritorialização e impactos no direito à alimentação de comunidades quilombolas na Amazônia Legal: análise a partir do conceito de Bem Viver*. No prelo.

NEVES, Rafaela P. de Almeida. *O paradoxo da (geo)grafia da violência e da re-existência no campo brasileiro: o caso da mãe Bernadete*. In: *Conflitos no campo Brasil*. 2023. 2024. <https://bit.ly/3VqMIPQ>

PORTO-GONÇALVES, Carlos Walter. *Amazônia: Encruzilhada civilizatória. Tensões territoriais em curso*. 2018. <https://bit.ly/49sMbmG>

TERRA DE DIREITOS; JUSTIÇA GLOBAL. *Na linha de frente: violência contra defensoras e defensores de direitos humanos no Brasil 2019-2022*. 2023. <https://bit.ly/49r2NdY>

## 56-57 – HEALTH AND MEDICINES

**By Jesem Douglas Yamall Orellana** (Statistical, Geoprocessing and Epidemiology Modeling Laboratory of the Oswaldo Cruz Foundation) **and João Paulo Lima Barreto (Tukano)** (Federal University of Amazonas/ Bahserikowi Indigenous Medicine Center)

### Graphs

p. 56: DATASUS.

p. 57: DATA SUS/SIVEP MALÁRIA.

FIOCRUZ. *Aumento dos casos de malária tem correlação direta com o garimpo ilegal*. 2023. <https://bit.ly/3Vms7HC>

MAPBIOMAS.

HUTUKARA ASSOCIAÇÃO YANOMAMI. *Garimpo ilegal na Terra Yanomami cresceu 54% em 2022, aponta Hutukara*. 2023. <https://bit.ly/4ihaaIX>

### Text

O GLOBO. *Mortes por desnutrição em crianças abaixo de 5 anos sobem em 2021*. 2022. <https://bit.ly/49ju3uV>

BARRETO, João Paulo Lima. *Waimahsã – peixes e humanos*. 2013. <https://bit.ly/4iw7hUS>

BARRETO, João Paulo Lima. *Kumuã na kahtiroti-ukuse: uma “teoria” sobre o corpo e o conhecimento-prático dos especialistas indígenas do Alto Rio Negro*. 2021. <https://bit.ly/3Zd9fR6>

BARRETO, João Paulo Lima. *Bahserikowi – Centro de Medicina Indígena da Amazônia: concepções e práticas de saúde indígena*. 2017. <https://bit.ly/4f0tYxu>

BARRETO, João Paulo Lima et al. *OMERÕ: constituição e circulação de conhecimentos Yepamahsã (Tukano)*. 2018. <https://bit.ly/49n3yok>

GRACIE, R. et al. *Desastres, Infraestrutura de Saneamento e Relações com a Saúde*. In: Barcellos, C.; Corvalán, C.; Silva, E.L. 2022. <https://bit.ly/4f1D5xJ>

IBGE. *Pesquisa nacional de saneamento básico 2017: abastecimento de água e esgotamento sanitário*. <https://bit.ly/3OFkdda>

IBGE. *População residente*. <https://bit.ly/3CWnNwZ>

INSTITUTO SOCIOAMBIENTAL POVOS INDÍGENAS NO BRASIL (ISA).

MINISTÉRIO DA SAÚDE (MS). *Imunizações – desde 1994*. <https://bit.ly/3Vq1mGR>

MINISTÉRIO DA SAÚDE (MS). *Secretaria de Vigilância em Saúde*. 2022. <https://bit.ly/3CYBGL3>

Orellana, J.D.Y. et al. *Intergenerational association of short maternal stature with stunting in Yanomámi indigenous children from the Brazilian Amazon*. 2021. <https://doi.org/10.3390/ijerph18179130>

Orellana, J.D.Y. et al. *Impact of the COVID-19 pandemic on excess maternal deaths in Brazil: A two-year assessment*. 2024. <https://doi.org/10.1371/journal.pone.0298822>

Orellana, J.D.Y.; Souza, M.L.P.; Horta, B.L. *Excess suicides in Brazil during the first 2 years of the COVID-19 pandemic: Gender, regional and age group inequalities*. 2024. <https://doi.org/10.1177/00207640231196743>

REDE BRASILEIRA DE PESQUISA EM SOBERANIA E SEGURANÇA ALIMENTAR (REDE PENSSAN). *II Inquérito Nacional sobre Insegurança Alimentar no Contexto da Pandemia da Covid-19 no Brasil (II Vigisan)*. <https://bit.ly/3CWdCIX>

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p. 58: CENSO 2022

FOLHA DE S. PAULO. *Cara típica do evangélico brasileiro é feminina e negra, aponta Datafolha*. 2020. <https://bit.ly/3Znp07Z>

AGÊNCIA PÚBLICA. *Morte e Vida Javari: igrejas evangélicas competem entre si pelas almas indígenas*. 2024. <https://bit.ly/3ZDEvKv>

p. 59: INSTITUTO IGARAPÉ. *Amazônia no Alvo*. 2022. <https://bit.ly/4gqdi3D>

THE INTERCEPT BRASIL. *Amazônia Sitiada – Sob Bolsonaro, clubes de tiro explodem em área de conflito da Amazônia Legal*. 2022. <https://bit.ly/3D4QeZO>

MALHEIRO, B. C. **Geografias do Bolsonarismo: entre a expansão das commodities, do negacionismo e da fé evangélica no Brasil.** 2022.

PRODES

BOMBARDI, LARISSA.

*Text*

MALHEIRO, B.C. **Geografias do Bolsonarismo: entre a expansão das commodities, do negacionismo e da fé evangélica no Brasil.** 2022.

MALHEIRO, B.C.; PORTO-GONÇALVES, C.V.; MICHELOTTI, F. **Horizontes Amazônicos: para repensar o Brasil e o Mundo.** 2021.

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G1. Amazonas tem prejuízo de R\$ 620 milhões em 2024 na pior seca da história, diz Defesa Civil. 2024. <https://bit.ly/3ZEJwSV>

p. 61, bottom: SEEG. 2023. <https://bit.ly/41l7Da>  
MORENO, Camila.

*Text*

BNDES. BNDES detalha Arco da Restauração da Amazônia em seminário prévio ao G20. 2025. <https://bit.ly/3OJc5IB>

## 62-63 – GREENWASHING

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*Text*

ADKINS, Lisa; COOPER, Melinda; MARTIJN, Konings. **The asset economy: Property ownership and the new logic of inequality.** 2020.

BIRCH, Kean. **Rethinking value in the bio-economy: Finance, assetization, and the management of value.** 2017. <https://doi.org/10.1177/0162243916661633>

GABOR, Daniela; WEBER, Isabella. **A COP 26 deveria se afastar da teoria de choque do carbono.** 2021. <https://bit.ly/3W9jjcY>

GABOR, Daniela. **The Wall Street consensus.** 2021. <https://doi.org/10.1111/dech.12645>

[doi.org/10.1111/dech.12645](https://doi.org/10.1111/dech.12645)

GONÇALVES, Marcela Vecchione. **Bioeconomia e o xadrez global da crise climática.** Amazônia Latitude: Ciência e Jornalismo pela Floresta. 2024. <https://bit.ly/4fLiIVT>

HERNANDEZ LERNER & MIRANDA. **Olhar para o céu com os pés fincados na terra: Áreas de uso coletivo e mercado voluntário de carbono na Amazônia brasileira: uma abordagem baseada em direitos.** 2023. <https://bit.ly/40tHaXK>

MARTIN, Natassja. **A leste dos sonhos: respostas even às crises sistêmicas.** 2023.

MORENO, Camila. **A Métrica do Carbono: abstrações globais e epistemicídio ecológico.** 2016. <https://bit.ly/425G4Td>

MOVIMENTO MUNDIAL PELAS FLORESTAS TROPICAIS. **Neocolonialismo na Amazônia: Projetos de REDD+ em Portel, Brasil.** 2022. <https://bit.ly/4j9xmcp>

OLIVEIRA, Tatiana. **Assetização da Natureza como Razão da Ex-A-Propriação Neoliberal.** In: **Finanças verdes no Brasil: perspectivas multidisciplinares sobre o financiamento da transição verde.** 2022. <https://bit.ly/3DYzN1l>

RAMOS, Carlos Augusto Pantoja; PASSOS, Taiana Amanda Fonseca dos; MIRANDA, Iná Camila Ramos Favacho de. **Nota técnica sobre comercialização de créditos de carbono em Portel, Marajó, Pará.** 2023. <https://bit.ly/4gKhYeR>

THE INTERCEPT BRASIL. **Com discurso ambiental, empresário norte-americano lucra com terras e ilude ribeirinhos no Pará.** 2022. <https://bit.ly/4gJlble>

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by **Beatriz Luz e Simy Corrêa** (Dema Fund)

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p. 64: CLIMATE POLICY INITIATIVE. **Panorama de Financiamento Climático para Uso da Terra no Brasil.** 2023. <https://bit.ly/3OJE4rE>

FUNDO DEMA

p. 65: INSTITUTO TRICONTINENTAL DE PESQUISA SOCIAL; NÚCLEO DE ESTUDOS EM COOPERAÇÃO – UFFS. **Análise do Programa Nacional de Apoio à Agricultura Familiar - Pronaf 2020.** 2021. <https://bit.ly/3D4Pa8g>

*Text*

ALTIERI, Miguel A.; NICHOLLS, Clara I. **Mudanças climáticas e agricultura camponesa: impactos e respostas adaptativas.** 2019. <https://bit.ly/3Vn15EM>  
CLIMATE POLICY INITIATIVE. **Panorama de Financiamento Climático para Uso da Terra no Brasil.** 2023. <https://bit.ly/3OJE4rE>

INSTITUTO TRICONTINENTAL DE PESQUISA SOCIAL; NÚCLEO DE ESTUDOS EM COOPERAÇÃO – UFFS. <https://bit.ly/3D4Pa8g>

INESC. **Caminhos para o financiamento da Política Socioambiental no Brasil.** 2022. <https://bit.ly/3VBFqsf>  
LEÓN, Lucas Pordeus. **Entenda o Fundo de Perdas e Danos para crise climática da COP 28.** Agência Brasil. 2023. <https://bit.ly/4fo1td0>

PODÁALI. **Relatório sobre financiamento climático.** 2022. <https://bit.ly/3OGehRc>

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### Graphs

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AMAZÔNIA REAL. A aldeia sem escola. 2022. <https://bit.ly/4gqcTOB>  
p. 67, top: AMAZÔNIA 2030. Mercado de trabalho na Amazônia Legal: Uma análise comparativa com o resto do Brasil. 2020. <https://bit.ly/3ZGkgvG>  
p. 67, bottom: CENSO 2022  
AMAZÔNIA REAL. Região Norte é a mais jovem do País e agora tem maioria feminina. 2023. <https://bit.ly/4fXIYNK>

### Text

ABRAMO, H. Estação juventude: conceitos fundamentais: pontos de partida para uma reflexão sobre políticas públicas. 2014. <https://bit.ly/3ZitVqS>  
ABRAMO, H.; SOUTO, A.L.S. Juventudes sul-americanas: diálogos para construção da democracia regional. CASTRO, L.R. Participação política e juventude: do mal-estar à responsabilização frente ao destino comum. 2008. <https://doi.org/10.1590/S0104-44782008000100015>  
GLOBAL LAND TOOL NETWORK; ONU-HABITAT. Juventude e território: um olhar jovem sobre governança da cidade. 2015. <https://bit.ly/3BjAOjN>  
KOLLODGE, R. O poder de 1,8 bilhão: adolescentes, jovens e a transformação do futuro. 2014. <https://bit.ly/3DeWCNS>  
SOLANO, E. Juventudes e Democracia na América Latina. 2022. <https://bit.ly/3D1TF3f>

## 68-69 – AMAZONIAN WOMEN by Francy Junior (Movement of the Black Women of the Forest, Dandara/Ykamiabas Produções)

### Graphs

p. 68: INSTITUTO IGARAPÉ. A violência contra mulheres na Amazônia Legal nos últimos cinco anos em comparação com o restante do país: violência legal desproporcional e escalada mais acentuada das violências não legais. 2024. <https://bit.ly/4giq8Rj>  
p. 69: FUNDAÇÃO AMAZÔNIA SUSTENTÁVEL. Mapeamento de organizações mulheres indígenas: Parentas que Fazem. 2024. <https://bit.ly/4f0XCCH>

### Text

A CRÍTICA. Eleições e emergência climática. 2024. <https://bit.ly/3Bge6ci>  
ADICHIE, Chimamanda Ngozi. Sejamos todos feministas. 2015.  
CÂMARA DOS DEPUTADOS. Anos 60 e 70: ditadura e bipartidarismo. 2008. <https://bit.ly/3BbmUQK>  
CENTRO DE DIREITOS HUMANOS PADRE JOSIMO; ASSOCIAÇÃO DE CATADORES DE MATERIAL RECICLÁVEL DE IMPERATRIZ. A saga por justiça ambiental: do lixo ao aterro. 2024. <https://bit.ly/4gjTDID>  
G1. Mulheres eleitas prefeitas no 1º turno; homens são 8 em cada 10 eleitos. 2024.

<https://bit.ly/3ZNpc25>

PINHEIRO, Celia Regina de Lima; SALES, José Edvaldo Pereira; FREITAS, Juliana Rodrigues. Constituição e processo eleitoral. 2018.

REVISTA AFIRMATIVA. A revoada das matintas pereiras: mulheres negras na política, por uma nova ordem para o Brasil. 2022. <https://bit.ly/4fVTsgM>

REVISTA FÓRUM. Bancada feminina quer cota de 30% das cadeiras do Congresso para mulheres. <https://bit.ly/4fZoaFO>  
RODRIGUEZ, Graciela S. et al. A privatização da água na cidade de Manaus e os impactos sobre as mulheres. <https://bit.ly/41dmpjH>  
TRIBUNAL SUPERIOR ELEITORAL.

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AGROECOLOGIA EM REDE. <https://bit.ly/3ZGtPK3>  
p. 71, bottom: GOVERNO FEDERAL. Cadastro Nacional de Produtores Orgânicos. <https://bit.ly/3Zo5qIM>

### Text

GLIESSMAN, Steve; TITTONELL, Pablo. Agroecology for food security and nutrition. Agroecology and Sustainable Food Systems. 2015. <https://bit.ly/4inLZxa>  
NEVES, Eduardo Góes. Sob os tempos do equinócio: oito mil anos de história na Amazônia Central. 2022.  
PARDINI, Patrick. Amazônia indígena: a floresta como sujeito. 2020. <https://doi.org/10.1590/2178-2547-bgoeldi-2019-0009>  
SOUSA, Romier da Paixão et al. Agroecologia: diálogos entre ciência e práxis em agroecossistemas familiares na Amazônia. 2022. <https://doi.org/10.11606/9788575064245>  
SOUSA, Romier da Paixão; Carlos Renilton Freitas CRUZ; Júlio César SUZUKI. No chão da floresta: trabalho, educação e agroecologia na Amazônia. 2020. <https://doi.org/10.11606/9786587621265>  
VIEIRA, Ima Célia Guimarães; TOLEDO, Peter Mann de; HIGUCHI, Horácio. A Amazônia no antropoceno. 2018. <http://dx.doi.org/10.21800/2317-66602018000100015>

## 72-73 – FOOD CULTURE by Tainá Marajoara (Iacitatá Food Culture Center/Oral History Studies Center of the University of São Paulo)

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p. 72: Rede Brasileira de Pesquisa em Soberania e Segurança Alimentar (REDE PENSSAN). 2º Inquérito Nacional sobre Insegurança Alimentar no Contexto da Pandemia da Covid-19 no Brasil. <https://bit.ly/3OF35Et>  
p. 73, top: MINISTÉRIO DA CIÊNCIA, TECNOLOGIA E INOVAÇÃO. Sistema de informações e análises sobre impactos das mudanças climáticas (Adapta Brasil).



<https://bit.ly/41l6M9Q>

INFO AMAZÔNIA/REDE CIDADÃ. Mudanças climáticas põem em risco segurança alimentar da população em 62% dos municípios da Amazônia Legal e região é a mais afetada do país. 2023. <https://bit.ly/41pM9Jw> p. 73, bottom: DE OLHO NOS RURALISTAS. “Os invasores” – Quem são os empresários brasileiros e estrangeiros com mais sobreposições em terras indígenas. 2023. <https://bit.ly/41iie6g>

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### Graphs

p. 74: GOVERNO FEDERAL. Povos Indígenas obtêm vitória histórica com aprovação do Tratado de Propriedade Intelectual. 2024. <https://bit.ly/4f9CWbA>  
AGÊNCIA BRASIL. Pesquisa encontra indícios de biopirataria de conhecimentos indígenas. 2022. <https://bit.ly/3ZEQ4kq>  
p. 75: DATAPB/UFPB. <https://bit.ly/4gmwnU7>  
TSING, Anna Lowenhaupt. Viver nas ruínas: paisagens multiespécies no antropoceno. 2019.  
ACOSTA, Alberto. O Bem Viver: uma oportunidade para imaginar outros mundos. 2016.  
MOORE, Jason W. Antropoceno ou Capitaloceno? Natureza, história e a crise do capitalismo. 2022.

### Text

ANGELIS, Massimo de. Bens Comuns (Commons). In: **Pluriverso: dicionário do pós-desenvolvimento**. 2021.  
DARDOT, Pierre; LAVAL, Christian. **Comum. Ensaio sobre a revolução no século XXI**. 2017.  
FEDERICI, Silvia. **Calibã e a bruxa: mulheres, corpo e acumulação primitiva**. 2017.  
HOUTART, François. **Dos bens comuns ao bem comum da humanidade**. 2011. <https://bit.ly/3ZnuUWS>  
KOPENAWA, Davi; ALBERT, Bruce. **A queda do céu. Palavras de um xamã Yanomami**. 2015.  
KRENAK, Ailton. **Ideias para adiar o fim do mundo**. 2019.  
OSTROM, Elinor. **El gobierno de los bienes comunes: la evolución de las instituciones de acción colectiva**. 2000. <https://bit.ly/3Dc9ioK>  
TSING, Anna Lowenhaupt. **Viver nas ruínas: paisagens multiespécies no antropoceno**. 2019.

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by **Anaclea Pires da Silva**, **Josiane do Espírito Santo Pires da Silva**, **Josicléa Pires da Silva** (Zica Pires) e **Joércio Pires da Silva** (all members of Association of Quilombola Agroforestry Agents of Santa Rosa dos Pretos/Association of Quilombola Rural Producers of Santa Rosa dos Pretos/Study Group on Development, Modernity and Environment of the Federal University of Maranhão)

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### Graphs

p. 79: MURA, Márcia

### Text

KAMBEBA, Márcia Wayna. **O lugar do saber ancestral**. 2021.  
KRENAK, Ailton. **A Terra pode nos deixar para trás e seguir seu caminho**. Entrevista feita por Anna Ortega, 2020. <https://bit.ly/41mur9V>  
NÚÑEZ, Geni. **As Árvores também são nossas parentes**. In: **Poesia indígena hoje**. 2020.  
MURA, Antorokay; MURA, Márcia. **Vivência Sagrada: Despertando a Ancestralidade Mura**. 2022. <https://bit.ly/41eqHHB>

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### Graphs

p. 80: CENSO 2022  
CASA COMUM. **Aldeias invisíveis nas cidades: indígenas enfrentam desafios quando saem de seus territórios tradicionais**. 2024. <https://bit.ly/4iWCpNB>  
REVISTA CENARIUM. **Parque das tribos: favelização e luta por direitos básicos**. 2024. <https://bit.ly/4a0FJ6h>  
TRIBUNAL DE JUSTIÇA DO ESTADO DO AMAZONAS. **Comunidade indígena do Parque das Tribos em Manaus participa de audiência pública do programa Solo Seguro – Favela, promovida pela CGJ/AM**. 2024. <https://bit.ly/400gUDW>  
PROJETO MANAÓS – FIOCRUZ. <https://bit.ly/3ZJunP7>  
p. 81, top: FRANCISCO, Priscila Maria Stolses Bergamo et al. **Doenças crônicas na população indígena não aldeada: dados da Pesquisa Nacional de Saúde, 2019**. 2024. <https://doi.org/10.1590/2358-289820241428889P>  
p. 81, bottom: ALENCAR, A. et al. **Uma combinação nefasta– PL 490 e Marco Temporal ameaçam os direitos territoriais indígenas e colocam em risco a segurança climática da Amazônia e do país**. 2023. <https://bit.ly/4gmsBdl>



# THE MYTH OF THE GREAT SNAKE

**W**hen I was a child, my favorite pastime was canoeing. Although I already lived in Belém, I always returned to the small town in northeastern Pará where my parents were born and where my cousins, aunts, and grandparents still lived. On one of those trips along the creek behind my grandmother's house, I saw a snake for the first time. My cousins and I boarded the small boat in the middle of the afternoon and went down to the river that gives its name to the town of Inhangapí, which in the Tupi language means "Path of Anhangá," one of the most feared entities in the Amazonian beliefs. We then entered a small opening that eventually led to a large lake dotted with giant water lilies.

It was a beautiful place, an enchanted lagoon, and we were ecstatic to be exploring a new territory. That is when we noticed a fishing net stretched from one bank to the other, sunk into the black, icy waters of the lagoon. We quickly slipped the paddle underneath to lift the net and grab it with our hands. We placed the canoe parallel to the net, and each of us pulled our part, hoping to find some little fish to roast over the fire we would make later.

That was when the snake appeared. Coiled in the net, we saw only its painted head, with wide eyes and its tongue hanging out. There was no shouting, no sudden reaction. Not a single word was said. We lowered the net and returned home in silence. The expedition had been aborted – no explanations needed. We knew we had crossed a line.

Later, my uncle told us that when a river springs from the ground, the spring receives a snake that drinks from it and traces, with its body slippery in the mud, the path the river will follow. After completing its work, the snake becomes the protector of that dwelling. That is why we were lucky to have come across a Boiaçu (protector of the forests), and not a Boiúna (protector of the rivers), which would certainly have struck and dragged us to the bottom of the river.

In Amazonian spirituality, the snake is the foundation. We believe it has a physical body in the river and an astral body in the sky, protecting the forest. So imagine the size of the guardian of the Amazon River. This is the greatest of the Great Snakes.

In Belém, the story of the Great Snake is intertwined with the story of the procession of the Taper of Our Lady of Nazaré. It is said that in the year 1700, the native Plácido found a wooden image of Our Lady of Nazaré on the banks of the Murutucu creek. Plácido took the saint home, but the image disappeared and miraculously reappeared in the creek. Eventually, a chapel was built there to house it – what is now the Basilica of Nazaré.

Of course, the Murutucu creek also has its guardian snake, which today lies dormant underground, between the Basilica and the Sé Cathedral – the path along which the faithful carry the image of the saint during the procession.

When a river is mistreated, the spiritual beings also suffer, and when a creek dies, its guardian lies dormant, buried.

For 230 years, pilgrims of the procession of the Taper of Our Lady of Nazaré have walked this path, offering prayers so that Our Lady of Nazaré may protect us from above – and so that the Great Snake does not awaken below, destroying Belém.

Among the many ills caused by the economic exploitation of the Amazon, the largest of the Great Snakes endures. It is up to us to respect it, for it is the owner of all things, and nothing can be touched without its permission.

We will survive... until the day our greed manages to awaken its wrath.

**Mael Anhangá**  
Cover illustrator

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The Heinrich Böll Foundation is a German political organization, present in more than 34 countries and affiliated with the Green Party of Germany. Promoting dialogue for democracy and working to ensure human rights, advocating for socio-environmental justice, defending women's rights, and taking a firm anti-racist stance are the values that drive the Foundation's ideas and actions.

In Brazil, the organization supports projects from various civil society organizations, organizes debates, and produces free publications. In the field of socio-environmental justice, it seeks to strengthen public debate that combines environmental protection with the defense of the rights of rural and forest peoples.

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## GET TO KNOW AND SUPPORT

Brazilian partner organizations that collaborated in the development of the Brazilian Amazon Atlas



A leading organization in the fight to defend the peoples of the forest. It is responsible for promoting Chico Mendes Week, an event that celebrates the environmentalist's legacy and fosters debates on sustainability, climate justice, and Amazonian culture.

[www.comitechicomendes.org](http://www.comitechicomendes.org)  
@chicomendescomite



An independent and investigative journalism agency that gives visibility to the peoples and issues of the Amazon.

[www.amazoniareal.com.br](http://www.amazoniareal.com.br)  
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The center integrates research and extension activities developed by professors and students of the Law School of the Federal University of Pará.

[www.cidh.ufpa.br](http://www.cidh.ufpa.br)  
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[www.institutomaecrioula.org](http://www.institutomaecrioula.org)  
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The center offers Bahse (blessings) and medicinal plants as healthcare and healing technologies, addressing both physical and psychological aspects, in accordance with the knowledge of the Tukano, Dessano, and Tuyuca Indigenous peoples of the Upper Rio Negro.

@centrodeclinicaindigena



This is a movement for the protection of the forests and peoples of the Amazon. It is present in networks, streets and rivers of the five regions of Brazil.

[www.amazoniadepe.org.br](http://www.amazoniadepe.org.br)  
@amazoniadepe



Grupo de Pesquisa Resistências e Existências dos Povos Indígenas e Povos e Comunidades Tradicionais na Terra

This is a research group within the Center for Advanced Amazonian Studies at the Federal University of Pará, focused on studying the adaptation, persistence, and resistance of Indigenous and traditional Amazonian peoples in times of climate change.

[www.ppgdstu.prosp.ufpa.br/index.php/br/pesquisa/grupos-de-pesquisa](http://www.ppgdstu.prosp.ufpa.br/index.php/br/pesquisa/grupos-de-pesquisa)  
@reexisterra



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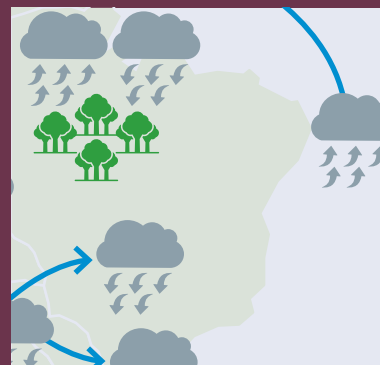
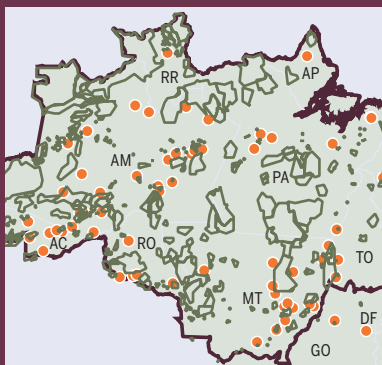
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The native peoples of the Amazon have used their knowledge, science, and technology to generate, enhance, and maintain biodiversity and agrobiodiversity, promoting soil fertility.

**ANCESTRAL KNOW-HOW, page 26**

Half of recent deforestation has occurred on undesignated public lands. The illegal deforestation of these lands is highly profitable and has been rapidly increasing in the Amazon, driven by a series of laws that seek to ease restrictions on land grabbing.

**DEGRADING THE FOREST, page 42**

The true solutions to climate change lie in guaranteeing access to land for Indigenous peoples and local populations, ensuring territorial sovereignty, and safeguarding local productive practices aimed at sustaining ways of life rooted in the territory.

**COP 30: POINT OF NO RETURN, page 60**

