

## ENDANGERED AMAZONIA

# PROTECTING AND RESTORING KEY AREAS OF THE AMAZON 2025 – 2030



AMAZONIA ALIVE:  
PROTECT +  
RESTORE  
**80% 2025**  
**2030**  
AVERTING THE TIPPING POINT



RAISG



## Technical report: Key Takeaways

1. In total, during the 40 years analysed (1985–2024), the Amazon has lost 136 million hectares of forest, an area equivalent to almost three times the territory of Spain.
2. Between 2021 and 2024, the region experienced an unprecedented acceleration in the loss of its natural cover, with a rate of transformation and degradation of around 8 million hectares per year, equivalent to more than 33 million hectares disturbed in just four years.
3. As a result, while the 2020 data showed a loss of 26% due to deforestation (20%) and high degradation (6%), by 2024, transformed and degraded areas will cover 30% of the Amazon, reducing areas with high ecological functionality to 70%. This trend warns of a real and imminent risk of irreversible loss of resilience in Amazonian ecosystems, threatening the region's climate stability, water availability, and biodiversity.
4. The analysis of the situation of priority conservation areas by country reveals that the regional trend once again positions Bolivia and Brazil as the countries with the highest level of transformation and degradation of Amazonian ecosystems and landscapes, as already evidenced in the 2022 report 'Amazonia Against the Clock'.
5. Bolivia and Brazil lead the way in terms of the extent of fires in the Amazon, and 2024 is taking shape as one of the most catastrophic years, with more than 21 million hectares affected by fire.
6. By 2024, indicators show a moderate increase: 13% in Indigenous Territories (IT) and Protected Areas (PA), and 25% in Ramsar Sites, in contrast to a worrying 47% transformation and degradation outside these areas. The results confirm the fundamental role of Indigenous Territories as effective conservation mechanisms, comparable to protected areas.

7. By 2024, the Amazon has more than 538 million hectares of stable forest, meaning that 70% is still standing. Of this total, Indigenous Territories protect 202 million hectares, Protected Areas 174 million, and Ramsar Sites 25 million.

In contrast, forests outside these protected areas are the most vulnerable to loss and fragmentation and urgently require effective conservation and restoration strategies (194 million hectares of forest).

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## Summary

Conducted since 2021 by Red Amazónica de Información Socioambiental Georreferenciada (RAISG) as part of the “Amazon for Life: Protect and Restore 80% 2025-2030” initiative, using its own methodology based on data from 1985 to 2024, this research presents a set of findings aimed at informing and guiding global and national policy to prevent the advance of the tipping-point scenarios that are already occurring in certain Amazonian regions. This report first presents an update of the results included in the 2022 ‘Amazonia Against the Clock’ report, which was conducted using RAISG data from 2020. The aim is to account for the trajectory of deforestation, degradation, and fires and their impact at the re-

gional level at two points in time, 2020 and 2024. Secondly, the data is disaggregated at country level to provide inputs that will enable emergency action to be taken in response to tipping points already present in some territories. Finally, the report analyses the penetration of degradation, deforestation, and fires in Indigenous Territories, protected areas and, on this occasion, Ramsar Sites. The data confirm an accelerated trajectory towards a tipping point in several regions if emergency measures are not taken. However, the final conclusion is that 70% of the Amazon is still standing and that priority areas have been found using 12 variables that can guide immediate regional and national public policies.

## PROTECTING AND RESTORING KEY AREAS OF THE AMAZON 2025 - 2030

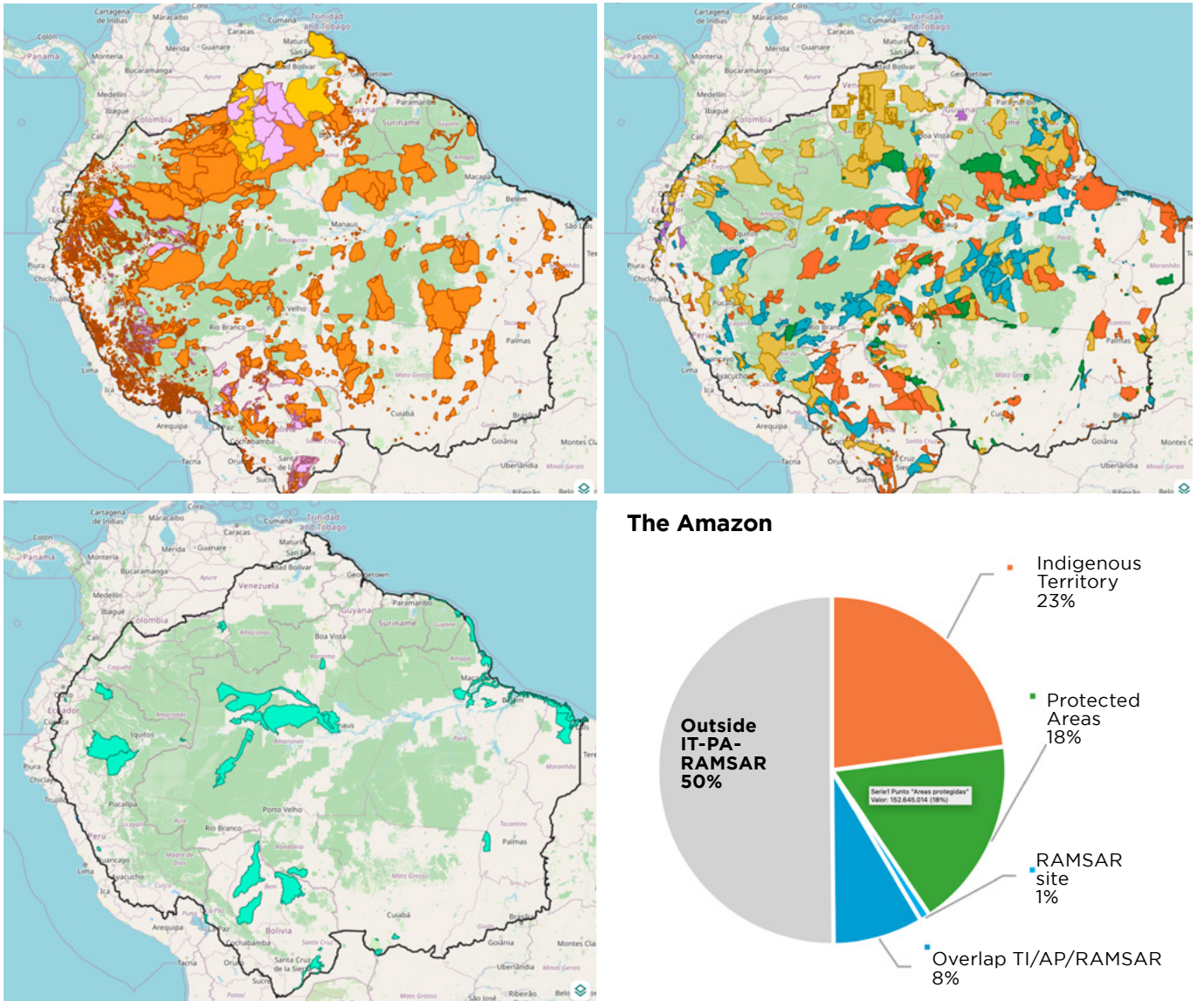
### 2. THE AMAZON TODAY: A COMPREHENSIVE SOCIO- ENVIRONMENTAL OVERVIEW

The Amazon covers 40% of the South American continent and extends over 847 million hectares across nine countries (Brazil, Bolivia, Colombia, Ecuador, Peru, Venezuela, Guyana, French Guiana, and Suriname). Although its role in global climate stability has been highlighted for many years, today it is at a tipping point due to high rates of deforestation and degradation, which are modifying and diminishing its ecosystems and, with them, the Priority Areas for sustaining its ecological functionality, both regionally and globally.

A tipping point is a moment that is reached when the function changes trend. The IPCC (2019) defines it as the moment when ‘irreversibility’ is reached – such as, for example, the degradation of an ecosystem to such an extent that it cannot be restored to its baseline. The tipping point (Lovejoy and Nobre, 2019), developed in the southeastern Amazon region of Brazil, occurs when deforestation and degradation cross the 20-25 per cent threshold. In the Amazon region comprising nine countries, environmental symptoms and changes are caused by pressures such as deforestation, land use change, fires, degradation, and carbon loss, which are altering ecological functions and responses. It is therefore ur-



Smoke from burning affects the Yawalapiti village, Xingu Indigenous Park, Mato Grosso, Brazil. **Credit:** Lalo de Almeida, 2016.



**Figure 1.** Location of Indigenous Territories (top left), Protected Areas (top right), Ramsar Sites (bottom left) and percentage distribution in the Amazon (bottom right, percentages in IT, PA, Ramsar Sites exclude overlaps and are added together with Overlap).

**Source:** RAISG, RAISG AMA Platform 2025.

gent to assess the state of conservation of the Amazon by defining Key Priority Areas that are vital for keeping its functionality and ecological representativeness.

More than 70% of the Amazon is forest (more than 600 million hectares in 2024)<sup>1</sup>, making it the largest tropical forest in the world. The carbon stored in them, in con-

cert with the multiple ecosystem functions and services they provide, defines the ecological stability of the planet and the climate, making the Amazon ‘the great lung of the Earth’.

In addition to its valuable diversity of plant and animal species, the functions and ecological uniqueness of its ecosystems have

1 According to data from MapBiomas Amazonia Collection 6 (2024).

supported a great diversity of cultures throughout the history of our planet. It is home to more than 400 Indigenous peoples, of which an estimated 82 are in voluntary isolation (RAISG 2020)<sup>2</sup>.

Half of the Amazon is covered by Indigenous Territories (249 million hectares, 29%), Protected Areas (326 million hectares, 38%), and Ramsar Sites (249 million hectares, 3%). There is an 8% overlap (26 million hectares) between these territorial spaces, where two or three of them converge.

### 3. WHAT IS THE SOCIO-ENVIRONMENTAL STATUS OF THE AMAZON?

Since 2021, the initiative ‘Amazonía por la Vida: protejamos 80% al 2025’ (Amazon for Life: let us protect 80% by 2025), promoted by COICA together with other organisations and of which RAISG is a founding member of the coalition, we have made an urgent call to protect and restore 80% of the Amazon by 2025, as a horizon where the global and national agenda prioritises the Amazon to prevent its collapse and tipping point. To highlight the current state of the Amazon, a specific method has been developed to rigorously evaluate, from a technical and scientific perspective, its ‘ecological functionality and relevance’ and the ‘symptoms and changes in its ecosystems.’

This method was designed with a focus on assessing where and how to achieve the goal of protecting 80% of the Amazon. Therefore, the analysis consists of figuring out ‘Key Areas for Conservation and Restoration in the Amazon,’ which involves

assessing and categorising 12 variables at a spatial resolution of 90 metres using a multi-criteria approach to classify and combine two dimensions:

- 1. Functionality and ecological relevance:** assessing conservation priority based on criteria of functionality, ecosystem services, and ecological representativeness.
- 2. Symptoms and changes:** assessing the degree of alteration or degradation of ecosystems as a result of deforestation, land-use change, fires, and carbon loss.

Although much of the input comes from information sources available in RAISG and MapBiomás Amazonía, during the analysis process new layers of information were designed to support the identification and assessment of ‘Functionality and ecological relevance,’ where it was crucial to define the ecosystems’ heterogeneity, complexity, and uniqueness.

**Bolivia and Brazil lead the way in terms of the extent of fires in the Amazon, and 2024 is taking shape as one of the most catastrophic years, with more than 21 million hectares affected by fire.**

<sup>2</sup> Atlas Amazonía bajo presión (RAISG 2020).

### 3.1. Methodological framework for defining priority conservation areas

The conceptual framework shows that **Key Areas** integrate two analytical axes:

- **Ecological value** (how vital the area is for conservation), and
- **Level of alteration** (how degraded it is).

The intersection of these two axes gives rise to categories that guide **differentiated conservation, restoration or sustainable management actions**.

In this understanding, the **Key Areas of the Amazon** are strategic spaces that combine high ecological and functional value with different levels of transformation or degradation, and whose management is a priority to ensure the conser-

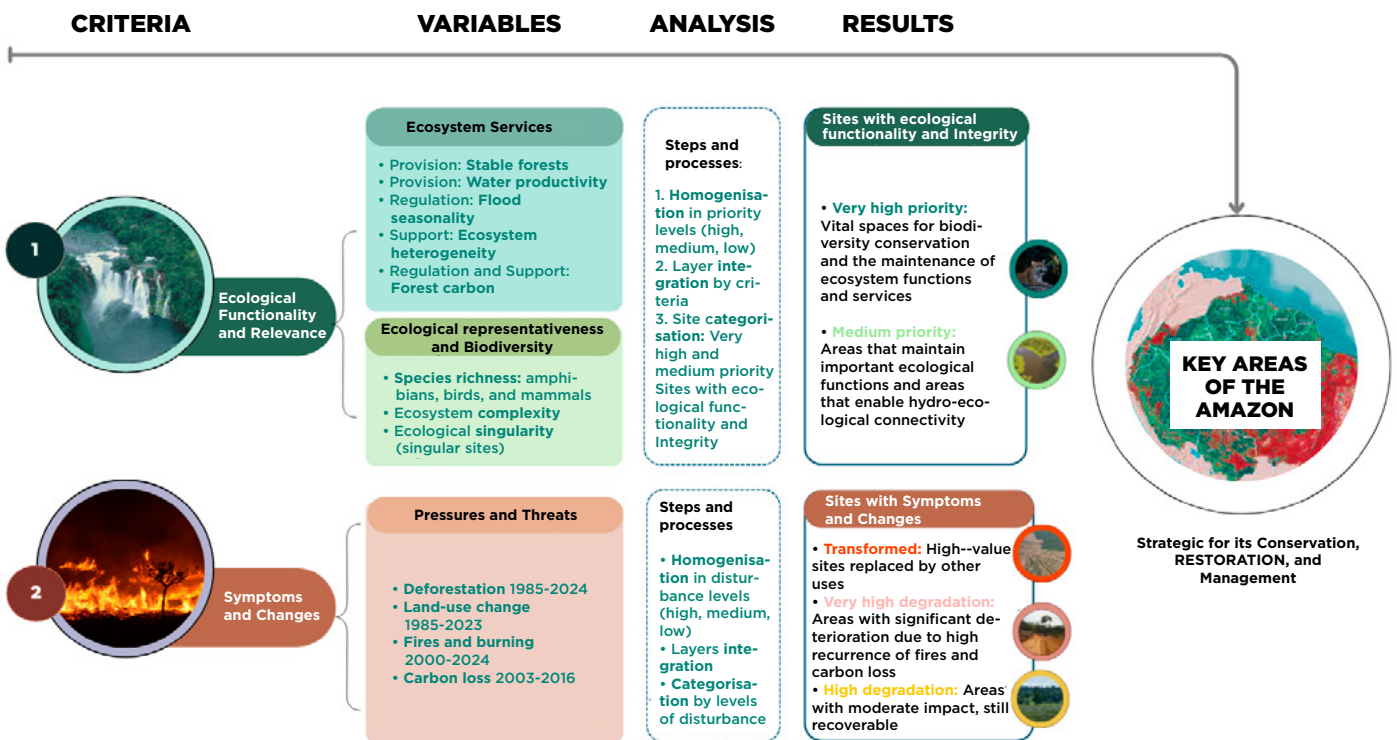
vation of biodiversity, connectivity and ecosystem services.

The two dimensions of the analysis are mentioned below:

#### 1. Functionality and ecological relevance

Assesses the ecological value and capacity of ecosystems and landscapes to keep natural processes.

- **Very high priority:** ecosystems with high integrity, biodiversity, and critical ecosystem services.
- **Medium priority:** functional areas that contribute to hydro-ecological connectivity and the maintenance of the natural mosaic.



**Figure 2.** Methodological framework implemented to define Key Areas for the Amazon. *Source: own elaboration (2021, 2025)*

## 2. Symptoms and changes

Reflects the degree of transformation and degradation of Amazonian ecosystems.

- **Transformed:** replacement of forest or natural ecosystems by agricultural or other uses.
- **Very high degradation:** severe loss of ecological structure and function due to recurrent fires and carbon loss.
- **High degradation:** significant impacts, but with potential for ecological recovery.

### 3.2. The Amazon and its main ecological benefits and values

To better understand the scope of the method and analyses conducted, it is essential to understand the criteria and definitions that are briefly explained below.

**The Amazon:** from a more integrative approach RAISG defines and delimits the Amazon by integrating biogeographical,

hydrographic, and political-administrative criteria, following and respecting the particularities of each country in the Amazon region. The total area of the Amazon using these criteria is 8,470,209 km<sup>2</sup>, equivalent to more than 847 million hectares distributed among nine countries (Table 1).

**Ecological functionality** is the capacity of ecosystems to keep their structures, processes, and integrity, ensuring their **self-organisation and resilience** (De Groot, 1992). Through biophysical processes such as primary production, the water cycle, and nutrient cycling, ecosystems generate **ecosystem services**, understood as the **benefits that people obtain from nature** (Leemans & De Groot, 2003; Millennium Ecosystem Assessment, 2005). **Biodiversity**, in interaction with the physical environment, underpins this functionality and enables ecosystems to provide essential services for human well-being.

**Ecological representativeness** seeks to ensure that the full diversity of ecosystems, species and natural processes is reflect-

Country	Area in the Amazon (km <sup>2</sup> )	% Amazon region in the country
Bolivia	714,834	65.1%
Brazil	5,238,589	61.5%
Colombia	506,181	44.3%
Ecuador	132,292	53.0%
Guyana	211,157	100%
French Guyana	84,226	100%
Peru	966,190	75.2%
Suriname	146,523	100%
Venezuela	470,219	51.3%
<b>Amazon</b>	<b>8,470,209</b>	

**Table 1.** Extent of the Amazon in the nine countries that comprise it.

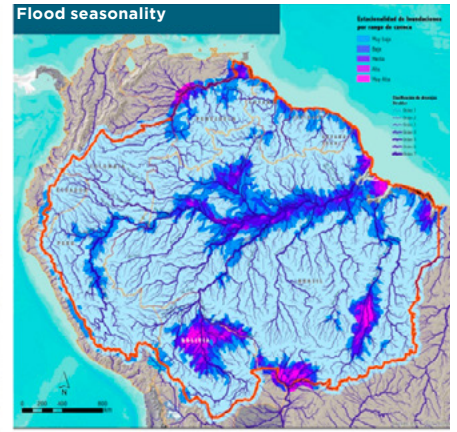
**Provision: Forest**



**Provision: Water**



**Regulation: Floods**



**Support:  
diversity/  
heterogeneity**



**Regulation &  
Support:  
biomass/  
carbon**



**Figure 3.** Ecological variables and resulting map of Amazonian functionality. **Source:** RAISG, *Initiative Amazonia for Life: protect 80% by 8025*. 2022.

ed within priority conservation areas. This approach, aligned with the **2030 Agenda** and the **SDGs**, recognises the importance of protecting biodiversity as the basis for ecosystem functionality. However, species loss rates show that this global commitment has not yet been fulfilled. **Rep-**

**resentativeness analysis** is a key tool for defining **conservation priorities**, offering scientific guidance on where and how to achieve the goal of **protecting and restoring 80% of the Amazon** by finding areas with high concentrations of biodiversity and unique ecosystems.

### Species richness



### Ecosystem complexity



### Ecosystem singularity



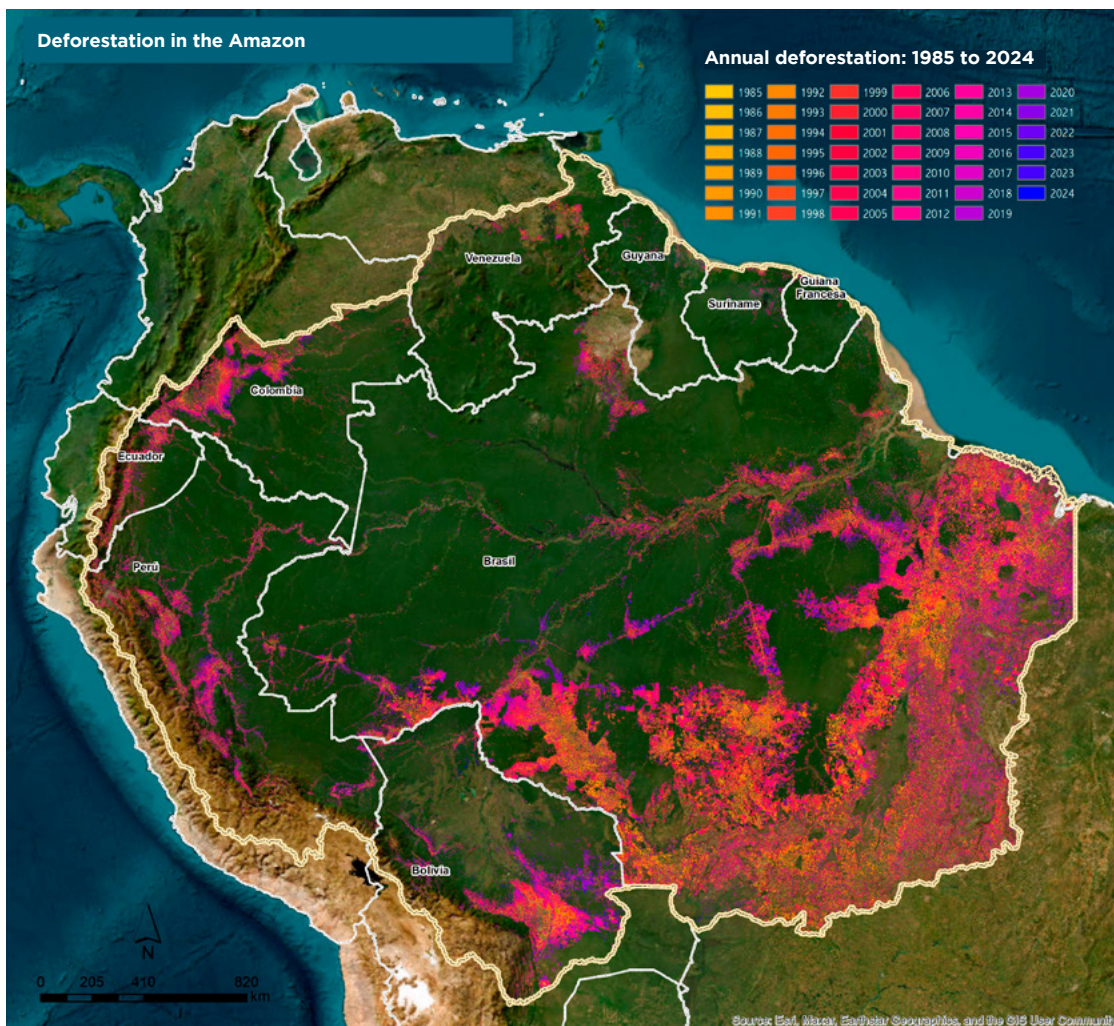
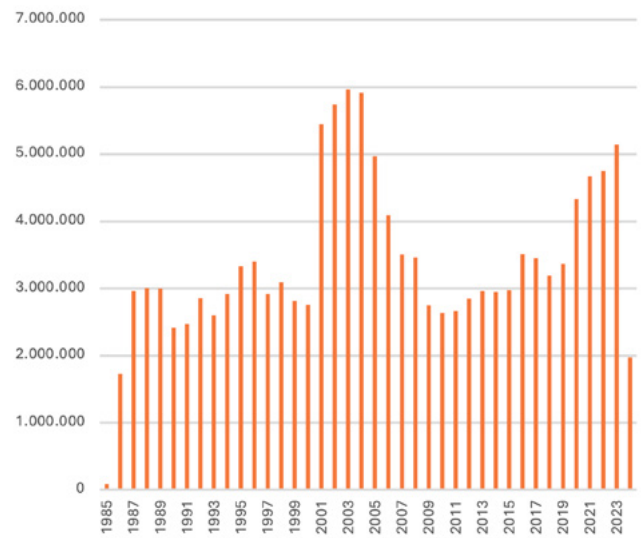
**Figure 4.** Variables and resulting map of Amazonian ecosystem representativeness. **Source:** RAISG, Initiative Amazonia for Life: protect 80% by 8025. 2022.

### 3.3. The Amazon with symptoms and changes

The Symptoms and Changes analysis finds the ecological impacts resulting from human pressures and threats in the Amazon, highlighting its fragmentation and deterioration. To assess the current status, information on deforestation, land use change, carbon loss, and burned areas was integrated and updated to the year 2024. The study was conducted pixel by pixel at a spatial resolution of 90 metres.

Amazonian forests have suffered accelerated loss over the last two and a half decades. According to the sources used to

**Deforestation in the Amazon**  
Annual deforestation: 1985 to 2024



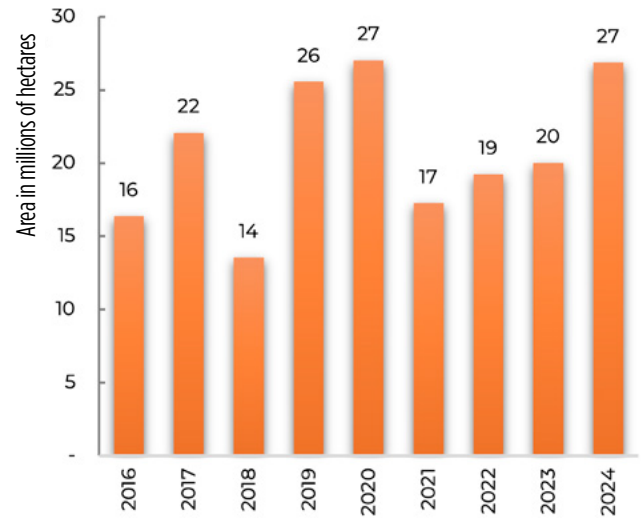
**Figure 5.** Annual dynamics of deforestation in the Amazon between 1985 and 2024. **Source:** own elaboration, based on data from RAISG (2021), MapBiomias Amazonia (2024), Global Forest Watch (2025) and FAN (2025 unpublished)

produce historical and current deforestation maps, the rate of forest loss in the Amazon increased by 60% compared to pre-2000 levels (an average of 2.5 million hectares per year), reaching around 4 million hectares per year in the period 2001-2024.

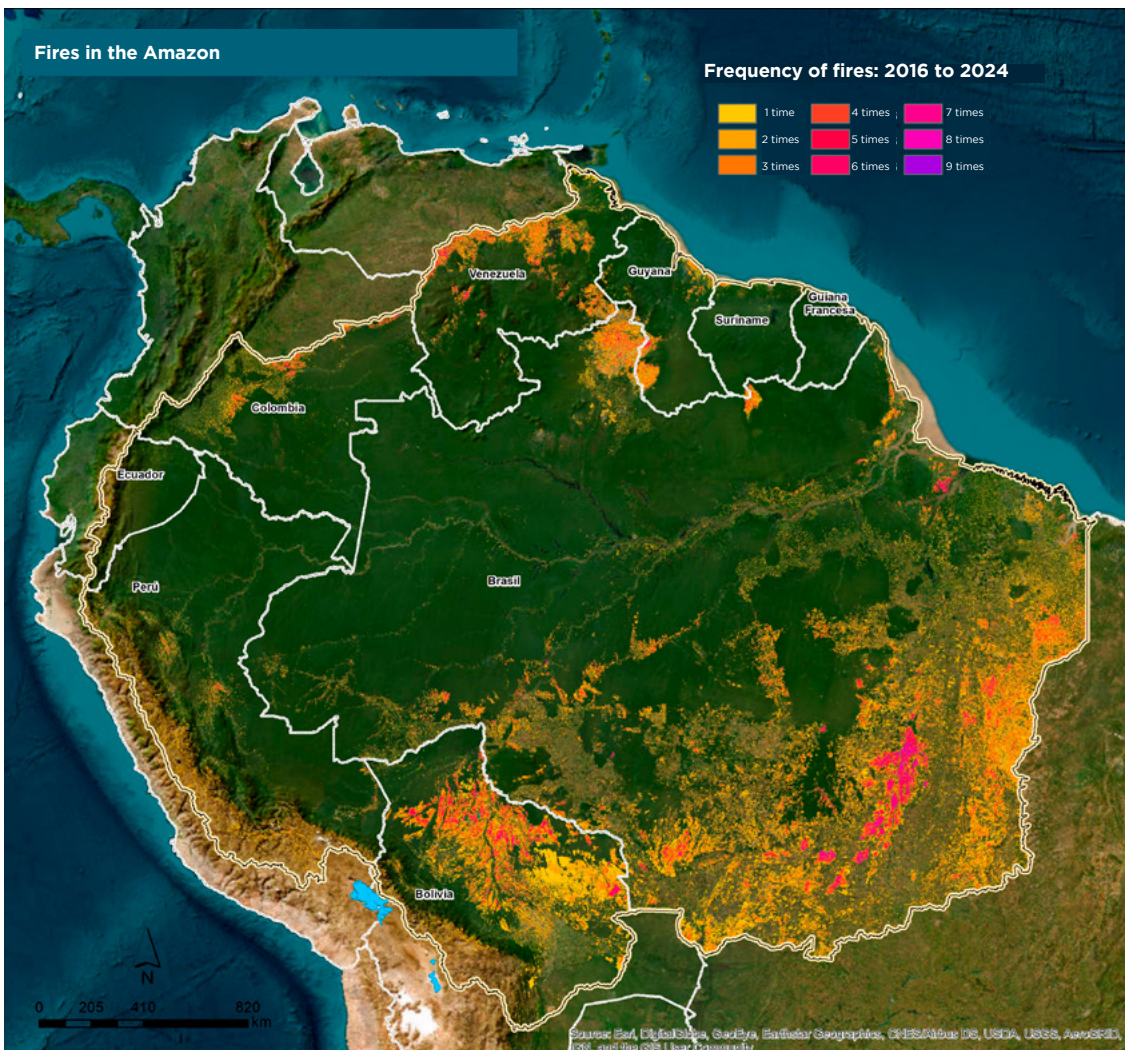
The trend of the last four years remains at this average, with deforestation exceeding 16.5 million hectares between 2021 and 2024. In total, during the 40 years analysed (1985-2024), the Amazon has lost 136 million hectares of forest, an area equivalent to almost three times the territory of Spain.

However, the figures for 2024 show an apparent reduction, which could be explained

### Fires in the Amazon 2016 - 2024



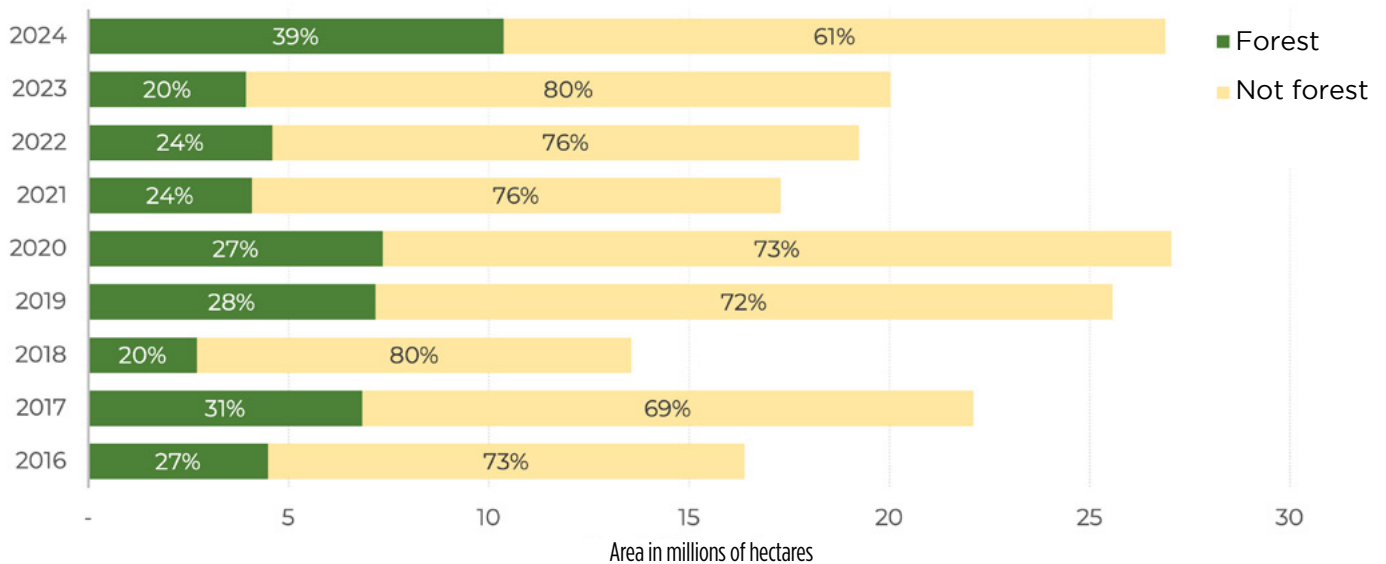
by limitations in satellite detection due to the extent of burn scars, which overlap and merge with deforested areas.



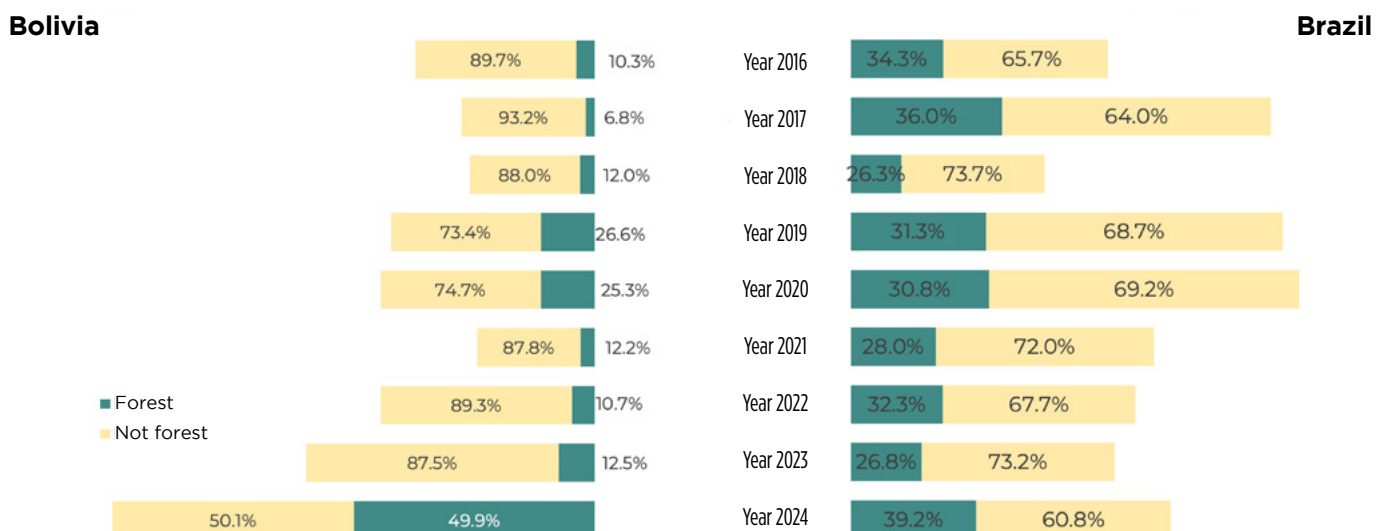
**Figure 6.** Areas affected by burning and fires in the Amazon: 2016–2024. **Source:** RAISG (2025), based on FAN (2021) methodology

In the Amazon, fires are one of the main pressures on its ecosystems and they do not recognise borders. Between 2001 and 2020, they affected an average of 17 million hectares per year, equivalent to 14% of the Amazon region. During the period 2016–2021, the areas affected exceeded that average, reaching between 17 and 27 million hectares, according to RAISG data. In that same period, 59% of the fires occurred in new areas, i.e., in areas that had not previously recorded fires.

Fire behaviour has changed in recent years and shows a trend towards greater intensity and frequency, influenced by prolonged droughts associated with the El Niño phenomenon and climate change; these factors alter the usual dynamics of fire and hasten its advance into previously resistant rainforests. Since Amazonian forests are not adapted to fire, this causes an accelerated loss of biomass, carbon, and biodiversity.



**Figure 7.** Fire behaviour in forests and other formations between 2016 and 2024



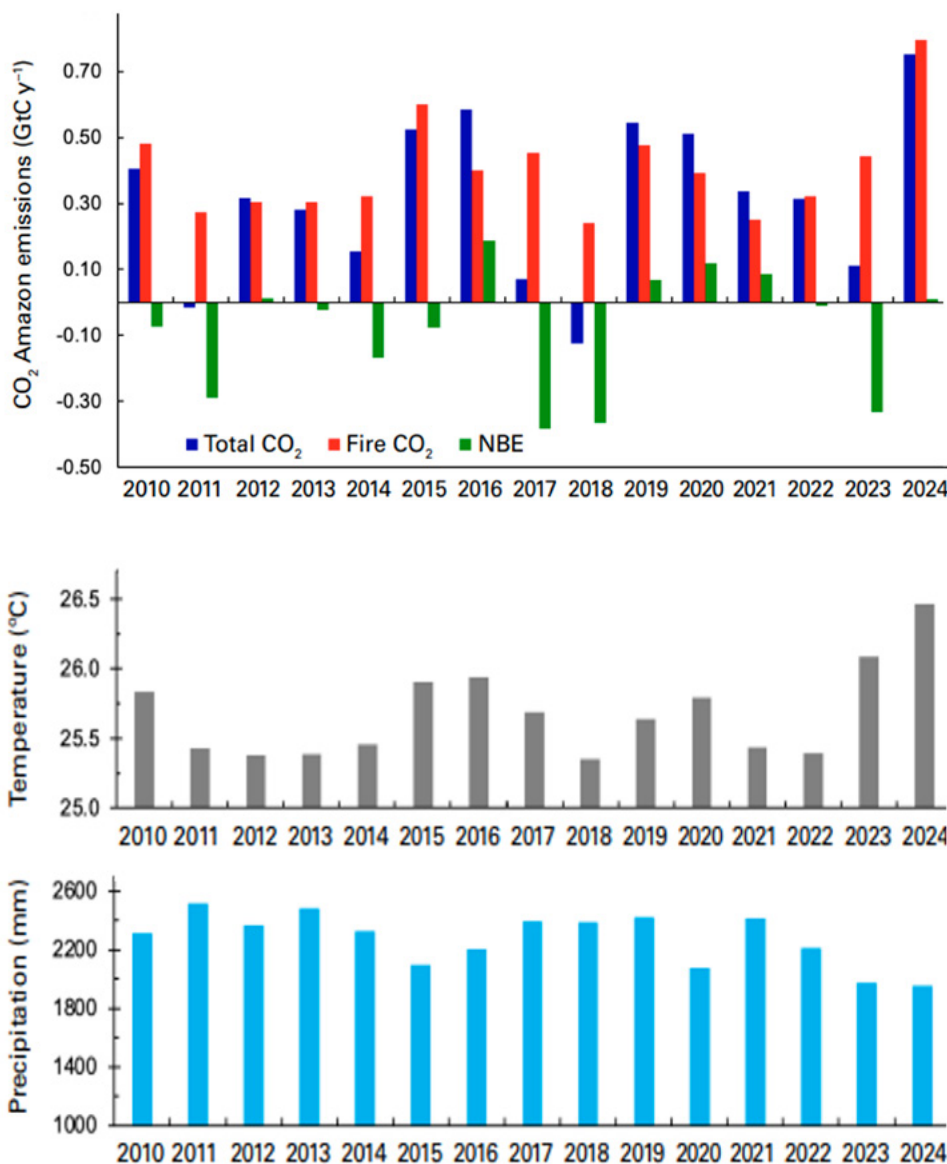
**Figure 8.** Fires in forests and other formations in Bolivia and Brazil

These fires are also gradually spreading to Protected Areas (PAs) and Indigenous Territories (ITs): In PAs, nearly 60% of the affected areas are new sectors. In ITs, approximately 45% of the fires were recorded in areas that had not been previously struck.

Bolivia and Brazil lead the spread of fires in the Amazon, and 2024 is shaping up to be one of the most catastrophic years, with more than 21 million hectares damaged by fire. The situation is particularly alarming in the Bolivian Amazon, where 50% of the total area disturbed was forest, generating an unprecedented chain of impacts.

The persistent smoke in the atmosphere even drifted as far as Argentina for weeks, while dozens of Amazonian communities were forced to evacuate due to high levels of air toxicity. The damage was even more severe for biodiversity, with countless species trapped by the flames and irreversible ecological losses.

According to reports from Global Atmosphere Watch (Oct. 2025), in 2024, CO<sub>2</sub> emissions in the Amazon reached record levels, driven by extreme drought and high temperatures linked to El Niño and the warming of the North Atlantic. That year saw the highest emissions from fires in 15



**Figure 9.** Changes in CO<sub>2</sub> emissions and weather anomalies in the Amazon between 2010 and 2024. **Source:** WMO Greenhouse Gas Bulletin - Global Atmosphere Watch (2025)

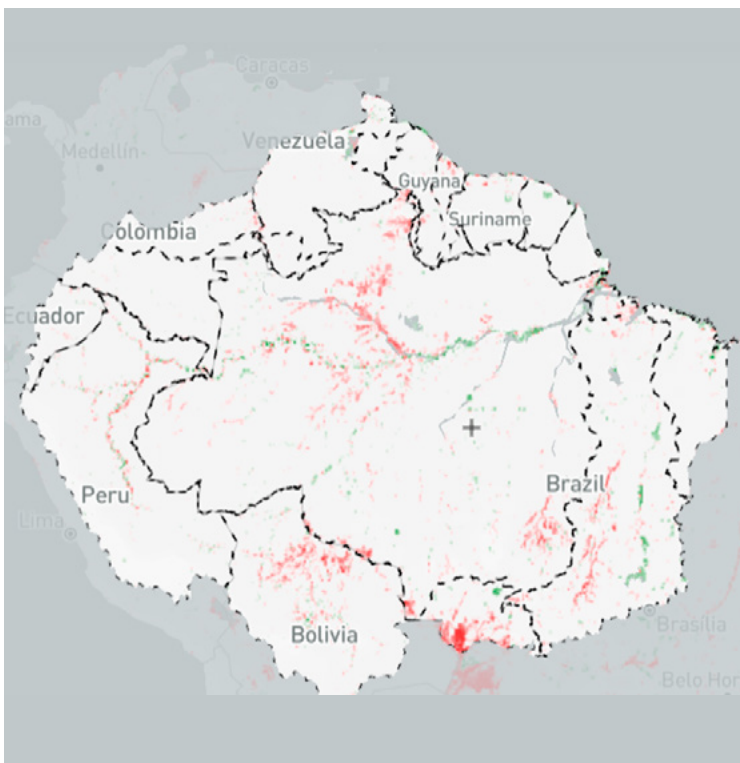
years, with a massive release of carbon that intensified regional and global air pollution. At the same time, methane (CH<sub>4</sub>) concentrations continued their steady increase since 2007, reaching 266% above pre-industrial levels, due to increased emissions from tropical wetlands and agricultural and waste sources. These processes reinforce the role of Amazonian fires as one of the main drivers of climate imbalance and air quality degradation in South America.

### 3.4. Water and climate emergency in the Amazon

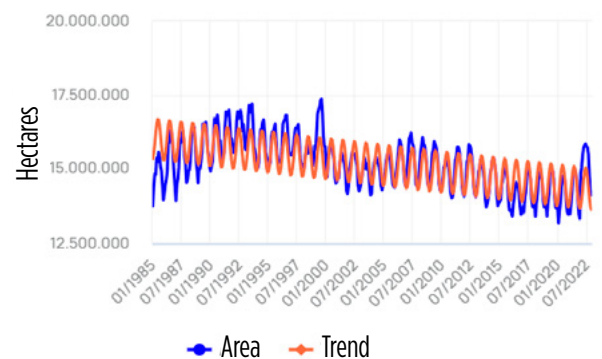
Water vulnerability in the Amazon has intensified in recent years, as shown by significant variations in water availability. In 2023, monthly rainfall recorded significant fluctuations, with differences ranging from -6% to +7% compared to historical values. Currently, it is estimated that only 13% of the region's surface water is used for human consumption, of which approximately 82% is concentrated in hydroelectric plants

(MapBiomias Agua, 2024). Added to this is the progressive loss of 184,000 hectares of glacier surface area (56% of the total) between 1985 and 2022, which compromises the availability of essential water resources for cities with high urban populations, as well as for ecosystems, communities, and biodiversity.

The concept of tipping point reflects that the Amazon is at a critical stage, where deforestation and degradation exceed the thresholds estimated by Nobre and Lovejoy (20–25% combined loss). This pressure is coupled with extreme climate change: rainfall has shown an annual decline of 17%, reaching peaks of 64% in August and September, while the average monthly temperature has already increased by more than 2°C (Spickenbom, 2021), leading to more intense and prolonged droughts. These interrelated factors jeopardise the Amazon's water and ecological resilience, increasing the urgency of conservation and sustainable water management strategies.



**Monthly time series of water surface area - RAISG**



**Figure 10.** Historical trend in the surface area of water bodies in the Amazon. *Source: MapBiomias Agua (2024)*

## 4. OPPORTUNITIES AND CHALLENGES

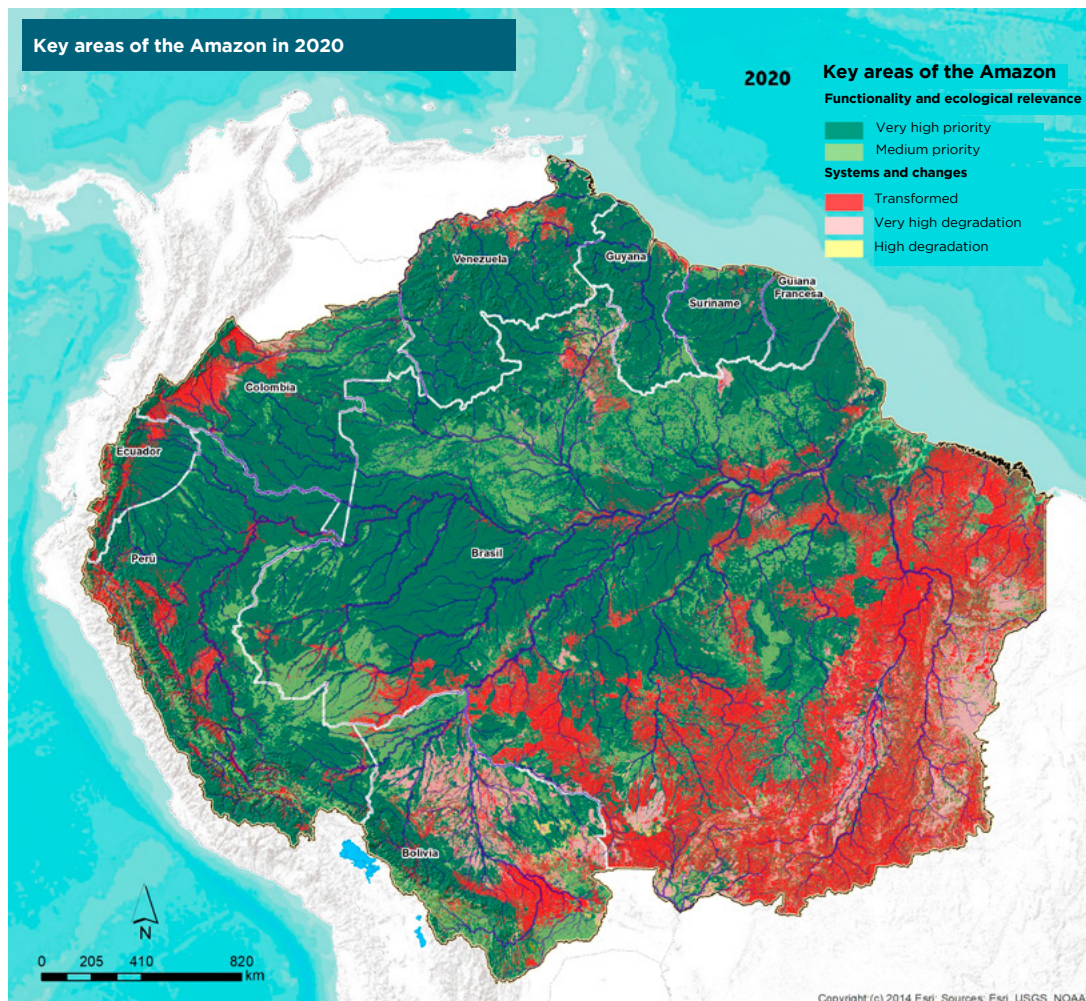
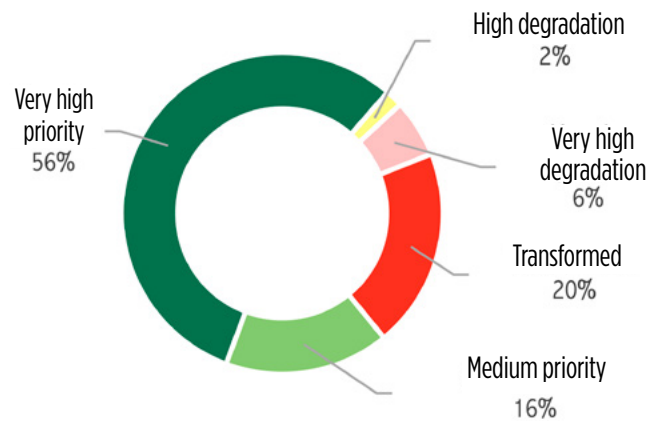
### 4.1. The Amazon on the threshold of the tipping point

The results of the analysis of Key Areas in the Amazon show that the region is in a critical state of transition towards its tipping point, although conditions still exist that could reverse this trend. Protecting at least 80% of the Amazon region is still a possible and essential goal for keeping its ecological functionality and the ecosystem services that sustain the climate, water, and biodiversity on a continental scale.

By 2020, approximately 26% of the Amazon had already been transformed (20%) or showed signs of very high degradation (6%), while 74% kept high ecological integ-

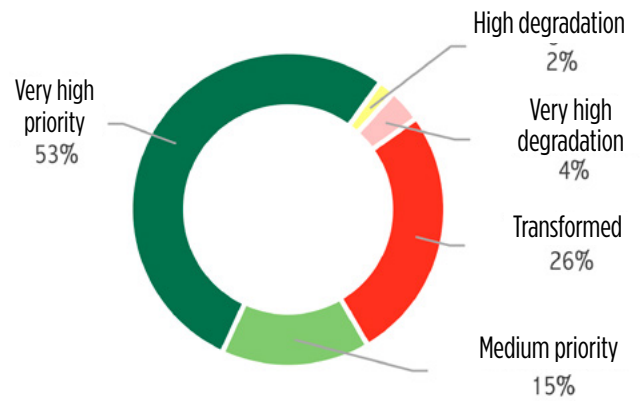
riety. However, between 2021 and 2024, the region experienced an unprecedented acceleration in the loss of its natural cover, with a rate of transformation and degradation of around 8 million hectares per year, equivalent to more than 33 million hectares disturbed in just four years.

Key areas of the Amazon in 2020

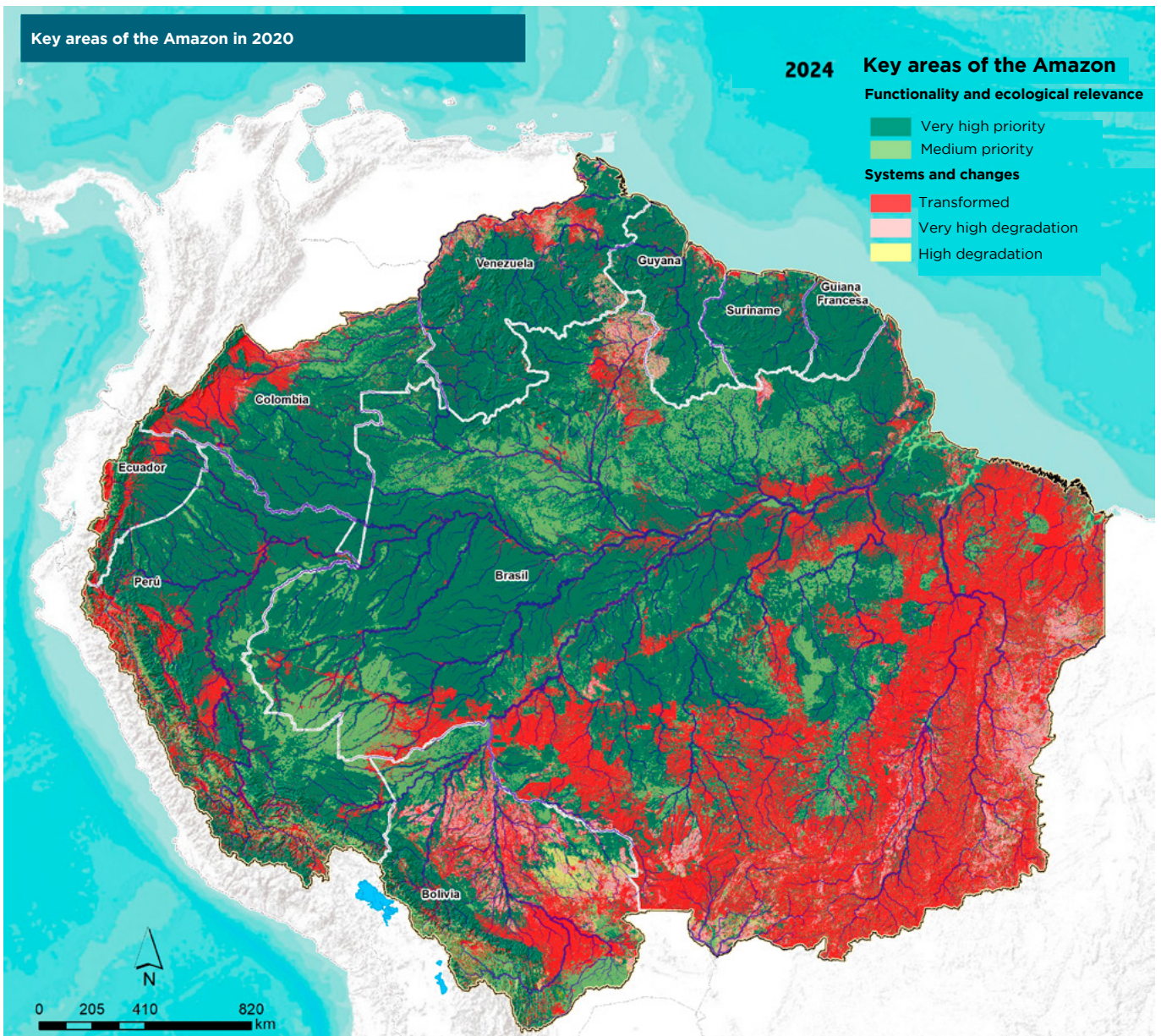


This deterioration is mainly attributed to the expansion of deforestation, land use change, and the intensification of forest fires. These factors have had a concentrated impact on Amazonian forests; as a result, by 2024, transformed and degraded areas will cover 30% of the Amazon, reducing areas with high ecological functionality to 70%. This trend warns of a real and imminent risk of irreversible loss of resilience in Amazonian ecosystems, threatening the region's climate stability, water availability, and biodiversity.

**Key areas of the Amazon in 2024**



**Figure 11.** Comparison of Key Areas of the Amazon in the years 2020 and 2024



## 4.2. STATUS OF PRIORITY CONSERVATION AREAS BY COUNTRY

The regional trend once again positions Bolivia and Brazil as the countries with the highest levels of transformation and degradation of Amazonian ecosystems and landscapes. In the case of Bolivia, whose Amazon region accounts for 65% of its national territory, 28% of its Amazonian area has been transformed and 10% degraded since 2024. Brazil, which has 61% of its territory within the Amazon region, has seen 32% transformation and 4% degradation. In both cases, the expansion of the agricultural frontier, deforestation, and forest fires have had a significant impact on the reduction of key areas for the ecological functionality and integrity of the Amazon as a whole.

Likewise, comparative results between 2020 and 2024 reveal worrying trends in

Ecuador and Colombia. In Ecuador, 23% of Amazonian areas are already undergoing transformation, while in Colombia, transformation and degradation have reached 19%. These figures reflect that a sustained expansion of anthropogenic pressures has taken places, as well as the accelerated loss of ecological connectivity in sectors critical to regional conservation.

**The regional trend once again positions Bolivia and Brazil as the countries with the highest levels of transformation and degradation of Amazonian ecosystems and landscapes.**

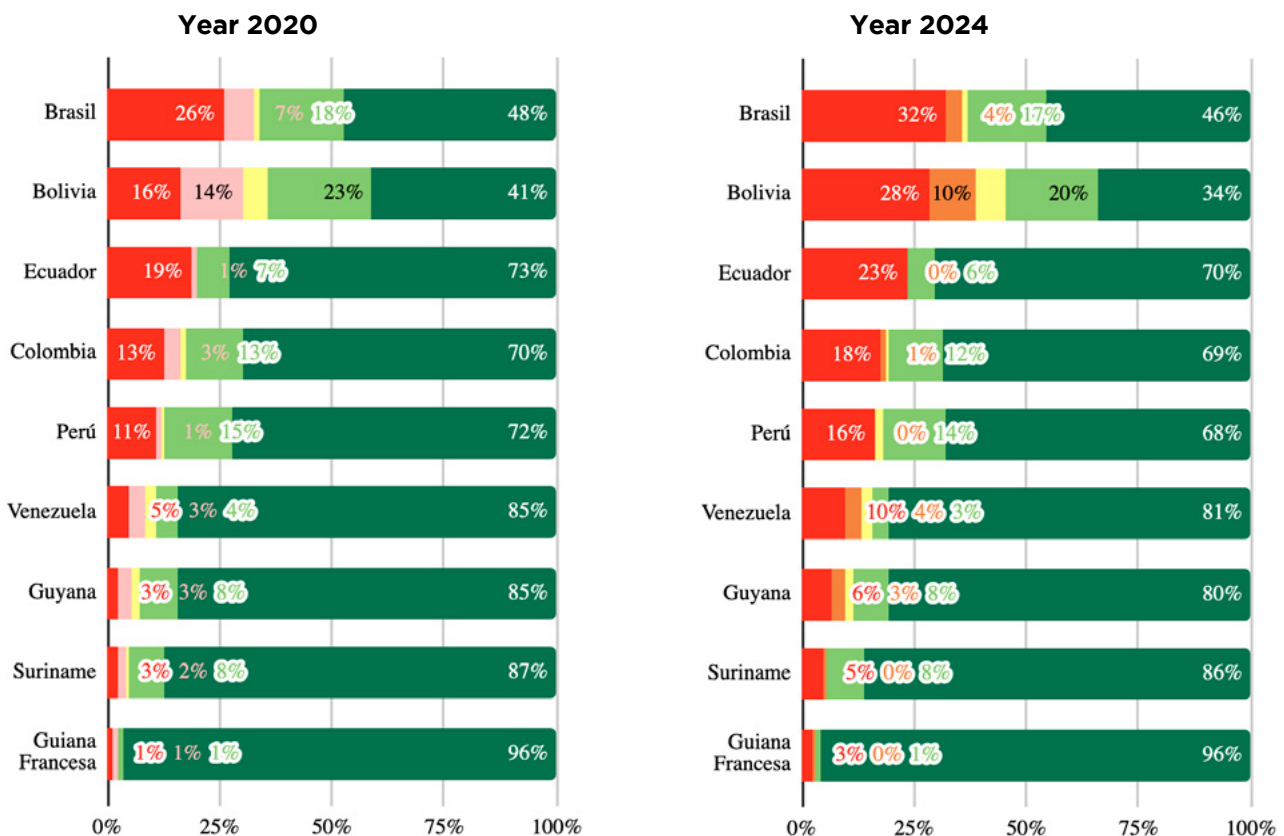


Figure 12. Key areas in Amazonian countries between 2020 and 2024

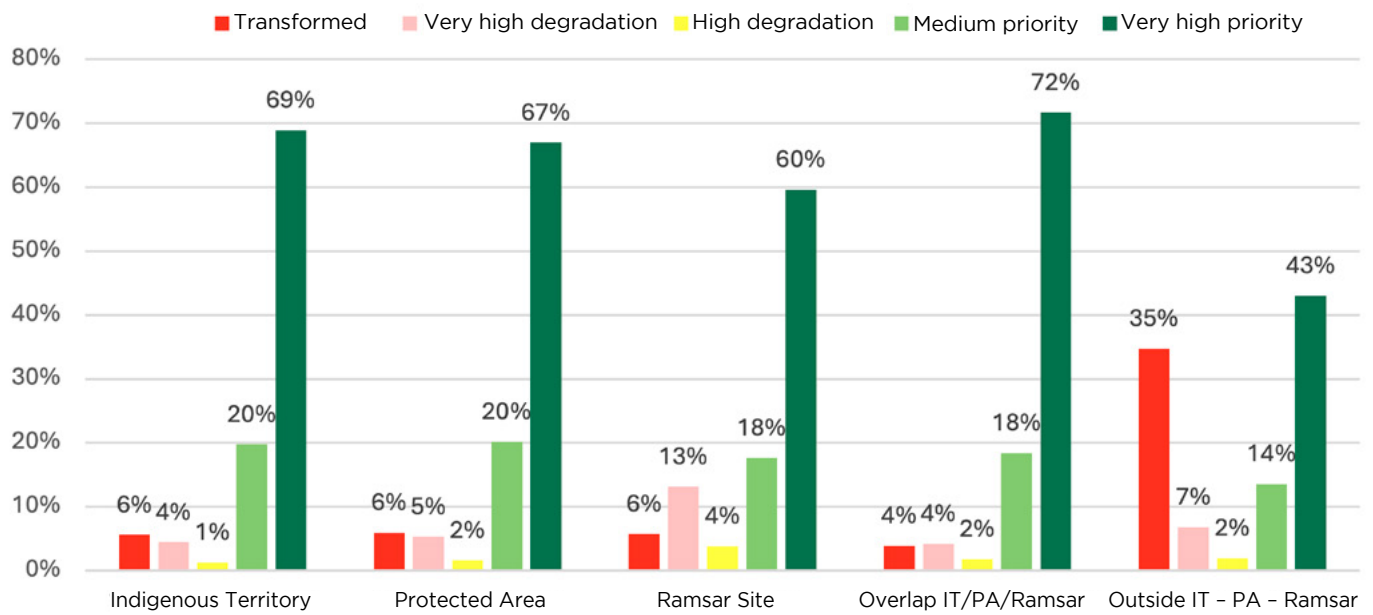
### 4.3 INDIGENOUS TERRITORIES, PROTECTED AREAS, AND RAMSAR SITES: THE SHIELDS OF THE AMAZON

Approximately half of the Amazon is made up of Indigenous Territories (IT), Protected Areas (PA), and Ramsar Sites, which have proved themselves as true shields against

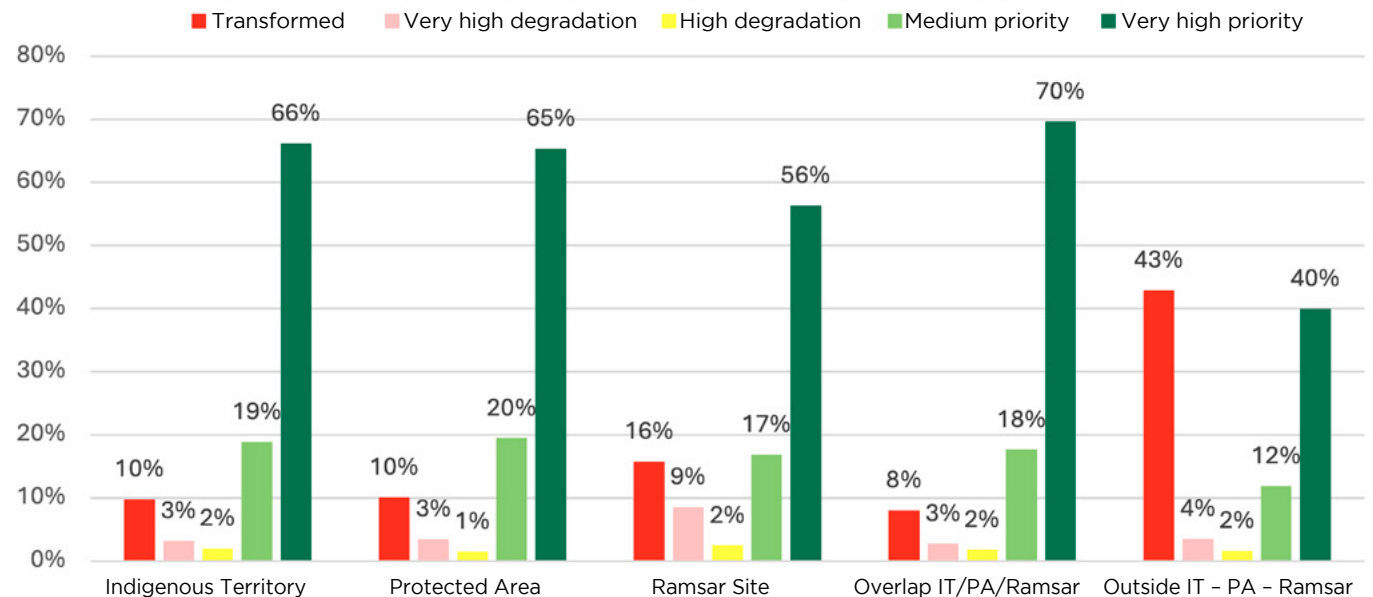
deforestation and degradation. These territories are an essential part of the promising solutions for Amazon conservation and resilience.

While the transformation and degradation of Amazonian ecosystems have continued relentlessly since 2020 – driven mainly by the expansion of the agricultur-

#### Year 2020



#### Year 2024



**Figure 13.** Key areas in IT, PA, and Ramsar sites between 2020 and 2024

al frontier and the increasing recurrence of forest fires – the rates of deterioration within ITs, PAs, and Ramsar Sites remain significantly below those recorded outside these areas, confirming their role as effective barriers against ecological collapse.

In 2020, these three territorial figures recorded levels of transformation and degradation of 10% in Indigenous Territories, 11% in Protected Areas and 19% in Ramsar Sites, while outside these areas, transformation exceeded 42%.

By 2024, the indicators show a moderate increase: 13% in IT and PA, and 25% in

**By 2024, the indicators show a moderate increase: 13% in IT and PA, and 25% in Ramsar Sites, in contrast to a worrying 47% transformation and degradation outside these areas.**



Smoke in the Amazon forest in the department of Santa Cruz Bolivia. *Credit: Pedro Pablo Ribera, 2020.*

Ramsar Sites, in contrast to a worrying 47% transformation and degradation outside these areas.

The results corroborate the fundamental role of Indigenous Territories as effective conservation mechanisms, comparable to protected areas. In many cases, a titled Indigenous territory translates, in fact, into a guarantee of protection and maintenance of ecological functionality,

even when conservation is not its explicit goal.

Similarly, comparative statistics from 2020 and 2024 show that areas where an Indigenous Territory, a Protected Area, and a Ramsar Site coincide or overlap have the highest levels of ecological integrity and the lowest rates of degradation, consolidating a key territorial model for sustaining Amazonian resilience.

## Conclusions

The Amazon is at a critical crossroads. Data shows that degradation and transformation are advancing at an alarming rate, threatening to reach a point of ecological no return. However, it also reveals that there is still a real opportunity to reverse this trend: nearly 70% of the Amazon keeps its ecological functionality and essential ecosystem services, due mainly to the protective role of Indigenous Territories, Protected Areas, and Ramsar Sites.

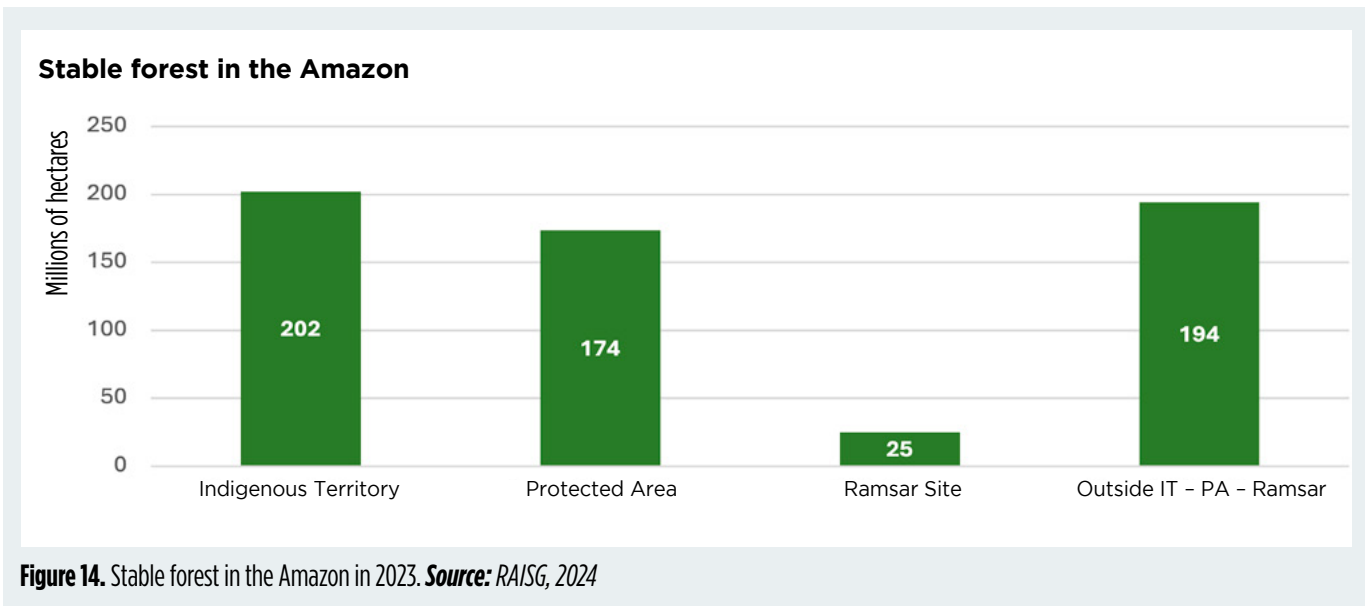
The future of the Amazon and, with it, the climate balance and water stability of the continent will depend on the collective ability to strengthen the management of these territories, curb deforestation, restore degraded areas, and recognise the leadership of Indigenous Peoples as guardians of this great system that is essential for all humanity.

By 2024, the Amazon will conserve more than 538 million hectares of stable forest in key areas of the Amazon. Of this total, Indigenous Territories protect 202 million hectares, Protected Areas 174 million, and Ramsar Sites 25 million. In contrast, forests outside these protected areas are the most vulnerable to loss and fragmentation, urgently requiring effective con-

servation and restoration strategies (194 million hectares of forest).

Protecting the Amazon is not just about preserving a source of life, water, and diversity: it is about ensuring humanity's ability to adapt and be resilient to climate change in an era of planetary crisis. Keeping the forest standing is, now more than ever, a fundamental condition for our shared future.

**In many cases, a titled Indigenous territory translates, in fact, into a guarantee of protection and maintenance of ecological functionality, even when conservation is not its explicit goal.**



## About the author

**Marlene Quintanilla.** A forestry engineer by profession, with a master’s degree in water resource assessment, Marlene has more than fifteen years of experience in planning and sustainable use of natural resources. She is currently Director of Research and Knowledge Management at Fundación Amigos de la Naturaleza (FAN), where she analyses and researches pressures on ecosystems and the impacts of climate change. She has led projects and research related to water and forest management in United Nations programmes, and forestry and land management projects at CIDOB and CEPAC. She is the main researcher for the initiative ‘Amazonia Viva: Protect and Restore 80% 2025-2030’ and developed the method for the reports ‘Amazonia Against the Clock’ (2022) and ‘Amazonia in Danger of Extinction’ (2025).

**Fundación Amigos de la Naturaleza (FAN).** Fundación Amigos de la Naturaleza is a Bolivian civil society organisation made up of women and men who, recognising the importance and value of nature, are committed to working to promote positive changes so that Bolivia values, protects, and conserves its natural heritage and the environmental functions that sustain the livelihoods and well-being of its population for sustainable development and climate resilience. FAN is a member of RAISG, which in turn is a member of the 80%x 2025-2030 Initiative.

**Red Amazónica de Información Socioambiental Georreferenciada (RAISG).** Red Amazónica de Información Socioambiental Georreferenciada (The Amazonian Network for Georeferenced Socio-Environmental Information) is a consortium of civil society organisations from Amazonian countries focused on the socio-environmental sustainability of the Amazon, with support from international cooperation. RAISG is a founding member of the ‘Amazonia Viva: Protect and Restore 80% 2025-2030’ initiative and was instrumental in developing the 2022 report ‘Amazonia Against the Clock’ and the 2025 report ‘Amazonia in Danger of Extinction’.

## References

- Comer, P.J., J.C. Hak, C. Josse and R. Smyth. (2020) Long-term loss in extent and current protection of terrestrial ecosystem diversity in the temperate and tropical Americas (<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0234960>). Fig 1. Potential/historical distribution of vegetation macrogroups. (<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0234960>).
- De Groot, R. 1992. Functions of nature: evaluation of nature in environmental planning, management and decision making. Wolters-Noordhoff BV, Groningen, Holanda.
- IPCC. (2019). Chapter 6: Extremes, Abrupt Changes and Managing Risks. In Special Report on the Ocean and Cryosphere in a Changing Climate. Geneva: IPCC. pp. – .
- Leemans, R., & de Groot, R. S. (2003). Millennium Ecosystem Assessment: Ecosystems and Human Well-being – A Framework for Assessment. Washington/Covelo/London: Island Press.
- Thomas E. Lovejoy & Carlos A. Nobre (2019). Amazon tipping point: Last chance for action. *Science Advances*, 5(12): eaba2949. DOI:10.1126/sciadv.aba2949. MapBiomias Agua. (2024). MapBiomias Agua – mapas de hidrografía y recursos hídricos de la Amazonía [Dataset]. Retrieved from: <https://mapbiomas.org/agua>
- MapBiomias Agua. (2024). MapBiomias Agua – mapas de hidrografía y recursos hídricos de la Amazonía [Dataset]. Retrieved from: <https://mapbiomas.org/agua>
- MapBiomias Amazonía. (2024). MapBiomias Amazonia Collection 6.0 (1985–2023) – mapas de cobertura y uso de suelo de la Amazonía [Dataset]. Retrieved from <https://amazonia.mapbiomas.org/en/mapbiomas-amazon-collection/>
- Millennium Ecosystem Assessment. (2005). Ecosystems and human well-being: Synthesis. Island Press. Available at: <https://www.millenniumassessment.org/en/Synthesis.html>
- Naciones Unidas. (2015). Transformar nuestro mundo: la Agenda 2030 para el Desarrollo Sostenible. Resolución aprobada por la Asamblea General el 25 de septiembre de 2015 (A/RES/70/1). United Nations. Available at: <https://sdgs.un.org/es/2030agenda>
- RAISG. (2020). Amazonía bajo Presión, 68 pages ([www.amazoniasocioambiental.org](http://www.amazoniasocioambiental.org))
- RAISG. (2021). Amazonía 2021. Áreas Protegidas. Territorios Indígenas. Deforestación 2001-2020. Poster map. ([www.amazoniasocioambiental.org](http://www.amazoniasocioambiental.org))
- RAISG. (2022). Amazonía a contrarreloj: un diagnóstico sobre dónde y cómo proteger el 80 % para 2025. Red Amazónica de Información Socioambiental Georreferenciada
- Red Amazónica de Información Socioambiental Georreferenciada (RAISG). (2022). Plataforma AMA 2.0: Monitoreo de incendios forestales y deforestación en la Amazonía [Online platform]. Retrieved from <https://ama.raisg.org>
- Spickenbom, J. (Ed.). (2021). Atlas Departamental de Vulnerabilidad al Cambio Climático – Santa Cruz. Fundación Amigos de la Naturaleza (FAN).
- Worboys, G.L. (2019). Gobernanza y gestión de áreas protegidas / Graeme L. Worboys, Michael Lockwood, Ashish Kothari, Sue Feary e Ian Pulsford -- Bogotá: Universidad El Bosque y ANU Press, 1040 pages.