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# SPOTLIGHT ON THE AMAZON



RAISG

AMAZONIAN NETWORK OF GEOREFERENCED  
SOCIO-ENVIRONMENTAL INFORMATION

# Intensifying efforts to safeguard the Amazon

Over the past year, RAISG has reinforced its commitment to **protecting the Amazon**. In 2024, we have made significant strides to tackle the challenges threatening the world's largest tropical forest, **a critical ecosystem for humanity**. This year, we introduce new tools, research, and collaborations designed not only to spotlight the region's pressing issues but also to explore and propose actionable solutions.

Throughout 2024, we deepened our research with an **analysis of ecological connectivity loss** across Amazonian countries. During the recent COP16 in Colombia, we sounded the alarm on how forest fragmentation is diminishing the Amazon's ability to regulate the climate, sustain biodiversity, and secure water flow. A study conducted by RAISG in partnership with the NorAmazonic Alliance (ANA) revealed that 23% of the Amazon has already lost its ecological connectivity, with an additional 13% at imminent risk of the same fate. This pushes the ecosystem perilously close to its "tipping point."

At COP16, RAISG researchers presented critical analyses on deforestation and carbon preservation in Indigenous territories. These areas have proven to be natural barriers against deforestation, accounting for only 6.5% of total forest loss in the Amazon compared to other regions. This reality highlights the importance of recognizing and strengthening the **role of Indigenous peoples in conservation policies and actions**.

In 2024 saw the strengthening of collaboration between Indigenous communities, scientists, and organizations. Knowledge-sharing workshops and meetings highlighted that the synergy between traditional knowledge, local practices, and modern science and technology fosters stronger and more effective conservation efforts.

The transformations taking place in the Amazon are profound and alarming. As we conclude 2024, we renew our call to decision-makers to strengthen conservation and restoration efforts before it is too late.



The Amazon, as an interconnected ecosystem, demands comprehensive, multidimensional actions at a regional scale. Issues such as drug trafficking and illegal activities - including illicit cultivation, logging, and mining - can only be effectively addressed through unified and coordinated efforts.

The protection of the Amazon is not only a regional responsibility but a global priority that requires the involvement of local communities, civil society organizations, governments, international cooperation, and other key stakeholders.

RAISG and its partners stand ready to collaborate with these actors by providing essential studies and critical data to inform and implement urgent conservation and biodiversity restoration actions. Our research and recommendations are vital tools for driving more effective and coordinated efforts to ensure a sustainable future for this irreplaceable ecosystem.

In this bulletin, we share the achievements of 2024, made possible through the collaborative efforts and dedication of our teams and allies. We invite you to join us in this mission and continue supporting our initiatives.

## **Together, we can - and must - protect the Amazon!**

**Angélica García**

Executive Secretary of RAISG

**And Members  
of the Board of  
Directors**

**Adriana Ramos, ISA; Bibiana Sucre, Provita;  
Carmen Josse, EcoCiencia; María Teresa Quispe, Wataniba;  
Natalia Calderón, FAN; Renzo Piana, IBC; Doris Ochoa, GAIA;  
Carlos Souza, Imazon**



# Highlights of 2024

A look at RAISG's work

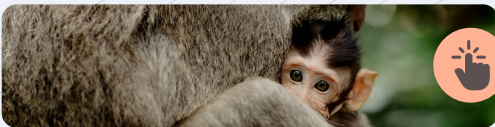
## RAISG

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### RAISG at COP16:

Analysis and recommendations on biodiversity and the climate crisis



### First Pan-Amazon Ecological Connectivity Analysis:

Charting the path to protect biodiversity



### MapBiomass Amazonia:

Forest loss nearly the size of Colombia



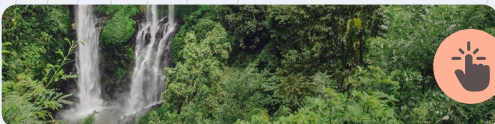
### Water Storymap:

The Amazon water crisis at your fingertips



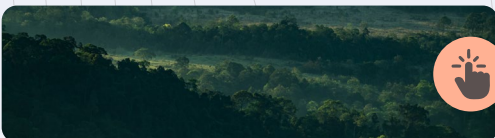
### Science and Indigenous Knowledge:

The partnership that can save the Amazon



### New projects:

Tackling water vulnerability, fires, and deforestation



### Progress in RAISG Governance and Planning:

A collective effort to advance a strategic vision for the Amazon



# RAISG at COP16

Geospatial knowledge  
for the Amazon



**COP16**  
**COLOMBIA**  
Paz con la Naturaleza

“

*RAISG's role as an information provider at this COP has been instrumental in understanding the region's environmental challenges and identifying solutions.*

**Angélica García**

Executive Secretary of RAISG

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Female researchers and specialists from RAISG presented the outcomes of 17 years of geospatial data analysis on forest loss and the crucial role of Indigenous peoples during COP16 in Colombia. Their insights and recommendations played a pivotal role in the discussions at the world's most important Biodiversity Convention.

The first analysis of ecological connectivity loss in the Amazon from 1985 to 2023, conducted by the NorAmazonian Alliance and RAISG, was presented at the event “An Amazon ecologically, socially, and culturally connected: The most effective way to protect biodiversity and secure water on the continent.”

Similarly, [the latest analyses from MapBiomás Amazonia](#) and the [Amazon Against the Clock](#) report, both RAISG initiatives, were central in the panels “Belém Declaration, Biodiversity, and Climate in the Amazon - Reflections for effective regional cooperation to prevent biome collapse”, “Geospatial intelligence for analyzing and predicting climate impacts”, “Amazon Against the Clock – Ensuring the rights of Indigenous peoples”

among others.

The specialists emphasized that efforts to save the Amazon must include [protecting Indigenous peoples and local communities](#) while engaging with global biodiversity and climate change agendas. They also called for coordination and collaboration among various Amazonian stakeholders to safeguard the 6 million square kilometers of forests in the best state of conservation.





# Ecological connectivity

The path to protecting biodiversity

“

*This analysis is crucial because it addresses an underexplored topic, expanding the understanding of ecological degradation beyond the limits of deforestation.*

**Adriana Rojas**

Technical Leader for  
Connectivity at RAISG/ANA.

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The NorAmazonic Alliance and RAISG presented the first analysis of ecological connectivity across the nine Amazonian countries from 1985 to 2022 at COP16 in Colombia, the world's most important biodiversity summit. The study reveals that 23% of the Amazon has experienced a total loss of continuous forest or ecological connectivity, while another 13% is at risk of losing it.

Ecological connectivity is crucial for sustaining healthy and functional ecosystems, allowing the free movement of wildlife and the natural flows that support life. In recent decades, the Amazon has faced severe connectivity losses, driven by the destruction and fragmentation of natural vegetation and habitats caused by economic activities such as agriculture, livestock farming, and mining.

Under these conditions, Amazonian ecosystems are increasingly losing their ability to recover from disturbances such as fires and droughts, regulate water and oxygen cycles, ensure global climate stability, and maintain biodiversity. This could lead to irreversible degradation and the transformation of the rainforest into a savanna-like ecosystem. To safeguard Amazonian ecosystems, RAISG has recommended implementing regional measures to halt deforestation, expand conservation areas, and integrate Indigenous knowledge and local community practices into biodiversity protection strategies.

**76%**

of the Andean-Amazonian corridor in Colombia totally lost its ecological connectivity.

**49%**

of the state of Rondônia, in Brazil, has suffered a total loss of this critical function.





# Devastated Amazon

Forest loss nearly the size of Colombia

“

*MapBiomass is key for governments to develop conservation policies and replace human activities that harm the forest.*

**Karen Huertas**

MapBiomass specialist

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The Amazon, a vital ecosystem for humanity, is facing one of its most critical moments. Over the past 39 years - from 1985 to 2023 - the nine Amazonian countries have lost more than 88 million hectares of forests, an area nearly the size of Colombia. This alarming data comes from the [MapBiomass Amazonia Collection 6.0](#), an initiative by RAISG presented in September in Ecuador, with funding from the Quadrature Climate Foundation and the Gordon and Betty Moore Foundation.

According to experts, in areas where forests were lost, land use for legal and illegal mining expanded by 1,063%, agriculture by 598%, and livestock farming by 298%. On the other hand, the analysis highlights the protective role of Indigenous peoples: only 6.5% of the total forest loss in the Amazon occurred within Indigenous Territories and Protected Areas, as these communities acted as natural barriers against deforestation and degradation.

In this regard, Karen Huertas, a specialist from MapBiomass Amazonia, emphasized the urgency of strengthening conservation and restoration policies before the Amazon reaches its so-called “tipping point.” She particularly stressed the importance of focusing on intact and low-degradation areas, as well as Indigenous Territories and Protected Areas.

Between 1985 and 2023, the nine Amazonian countries lost more than

**88 million hectares of forest**



# Water Storymap

The Amazon's water crisis at a glance

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*The Storymap helps us understand how the climate crisis disrupts water cycles, enabling joint decision-making as a region.*

**Nicole Moreno**

Technical lead for  
MapBiomás Agua Peru

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In 2024, RAISG launched the **Water Storymap**, an interactive platform featuring maps, infographics, videos, and case studies on the dynamics of river systems and glaciers in Amazonian countries (Brazil, Bolivia, Colombia, Ecuador, Guyana, French Guiana, Peru, Suriname, and Venezuela). This initiative, supported by the Quadrature Climate Foundation, is available to the public through this [link](#).

The Water Storymap presents a clear explanation of an alarming issue: the loss of over 1 million hectares of freshwater across rivers, lagoons, wetlands, glaciers, and other natural reservoirs in the Amazon region between 2013 and 2022. This situation has far-reaching consequences, affecting access to drinking water, biodiversity, public health, and agricultural and industrial development. It also exacerbates drought conditions and increases the spread of wildfires.

The countries with the greatest loss of surface water were Colombia (13%), Guyana (9%), and Bolivia (8%), driven by excessive planetary warming accelerated by human activities. In response, RAISG is calling on decision-makers to intensify efforts to protect water in the Amazon and to implement strategies to combat deforestation and illegal mining, which significantly affect the availability and quality of this vital resource.

**184K hectares  
of ice surfaces**

were lost between 1985 and 2022 across Amazonian countries.



**97%**

of Venezuela's glaciers had disappeared by 2022.





# Mapping wetlands

Water refuges for life

“

*Mapping the wetlands of the Pan-Amazon is the starting point for their sustainable conservation.*

**Sandra Ríos**

Coordinator of the  
Common Goods  
Monitoring Area at  
Instituto del Bien Común.

[LEARN MORE](#)

Amazonian wetlands are among the most productive ecosystems in the world, playing a crucial role in mitigating climate change and supporting human life. However, they face constant threats from economic activities such as mining and large-scale projects like hydroelectric dams. To address these challenges, RAISC is advancing the project “Mapping and designing a conservation and management approach for Amazonian wetlands”, funded by the Gordon and Betty Moore Foundation. The project aims to enhance wetland mapping, understand the threats they face, and guide conservation and management policies.

One of the first steps was the regional workshop “Wetlands: Monitoring, Conservation, and Management of Wetlands”, held from March 18 to 22 in Brazil. During the workshop, the project’s technical team met with specialists from the nine Amazonian countries to discuss the mapping methodology under development. This methodology incorporates satellite observations and tools using optical and radar sensors. The discussions also covered defining the ecosystems to be mapped and classifying them based on biomes, altitude, vegetation, and other characteristics.

Throughout the year, national workshops were also held in Peru, Brazil, Bolivia, Ecuador, Colombia, and Venezuela, bringing together experts and community members.



# Science and Indigenous Knowledge

The partnership that can save the Amazon

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*By combining local knowledge with satellite data, we aim to understand the changes in forest carbon gains and losses in the Amazon.*

**Mireya Bravo**

Coordinator of the Science and Indigenous Knowledge project

In 2024, two events fostered the exchange of knowledge between researchers and Indigenous communities from Brazil, Colombia, Ecuador, and Peru. These groups have been combining geospatial information, technology, and traditional knowledge to protect forests. These initiatives are part of the Science and Indigenous Knowledge project, promoted by RAISG, the Coordinator of Indigenous Organizations of the Amazon Basin (COICA), and the Woodwell Climate Research Center (WCRC), with funding from Norway's International Climate and Forest Initiative (NICFI).

The first event, titled “Local Conservation Strategies in Indigenous Territories” was held in Puyo, Ecuador, bringing together representatives from Indigenous territories such as Waorani (Ecuador), Kakataibo (Peru), Xingu (Brazil), and Mirití Paran  (Colombia). Participants shared their territorial management strategies, conservation actions, forest management practices, and their use of technological tools like GPS and drones for forest monitoring and surveillance.

The second initiative was the online discussion “Indigenous Territories: Challenges in Conserving Forest Carbon in the Amazon.” This platform explored the critical role of Indigenous territories and protected areas in safeguarding the Amazon. It highlighted that these regions protect 58% of the 79 billion metric tons of carbon stored in the Amazon biome, making a significant contribution to mitigating climate change by reducing CO2 concentrations in the atmosphere.



The discussion also sought to emphasize the importance of these areas as effective mechanisms to address the climate crisis and other pressures. Furthermore, it promoted debate on improving public policies that support the conservation of carbon stored in Amazonian forests.

## Studies by country

### Impulsando el Futuro Verde

¿Son los Mercados de Carbono una oportunidad para Venezuela?

Wataniba



### Resiliencia Amazónica: La necesidad de fortalecer la gestión de Territorios Indígenas

y su rol en la preservación del Carbono Forestal

INSTITUTO DEL BIEN COMÚN



### Los mecanismos de no mercado de carbono en el Ecuador

y sus desafíos en torno al Programa Pago Basado en resultados (REDD+) y el Esquema de Compensación de Emisiones.

ecoCiencia  
Quito, octubre 2023



### La reducción de las emisiones por deforestación en Colombia

y la implementación de REDD+ en el oriente amazónico

Gaia Amazonas  
Fundación Gaia Amazonas



### Os compromissos do Brasil para reduzir a perda de carbono florestal na Amazônia

Antonio Oviedo, Márcio Santilli

Instituto Socioambiental



## Water is not forever:

An initiative for water  
security



The Amazon holds the largest freshwater reserves in the world, yet it is at risk due to human-driven deforestation and the impacts of climate change. To address this, RAISG is advancing the project “Water vulnerability in the Amazon in the face of climate change and its risk of degradation due to pollution”, funded by the Embassy of Sweden.

This initiative will analyze water vulnerability indices and areas in the Amazon to mobilize stakeholders and influence policy decisions for its protection. In 2024, existing maps were updated, regional workshops were held, and engagement meetings took place with the Amazon Waters Alliance, all in preparation for COP30.

## Against fire and deforestation:

Enhancing monitoring  
and collaboration



RAISG has begun upgrading the AMA platform for monitoring forest fires and deforestation in the Amazon. This tool will soon become an app featuring real-time alerts, as part of the project “Enhancing socio-environmental monitoring strategies in the Amazon and strengthening collaborative work among regional organizations”, supported by funding from Good Energies.

The project also aims to enhance collaboration among RAISG’s partners and allies and support regional advocacy through actions such as analyzing the legal framework for environmental crimes related to illegal fires and deforestation in Amazonian countries. To this end, discussions have begun with the Center for Justice and International Law.





# Road to COP30

Redoubling efforts to protect the Amazon

The countdown to COP30, set to take place in less than a year in Belém do Pará, Brazil, has begun. Amid this global urgency, protecting the Amazon emerges as one of the most critical topics on the climate agenda. As we move closer to this pivotal event, it is essential to reflect on the work accomplished so far and intensify efforts to ensure the Amazon does not reach its tipping point.

## Lessons from COP16

RAISG's recent work at COP16 in Colombia provided crucial insights:

- **COP16 proved to be a key platform for RAISG** to establish connections with strategic actors in the region. In the current context, political advocacy and strategic communication have emerged as essential tools to advance the shared priorities of various stakeholders. COP16 underscored the importance of strengthening dialogue, fostering effective coordination, and encouraging mutual collaboration as decisive factors for optimizing efforts, driving innovation, and maximizing the impact of initiatives.
- **Indigenous and Afro-descendant peoples are essential guardians of ancestral knowledge and sustainable forest management practices**, making significant contributions to the conservation of the Amazon's megadiversity. However, they remain the most vulnerable to external pressures and interests that threaten their territories. For this reason, it is imperative that public policies aimed at protecting the Amazon fully integrate their rights, knowledge, and proposals, paving the way for a sustainable future for the region.

## Looking ahead: What can we expect at COP30?

Twenty-twenty-four (2024) has been a year of significant progress for RAISG, with the launch of new research, tools, and collaborations aimed at protecting the Amazon. As we approach COP30, the opportunity to scale up these efforts is more apparent than ever. The event in Belém represents a unique platform to place the Amazon at the heart of the climate debate - not just as a region in need of protection, but as a source of solutions rooted in ancestral knowledge and modern science.

RAISG, together with its allies, has demonstrated that combining Indigenous knowledge with science can be the key to conservation. This collaborative approach will be crucial at COP30, where global decision-makers are expected to take note of these experiences and integrate them into concrete policies.

As we approach COP30, it is crucial for global leaders not only to listen but to act with determination. Commitments must go beyond words; they must be translated into concrete actions that secure the necessary funding to protect the Amazon and support the communities that have safeguarded it for generations.

RAISG will continue working with allies, researchers, and communities in this next phase, building on the lessons and successes of 2024 as we move toward COP30. Protecting the Amazon is a global priority, and only through a collective effort can we ensure this vital ecosystem survives for future generations.





# Progress in RAISG Governance and Planning

A collective effort to drive a strategic vision for the Amazon



## Annual Meeting

The RAISG Annual Meeting, held in Quito, Ecuador, in September, brought together representatives from the network's various working groups to evaluate progress, address internal challenges, and agree on strategic guidelines and key actions for 2025.



## Capacity Building

RAISG has developed initiatives to equip specialists with new technical skills. Additionally, professionals have been hired to advance key topics such as water and wetlands.



## Strategic Communication

RAISG is achieving greater visibility for its studies and data through strategic communication efforts focused on translating content into more accessible language, enabling broader coverage in national and global media.



## Advocacy Plan

RAISG developed an Advocacy Plan for 2024–2025, based on dialogues with key stakeholders and the creation of alliances and collaborative pathways leading to COP30.

## Partnerships

We are collaborating and building alliances with several organizations, including



# RAISG in regional and global media

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We produce studies and recommendations to  
contribute to the protection of the  
Pan-Amazon region.



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