



FULBRIGHT
Amazonia

Policy Brief

Policy-Relevant Research for
a Sustainable Amazonia

2024





Introduction

The Amazon faces critical policy challenges on climate change, sustainable development, and human and environmental health. Fulbright Amazonia was launched in June 2022 to support interdisciplinary research with policy applications on pressing social and environmental pressures facing the region and its people.

Fulbright Amazonia brings together 16 scholars and two co-lead scholars, all with years of research experience in the region. Fulbright Amazonia emphasizes collaboration across disciplinary lines, a trans-boundary perspective, and applied research that is useful to policymakers and communities. The scholars, who come from the US and eight Amazonian nations, work over 18 months on their individual research projects. They also work collectively in one of three interdisciplinary groups: 1) Climate Change Adaptation and Mitigation, 2) Strengthening Human and Environmental Health and Security, and 3) Bioeconomy and Sustainable Development. These thematic groups worked together to address complex topics from a range of perspectives, generating new insights and products, such as the policy recommendations featured in this booklet. Over the past year and a half, the scholars have met regularly, and worked intensively in two in-person meetings in Belém, Brazil, and Leticia, Colombia. Additionally, the scholars carried out an exchange visit of six weeks to broaden their training and establish new collaborations.

Fulbright Amazonia Week, December 9-12, 2024 in Washington, D.C., is the culminating event of Fulbright Amazonia. This week offers a chance for scholars to share their work with the public and policymakers at events hosted by a range of partners, including the National Academy of Sciences, the U.S. State Department, the Institute of International Education, the U.S. Institute of Peace, the Inter-American Development Bank, and the Embassies of Brazil and Colombia.

The Fulbright Program was established in 1946. It has become the U.S. flagship international educational exchange program administered by the Bureau of Educational and Cultural Affairs (ECA) within the Department of State. The broad goal of Fulbright is "to increase mutual understanding between the people of the United States and the people of other countries."

The recommendations presented here are intended to be useful to Amazonian communities, policy makers, and researchers in setting priorities for future work and policy decisions. The briefs also demonstrate the value of programs, such as Fulbright Amazonia, which provide a vital investment in applied, interdisciplinary research and collaborative approaches needed to address the complex, urgent issues in our changing world.

FULBRIGHT AMAZONIA CO-LEAD SCHOLARS







Valério Gomes
Co-Lead Scholar
Federal University of Pará, Belém, Brazil



Jeffrey Hoelle
Co-Lead Scholar
University of California, Santa Barbara, USA

For more information, visit
fulbrightscholars.org/amazonia

-  /fulbright
-  @FulbrightPrgrm
-  @the_Fulbright_program
-  /the-fulbright-program



The Fulbright Program is sponsored by the U.S. Department of State with funding provided by the U.S. Government and administered by the Institute of International Education.



STRENGTHENING PARTICIPATORY ENVIRONMENTAL GOVERNANCE TO PROMOTE HUMAN AND ENVIRONMENTAL HEALTH IN THE AMAZON

Brief

Sustaining environmental and human health in the Amazon is contingent upon strengthening participatory environmental governance. The predominance of environmental governance models that centralize decision-making in corporations or state institutions without significant involvement of local actors is leading to the expansion of extractive industries, illegal economies, and extreme weather events, causing environmental degradation, emerging human health risks, deficient provision of healthcare, and violations of the rights of local populations. To mitigate these impacts we propose the following strategies: i) strengthening effective institutional strategies for healthcare delivery, ii) promoting an intercultural perspective that acknowledges the participation of Indigenous people and other local populations in policy-making, iii) ensuring environmental justice, and iv) promoting and investing in environmental and epidemiological data collection (Figure 1).

Introduction

Environmental governance, understood as the transfer of natural resource regulation from the state to non-state actors and institutions, has emerged as a key tool to achieve sustainable development goals in recent decades. In Amazonian countries, however, environmental resources are mainly controlled by corporations and illegal resource extractors, while civil society actors (indigenous organizations, local communities, NGOs, etc.) are usually marginalized from decision-making processes. This form of environmental governance leads to the uncontrolled expansion of extractive industries and illegal economies, posing severe threats to the environment and the communities that depend on it. One of the most prominent manifestations of this crisis is deforestation, which has increased over the past two decades, affecting the resilience of the ecosystem.¹ This threatens water systems, food security and the health of Amazonian dwellers, resulting in high rates of infectious diseases and other health problems among Indigenous peoples and other vulnerable populations.

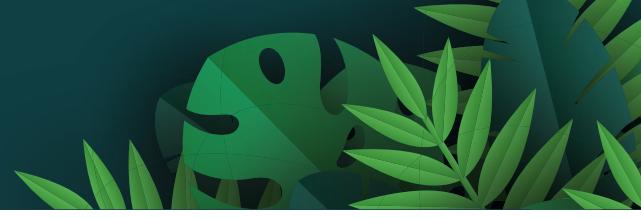
Policies have been implemented in Amazonian countries to address these issues. Nevertheless, the limited participation of Indigenous people and other civil society actors in policy-making has posed at least four challenges to these interventions. First, there is a need to co-create innovative and effective institutional strategies to provide adequate healthcare to culturally diverse and geographically isolated communities.

Scholars in this working group:

- Daniel Bustos-Echeverry, Colombia
- Hortensia Caballero-Arias, Venezuela
- Carlos Luis Del Cairo Silva, Colombia
- Beth J Feingold, United States
- Danny Pinedo, Peru
- Paola A Torres-Slimming, Peru

Figure 1 Participatory environmental governance for improving human and environmental health in the Amazon





Colombia's Intercultural Indigenous Health System (SISPI)² is a promising effort to harmonize traditional and biomedical knowledge for the healthcare of Indigenous populations. Secondly, promoting intercultural dialogue is required to avoid biomedical interventions that view local knowledge and cultural patterns as obstacles to health improvement. In Peru, the Interethnic Association for the Development of Peruvian Rainforest (AIDSESP) implemented an ambitious intercultural health program that promoted the integration of Indigenous health workers into the state health system. Thirdly, collective territorial rights face several challenges with the advance of extractive and illegal economies. To address this threat to the livelihoods of Indigenous and local communities, it is necessary to implement and enforce data-driven policies and programs that promote environmental justice. For example, in 2023, Colombia was the country with the highest number of environmental leaders killed, followed by Brazil.³

Finally, coordinated and systematic environmental and epidemiological data should be collected and disseminated to inform health promotion strategies. Various efforts are underway as the countries of

➡ To mitigate these environmental and health threats, it is essential to strengthen environmental governance that is based on the active and sustained participation of Indigenous peoples and local communities.

Amazonia recognize that environmental pollution does not respect administrative boundaries. Coordinated reporting efforts such as the Minamata Convention on Mercury and the Project to Support Vaccination of Amazonian Indigenous Peoples in Border Areas of Andean Countries⁴ implemented by PAHO and WHO are good examples of how international treaties and strategies can promote the reduction of environmental hazards and the health of local populations.

Therefore, to mitigate these environmental and health threats requires strengthening an environmental governance based on active and sustained participation of Indigenous people and local communities.

Endnotes

1 <https://doi.org/10.1038/s41586-023-06970-0>

2 <https://www.minsalud.gov.co/proteccionsocial/promocion-social/Paginas/Pueblos-indigenas.aspx>

3 <https://www.globalwitness.org/en/campaigns/environmental-activists/land-and-environmental-defenders-annual-report-archive/>

4 <https://otca.org/es-realizado-encuentro-de-actores-para-la-proteccion-de-la-salud-de-los-pueblos-indigenas-con-base-territorial-transfronterizo-peru-brasil-colombia/>

5 [https://www.thelancet.com/journals/lanam/article/PIIS2667-193X\(23\)00051-0/fulltext](https://www.thelancet.com/journals/lanam/article/PIIS2667-193X(23)00051-0/fulltext)



Recommendations for Amazonia Policy Makers

1 Co-create innovative and effective institutional strategies to deliver healthcare and communicate environmental health.

- Develop programs that value and integrate traditional and local healthcare knowledge as a strategy to provide primary care to Indigenous and local populations living in rural areas and dispersed communities.
- Design strategies for providing healthcare to Indigenous people in initial contact and nomadic settlement patterns.
- Provide training programs to Indigenous and other local communities on environmental health monitoring and alert systems to guarantee primary care .
- Co-design health communication campaigns and programs to address the gaps in health literacy needed to prevent and mitigate disease risks.

2 Promote an intercultural perspective to implement healthcare policies and practices

- Recognize intercultural health as an official career in universities and other higher education centers, allowing participation of Indigenous people in the design of curriculums based on professional competencies.
- Public and private intercultural healthcare programs should hire professionally trained Indigenous health workers.
- Provide intercultural training to non-Indigenous health workers, including building capacity in indigenous languages and territorial rights.
- Provide training to address emerging and re-emerging disease threats including infectious and chronic diseases.

3 Implement and enforce policies and programs that promote environmental justice as an alternative to illegal and extractive economies

- Recognize the collective rights of indigenous peoples according to national legal frameworks, and international conventions and declarations in order to guarantee their ways of life and territorial rights.
- Support and strengthen the Coordinator of Indigenous Organizations of the Amazon River Basin (COICA) and other national and regional Indigenous organizations' initiatives to protect Indigenous people's territories and well-being, following strategies that impact beyond national boundaries.
- Support Indigenous Life Plans (Planes de Vida) as a collective planning tool that strengthens Indigenous self-determination and local strategies to guarantee human and environmental health in a context of environmental crisis.
- Take effective protective measures to preserve the physical integrity of local leaders who claim the rights of communities against illegal and extractive agents.

4 Invest in coordinated and routine environmental and epidemiologic data collection and reporting to inform health promotion strategies.

- Establish cross-border disease prevention and care programs from articulation efforts between local and national governments.
- Support state entities in developing and publishing standardized and harmonized demographic, epidemiological, and environmental data to support the region's environmental and human health decision-making.
- Implement transboundary epidemiological surveillance systems that allow timely identification and response to health problems affecting Indigenous populations and local communities.



SUPPORT THE BIG IMPACT OF AMAZONIAN COMMUNITY-BASED BIOECONOMY BUSINESSES

Brief

By supporting community-based bioeconomy businesses in the Amazon, we can create jobs and climate-resilient communities, fight poverty and food insecurity, and promote sustainable development and biodiversity protection. These initiatives provide a concrete pathway to achieve G20 goals, promote our shared values, and address the social and environmental challenges faced by our planet via entrepreneurship.

Scholars in this working group:

- Simone Athayde, World Resources Institute (WRI), USA
- João Vitor Campos-Silva, Instituto Juruá, Brazil
- Mayra Esseboom, Center for Agricultural Research in Suriname (CELOS), Suriname
- Brad Olsen, Massachusetts Institute of Technology (MIT), USA

▶ The Pirarucu fish and the Açaí palm value chains provide relevant examples of the economic, social and environmental benefits provided by Amazonian sociobioeconomies.



Scan QR code to learn more about this work.

Introduction and Overview

In September 2024, the G20 countries established ten high-level Principles on Bioeconomy during their meeting in Rio de Janeiro, emphasizing sustainable development, equity and inclusivity, climate change mitigation, and efficient and circular use of biological resources.¹ Community-based small businesses focusing on bioeconomy products, services and processes — referred to as sociobioeconomies — provide an important opportunity to achieve these shared goals between the G20 and Amazonian countries.² These businesses rely on the cultural and environmental heritage of the Amazonian region as the foundation to provide a variety of goods and services such as ecotourism, personal care products, sustainable fisheries, health supplements and tropical fruits and nuts. Often owned and operated by Indigenous groups or local communities, these community enterprises value preservation of the forest and river ecosystems that fight climate change and preserve biodiversity, while also creating jobs that support families, fight poverty, and provide alternatives to illicit economic activities such as drug trafficking, illegal mining, and others.

The *Pirarucu* fish and the Açaí palm value chains provide relevant examples of the economic, social and environmental benefits provided by Amazonian sociobioeconomies, including opportunities for transboundary collaboration and innovation (Figure 1). The community-based management of the *pirarucu* fish (*Arapaima gigas*) involves around 4,000 families across 23 municipalities in the Amazonas State (Brazil), producing approximately 4,500 tons of fish annually, worth about 25 million Brazilian Reals (USD 4.5 million).³ This boosts local economies and benefits women and youth. *Açaí* (*Euterpe* spp) production reached over R\$8 billion (~\$1.6 billion) in 2023 in Brazil, with additional production in other Amazonian countries. In Suriname, açaí is produced by maroon family businesses, mostly matrilineal, and harvested in natural swamp forests. Despite informal practices, growing export numbers pressure rural biodiversity through the expansion of *açaí* plantations.⁴

* Sociobioeconomies integrate activities that maintain productive and conserved multifunctional landscapes and cultural diversity. They promote economic and social value by leveraging the Amazon's biodiversity and agrobiodiversity, including the conservation and restoration of forest and aquatic ecosystems, and the diversified production and processing of native plants, fish, and other resources. This concept highlights the critical role of traditional knowledge and practices of Indigenous peoples, Afro-descendant populations and riverside communities, among other traditional populations, in conserving biodiversity, protecting ecosystem services, and ensuring sustainable development. Source: adapted from Garret et al. (2024).



Challenges for community-based enterprises in the Pan-Amazonian region include limited access to credit and technical assistance, market access and fairer relationships, logistical support and financial arrangements to reward environmental and climatic benefits.² Climate change effects, such as extreme droughts, have led to crop failures, food insecurity, and economic instability, threatening livelihoods and regional economies.

Integrated and innovative approaches combining payments for ecosystem services (PES), climate adaptation strategies, and long-term support for community-based enterprises

are urgently needed. International cooperation, including innovative technologies, business models, and sustainable practices that are rooted in Amazonian diversity and traditional knowledge can enhance productivity and protect Amazon's unique social-ecological heritage. Increased access to data and information, legal services, finance, and logistical support is critical. Supporting these enterprises aligns with the G20 Bioeconomy principles, fostering a collaborative approach to global environmental challenges and development goals.

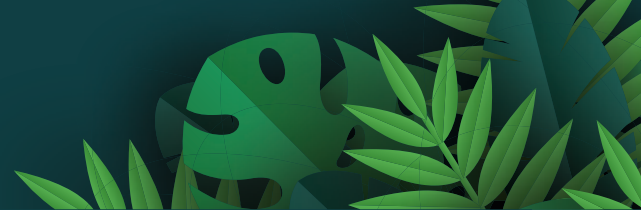
Figure 1

Sociobioeconomy products from Amazonian countries. A) Rubber extraction in São Raimundo community at Médio Juruá extractive Reserve in Brazil (photo by Bernardo Oliveira); b) Açaí market in Suriname (Photo by Center for Agricultural Research in Suriname - CELOS); c) Catfish fishery at Juruá River in Brazil (Photo by André Dib); d) Community-based management of pirarucu in the Juruá River in Brazil (Photo by Bernardo Oliveira); e) Tikuna Indigenous people handicrafts from the Umariáçu Indigenous Land in Brazil, in the triple frontier between Brazil, Peru and Colombia (photo by Simone Athayde); and f) Andiroba seed from Médio Juruá extractive Reserve in Brazil (photo by Joseph Hawes).



Endnotes

- 1 G20 Initiative on Bioeconomy. (2024). G20 High-Level Principles on Bioeconomy. Retrieved from <https://www.g20.org/en/tracks/shepa-track/bioeconomy-initiative> on 11/18/2024.
- 2 Garrett, R., Ferreira, J., Abramovay, R., Brandão, J., Brondizio, E., Euler, A., Pinedo, D., Porro, R., Rocha, E. C., Sampaio, O., Schmink, M., Torres, B., & Varese, M. (2023). Supporting socio-bioeconomies of healthy standing forests and flowing rivers in the Amazon. Science Panel for the Amazon. https://www.theamazonwewant.org/wp-content/uploads/2023/08/PB-Bioeconomy-en_approved.pdf
- 3 Constantino et al. Ecological, economic and social benefits of increased governance of local communities in the community-based management of pirarucu (*Arapaima gigas*) in the Brazilian Amazon. In Progress.
- 4 Freitas, M. A. B., Magalhães, J. L. L., Carmona, C. P., Arroyo-Rodríguez, V., Vieira, I. C. G., and Tabarelli, M. (2021). Intensification of açai palm management largely impoverishes tree assemblages in the Amazon estuarine forest. *Biological Conservation*, 261. <https://doi.org/10.1016/j.biocon.2021.109251>



Recommendations for Amazonia Policy Makers

These policy recommendations stem from on-the-ground work with Indigenous peoples, maroon Afro-descendant communities, riverine communities, and other traditional populations primarily in Brazil, Colombia, and Suriname, where Fulbright Amazonia scholars have conducted collaborative research. The insights gained from working with these communities highlight the importance of protecting legal rights, strengthening land tenure, and providing financial and technical support to foster equitable, sustainable and resilient sociobioeconomies in the Amazon (Figure 2). These recommendations align with the G20 Bioeconomy principles by ensuring inclusivity, equitable rights, sustainable development, and the integration of traditional knowledge and innovative practices.

Figure 2 *The integration of several different policy approaches can support thriving community-based bioeconomy businesses throughout the Amazon region.*



1 **Safeguard Land Tenure, Territorial Autonomy, and Social Rights**

- Strengthen land tenure security and ensure the territorial rights of Indigenous peoples and local communities to support the development of small businesses.
- Improve legal assistance to community-based enterprises and grassroots organizations.
- Incentivize fair commercial arrangements to be led by locally-based grassroots organizations.

2 **Provide Financial and Technical Support for Sustainable Business Ventures**

- Create loan and grant programs for businesses that adopt sustainable practices and contribute to equitable sociobioeconomies.
- Create subsidized programs for infrastructure and services needed to support community-based bioeconomy businesses.
- Connect community businesses with innovative technology to enhance local value and open new markets for products and environmental services.

3 **Support Small Businesses with Capacity-Building and Market Access**

- Develop digital and transportation infrastructure to improve market access.
- Support the creation of value chains that add economic value to sustainable products.
- Train communities and key stakeholders, including government agents, private sector businesses, and financial investors, to enhance their capacity for sustainable entrepreneurship.
- Reduce tariffs and non-tariff barriers for eco-friendly goods.
- Promote fair trade certifications for Amazonian bioeconomy products.
- Ensure fairer market relationships considering the production costs within community-based businesses.

4 **Promote Open Innovation, Integrated Data and Policy Frameworks**

- Encourage collaborative governance models that integrate Indigenous and local knowledge and the priorities of Indigenous peoples and local communities into local, regional, and international policies and agreements.
- Promote data standardization and integration related to sociobioeconomies products, services, and processes within and across Amazonian countries.
- Integrate climate change and bioeconomy policies to support climate-resilient bioeconomies and achieve just transitions towards de-carbonization, as well as climate change mitigation and adaptation targets across the Amazon.
- Integrate biodiversity conservation policies, including National Biodiversity Strategies and Action Plans (NBSAPs), with Bioeconomy policies and strategies to ensure sustainable use and conservation of biodiversity.

5 **Promote Public Policies and Innovative Financing Mechanisms to Protect Ecosystem Services and Reward Environmental Services**

- Integrate ecosystem service values into national and climate change accounting systems.
- Promote innovative Payments for Ecosystem Services (PES) policies and financial schemes to recognize and reward local communities for their territorial protection and contribution to climate change mitigation and adaptation.
- Create innovative financial mechanisms to reward territorial protection within community-based businesses.



STRENGTHENING CLIMATE DISASTER POLICY IN THE AMAZON THROUGH DATA STANDARDIZATION AND TRANSBOUNDARY COLLABORATION

Brief

A lack of standardized regional disaster reporting in the Amazon undermines effective responses to climate-related disasters and implementation of climate adaptation and mitigation policies.

Scholars in this working group:

- Ane Alencar, Brazil
- Liliana M. Dávalos, United States
- Juan Pablo Iñamagua, Ecuador
- Rayane Pacheco, Brazil
- Sabina Ribeiro, Brazil
- Galia Selaya, Bolivia

➡ Transboundary cooperation is essential to address shared challenges and implement evidence-based policies. These actions are crucial to break the cycle of damage and safeguard lives, livelihoods, and nature.

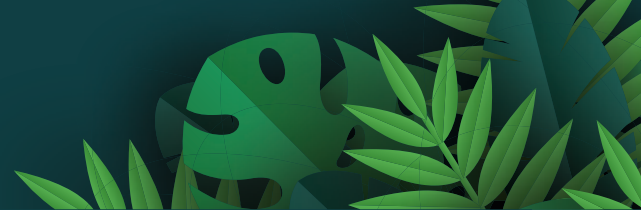
Executive Summary

Increasingly climate-related disasters in the Amazon impact millions, but underreporting and lack of standardized data hinder effective response efforts. Transboundary cooperation is essential to address shared challenges and implement evidence-based policies. To enhance disaster response and preparedness, we recommend: 1) standardizing disaster reporting practices among Amazon countries; 2) including global support for regional disaster mitigation in CoP30 commitments; 3) developing a transboundary preparedness strategy; 4) strengthening and connecting cross-border early-warning systems; and 5) reinforcing local and regional policies for climate change adaptation. These actions are crucial to break the cycle of damage and safeguard lives, livelihoods, and nature.

Problem Context

1. Climate-related disasters in Amazonia have intensified recently, posing significant challenges to ecosystems, and undermining local lives and livelihoods. Across Amazonian countries, climate disasters affect millions of people and impact the already precarious regional infrastructure causing economic, social and cultural losses (1). Disasters exacerbate existing social disparities among ethnically diverse vulnerable populations, including Indigenous, riverine and Afro-descendant communities, as well as campesinos and the majority of Amazonians who live in cities. Landslides, floods, extreme droughts, and wildfires are among the climate related impacts increasingly affecting Amazonians, across national borders. These events often trigger cascading effects, disrupting health, food security, and agricultural production. One prominent transboundary disaster is the spread of wildfires, exacerbated by extreme drought, which in the Amazon are the main cause of dangerous fine particle pollution. Poor air quality is linked to premature deaths and neurodegenerative diseases affecting over 24 million people, or more than 70% of the Amazonian population each year (2). Smoke from these fires travel long distances, affecting the rural and urban Amazon and beyond, in cities as far as Medellín, Colombia and São Paulo, Brazil.

2. While we know these events are occurring, their true scale often remains unknown. Depending on the location, data may be fragmented, underreported, or not reported at all, making it difficult to measure and effectively address impacts across countries. To address this challenge, we compiled all available regional data (3), generating the first Amazonian assessment of climate-related disasters (Fig. 1). Although we searched for climate-related disasters at the municipal level from 2013 to 2023 across all nine Amazon Basin countries, data were available only for five: Brazil, Colombia, Ecuador, Peru, and Bolivia. Within these countries, over 12,000



disasters were reported, and floods (4,271), landslides (3,051), storms (2,607), fires (2,016), and droughts (596) were the most frequent (Figure 1). When aggregated, the geography of disaster events (Figure 2) corresponds to changes in precipitation, drought and temperature. These disasters already have extensive impacts beyond Amazonia, and will continue to shape the region for decades. As large as these numbers seem, they underestimate the scale of climate impacts. Venezuela, French Guiana, Guyana, and Suriname lacked publicly accessible data and were excluded

from our analyses. Poor data reporting and availability are therefore severe obstacles for developing early warning systems, regional planning, and designing policy.

3. These disasters have no borders, yet responses remain domestic or local. Currently, disaster preparedness and response rely heavily on national capacities and resources. But this leads to unequal responses, with varying impacts and affected populations across countries. While climate-related disasters cannot be avoided, their impacts can be mitigated through preparedness and transboundary cooperation. Currently, agencies collect and report data using their own methods, sometimes suitable for domestic use but inadequate for cross-border analyses. Differences in who is counted as affected or what qualifies as a disaster hinder comparisons and coordinated action. Inaccessible, outdated, or for-pay data further obstructs decision-making and climate impact tracking. Inaccessible data also impede societal engagement, an important force to press for planning, preparedness, and response. A unified approach to data collection and reporting, with freely accessible and timely information, is therefore crucial because it enables better policy design and disaster response. For example, data on upstream events like wildfires or heavy rainfall can warn downstream populations of imminent floods or droughts, saving lives and reducing economic losses.

Figure 1 Total climate-related disaster reports by type and country (2013–2023) in Amazonian municipalities.

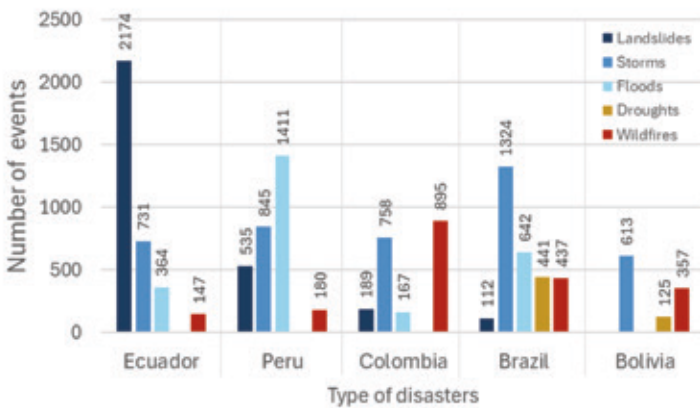
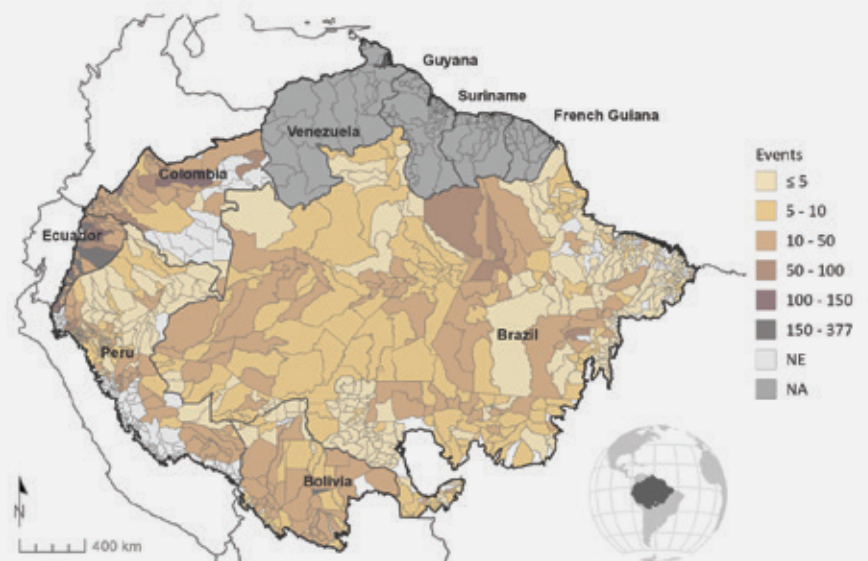


Figure 2 Cumulative reports of storms, floods, landslides, droughts, and wildfires by municipality, and climate anomalies index from remote sensing data (2013–2023). Sample includes municipalities with at least 50% of their area within the Amazonian boundary. 'NE' denotes No Event reported, while 'NA' means Not Available.





Recommendations for Amazonia Policy Makers

Based on our findings, which are partial because several countries have no available data, we recommend to:

- 1 Standardize disaster reporting to ensure comparable climate-related data across Amazonian nations.**
- 2 Facilitate open information exchange on successes and failures to improve disaster response regionally.**
- 3 Prioritize climate mitigation and adaptation regional funds, focusing on local Amazonian community resilience**
- 4 Integrate climate mitigation policies into updated land use planning across the region.**
- 5 Develop climate adaptation plans to strengthen community and infrastructure resilience.**
- 6 Regularly review and update regional strategies based on new data, feedback, and emerging challenges, including the ones led by ACTO.**


Sources

- Ramos-Castillo, A., Castellanos, E.J., McLean, K.G. (2017). Indigenous peoples, local communities and climate change mitigation. *Climatic Change* 140:1-4.
- Reddington, C.L., Butt, E.W., Ridley, D.A. et al. (2015). Air quality and human health improvements from reductions in deforestation-related fire in Brazil. *Nature Geoscience* 8:768-771.
- Pacheco, R., Iñamagua, J.P, Dávalos, L.M. et al. (Submitted). Weather Disasters and their Underreported Impacts on Amazonian Communities. *Proceedings of the National Academies of Science, USA*.
- Pinho P.F., Marengo J.A., Smith M.S. (2015). Complex socio-ecological dynamics driven by extreme events in the Amazon. *Regional Environmental Change* 15:643-655.
- de Souza, E. B., Silva, B. C. S., Serra, E. M. F. et al. (2024). Small municipalities in the Amazon under the risk of future climate change. *Climate* 12:1-19.






FULBRIGHT Amazonia

 /fulbright

 @FulbrightPrgrm

 @the_Fulbright_program

 /the-fulbright-program

A Program of the Bureau of Educational and Cultural Affairs, U.S. Department of State

fulbrightprogram.org/amazonia



FULBRIGHT
Brasil



The Power
of International
Education