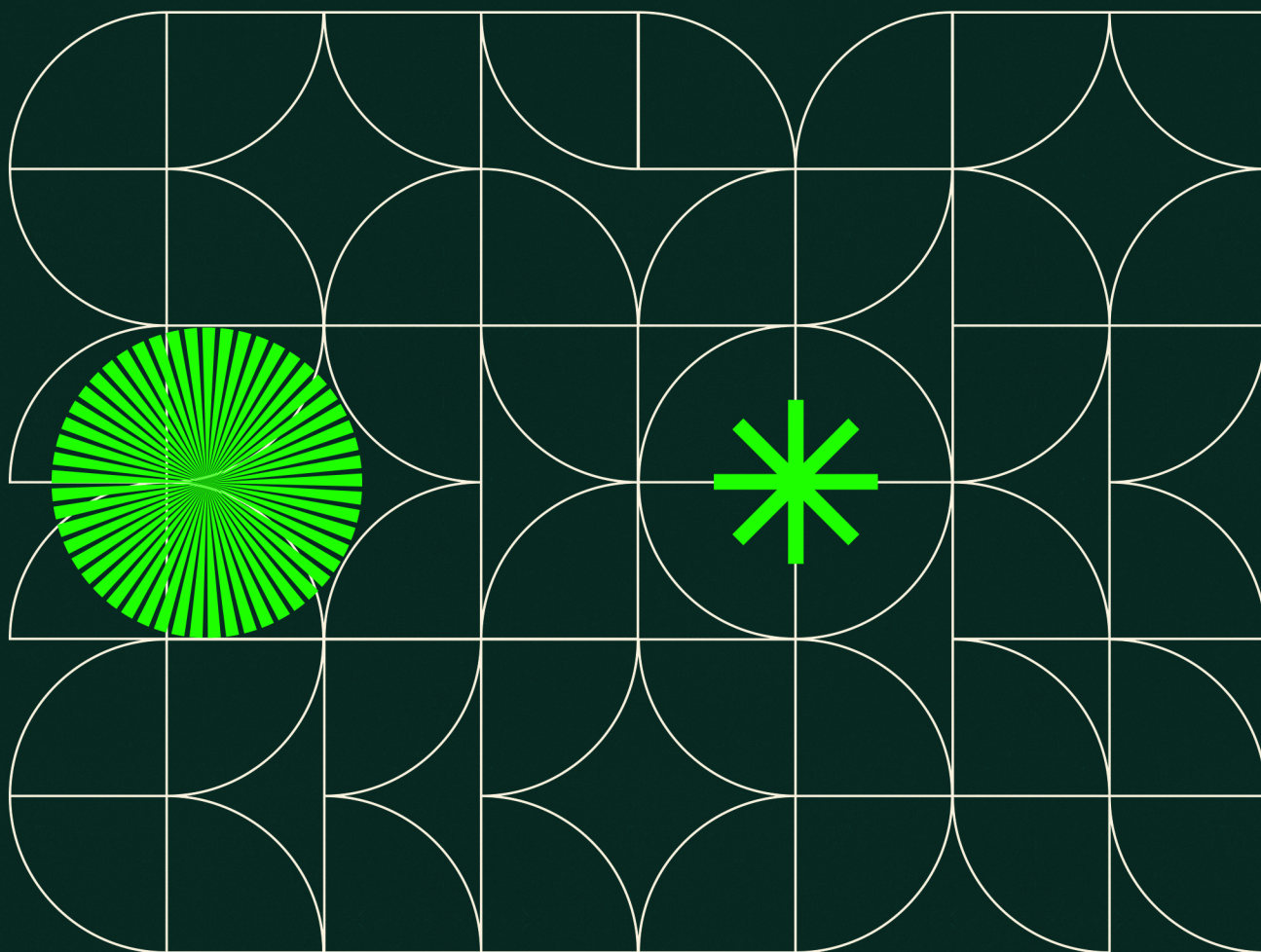


The Digital Rights and Environmental Justice Policy Framework for the Amazonia

Police Brief



Centro Popular de
Comunicação e
Audiovisual (CPA)

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Tecnopolíticas
Pan-Amazônicas

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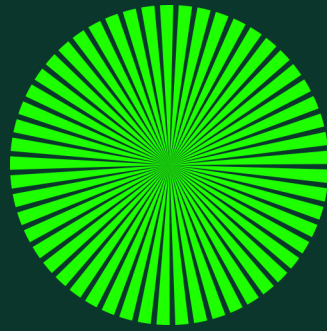
Ariadne Network: European Funders for Social Change and Human Rights

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We express our sincere thanks to everyone who participated in our panels at the Brazil Internet Forum in 2022 and 2023. Furthermore, we extend our profound appreciation to everyone who participated in the first edition of “Margem – Amazonia Encounter of Communication, Culture, and Technologies.” Launching the “The Digital Rights and Environmental Justice Policy Framework for the Amazonia: Insights and Recommendations Report” marked a significant achievement.

FOREWORD

The “The Digital Rights and Environmental Justice Policy Framework for the Amazonia: Insights and Recommendations Report” emanates from a series of dialogues facilitated by the Grassroots Center for Communication and Audiovisual (Centro Popular de Comunicação e Audiovisual - CPA) during the Brazil Internet Governance Forum from 2022 to 2023. These discussions, held in collaboration with partners across the Pan-Amazon region¹, culminated in this report. The collaborative efforts of CPA and its partner organizations reflect their dedication to participatory governance and enhancing community empowerment in response to digital technologies and the climate crisis.

For decades, indigenous peoples, traditional extractive communities², and socio-environmental activists have consistently highlighted the ongoing threats to the Amazonia³ biome, its biodiversity, rivers, forests, and livelihoods. The Pastoral Land Commission (Comissão Pastoral da Terra - CPT)⁴ reported a concerning increase in violence in 2022, totaling 553 incidents affecting 1,065 people. Indigenous people were the most frequent targets of violence, followed by landless workers, environmentalists, and peasants. The Legal Amazon⁵ continues to be the epicenter of such violence, accounting for 64.5% of the incidents nationwide, which marked a 39.5% increase from 2021. This pattern underscores the long history and the ongoing impact of the *agro-mining-hydro-bio-carbon*⁶ industry expansion in the North region.

Despite incontrovertible evidence highlighting severe concerns, a considerable

¹ The Pan-Amazon region spans across nine countries: Brazil, Bolivia, Colombia, Ecuador, Guyana, Peru, Suriname, Venezuela, and French Guiana. This region is crucial for its role in global biodiversity conservation and climate regulation, hosting the most extensive tropical forest and hydrographic network in the world. The Pan-Amazon is home to over 400 indigenous groups, each with unique cultures and connections to their land.

² Traditional extractive communities refer to groups of people who sustain their way of life and economies through the extraction of natural resources from their territories, using time-honored methods that are sustainable and often integral to their cultural identities. These communities typically harvest non-timber forest products, such as fruits, nuts, resins, and latex, in a manner that allows for resource regeneration and minimizes environmental impact. They possess deep-rooted knowledge of the local ecosystem, which guides their extraction practices and ensures the conservation of the biodiversity upon which they depend. While their livelihoods are closely tied to the natural landscape, these communities also play a crucial role in maintaining the ecological balance and contributing to the broader environmental stewardship.

³ In our report, please note that we are using “Amazonia” in Portuguese language as a strategy to reclaim our territory, land, and ecosystem from the exploitative bit tech “Amazon” brand.

⁴ Violence Against Individuals: Assassinations Increase by Over 30% and Indigenous People Again Account for the Highest Number of Victims (Pastoral Land Commission (Comissão Pastoral da Terra - CPT) <https://www.cptnacional.org.br/downloads?task=download.send&id=14286&catid=95&m=0>)

⁵ The term “Legal Amazon” refers to a region that covers 60% of the Amazon rainforest, spanning the complete Amazon biome within Brazil as well as adjacent areas of the Cerrado biome, across nine Brazilian states. This area, often called the “Brazilian” Amazon, has a population of 28 million and features the world’s largest and most biodiverse tract of forest, alongside the biggest reservoir of freshwater.

⁶ In the work of Bruno Malheiro, Carlos Walter Porto-Gonçalves, and Fernando Michelotti (2021), the term “agro-mining-hydro-bio-carbon” is elaborated upon as a complex concept that encapsulates the interconnectedness of agricultural, mining, hydrological, biological, and carbon-based industries. This concept serves to illustrate the extensive, multifaceted exploitation of natural resources, land and knowledge appropriation and dispossession. It reveals how these sectors are not isolated in their operations but are deeply intersected in the global supply-chain logistics, impacting ecosystems, humans, and more than human worlds. At the heart of the *agro-mining-hydro-bio-carbon* discussion is the critique of how modern technology, particularly biotechnology, is positioned within the knowledge economy. Largely driven by the interests of major global corporations, which have historically structured processes of material, energy plundering, and epistemic extractivism from indigenous and local communities. Instead of merely focusing on biotech-



segment of the population outside *Amazonia* still harbors the falsehood that the Amazonia region is an untouched, empty wilderness awaiting exploitation. This perspective is not only simplistic but also dehumanizing when focusing solely on its environmental aspects or the forest carbon stock estimation, as it overlooks the severe human rights abuses and violence inflicted upon its population, environmental defenders, indigenous, quilombolas, and local communities. This perception has roots in historical narratives, especially those propagated during the military dictatorship era in Brazil.

During the Military Dictatorship, the regime advanced aggressive development and colonization campaigns under slogans like “Integrate or perish,” promoting the Amazonia region as an uninhabited land for economic expansion. Such propaganda significantly shaped public consciousness, embedding the notion of the *Amazonia* as an unclaimed resource, thereby marginalizing the voices and rights of its indigenous and local communities.

The Brazilian *Amazonia* is predominantly inhabited by black, brown, and indigenous populations⁷, whose active grassroots efforts significantly contribute to collective struggles, securing and advancing shared rights. Acknowledging access to information as an essential right for shaping public policy, it becomes evident that the marginalization of the population and organizations from the Amazonia in decision-making processes concerning digital rights is a stark manifestation of environmental racism. This exclusion undermines effective mechanisms of decision and implementation at the multistakeholder level, violating the rights to participate in governance spaces that affect lives and the environment in Amazonia.

This report is strategically designed to impact Brazilian and international agendas

nology as a tool for a sustainable knowledge economy, the authors argue for the recognition of the autonomy of the territorialities and territories. Malheiro, Bruno, Carlos Walter Porto-Gonçalves, and Fernando Michelotti. *Horizontes Amazônicos: Para Repensar o Brasil e o Mundo*. 1st ed., Fundação Rosa Luxemburgo; Expressão Popular, 2021.

⁷ The 2022 Brazil Census data indicates significant demographic shifts in the Legal Amazon, with marked increases in the representation of indigenous, black, and brown populations. Brazil 2022 Census

Data: <https://agenciadenoticias.ibge.gov.br/en/agencia-news/2184-news-agency/news/38726-2022-census-self-reported-brown-population-is-the-majority-in-brazil-for-the-first-time>



on digital rights, technology, and socioenvironmental justice, focusing on governance forums, stakeholders, research initiatives, and public policies. It targets the critical issue of technological and digital challenges within the Amazonia as collective responsibility, underlining the importance of collaborative efforts and effective strategies built from the territory with people and organizations from the Amazonia. These principles are vital to guarantee the territorial sovereignty and self-determination of indigenous peoples, *quilombolas* afro-descendants⁸, and local communities (IPADLCs) are prioritized amidst the climate crisis and the rise of technosolutionist⁹ ideologies.

The report advocates for a *multistakeholder from the territory* governance model characterized by meaningful and accountable participation. It highlights the necessity for flexible stakeholder roles responsive to the nuances of each issue, particularly addressing the challenges and dynamics of the Amazonia region. It emphasizes the importance of transparency, accountability, inclusivity, and equity, advocating for a bottom-up decision-making process that does not marginalize any stakeholder group at the territorial level. This model supports trustworthy involvement mechanisms, enabling all affected parties to participate in decision-making, with logistics and capacity-building support available as needed.

Establishing the **Pan-Amazonia Technopolitics Coalition**, conveniently launched with this Report, marks the first step toward a new phase of debate and political coordination on technology from the Amazonia territory. Therefore, it does not exhaust the possibilities for collective construction supporting Amazonian digital rights within the context of climate injustice. Instead, it inaugurates and invites collaboration with the Grassroots Center for Communication and Audiovisual (CPA) and the Pan-Amazonia Technopolitics Coalition.

⁸ Afro-descendants are recognized as entitled right-holders under human rights law, but their specific rights can vary significantly due to the diverse contexts and relationships they have with nation-states. In Brazil, Afro-descendant communities known as “Quilombolas” are associated with Quilombo territories. They have been granted particular rights concerning their identity, traditions, ways of life, and land claims—many of which are still pending official recognition—under the 1988 Brazilian Constitution. Quilombolas reside in areas known as quilombos, which historically were territories of resistance against slavery. Census data indicate that the majority of Brazil’s quilombola population, 68.19% or 905,400 people, is in the Northeast, followed by the Southeast with 182,300 and the North with 166,000 inhabitants, making up 26.24% of the nation’s quilombola population. More info: Census provides unprecedented data on quilombola and Indigenous populations <https://revistapesquisa.fapesp.br/en/census-provides-unprecedented-data-on-quilombola-and-indigenous-populations/>

⁹ An approach or perspective that relies on technology as the solution to complex social, environmental, or political issues, neglecting broader systemic factors and erasing the experiences of the communities directly impacted by the proposed solutions. It emphasizes technological solutions without adequately considering the social, ethical, or environmental implications of such interventions.



The Digital Rights and Environmental Justice Policy Framework for the Amazonia: Insights and Recommendations Report is divided into six sections:

- 1 – From the Territory and Towards Internet Governance
- 2 – Meaningful Connectivity;
- 3 – The Right to Communication and Information;
- 4 – An Intersectional Agenda for Digital Rights and Climate Justice;
- 5 – Strengthening Sociobiodiversity
- 6 – Data, Digitalization, and Automation Systems.

EXECUTIVE SUMMARY

- The Internet is a vital tool for communication and information empowerment for indigenous peoples, *quilombolas*, riverside communities, traditional extractive populations, and urban-based local communities whose livelihoods are tightly connected to Amazonian socio-biodiversity. The Internet is crucial in their territorial struggles, particularly public health and educational issues.
- When addressing internet access issues in the Amazon, it is crucial to understand the specific context of its populations, considering the territorial and demographic challenges across the region's nine states. This involves acknowledging each state's unique geographical, topographical,



and spatial characteristics within the Legal Amazon. Reevaluating factors that have been mistakenly attributed solely to infrastructure and logistics are essential for achieving meaningful connectivity, such as reinterpreting the so-called “Amazon cost”¹⁰.

- Enhanced infrastructure is essential to bridge the digital divide, as the current internet connectivity challenge stems from longstanding political neglect and insufficient investment. Achieving equitable distribution demands a focus on sustainable connectivity solutions, equitable access, and inclusive participation in digital governance. Additionally, it is essential to critically examine the extractive practices of connectivity provider firms¹¹ and address the socio-economic asymmetry affecting meaningful connectivity, ensuring that advancements in digital infrastructure benefit all territories equitably.
- The annual forest fires in the Amazonia region¹² shed light on how the Internet of Things (IoT) has expanded the global dissemination of data regarding deforestation, land degradation, and their social and health consequences for the population. Forest monitoring, image detection, remote sensing, and other spatial technologies democratize information worldwide, offering insights into the global ramifications of these environmental impacts. Adopting an interconnected strategy beyond merely measuring carbon footprints and emissions is essential for tackling socio-environmental challenges.
- Promoting data census, cartography, and citizen data production is crucial for emphasizing not just the geographical aspects but also the cultural, ethnic, and identity information from local

¹⁰The “Amazonia cost” refers to the additional expenses associated with logistics and infrastructure in the Brazilian Amazon. However, we argue that this term oversimplifies complex issues and fails to address underlying factors such as historical neglect, inadequate investment, and unsustainable development practices. It can also perpetuate a narrative that prioritizes economic interests over social and environmental considerations, neglecting the rights and well-being of peoples and communities’ livelihoods.

¹¹The presence of Starling SpaceX provider in the Amazonia region has been closely analyzed by various stakeholders, including organizations, researchers, and journalists, while also serving a wide array of users. Concerns have emerged about the network’s misuse for illegal mining, contrasted with its beneficial connectivity projects for Amazonian forest inhabitants via Starlink antennas. Amazonian researcher Hemanuel Veras elucidated the issue by comparing internet service costs and speeds in Manaus (capital), versus Coari (municipality in the interior of the state of Amazonas), offering a nuanced view of the connectivity landscape in terms of price and performance. More: <https://direitosnarede.org.br/2023/11/29/starlink-nos-rios-e-ceus-da-amazonia-brasileira/>

¹²The fires devastating the Amazonia forest are frequently caused by intentional human activity. Illegal land grabbers are among the main culprits behind these blazes, aiming to clear forested areas for various purposes such as cattle ranching, animal feed production, and illicit logging. The interconnection between deforestation and fires presents substantial risks to the lives and livelihoods of indigenous peoples, traditional communities, and urban populations. As the smoke from the fires disperses across regions, urban areas are also affected, highlighting the broader impact of these environmental crises.



communities, indigenous peoples, and *quilombola* communities in the Amazonia region. This approach also strives to advance equal opportunities and respect for differences, ensuring universal access to digital rights for all individuals.

- Advocating for the design and deployment of Free Open Source Software (FOSS) as a catalyst for empowerment, we advocate for community engagement in developing databases and information systems, particularly emphasizing Brazilian initiatives centered around land management and agroecology. We stress the necessity of a governance model that ensures transparency and accountability, with active participation from the Amazonia region.
- The report highlights the cyclical process of data colonialism prevalent in Amazonian territories. We support collaborative development through participatory community management and resilient technological ecosystems. By implementing robust and resilient mechanisms, we aim to safeguard against data extraction by large foreign companies, ensuring that local communities benefit from and actively participate in developing projects. Our objective is to steer technological design toward meeting the needs of the Amazonian populations and organizations, thereby promoting equality, respect for differences, and universal access to research, innovation, and development.
- The report critically assesses the relationship between automation technologies and predictive models in Brazil's agriculture, which is closely linked to the pursuit of solutions in response to global commodity demands and the financialization of nature. Integrating artificial intelligence features and models has severe environmental impacts and may perpetuate existing inequalities, raising concerns about artificial intelligence ecological impacts, data, and territorial sovereignty.



SECTION 1

From the Territory and Towards Internet Governance

To underscore the critical importance of a decentralized, multisectoral, and transparent approach to Internet governance, we recognize its global scope and the need for local cooperation while upholding a rights-based approach. Internet governance addresses various issues, including network access to privacy, cybersecurity, and technological innovation. The *multistakeholder from the territory* approach fosters open-ended innovation from margins to margins, decentralized governance structures, and inclusive decision-making processes.

The *multistakeholder from the territory* approach to Internet governance, rooted in the Internet's inherent nature of openness and interconnectedness, ensures accountability, sustainability, and, most importantly, effectiveness in decision-making from the bottom-up, constructive governance transversality from the margins to the margins, sovereignty, and self-determination for the people and nature. The *multistakeholder approach from the territory* addresses emerging technological and juridical challenges as the Internet landscape evolves alongside digital economies and societies, positioning Amazonia's people and organizations protagonism in

transforming the governance landscape.

In light of these principles, our recommendations advocate for a *multistakeholder from the territory* to Internet governance that considers technological, juridical, and socio-environmental impacts in the Amazonia territories. By embracing the principles of inclusiveness, transparency, collective responsibility, and effective collaboration, we can ensure that Internet governance serves the needs of all stakeholders, including those in the Amazonia region.

Recommendations:

1. Implementing a regionalized Internet Governance agenda involves several key initiatives: Firstly, establishing a dedicated platform within the Brazil Internet Forum (Fórum da Internet no Brasil - FIB) specifically focused on Amazon-related discussions. This platform encourages active and broad participation from traditional communities, recognizing their crucial role as key stakeholders. Secondly, integrating Amazonian Programmatic Areas into the agenda of the Internet Steering Committee in Brazil (Comitê Gestor da Internet no Brasil - CGI) ensures that infrastructure and logistical issues about the Amazonia region are discussed at the national instances. Thirdly, classes about data colonialism from a regional perspective can be included within the curriculum of the Brazil Internet Governance School (Escola de Governança da Internet - EGI), providing a comprehensive understanding of the challenges faced by the Ama-



zonian communities. Importantly, this approach transcends national boundaries, actively engaging subnational entities in pursuing inclusive and participatory Internet Governance.

2. Facilitating community participation is crucial to ensure that affected communities actively engage in decisions regarding Information and Communication Technologies (ICT) infrastructure. Overcoming financial and logistical hurdles is paramount in addressing longstanding barriers to participation. By providing support, we can ensure that a diverse array of perspectives, voices, and needs are represented, including those of farmers, riverine communities, indigenous peoples, quilombolas, urban outskirts residents, women, forest-based livelihood practitioners such as rubber tappers, coconut breakers, and *açaí palm* extractors, as well as peasants, landless, labor movements, and other historically active groups and coalitions in the Brazilian Amazonia territories.

3. Enhancing regulation and transparency is essential to ensure that foreign companies' business practices align with the interests of traditional territories in the Brazilian Amazonia. By strengthening regulations, we can enforce transparency and accountability, safeguarding the rights and well-being of local communities, natural resources, and ecosystems.

4. Research and reflections highlight that technologies are not neutral, particularly when assessing their socio-environmental

impacts. We encourage the Internet governance space and its ecosystems to establish working groups that include climate, territorial management, forest monitoring, hydrography and pollution assessment, and representatives from affected or vulnerable communities. A permanent working group can develop regulatory frameworks incorporating proposals in the context of Information and Communication Technologies (ICT) infrastructure.



SECTION 2

Meaningful Connectivity

¹³ The state of broadband 2023: digital connectivity a transformative opportunity: <https://unesdoc.unesco.org/ark:/48223/pf0000387841>

Meaningful connectivity, as defined by UNESCO¹³, involves having a fast, reliable internet connection, adequate data, suitable devices, and regular internet use. This comprehensive definition emphasizes the importance of quality and accessibility, aligning with broader social and human development goals. In the Amazon basin, the principle of network universality highlights the essential nature of internet access for sustainable development. However, this level of connectivity is currently insufficient across much of the region, necessitating a critical examination of the underlying issues.

Connectivity encompasses more than just internet access; it includes significant infrastructure issues such as the lack of electricity and weather-related disruptions, which frequently plague the Amazon region. Additionally, there are critical issues surrounding autonomy in internet usage, including individual access limitations, data cap restrictions, and “zero rating” practices that prioritize certain services over others. These barriers disproportionately affect lower-income groups, who often rely on restricted smartphone access, compared to more unrestricted use of computers and laptops in higher-income groups.

The debate on connectivity in the Amazon must consider territoriality, justice, and internet freedom. Connectivity initiatives must respect the territorial rights and sovereignties of Amazonian communities, ensuring that digital inclusion efforts do not undermine local governance. Digital justice is crucial in addressing the inequalities ex-



acerbated by the digital divide, ensuring that marginalized and underserved populations receive fair access to technology and information. Furthermore, internet freedom and openness must be protected to foster an environment of innovation and free expression, supporting educational, economic, and social development.

[The introduction of Starlink](#) and other low-orbit satellite services in the Amazon presents both opportunities and challenges. While these services promise high-speed internet access in remote areas, they also raise significant concerns about fair competition, sovereignty, and their impact on research and development. The dominance of a single foreign company over the region's digital infrastructure can compromise Brazil's digital sovereignty and lead to economic disparities. The rapid deployment of such infrastructure often bypasses local regulations and community engagement, leading to imbalances and potential threats to national security.

Recommendations:

1. Invest in improving internet infrastructure in the Amazon by assessing and upgrading existing systems. This investment should aim to provide equitable and reliable connectivity to all communities, addressing current deficiencies and ensuring long-term sustainability and access for marginalized areas.
2. Ensure that the expansion of connectivity in the Amazon is sustainable by involving local communities in decision-making processes. This approach will promote digital inclusion while respecting and preserving community sovereignty, ensuring that expansion efforts do not favor specific regions or groups over others.
3. Foster open governance and social organization by developing participatory plat-



forms using open-source software. These platforms should be modeled after successful initiatives like “Plantaformas” to encourage active involvement of Amazonian peoples in digital governance and enhance transparency¹⁴.

¹⁴ It is crucial to stimulate comprehensive debates on platform governance that also align with democratic processes, involving diverse stakeholders to ensure transparency, representativeness, and continuous evolution.

4. Address the role of Big Tech in digital extractivism by emphasizing their practices akin to large mining and oil companies. Highlight the intentional creation of “news deserts” in the Amazon, which aims to keep populations uninformed, facilitating rights violations and undermining local autonomy.

5. Implement regulatory measures to ensure fair competition and protect national sovereignty in response to Starlink’s dominance. Governments and civil society organizations should advocate for policies that promote diverse and competitive internet service provision, mitigating adverse impacts on research and development and ensuring community engagement in regulatory processes.

6. When discussing the internet as a fundamental right that facilitates access to other rights, it is crucial to emphasize the importance of robust infrastructure. The capitalist focus on immediate consumption often leads to unequal development, disproportionately affecting different territories and communities, thereby exacerbating existing inequalities and hindering equitable access to essential digital resources.



SECTION 3

The Right to Communication and Information

Despite the Amazon's significance, both environmentally and demographically, the region faces severe challenges in media coverage. There is a critical lack of journalistic resources and a heavy reliance on press releases from public agencies and politicians, leading to a significant gap in original reporting. This has allowed disinformation to flourish, as local media often republish content directly from press releases without independent verification. The sustainability of journalism in the Amazon is hampered by financial constraints and the logistical challenges of reporting in such a vast and remote area.

This lack of journalistic presence contributes to “news deserts”, particularly in smaller municipalities, where local news outlets are virtually nonexistent. According to the Atlas da Notícia¹⁵, there is a disproportionate concentration of media in the capital, Manaus, with over 70% of the state's news outlets based there. Smaller communities often lack any local media presence, creating information vacuums that are easily filled by disinformation. The implications of this are profound, as it undermines the ability of citizens to stay informed and hold power to account, exacerbating social and environmental injustices.

The prevalence of disinformation misinforms the public and also fuels harmful narratives that can lead to the criminalization of indigenous peoples and local communities. Effective communication infrastructure and support for local journalism are essential to counter these trends and ensure that accurate, context-specific information is

¹⁵ Botelho, J. (2022, March 7). Jornalismo: falta de veículos abre espaço para desinformação e reprodução de releases em sites do Amazonas. Infoamazonia. Concentração de veículos na capital, falta de recursos e equipes reduzidas deixam sites vulneráveis à atuação de grupos de interesse no estado. <https://infoamazonia.org/2022/03/07/jornalismo-falta-de-veiculos-abre-espaco-para-desinformacao-e-reproducao-de-releases-em-sites-do-amazonas>



available to all residents of the Amazon.

Recommendations

1. Recognize and address the specific challenges faced by media outlets in the Amazon, including the lack of internet access in many territories. Invest in communication infrastructure to expand the dissemination of news and information across various Amazonian regions.

2. Advocate for greater transparency in data availability, especially concerning environmental issues, aiming to overcome challenges such as information blackouts. Ensure that data is accessible and comprehensible to the public to foster informed community engagement.

3. Promote digital education programs in the region, empowering the community to discern reliable sources, identify misinformation, and actively participate constructively in the digital environment. These programs should be tailored to the specific needs and contexts of Amazonian communities.

4. Consider the financial sustainability of local journalistic outlets by seeking resources from platforms within regulatory processes to ensure their independence and strengthening. Additionally, reconsider the rules for financing initiatives, collectives, communication organizations, and journalism with the aim of combating news deserts and socio-environmental misinformation in the Amazon.

5. Establish community funds to support local media, ensuring they are governed by local stakeholders. This approach can promote diverse and representative coverage, empowering communities to produce and disseminate their own news, and fostering a more inclusive media landscape.



SECTION 4

An Intersectional Agenda for Digital Rights and Climate Justice

The urgency of the climate crisis necessitates the integration of socio-environmental discourse into internet governance, particularly in the Pan-Amazon region. This approach addresses the violations in Amazonian territories caused by technologies and underscores the critical intersection between digital infrastructure, power dynamics, and climate challenges. Effective strategies in this field must prioritize socio-environmental reparative measures, recognizing the essential role of democratic and participatory governance that includes vulnerable and historically overlooked groups.

Digital rights and climate justice are interconnected, with both requiring a comprehensive understanding of the socio-political landscape and environmental impacts. In the Amazon, the expansion of digital infrastructure must be critically examined to ensure it does not exacerbate existing inequalities or environmental degradation. This includes addressing issues such as illegal mining and the monopolistic tendencies of large tech companies, which can further marginalize local communities and disrupt their ecosystems.

Establishing an Amazonian socio-environmental agenda is crucial for fostering sustainable development and ensuring that digital rights are protected alongside environmental justice. This agenda should promote the creation of sustainable data infrastructure, rigorous monitoring of business models, and the use of technology to combat environmental issues. Additionally, it should advocate for community-driven governance and the transparent accountability of companies involved in ex-



tractive activities.

Recommendations:

1. Develop and implement sustainable data infrastructure tailored to the unique environmental conditions of the Pan-Amazon region. This involves creating technologies that can withstand the challenges of the local climate and ensuring that these infrastructures support long-term environmental sustainability.

2. Establish rigorous monitoring mechanisms to oversee the rapid expansion and impact of monopolistic business models in the Northern Region. This includes comprehensive socio-environmental impact assessments, particularly in areas affected by illegal mining and other extractive activities.

3. Utilize advanced technologies, such as remote sensing and artificial intelligence, to monitor and address environmental issues like deforestation and wildfires. These tools can provide critical data and insights, aiding in effective environmental management and policy-making.

4. Pay close attention to predatory mineral extraction activities, such as lithium mining in Bolivia and illegal gold mining in Brazil. Companies must be transparent about their practices and held accountable for the socio-environmental damages they cause.¹⁶

5. Engage with international organizations and coalitions within the UN framework to develop regulatory measures against large technology companies and address issues like electronic waste. This involves understanding the global implications of digital and physical resource extraction and advocating for equitable policies.

6. Promote the democratization of Geographic Information System (GIS) technologies to enhance community access to spatial information. This can empower local communities in the Amazon to monitor forests, protect territories, and participate in environmental decision-making processes effectively.

¹⁶ It is crucial to promote a transnational narrative to expose harmful practices, recognizing the interconnection between technology, geopolitics, and territorial impacts. Reflection on the exploitation of natural resources becomes imperative in the technological era, seeking a balance between technological advancements and sustainability.



SECTION 5

Strengthening Sociobiodiversity

Strengthening sociobiodiversity in the Amazon involves enhancing the production and accessibility of data to foster a more comprehensive and informed understanding for policy development. The Amazon's rich biodiversity and the intricate relationship between local communities and their environment are critical for sustainable development. Ensuring the protection and promotion of sociobiodiversity requires a multifaceted approach that integrates local knowledge, scientific research, and effective governance structures.

One of the key challenges in strengthening sociobiodiversity is the lack of comprehensive data on the Amazon's ecological and socio-economic conditions. This gap hinders the ability to develop effective policies and actions. Addressing this requires significant investment in research and data collection, focusing on both biological and social aspects of the region. Enhanced data accessibility, guided by principles of environmental justice, privacy, transparency, and accountability, can support local communities, policymakers, and researchers in making informed decisions that promote sustainability and resilience.

Moreover, promoting sociobiodiversity involves recognizing and supporting the traditional knowledge and practices of Indigenous peoples and local communities. These communities have managed the Amazon's resources sustainably for generations, and the recognition for their labour and their involvement is crucial for the success of any biodiversity conservation initiative. This includes ensuring their land rights, providing financial and technical support, and incorporating their perspectives into policy-making processes. A collaborative approach that values and integrates diverse forms of knowledge, along with technology-related justice principles, is essential for achieving long-term sustainability and equity in the Amazon.

Recommendations

1. Develop and implement comprehensive research and data collection initiatives focused on both the biological and socio-economic aspects of the Amazon Basin. This data is crucial for informed policy-making and effective management of sociobiodiversity, incorporating environmental justice principles.
2. Improve the accessibility of data on the Amazon's ecological and socio-economic conditions while ensuring data privacy and transparency. Promote open data practices and establish accountable data stewardship frameworks to support decision-making processes.



3. Mitigation of Outsourcing by Organizations Based in Southeast Brazil: Addressing challenges related to the formation of the ecosystem of organizations is crucial, with an emphasis on overcoming obstacles for these entities to play a more prominent, active, and responsible role in the institutional strengthening of Amazonian organizations in the field of technology.
4. Decentralization in research and understanding of local realities, avoiding generalizations, and considering singularities, fostering field research, qualitative interviews, and primary data collection to obtain a richer and contextualized understanding of experiences.
5. Emphasis on subjectivity in the process of experiencing and using technology, emphasizing the need to consider different ways of experiencing and incorporating technology in everyday life, especially in diverse regional and territorial contexts. Additionally, encouraging the creation and strengthening of Latin American networks with diverse and non-linear approaches in technology studies, promoting varied methods and objects, recognizing the complexity of the subject, and breaking away from pre-established notions.
6. Recognize and support the traditional knowledge and practices of Indigenous peoples and local communities. Provide financial and technical assistance to ensure their sustainable management of resources and incorporate their perspectives into policy-making.
7. Strengthen the land rights of Indigenous peoples and local communities to ensure their ability to protect and manage their territories. This includes enforcing existing laws and enacting new legislation that recognizes and safeguards their rights.
8. Establish inclusive and participatory governance structures that involve local communities, researchers, and policymakers. Encourage collaboration across different sectors and levels of government to develop and implement effective biodiversity conservation strategies.
9. Ensure that the deployment of technology in the Amazon follows principles of environmental justice, prioritizing the needs and rights of local communities. This includes using technology for environmental monitoring in ways that are transparent, accountable, and respectful of community privacy.



SECTION 6

Data, Digitalization, and Automation Systems

Ensuring transparency, participation, understandability, security, responsibility, and benefits for local communities in data collection and management processes, digitization, and automation systems related to the Amazon Basin establishes the foundation for responsible and ethical data stewardship. Upholding these principles fosters trust between stakeholders, ensures equitable access to information, and empowers local communities to actively engage in and benefit from data-driven initiatives. These processes must address land issues, socio-biodiversity, and traditional knowledge to ensure the sovereignty of territories, peoples, and traditional communities. Studies by the organization GRAIN¹⁷ reveal that automation and large-scale data processing systems, along with the digitization of land information in Brazil, tend to benefit a few and strengthen the concentration of access to credit, exacerbating inequalities.

One critical issue highlighted by GRAIN is the creation of a “digital land profile,” which aims to locate and quantify geographic spaces with a focus on “sustainable governance.” However, this often results in an abstract valuation of territories, detaching the management of land from the lived experiences and needs of local communities. The digitalization of land data should therefore prioritize the inclusion and representation of these communities, ensuring that the benefits of technology do not contribute to further marginalization.

Promoting the use of open-source software and participatory approaches in data collection, production, and usage is essential. Local communities should be actively

¹⁷ GRAIN. (2022, April 13). Digitalização da terra: mais dados, menos terras. GRAIN. <https://grain.org/en/article/6830-digitalizacao-da-terra-mais-dados-menos-terras>



involved in constructing databases related to land, agriculture, and agroecology. Effective democratic participation in data governance debates, particularly on issues of sovereignty, can help avoid myths and false dichotomies. Raising awareness about data neocolonialism is also crucial, emphasizing that Brazil must not only produce data but also develop technologies that ensure participatory management and tangible benefits for affected communities.

Recommendations

1. Encourage the use of open-source software and promote the active participation of affected communities in database construction. Highlight successful Brazilian experiences and foster a participatory approach in the collection, production, and use of data related to land, agriculture, and agroecology.
2. Promote effective democratic participation in data governance, ensuring transparency, public infrastructure involvement, and governance. Address myths and false dichotomies about sovereignty and ensure the Amazonian communities are actively involved in these discussions.
3. Raise awareness about data neocolonialism and emphasize the importance of Brazil not only producing data but also developing technologies that ensure participatory management and benefits for affected communities. Advocate for policies that protect local data sovereignty.
4. Raise awareness about data neocolonialism and extraction practices, highlighting the need for Brazil to not only produce its own data but also develop technologies that enable participatory management and ensure benefits for local communities.
5. Prevent the uncontrolled exploitation of data by large foreign technology companies by ensuring that technological advancements are directed to benefit local communities and impacted territories. Implement policies that protect local data sovereignty and ensure that the benefits of data usage are equitably distributed.
6. Accessible Digitization and Automation for Indigenous Peoples and Traditional Communities: Guarantee that geospatial technologies, remote sensing, and open data initiatives are accessible for family farming, agroecology, as well as for indigenous peoples and traditional communities. Recognize and respect the scale of these actors in cultivation methods and the production chain of socio-biodiversity.



ABOUT CPA

The Grassroots Center for Communication and Audiovisual (CPA) is an organization that collaborates with various entities, youth collectives, associations, and social movements, dedicated to promoting human rights, citizen communication, spatial justice, cultural diversity, internet freedom and openness. Based in Manaus, Amazonas, Brazil, CPA has been active since 2016, extending its efforts across various territories in the Amazon region. Its ongoing focus is to drive initiatives that explore the intersections between communication, culture, human rights, and technology.

ABOUT THE COALITION

The Pan-Amazon Technopolitics Coalition (Coalizão Tecnopolíticas Pan-Amazônicas) is a group of activists, researchers, organizations, and social movements advocating for digital rights within the framework of socio-environmental and climate justice for Pan-Amazonian populations. We engage in events, produce knowledge both inside and outside academia, and influence decision-making spaces, all guided by a holistic vision rooted in the territory

HISTORY

The Pan-Amazonian Technopolitics Coalition started to take shape in 2022 with the panel “Amazon on the Internet - Data, Networks, and Activisms” at the Internet Forum. However, the creation of a network of actors in the field of digital technologies has been in progress for several years. Members of the Grassroots Center for Communication and

Audiovisual (CPA) have actively participated in internet governance debates, media activism, and the development of integrated technological and digital infrastructures.

MANIFEST

The Pan-Amazonian Technopolitics Coalition is a call for collective discussion and action to address historical challenges and confront the asymmetries in digital technologies centered on the Amazon Basin. We aim to challenge the logic of predatory extraction and advocate for an approach focused on life, mental health, and dignity. The Coalition calls for an interconnected and solidarity-based vision to develop strategies and solutions dedicated to preserving territories and the power of life.

Our mission is rooted in spatial justice and the role of technology in emancipation. By ensuring internet openness and accessibility, we co-design with local communities to celebrate the plurality of living. Together, we form an assemblage that utilizes technology not just as a tool for economic gain but as a means of achieving justice and equality, enhancing the well-being and autonomy of all inhabitants of the Pan-Amazon.

The Coalition stands against exploitative practices and promotes a sustainable, life-centered approach. We strive to build a future where technology supports the preservation of our territories and enhances the dignity and mental health of our communities. Through solidarity and interconnected efforts, we seek to create a digital landscape that honors the principles of spatial justice and fosters true emancipation.

