STRENGTHENING INFORMATION INTEGRITY ON CLIMATE CHANGE AND THE ENVIRONMENT

REPORT OF THE WORKSTREAM
OF THE PARTNERSHIP FOR
INFORMATION AND DEMOCRACY
CO-CHAIRED BY **ARMENIA** AND **BRAZIL**

FORUM INFORMATION DEMOCRACY

February 2026

FOREWORD

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The governments of Brazil and Armenia are honored to present this report, which represents a year of intensive collaboration within the Partnership for Information and Democracy (PID). The urgency of our mission has never been clearer: protecting information integrity is not merely a technical challenge but a foundational requirement for democratic governance and effective climate action in the 21st century. This urgency is particularly evident in contexts where environmental stress, societal resilience, and trust in public information are closely intertwined.

This report reflects a critical transition from diagnosis to the implementation of systemic solutions. Following the historic breakthrough at COP30 in Belém, where information integrity was placed at the center of the global climate agenda through the Belém Declaration, our focus now turns to operationalizing these commitments. This phase calls for translating global principles into practical, inclusive approaches that respond to diverse regional realities and information ecosystems.

For the Armenian and Brazilian Co-Chairmanship, the year 2026 marks a decisive phase for the Global Initiative for Information Integrity on Climate Change and the PID, a year of consolidation and outreach, aimed at strengthening cross-regional dialogue, supporting inclusive participation, and advancing practical approaches to information integrity across climate and broader environmental agendas. Our roadmap is guided by the Plan to Accelerate the Promotion of Information Integrity on Climate Change (PAS), focusing on several key priorities:

- Mobilization and Implementation: We will organize seminars to showcase the Initiative’s work within a broader democratic context, and with a particular emphasis on the intersection between information integrity and environmental challenges.

- Platform Accountability: A central priority is establishing a Charter of Principles for Accountable Climate Advertising and maintaining a permanent dialogue roundtable with digital platforms to disrupt the monetization of disinformation. Special attention will be given to transparency and accountability mechanisms that function effectively across different linguistic, cultural, and media environments.

FOREWORD

- Strengthening National Capacities: We are committed to fostering the creation of National Chapters and mapping global research and legal frameworks to help countries build localized resilience against environmental misinformation and greenwashing. This includes reinforcing media literacy, independent research, and fact-based public communication as essential components of democratic resilience.

- Multilateral Alignment: Our efforts will be reinforced through engagement with major multilateral environmental processes, including the 17th Conference of the Parties (COP17) of the Convention on Biological Diversity in Yerevan, underscoring the relevance of information integrity across the broader environmental agenda. These efforts will culminate in a presence, as possible, at COP31 in Turkey, where we intend to showcase the Initiative's outcomes and announce the adhesion of new members.

Furthermore, we will continue to streamline information integrity with the UNFCCC process, specifically through the Action for Climate Empowerment (ACE) agenda, ensuring that the right to reliable information is embedded in future climate work programs.

This report is a call to action. We invite all stakeholders—governments, civil society, media and the private sector—to engage with these findings and join us in building an information ecosystem that supports, rather than undermines, our collective ability to protect the planet.

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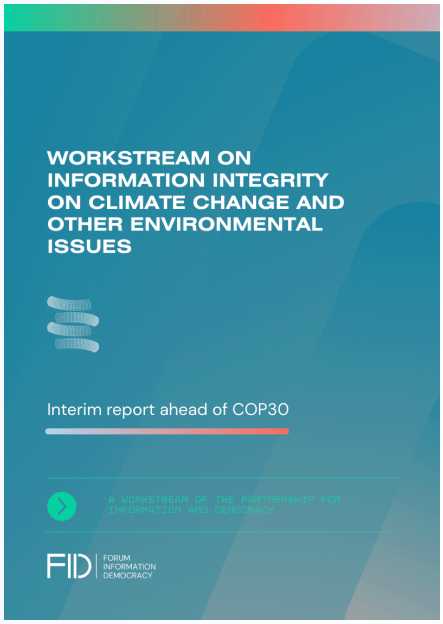
Presidency of the Republic of Brazil and
Ministry of Foreign Affairs of Armenia,
Co-Chairs of the PID Workstream

EXECUTIVE SUMMARY

This report presents the outcome of one year of work by the Workstream on Information Integrity, Climate Change, and Other Environmental Issues of the Partnership for Information and Democracy, co-chaired by the governments of Armenia and Brazil.

The purpose of the report is to identify and address systemic threats to information integrity that cut across climate change, biodiversity, land use, water, pollution, and related environmental domains. These threats undermine democratic debate, public trust, and the ability of societies to act effectively on urgent environmental challenges.

The report's core message is clear: disinformation, repression, and restricted access to environmental data are weakening the foundations of sustainable development and democratic accountability worldwide.



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KEY FINDINGS

- **Sophisticated disinformation campaigns** are increasingly well-funded, targeted, and strategic, shifting from outright denial to narratives of delay and doubt.
- The **opaque online advertising market** and dominant **platform business models** incentivize the spread of misleading and harmful content.
- **Environmental journalists, researchers, and defenders** face escalating threats, harassment, together with violence and shrinking civic space.
- **Cross-cutting tactics** are evident across environmental domains, with similar methods deployed against action on climate change, biodiversity protection, pollution control, and land and water governance.
- **Fossil fuel and other corporate actors** continue to engage in greenwashing and to influence operations, obscuring accountability and misinforming the public.

RECOMMENDATIONS

To safeguard information integrity and strengthen democratic environmental governance, the report calls for:

1. **Embedding information integrity directly within climate and environmental governance** frameworks, including crisis response and access-to-information regimes.
2. **Strengthening regulatory and platform accountability,** including transparency, risk assessments, and due prominence for reliable information.
3. **Reforming digital advertising and economic incentives** to disrupt the monetization of environmental disinformation and to support public-interest media.
4. **Enhancing transparency and corporate accountability** to expose vested interests, counter greenwashing, and regulate environmental claims.
5. **Protecting environmental journalists and defenders** through legal safeguards, safety mechanisms, and coordinated institutional responses.
6. **Reinforcing media freedom, sustainability, and high-quality environmental journalism** as a public good.
7. **Improving science communication, data integrity, and digital inclusion** to ensure universal access to reliable environmental information.
8. **Advancing environmental and media literacy** to build societal resilience to disinformation.
9. **Expanding research, monitoring, and shared methodologies** on environmental disinformation and to influence operations.
10. **Building institutional capacity and multilateral coordination,** aligning national efforts with international initiatives such as the Global Initiative for Information Integrity on Climate Change, the Belém Declaration, and related Conference of the Parties (COP) and access-to-information processes.

Together, these measures chart a path toward strengthening public trust, countering systemic disinformation, and reinforcing democratic capacity to respond to the interconnected environmental crises of our time.

SUMMARY

Introduction

The Partnership for Information and Democracy (PID) is an international coalition of states, committed to advancing democratic principles in the global information space. Recognizing the growing threats posed by disinformation, restricted access to environmental data, and attacks on environmental journalists, Armenia and Brazil, as hosts of COP17 in 2026 and COP30 in 2025, launched a dedicated workstream on information integrity in the context of climate change and other environmental issues. This workstream convened interested states, civil society, and expert networks to examine challenges, share research, and identify practical policy and institutional responses.

This report reflects one year of sustained exchange within this workstream[1], encompassing the presentation of studies, cross-sector dialogue, and collaborative analysis. It proceeds from the premise that environmental information integrity is essential: citizens have a fundamental right to reliable, accurate, and accessible information, which underpins public participation, accountability, and the formulation of effective environmental policy.

The scale of the challenge is profound. Over the past decade, more than 2,100 environmental defenders have been killed worldwide, with Indigenous and marginalized communities disproportionately affected. The work of environmental journalists is increasingly imperiled, with at least 44 killed in the same period. At the same time, environmental disinformation has become a lucrative business, often coordinated across platforms, political actors, and corporate interests, amplifying misleading narratives and delaying urgent action.

Despite the diversity of environmental issues, the dynamics of disinformation are remarkably consistent. Tactics initially deployed to sow doubt around climate science —such as strategic skepticism, selective framing, and misinformation amplification— are increasingly evident in debates over biodiversity loss, deforestation, pollution risks, and other environmental challenges. Greenwashing and corporate influence further blur the lines between fact and falsehood, undermining public trust and democratic oversight. Disinformation can flourish even more in a context dominated by online platforms and their business models, and by increasing threats to the economic situation of public interest media.

(1) The workstream met four times online on 17 April, 3 July, 1 October and 11 December and in Yerevan, Armenia on 27 May 2025. The issues discussed in this report are largely context-specific and, in many cases, regional in nature; therefore, the examples and dynamics described should not be interpreted as universally applicable to all countries.

Beyond its environmental consequences, disinformation on climate change, biodiversity, pollution, and natural resource governance constitutes a profound democratic challenge. It distorts public debate and undermines trust in scientific and journalistic institutions. By hindering access to reliable information, it weakens citizens' ability to participate meaningfully in decision-making, and erodes accountability for powerful public and private actors. When false or misleading narratives shape perceptions of risk, responsibility, and policy options, democratic processes themselves are compromised: elections, regulatory choices, investment decisions, and community consultations can no longer be grounded in shared factual baselines. Environmental disinformation therefore does not merely delay action; it reshapes the conditions under which democratic societies deliberate and govern.

It is for this reason that the Partnership for Information and Democracy chose to focus its workstream on information integrity in the environmental domain. Environmental governance today is inseparable from the quality, accessibility, and credibility of information circulating in the public sphere, particularly in a digital ecosystem dominated by platform-driven amplification and vulnerable media economies. The workstream situates this challenge within a broader international effort to treat reliable environmental information as a global public good and a pillar of democratic resilience. Its findings and recommendations are intended to complement and reinforce ongoing initiatives, including the Global Initiative for Information Integrity on Climate Change, the Belém Declaration on Information Integrity on Climate Change adopted at COP30, the Escazú and Aarhus frameworks on access to information, and emerging commitments under the COP process, by providing concrete policy pathways for states and stakeholders to operationalize information integrity across environmental, digital, and democratic governance.

This report distills the insights and recommendations emerging from the workstream's deliberations, highlighting concrete approaches to strengthen information integrity, protect environmental journalists and defenders, promote transparency, and foster cross-sectoral collaboration in the service of evidence-based environmental governance. The recommendations underline that defending information integrity on climate change and other environmental issues is both a digital governance and an environmental governance issue. Information integrity also relies on access to information, media freedom and sustainability as well as research and international cooperation.

1. HOW ENVIRONMENTAL INFORMATION IS MANIPULATED AND DISTORTED

1.1/ **Key Terminology** and **Scope**

To guide this report, we have adopted a broad conceptual framework of information integrity, which encompasses the accuracy, reliability, accessibility, and trustworthiness of information across environmental issues. Information integrity is threatened by a spectrum of challenges, including disinformation, misinformation, malinformation, censorship, information suppression, and structural barriers to access. While this workstream and report consider these challenges holistically, the current section focuses more narrowly on disinformation as one of the most visible and deliberate threats to environmental information ecosystems. This focus allows for a detailed exploration of how coordinated campaigns and strategic manipulations undermine public understanding and hinder effective climate and environmental action. At the same time, it is important to acknowledge that disinformation is only one facet of broader attacks on information integrity; subsequent sections of this report examine other forms of interference, including the suppression of credible research, barriers to environmental journalism, and structural inequities in information access, all of which collectively shape public understanding and societal response to environmental challenges.

Climate change and environmental disinformation refer to the deliberate spread of false or misleading information about climate change and environmental issues, intended to create confusion, delay policy action, or undermine public trust in the science and urgency of the environmental crisis. Unlike simple misinformation, which can occur accidentally, disinformation is purposely crafted to mislead or manipulate the audience. In the case of climate change, disinformation aims to obscure the connection between human activity — especially the burning of fossil fuels — and climate change, downplay the severity of its consequences, and ultimately hinder efforts to mitigate its impacts.

Research shows that climate disinformation is widespread, influential, and also not an entirely new phenomenon. Already in 2015, the Union of Concerned Scientists published findings that stated “for nearly three decades, many of the world’s largest fossil fuel companies have knowingly worked to deceive the public about the realities and risks of climate change. [2] ” According to an EU Commission study, 40% of organizations' claims to be "green" are not backed by evidence, highlighting the problem of greenwashing. These patterns have vastly increased as social media amplification and engagement gain significance: an analysis of 20 million posts on Twitter, Facebook, Instagram, and YouTube between 2018 and 2022 found “significantly greater relative engagement with these [unreliable] sources compared to content from reliable sources on all platforms except Twitter.” [3]

(2) Union of Concerned Scientists “The Climate Deception Dossiers” 2015, www.ucs.org/resources/climate-deception-dossiers.

(3) Saverio Storani, Max Falkenberg, Walter Quattrociocchi & Matteo Cinelli “Relative engagement with sources of climate misinformation is growing across social media platforms” Scientific Reports. 2025. www.nature.com/articles/s41598-025-03082-9

Climate change disinformation differs from other forms of disinformation in its genesis, scope, and intent, sometimes in subtle and sometimes more significant ways. For instance, electoral disinformation is focused on undermining confidence in democratic processes by spreading false or misleading information about candidates, voting processes, or election results. [4] And COVID-19 disinformation revolves around misleading information related to the pandemic, such as false claims about the virus, its spread, or the effectiveness of vaccines. [5] While such disinformation can have significant societal impacts, climate disinformation can be even more far-reaching in its implications for global survival, public health, and environmental sustainability. [6] Moreover, as an issue strongly affected by partisanship and polarization, especially over long timelines, climate claims are strongly impacted by disinformation. As a result, climate disinformation is also often not only leveraged in order to hinder effective climate action, but also used as an inroad for other types of disinformation aimed at sowing division and further tearing at the social fabric.

Unlike disinformation focused on specific events, climate disinformation has long-term and systemic consequences. According to the UNDP "both climate misinformation and disinformation undermine public trust in climate science, delay policy responses and polarize public discourse" making the mitigation of catastrophic climate outcomes more difficult [7]. Ipsos surveys conducted in 2021–2022 across 30 countries found that nearly one-third of the public either doubts the human causes of climate change or believes its severity has been exaggerated. These surveys also found that "unexpectedly, climate skepticism has grown over the past 3 years" (37%, +6pts in 3 years) reflecting the real-world impact of sustained disinformation campaigns. These numbers are much higher in fossil fuel producing countries (Saudi Arabia 60%, USA 48%). [8]

Climate disinformation also stands apart from misleading information about other issues, such as about electric vehicles (EVs), where the focus is on spreading inaccuracies about technological advancement or environmental benefit. While these may influence individual consumer decisions, climate disinformation seeks to derail broader, systemic action aimed at addressing the climate crisis by cultivating skepticism, uncertainty, and inaction on a global scale. However, it is important to note that while these types of disinformation can in some ways be differentiated, they also overlap, and can be part of the same broader networks seeking to undermine healthy information ecosystems.

To better understand the scope of climate change disinformation, it is essential to define some core terms related to disinformation:

(4) Michael Karanicolas, "Subverting Democracy to Save Democracy: Canada's Extra-Constitutional Approaches to Battling 'Fake News,'" SSRN Scholarly Paper (Rochester, NY, July 22, 2019), https://digitalcommons.schulichlaw.dal.ca/cjlt/vol17/iss2/3/.

(5) Sahana Sule et al., "Communication of COVID-19 Misinformation on Social Media by Physicians in the US," JAMA Network Open 6, no. 8 (August 15, 2023): e2328928, doi.org/10.1001/jamanetworkopen.2023.28928.

(6) Donald A. Brown, "The Enormity of the Damage Done by the Climate Change Disinformation Campaign as the World Struggles to Implement the Paris Agreement," in The Role of Integrity in the Governance of the Commons: Governance, Ecology, Law, Ethics, ed. Laura Westra, Janice Gray, and Franz-Theo Gottwald (Cham: Springer International Publishing, 2017), 125–39, https://doi.org/10.1007/978-3-319-54392-5_8.

(7) UNDP "What are climate misinformation and disinformation and how can we tackle them?" 2025. climatepromise.undp.org/news-and-stories/what-are-climate-misinformation-and-disinformation-and-how-can-we-tackle-them.

(8) Ipsos "Climate Change: A Growing Skepticism" 2022. www.ipsos.com/en-ca/news-polls/obscop-2022

Misinformation

This refers to the spread of incorrect or misleading information without the intent to deceive.[9] It is often based on misunderstanding or miscommunication. For instance, a well-meaning individual might share an inaccurate climate statistic without knowing it is false. Although not intentional, misinformation can still have a harmful impact, especially when it accumulates over time.

Disinformation

Disinformation refers to false or inaccurate information deliberately created and spread with the intent to deceive or mislead people.[10] Unlike misinformation, which is shared without the intent to harm, disinformation is crafted and distributed to manipulate opinions, influence behavior, or create confusion, often for political, social, or financial gain.[11]

Malinformation

This term involves the use of accurate information to deliberately cause harm, such as sharing true but selectively chosen facts to manipulate the audience's perception. In the context of climate change, malinformation could involve presenting real scientific data but in a context that misleads the audience into believing there is no significant problem or that the situation is exaggerated.

Coordinated Campaigns

These are organized efforts, often involving multiple individuals or organizations, to spread disinformation in a strategic, synchronized manner. In the case of climate change, coordinated campaigns are typically designed to influence public opinion, delay policy action, or discredit scientific consensus. These campaigns might involve think tanks, lobby groups, media outlets, and social media influencers, working together to disseminate false narratives about climate science or policy.[12]

Studies indicate that disinformation often coexists with widespread misinformation: for example, a 2025 Pew Research Center survey found that 72% of adults across 25 countries reported the spread of false information online being a major threat to their country, illustrating how disinformation campaigns can amplify the reach and impact of otherwise accidental misinformation.[13] Each of these terms plays a crucial role in understanding how information ecosystems are undermined and how this impacts the public's understanding of climate change. In this context, climate change disinformation may blend misinformation and malinformation, and often involves coordinated campaigns to maximize its reach and influence.

(9) Forum on Information and Democracy (2020), How to End Infodemics, informationdemocracy.org/wp-content/uploads/2020/11/ForumID_Report-on-infodemics_101120.pdf

(10) ibid.

(11) Stephan Lewandowsky et al., "Misinformation, Disinformation, and Violent Conflict: From Iraq and the 'War on Terror' to Future Threats to Peace," American Psychologist 68, no. 7 (2013): 487–501, doi.org/10.1037/a0034515.

(12) Andrew Heffernan, "The Climate Policy Crisis: Governing Disinformation in the Digital Age," Centre for International Governance Innovation, 2024, www.cigionline.org/publications/the-climate-policy-crisis-governing-disinformation-in-the-digital-age/

(13) Jacob Poushter, Moira Fagan and, Maria Smerkovich, and Andrew Prozorovsky "False Information Online as a Threat" 2025. www.pewresearch.org/2025/08/19/false-information-online-as-a-threat/

1.2/ **Characteristics** of Climate Change Disinformation

Climate change disinformation is not a random or disorganized phenomenon; rather, it exhibits certain distinctive characteristics that enhance its effectiveness and ability to shape public opinion. These characteristics include being coordinated, well-resourced, targeted, and funded.

Coordinated.

One of the key features of climate change disinformation is its coordinated nature. Unlike isolated instances of misleading information, disinformation campaigns are often part of a larger, strategic plan. These campaigns typically involve a network of actors who work in unison to spread specific messages or narratives, often across multiple platforms and media channels.[14] These coordinated efforts make disinformation more effective, as it amplifies the messages and gives them a veneer of credibility. By using diverse channels—such as social media platforms, blogs, think tanks, and even mainstream media—disinformation campaigns can reach a wide and varied audience.

Well-Resourced.

Climate change disinformation is not only coordinated, but often heavily financed. This financial backing comes from multiple sources, many of which have a vested interest in delaying climate action. For example, fossil fuel companies and industries reliant on carbon-intensive practices often fund disinformation campaigns to protect their financial interests.[15] These industries have the means to support think tanks, media campaigns, and research centers that actively produce and promote disinformation, influencing public opinion and policy outcomes in favor of the status quo. Political lobbying groups, trade associations, and other entities with an interest in avoiding regulatory changes related to climate action often provide the resources necessary to sustain disinformation efforts.[16] This financial backing allows disinformation campaigns to create high-quality, persuasive content—such as research reports, documentaries, and media ads—that can be easily disseminated through both traditional and digital media channels.

(14) Andrew Heffernan, "Countering Fossil-Fuelled Climate Disinformation to Save Democracy," Centre for International Governance Innovation, November 21, 2024, www.cigionline.org/publications/countering-fossil-fuelled-climate-disinformation-to-save-democracy/.

(15) Angela V. Carter, Fossilized: Environmental Policy in Canada's Petro-Provinces (UBC Press, 2020).

(16) A. Nguyen and H. T. Vu, "Testing Popular News Discourse on the 'Echo Chamber' Effect: Does Political Polarisation Occur among Those Relying on Social Media as Their Primary Politics News Source?," First Monday 24, no. 5 (June 3, 2019), https://firstmonday.org/ojs/index.php/fm/article/view/9632

Targeted.

Climate change disinformation is carefully crafted and tailored to specific audiences. These campaigns are not generic; rather, they are tailored to appeal to particular groups based on demographic, political, or ideological factors. For example, campaigns may target conservative voters with messages that align with their values or economic concerns, arguing that addressing climate change would be too costly or lead to job losses. Research from the International Panel on the Information Environment (IPIE) found that often policymakers are targeted directly.[17] Alternatively, disinformation could be aimed at younger, more environmentally conscious groups, seeking to confuse them about the science behind climate change in order to diminish their activism or support for climate policies. [18]

In many cases, these campaigns are designed to mislead the public into questioning the scientific consensus on climate change, promoting alternative narratives that downplay the severity of the issue or suggest that the science is still uncertain. This uncertainty is often deliberately cultivated to delay action on climate change policies and to maintain the status quo of fossil fuel consumption and environmental exploitation. As a result, disinformation represents a significant challenge to global efforts to address climate change. Its strategic, coordinated nature, combined with its financial backing, targeting of specific audiences, and involvement of powerful interests, makes it particularly dangerous. [19] As the global climate crisis worsens, understanding the dynamics of disinformation campaigns becomes increasingly critical to ensuring that accurate, science-based information prevails and that policy actions are not unduly delayed.

(17) International Panel on the Information Environment [E. Elbeyi, K. Bruhn Jensen, M. Aronczyk, J. Asuka, G. Ceylan, J. Cook, G. Erdelyi, H. Ford, C. Milani, E. Mustafaraj, F. Ogenga, S. Yadin, P. N. Howard, S. Valenzuela (eds.)], "Information Integrity about Climate Science: A Systematic Review," Zurich, Switzerland: IPIE, 2025. Synthesis Report, SR2025.1, doi: 10.61452/BTZP3426.

(18) Andrew Marantz, Antisocial: Online Extremists, Techno-Utopians, and the Hijacking of the American Conversation (Penguin Books, 2019).

(19) Donald Brown, "The Enormity of the Damage Done by the Climate Change Disinformation Campaign as the World Struggles to Implement the Paris Agreement." 2017. DOI: 10.1007/978-3-319-54392-5_8

2. THE EVOLUTION OF CLIMATE CHANGE DISINFORMATION

It is important to acknowledge that efforts to deceive the public are not new, and that such disinformation campaigns have existed throughout modern human history. What has changed is the internet age and the ability to weaponize this information by data harvested from ubiquitous online habits.[20] Over the past few decades, the methods used to spread climate change disinformation have evolved significantly, adapting to technological advancements and shifts in public discourse. These changes reflect not only the increasing sophistication of disinformation campaigns but also the growing influence of digital platforms and data-driven tools in shaping public opinion. Two key elements that have transformed climate change disinformation are the introduction of new technologies, such as deepfakes and targeted artificial intelligence (AI), and the evolution of narrative strategies.

2.1/ **New Technologies: Deepfakes** and **Targeted AI**

The rapid development of digital technologies has made it easier to create and disseminate disinformation on a massive scale.[21] One of the most concerning phenomena is the proliferation of deepfakes—highly realistic videos or audio recordings that use artificial intelligence to manipulate or fabricate media content. Deepfakes can make it appear as though prominent individuals, including scientists, politicians, or activists, are saying or doing things they never actually said or did.[22] This technology can be used to discredit credible voices in the climate change debate, making it harder for the public to trust what they see or hear, as well as providing confirmation of falsehoods they may have already heard. Research from Tactical Tech has also demonstrated that deepfakes are creating so much confusion that people are increasingly questioning visual content that is actually real—similar to the doubt being sown on accurate information. A World Economic Forum report found that the total number of online deepfake videos had increased to about 95,820 in 2023, a 550% increase from 2019. Additionally they posit that "deepfakes could be used to falsely demonstrate commitment to renewable energy, carbon capture and sustainable development which is a significant and growing challenge to the information integrity required for effective climate and environmental policy."[23] Surveys show that 80% of adults across the 35 countries studied by Pew Research are concerned about fabricated news, including 59% who view it as a very big problem, highlighting the growing challenge for public trust in all types of information.[24]

(20) Rachel Ehrenberg, "Social Media Sway: Worries over Political Misinformation on Twitter Attract Scientists' Attention," Science News 182, no. 8 (2012): 22–25, doi.org/10.1002/scin.5591820826.

(21) Forum on Information and Democracy (2024), AI as a Public Good: Ensuring Democratic Control of AI in the Information Space, informationdemocracy.org/wp-content/uploads/2024/03/ID-AI-as-a-Public-Good-Feb-2024.pdf.

(22) Pawan Singh and Dr Bharat Dhiman, "Exploding AI-Generated Deepfakes and Misinformation: A Threat to Global Concern in the 21st Century," SSRN Scholarly Paper (Rochester, NY: Social Science Research Network, December 1, 2023).

(23) Goodness Esom "3 ways regulation can prevent deepfake greenwashing" World Economic Forum. 2025. www.weforum.org/stories/2025/07/deepfake-greenwashing-regulations/

(24) Jacob Poushter, Maria Smerkovich, Moira Fagan, and Andrew Prozorovsky "Widespread Public Concern about made-up news" Pew Research Centre. 2025.

In addition to deepfakes, targeted AI has become a key tool in spreading climate change disinformation. By harnessing vast amounts of data on individual behaviors, preferences, and political leanings, AI algorithms can help craft highly personalized messages. These messages are tailored to resonate with specific segments of the population, making them more persuasive and increasing their chances of being shared. [25] For instance, a targeted AI campaign might focus on certain social media users who express skepticism about climate science, bombarding them with content that aligns with their views, while simultaneously reinforcing doubts about the credibility of mainstream scientific consensus. This is demonstrated by findings that suggest AI-driven microtargeting affects 34% of social media users—a number that is continuing to grow. [26] Additionally, the Reuters Institute conducted a survey across eight countries with 25% of respondents indicating they believe they see false or inaccurate information about climate change on a weekly basis. [27]

These rapidly evolving technologies allow disinformation campaigns to outpace traditional countermeasures such as fact-checking or public rebuttals. [28] These campaigns are well resourced, enabling actors to exploit social media algorithms and peer-to-peer networks, amplifying misleading narratives that appear credible and emotionally resonant. As a result, even authentic reporting can be misinterpreted or dismissed, contributing to public confusion, skepticism, and apathy.

2.2/ **Evolution** of **Narrative Strategies**

The strategies used in climate change disinformation have also evolved over time, shifting from simple denial to more sophisticated tactics that aim to sow confusion and uncertainty. Initially, climate change disinformation campaigns focused largely on outright denial—asserting that climate change was either a hoax or not caused by human activity. [29] This approach was commonly found in the early 2000s, when some political figures and media outlets flatly rejected the scientific consensus on climate change, arguing that the earth's climate had always been subject to natural cycles and that human activity was not responsible for the observed warming trends. [30]

(25) Robert P. Griffin, Unal Tatar, and Benjamin Yankson, ICCWS 2022 17th International Conference on Cyber Warfare and Security (Academic Conferences and Publishing Limited, 2022).

(26) Alexander Romanishyn, Olena Malitska, and Vitaliy Goncharuk "AI-driven disinformation: policy recommendations for democratic resilience. Frontier in Artificial Intelligence. 2025, www.frontiersin.org/journals/artificial-intelligence/articles/10.3389/frai.2025.1569115/full.

(27) Dr Waqas Ejaz, Mitali Mukherjee, and Dr Richard Fletcher "Climate change and news audiences report 2024: Analysis of news use and attitudes in eight countries" Reuters Institute for the Study of Journalism. 2025, reutersinstitute.politics.ox.ac.uk/climate-change-and-news-audiences-report-2024-analysis-news-use-and-attitudes-eight-countries

(28) Kertysova, K. (2018), "Artificial Intelligence and Disinformation." in Security and Human Rights, 29, doi:10.1163/18750230-02901005

(29) Heffernan, A. (2024), "The Climate Policy Crisis:Governing Disinformation in the Digital Age", Center for International Governance Innovation, www.cigionline.org/static/documents/DPH-paper-Heffernan.pdf

(30) Kertysova, K. (2018), "Artificial Intelligence and Disinformation." in Security and Human Rights, 29, doi:10.1163/18750230-02901005

As the scientific consensus on climate change solidified and public awareness grew, disinformation campaigns initially adapted their tactics, shifting from outright denial to more nuanced strategies. For several years, one of the most common approaches was to acknowledge that climate change exists while downplaying its severity or the urgency of addressing it—for instance, by framing it as a natural cycle or insisting its impacts would be manageable. However, this evolution has now come full circle. In the current political environment, high-profile actors have returned to explicit denial of climate science, demonstrating that disinformation ecosystems can oscillate between sophistication and blunt rejection depending on political incentives and audience receptivity. Others claim that climate models are unreliable, that the science is still uncertain, or that the costs of addressing climate change are too high.[31] A 2021 survey by Yale's Program on Climate Change Communication found that 58% of Americans understand that global warming is mostly human-caused. By contrast, 29% think it is caused mostly by natural changes in the environment. Such findings reflect the ongoing challenges to effectively communicating the longheld scientific consensus regarding the reality of anthropogenic climate change among certain segments of the population.[32] In the EU, a 2025 Eurobarometer report indicated that 49% of citizens say that it is difficult to distinguish between accurate and false information on climate change on social media, reinforcing uncertainty and skepticism despite widespread scientific consensus. [33] Alternatively, someone whose clicks suggest they believe in the science of climate change might be targeted differently, such as by messages about how a carbon tax is ineffective at reducing greenhouse gases, or that EVs are worse for the environment than vehicles that run internal combustion engines.

A key tactic of disinformation is the deliberate downplaying of the link between human-driven climate change and extreme weather events.[34] Campaigns often frame wildfires, hurricanes, floods, or droughts as isolated incidents or part of natural variability, while ignoring the systemic, long-term impacts of global warming. [35] This narrative minimizes perceived urgency, weakens public demand for policy action, and delays investment in structural solutions such as renewable energy, climate adaptation, or emissions reduction. By framing climate action in terms of uncertain technological fixes, these campaigns also preserve the status quo, benefitting industries and political actors with vested interests in delaying mitigation. [36]

(31) ibid

(32) Anthony Leiserowitz, Edward Maibach, Seth Rosenthal, John Kotcher, Emily Goddard, Jennifer Carman, Matthew Ballew, Marija Verner, Jennifer Marlon, Sanguk Lee, Teresa Myers, Matthew Goldberg, Nicholas Badullovich and Kathryn Thier. "Climate Change in the American Mind: Beliefs and Attitudes, Fall 2023" 2023. climatecommunication.yale.edu/publications/climate-change-in-the-american-mind-beliefs-attitudes-fall-2023/toc/2/.

(33) European Commission. Europeans Consider Tackling Climate Change a Priority and Support Energy Independence. 2025. https://ec.europa.eu/commission/presscorner/detail/en/ip_25_1376

(34) Andrew Heffernan, "In the Wake of Helene and Milton: Battling the Hurricane of Misinformation," Centre for International Governance Innovation, www.cigionline.org/articles/in-the-wake-of-helene-and-milton-battling-the-hurricane-of-misinformation/.

(35) Kevin B. Wright, "Social Media Misinformation About Extreme Weather Events and Climate Change," in Communication and Catastrophic Events (John Wiley & Sons, Ltd, 2022), 137–54, doi.org/10.1002/9781119751847.ch9.

(36) Fiona Harvey, "'Massive Disinformation Campaign' Is Slowing Global Transition to Green Energy," The Guardian, August 8, 2024, sec. Environment, www.theguardian.com/environment/article/2024/aug/08/fossil-fuel-industry-using-disinformation-campaign-to-slow-green-transition-says-un.

Findings from the IPIE outline significant gaps in research on climate information integrity, particularly in the Global South. Similarly, the Observatory's report shows a general gap of research on information integrity in the Global South, with only about 20% of research focusing on that region. [37] The IPIE's research further shows that coordinated misinformation campaigns actively shape climate narratives and that scientific consensus is frequently misrepresented in media. [38]

These takeaways also feed into the way attacks on information integrity have proliferated to increasing degrees of success in both the Global North and South. For example, in Brazil, the passage of the controversial PL 2159/2021—dubbed the "Devastation Bill"—highlights how disinformation can directly undermine environmental governance. A central falsehood used to justify the bill claimed that 5,000 development projects were stalled due to environmental licensing requirements. Despite being repeatedly cited by legislators and amplified across platforms via ads and social media, the number was fabricated. Investigations revealed no supporting data from any government source, including the ministries allegedly responsible [39]. The narrative, designed to frame oversight as a barrier to progress, was strategically disseminated to build public support for the bill. Its provisions severely weaken Brazil's environmental licensing regime by introducing "trust-based" approvals, expanding exemptions, and removing federal oversight and transparency mechanisms. This case illustrates the high-level political use of disinformation to legitimize deregulatory agendas that threaten biodiversity and environmental accountability.

Additionally, disinformation campaigns have progressively focused on dividing public opinion and framing climate change as a highly polarized issue. [40] By emphasizing debate and discord among scientists or presenting climate change as a partisan issue, these campaigns create a sense of uncertainty, causing the public to question the validity of established scientific consensus and pushing them to agree with their team, rather than to think critically about the issue for themselves. These tactics are designed to slow down policy action and prevent broad-based public support for necessary climate reforms.

The latest research in Brazil, ahead of and during COP30, shows that disinformation campaigns were less and less focused on the climate issue, but rather used COP to delegitimize the government, undermining trust in the institutions and actors. Messages portrayed COP as a corruption scandal and government failure thereby undermining climate action. [41]

(37) Forum on Information and Democracy (2025), Information Ecosystems and Troubled Democracy, Observatory on Information and Democracy, observatory.informationdemocracy.org/reports/

(38) International Panel on the Information Environment [E. Elbeyi, K. Bruhn Jensen, M. Aronczyk, J. Asuka, G. Ceylan, J. Cook, G. Erdelyi, H. Ford, C. Milani, E. Mustafaraj, F. Ogenga, S. Yadin, P. N. Howard, S. Valenzuela (eds.)], "Information Integrity about Climate Science: A Systematic Review," Zurich, Switzerland: IPIE, 2025. Synthesis Report, SR2025.1, http://doi.org/10.61452/BTZP3426.

(39) Thais Lazzeri and Rafael de Pino, "How Does a Lie Become Law?," Substack newsletter, Oii - Observatory for Information Integrity - Climate (blog), July 31, 2025.

(40) J. Bellamy, "Climate Change Disinformation and Polarization in Canadian Society," 2020, www.semanticscholar.org/paper/Climate-Change-Disinformation-and-Polarization-in-Bellamy/0d8d74e1f6ae837300db1bb6193897e3bd030c3d.

(41) Thais Lazzeri and Rafael de Pino, "Denying climate change is no longer the main strategy. The new strategy is to make you give up on those trying to confront it," Substack newsletter, Oii - Observatory for Information Integrity - Climate (blog), December 16, 2025.

3. KEY DOMAINS AND VULNERABILITIES

As climate change accelerates and other environmental crises deepen, the information ecosystems required to confront these challenges are themselves increasingly under strain. Around the world, civic space is shrinking and freedom of the press is under growing pressure, weakening the foundational rights that underpin environmental democracy—freedom of expression, access to information, public participation, and freedom of assembly. These constraints are imposed not only by states, through censorship, legal intimidation, and restrictions on civil society and journalists, but also by powerful private actors that now exercise significant influence over the visibility, circulation, and monetization of environmental information.

In particular, the concentration of communicative power in a small number of digital platforms and their owners has created profound accountability gaps. Platform governance decisions—determining which sources and narratives are amplified, which are suppressed or deprioritized, and which are financially rewarded—are shaped by opaque corporate policies and, at times, by the ideological positions of individual executives. The emergence of highly visible "chief denial officers," including technology leaders who publicly question or downplay established scientific consensus, illustrates how private control over digital infrastructures can have systemic effects on public understanding, political debate, and environmental governance. In the absence of robust regulatory oversight, transparency obligations, and enforceable duties of care, these actors exercise forms of quasi-public authority without commensurate democratic accountability, enabling the large-scale circulation of denial, delay, and distortion while avoiding responsibility for their societal and environmental impacts.

Together, these dynamics undermine informed public participation and effective oversight across core environmental domains. Disinformation, restricted access to data, and the silencing or intimidation of journalists and environmental defenders diminish the capacity of communities to assess risks, contest harmful projects, and hold both governments and corporations to account.

Although international and regional instruments—from the Aarhus Convention to relevant United Nations resolutions—recognize access to environmental information as a legal right and a cornerstone of environmental protection, implementation remains uneven and, in many contexts, deliberately obstructed. Some states frequently privilege political and economic interests over their obligations to collect, disclose, and proactively disseminate information on environmental risks and harms. At the same time, private companies, particularly in the extractive, agribusiness, energy, and infrastructure sectors, often operate in conditions of opacity, withholding or strategically framing data that affected communities require to protect their health, livelihoods, and ecosystems. Despite existing normative frameworks, including the UN Guiding Principles on Business and Human Rights, corporate actors are rarely held accountable for the suppression, distortion, or strategic manipulation of environmental information, further entrenching asymmetries of power and weakening democratic oversight in the environmental domain.

3.1/ Environmental Journalism Under Threat

Across the globe, environmental journalism plays a critical role in exposing ecological harm, amplifying community struggles, and holding powerful actors accountable. Yet, as environmental crises intensify—particularly in domains beyond climate, such as biodiversity loss, land use, and pollution—journalists, media outlets, and environmental defenders face an increasingly hostile and digitally mediated landscape.[42] One UNESCO report reveals 70% of environmental journalists have been attacked for their work.[43] The same report found that at least 749 journalists or news media working on environmental issues have been attacked in the past 15 years—a period in which online disinformation has proliferated as well. Data from Reporters Without Borders (RSF) also finds that nearly 30 environmental journalists were killed over the past decade.[44]The examples below, from across the globe and in particular across much of the Global South, include instances highlighting how attacks on information integrity are deeply entangled with structural inequalities, violence, digital exclusion, and shrinking civic space.

RSF highlights a stark correlation between natural resource extraction and press freedom risks, showing that two-thirds of the world's natural resources—including fossil fuels, minerals, and forest products—are extracted in countries where press freedom is classified as "difficult" or "very serious".[45] In these contexts, investigating environmental degradation, pollution, or the social impacts of extractive projects is often impossible or dangerous, as reporting can draw censorship, harassment, or criminalization, leaving the public uninformed about critical ecological and human rights violations. This extractivism–press freedom nexus not only obstructs independent environmental journalism but also reinforces information voids exactly where scrutiny is most urgently needed.

Environmental journalists serve as vital mediators between technical knowledge, local experience, and public accountability, yet they are frequently subjected to threats, legal intimidation, and violence. In Brazil, investigative journalists documenting illegal logging in the Amazon have been targeted by disinformation campaigns and surveillance. In Mexico, local journalists covering water pollution and illegal mining often operate in precarious conditions, facing both cartel-linked violence and state hostility.[46] This underscores both the threats to environmental journalism and the creative strategies being developed to maintain public access to environmental knowledge.[47]

(42) Barbara Trionfi and Leopold Salzenstein, "Climate and Environmental Journalism under Fire:Threats to Free and Independent Coverage of Climate Change and Environmental Degradation" (International Press Institute, 2024).

(43) UNESCO, "UNESCO Report Reveals 70% of Environmental Journalists Have Been," 2024. www.unesco.org/en/articles/unesco-report-reveals-70-environmental-journalists-have-been-attacked-their-work

(44) RSF (2025) "Earth Day: protecting reliable journalism, a pillar in the fight against global warming", rsf.org/en/earth-day-protecting-reliable-journalism-pillar-fight-against-global-warming

(45) RSF (2024) "Two thirds of the world's natural resouces are extracted in countries where press freedom is in serious danger" rsf.org/en/two-thirds-world-s-natural-resources-are-extracted-countries-where-press-freedom-serious-danger

(46) Charles (Chip) Barber, "Organized Crime in The Amazon: A Growing Threat to the World's Greatest Tropical Rainforest," July 9, 2025, www.wri.org/insights/nature-crime-amazon-deforestation.

(47) Benjamin Kurylo, "The Environmental Impact of Illegal Mining in Latin America," Earth.Org (blog), April 26, 2024, https://earth.org/the-environmental-impact-of-illegal-mining-in-latin-america/.

Environmental journalists are facing growing hostility, especially when covering protests, corporate malfeasance, or state inaction. In Europe, reporters have faced prosecution and detention; in the Asia-Pacific, journalists are targeted with restrictive laws, online harassment, and censorship. In highly repressive contexts, such as the Middle East and North Africa, environmental journalism is nearly impossible.[48] These threats directly suppress information that the public needs to understand environmental degradation and advocate for change. The 2023 revocation of the media license of Voice of Democracy (VOD) in Cambodia, following its reporting on illegal deforestation, illustrates how state retaliation silences independent media and stifles civic oversight.[49] In response, civil society actors such as the Cambodian Center for Independent Media have created open databases like Kamnotra to independently monitor and document environmental harm, showcasing the critical role of non-state actors in protecting the public's right to know.[50]

Across South Asia, environmental journalists face growing constraints that mirror many challenges seen in Latin America, though often through legal and structural pressures rather than lethal violence. Research by Media Action Nepal highlights how reporters in Nepal, India, and Bangladesh documenting issues such as hydropower development, sand mining, or industrial pollution face intimidation from local elites, corporations, and state authorities[51]. These pressures—surveillance, defamation threats, and forced self-censorship—significantly restrict public access to environmental information, especially in rural regions where communities already lack institutional protection.

The Climate Change News Audience Report 2025 finds that although public interest in climate information remains high and stable, the availability of climate coverage is shrinking at a critical moment. Across eight countries surveyed (Brazil, France, Germany, India, Japan, Pakistan, the UK, and the US), engagement with climate news has shown little growth in recent years despite escalating climate impacts, and in several major markets—France, Germany, Japan, the UK, and the US—consumption has declined, largely attributed to reduced TV coverage and lower consumption among audiences aged 45+. This suggests that supply-side constraints in news availability may be driving lower use more than fading public concern. Roughly half of respondents still trust news media for climate information, with trust ranging from 72% in Pakistan to 36% in France, yet trust in politicians and parties remains low at just 23%, widening the trust gap between media, science, and political sources.[52] Taken together, these figures highlight a persistent mismatch between audience demand for climate information and the volume of journalistic coverage available to meet it—a dynamic that deepens the threat to the quality of environmental journalism.

(48) Derechos Digitales et al., "Contribution to the International Partnership for Information and Democracy's Call: Addressing Disinformation and Attacks on Information Integrity on Environmental Issues Beyond Climate Change," 2025.

(49) RSF, "Cambodia | RSF," June 13, 2025, https://rsf.org/en/country/cambodia.

(50) Phon Sothyroth, "New Interactive Database Expands Access to Public Information | CamboJA News," June 21, 2023.

(51) Media Action Nepal "Young Journalists Equipped to Counter Disinformation and Promote Inclusive Reporting" 2025.

(52) Waqas Ejaz, Mitali Mukherjee, and Richard Fletcher "Climate Change News Audience Report 2025: Analysis of News Use and Attitudes in Eight Countries" Reuters Institute for the Study of Journalism. 2025.

These coverage and engagement trends play out against a broader crisis in public interest media marked by financial instability and erosion of editorial independence. Many legacy public broadcasters and newsrooms face viability challenges, with shrinking revenues, layoffs, and closures undermining their capacity to sustain in-depth reporting on complex subjects like climate change. These pressures are compounded by ownership structures where commercial imperatives or political influence can shape editorial priorities, weakening independent journalism and narrowing the diversity of voices in the public sphere. In environments where trusted outlets struggle to survive or are constrained in their editorial autonomy, audiences are more likely to encounter fragmented, low-quality, or polarized information—further imperiling the role of journalism in democratic climate discourse and informed public engagement.

3.2/ **Digital Exclusion** and **Inequitable Access to Environmental Information**

Environmental information integrity is tightly linked to internet access, yet global connectivity remains uneven: as of 2024 roughly 71% of the world's population are online, leaving hundreds of millions offline, and widening information gaps that disproportionately affect underserved communities.[53] In Latin America, while overall internet use is relatively high at around 82% of the population, fixed broadband infrastructure remains limited (with only about 18% fixed broadband penetration), and rural, Indigenous, and low-income populations still face significant barriers to meaningful, reliable connectivity.[54] In the framework of this workstream, evidence notably from civil society organizations (CSOs) in Latin America: Derechos Digitales, Nupef, Tedic and Fundacion Karisma illustrates the point. Rural, Indigenous, and traditional communities—those most directly engaged in environmental defense—are systematically excluded from robust digital infrastructure. In Colombia's Vaupés department, fixed internet penetration is as low as 0.16 connections per 100 inhabitants.[55] In Brazil's Amazon region, research by Derechos Digitales and Instituto Nupef shows that connectivity often favors extractive industries while leaving defenders disconnected.[56]

Paraguay exemplifies how structural inequalities are reinforced through digital policy. TEDIC found that Paraguay's Universal Service Funds—intended to bridge the digital divide—were instead spent on facial recognition surveillance systems, undermining both digital rights and community autonomy.[57] In socio-environmental conflict zones, internet shutdowns and service disruptions have been used to block community mobilization and obscure state abuses, violating international norms on freedom of expression.[58]

(53) World Bank "Individuals using the Internet (% of population)" data.worldbank.org/indicator/IT.NET.USER.ZS

(54) World Bank "Individuals using the Internet (%of population) - Latin America & Caribbean" data.worldbank.org/indicator/IT.NET.USER.ZS?locations=ZJ

(55) Juan Ignacio Crosta Blanco and Maria Jose Vidal Roman, "What Is the Way Forward to Include Everyone in the Digital Age?," World Bank Blogs, 2023.

(56) Derechos Digitales et al., "Contribution to the International Partnership for Information and Democracy's Call: Addressing Disinformation and Attacks on Information Integrity on Environmental Issues Beyond Climate Change."available at: www.derechosdigitales.org/wp-content/uploads/Contribucio%CC%81n-completa-final-FID-1.pdf

(57) TEDIC, "Not with My Face: The Paraguayan State Deploys Facial Recognition without Transparency or Oversight," TEDIC (blog), April 29, 2025.

(58) Jacqueline Rowe and Saba Mah'derom, "Weaponizing Internet Shutdowns to Evade Accountability for Rights Violations," OpenGlobalRights, 2023.

Meanwhile, commercial practices such as zero-rating further restrict the diversity of information accessible to communities. These practices prioritize corporate platforms (e.g., Facebook or WhatsApp) over open internet access, narrowing the flow of environmental knowledge and limiting the ability of defenders to access laws, organize campaigns, or engage with international advocacy networks. [59]

Community networks have emerged as a rights-based alternative. Built and governed by local actors, these networks prioritize autonomy, cultural relevance, and resilience. Yet they face significant regulatory and financial obstacles, such as restrictive spectrum policies and burdensome licensing requirements. [60] Without state support, they remain exceptional rather than systemic solutions—despite their transformative potential for democratizing access to environmental information.

3.3/ **Critical Voices Face Threats, Digital Surveillance,** and **Online Violence**

According to Global Witness, over 2,100 land and environmental defenders were killed globally between 2012 and 2023, with 2023 marking the highest number of such murders—most of them in Latin America. [61] The region is home to more than 40% of the planet's biodiversity, but this ecological richness has been accompanied by high-stakes conflicts over land, resources, and territory—often at the expense of those who seek to protect it. [62]

Defenders from Indigenous, rural, or marginalized communities are particularly vulnerable due to limited legal protection and systemic discrimination. In Colombia for example, Indigenous and Afro-descendant communities in the Amazon have faced severe repression for opposing extractive projects. [63] The lack of transparency around environmental decision-making, combined with impunity for violence, fosters a chilling effect that discourages public participation and allows harmful development projects to proceed unchecked. Civil society initiatives—such as those led by Africa Freedom of Information Centre in Uganda and Globe International Center in Mongolia—have sought to empower communities to demand access to information and participate in decision-making, demonstrating the potential for bottom-up accountability mechanisms to fill governance gaps. [64]

(59) Dennis Brouwer, "A Non-Discrimination Principle for Rankings in App Stores," Internet Policy Review, 9(4), 2020, https://doi.org/10.14763/2020.4.1539.

(60) Laronda A. Hollimon et al., "Redefining and Solving the Digital Divide and Exclusion to Improve Healthcare: Going beyond Access to Include Availability, Adequacy, Acceptability, and Affordability," Frontiers in Digital Health 7 (April 22, 2025), https://doi.org/10.3389/fdgth.2025.1508686

(61) Derechos Digitales et al., "Contribution to the International Partnership for Information and Democracy's Call: Addressing Disinformation and Attacks on Information Integrity on Environmental Issues Beyond Climate Change," 2025.

(62) Fermín Koop, "Latin America Is World's Worst-Hit Region for Wildlife Loss, Report Says," Dialogue Earth (blog), October 10, 2024.

(63) "Colombia: The Struggle of Environmental Defenders, between Structural Violence and Resistance – GENDEREDCLIMATEMIG," accessed July 29, 2025.

(64) African Freedom of Information Center, "Why Climate Financing Needs to Take Centre Stage," July 8, 2025.

Digital technologies are now central to environmental advocacy—but they also enable new forms of repression as exemplified by studies from across Latin America, where defenders face digital surveillance, phishing attacks, doxxing, social media manipulation, and hacking. According to TEDIC and Fundación Karisma, many environmental activists in Paraguay and Colombia operate with limited digital literacy and almost no access to digital security training. In Paraguay, over 75% of surveyed women defenders lacked digital security protocols, and one in three Colombian women defenders had experienced online harassment. [65]

Surveillance tools—ranging from spyware to facial recognition—are being deployed under the guise of public safety, but often target civil society. Infiltration of WhatsApp groups, monitoring of activist movements, and manipulation of online narratives are increasingly common. [66] These digital threats intersect with preexisting patterns of racism, sexism, and colonial power, intensifying both the personal and collective risks defenders face.

The psychological impact is also severe: defenders report emotional exhaustion, self-censorship, and reduced participation in public life. [67] These dynamics directly impair the production and circulation of environmental knowledge, as defenders—often the primary sources of data in ecologically threatened regions—are silenced or forced offline.

Finally, worldwide environmental defenders are victims of disinformation campaigns in attempts to discredit their credibility and delegitimize their causes. High-profile figures like Greta Thunberg have faced orchestrated smear campaigns accusing them of being mentally unfit or manipulated by shadowy interests. These personal attacks, amplified by powerful political figures and online communities, are intended to distract from the activists' messages and fracture public trust. [68] South African climate activists have faced similar vilification: in 2021, Gwede Mantashe, Minister of Petroleum and Mineral Resources in South Africa, equated opposition to Shell's seismic exploration plans with "apartheid and colonialism of a special type," effectively reframing environmental protest as anti-national [69]. Such narratives weaponize history and identity to erode the legitimacy of environmental advocacy and suppress public discourse.

Environmental defenders are not merely victims of disinformation or repression—they are knowledge producers, watchdogs, and advocates whose work underpins environmental integrity itself. Their capacity to operate safely and communicate effectively is foundational to the broader struggle for ecological sustainability and democratic accountability. [70]

(65) TEDIC, "Not with My Face", 2025, www.tedic.org/en/not-with-my-face-the-paraguayan-state-deploys-facial-recognition/

(66) Joao V. S. Ozawa et al., "How Disinformation on WhatsApp Went From Campaign Weapon to Governmental Propaganda in Brazil," Social Media + Society 9, no. 1 (January 1, 2023): https://doi.org/10.1177/2056305123116063.

(67) Global Witness, "Online Abuse of Environmental Defenders Harms Climate Action," Global Witness, accessed July 29, 2025.

(68) Joshua Nevett, "Greta Thunberg: Why Are Young Climate Activists Facing So Much Hate?," August 28, 2019.

(69) Emsie Ferreira, "High Court Halts Shell's Seismic Exploration along Wild Coast," The Mail & Guardian (blog), December 28, 2021.

(70) Trionfi and Salzenstein, "Climate and Environmental Journalism under fire: Threats to Free and Independent Coverage of Climate Change and Environmental Degradation," 2024.

3.4/ **Platform Governance, Visibility,** and **Structural Inequality**

Dominant tech platforms have become essential yet unreliable vehicles for environmental communication. Research by Fundación Karisma shows that automated moderation systems disproportionately flag or suppress content on environmental and human rights topics[71]. Advocacy posts are often shadowbanned, removed, or classified under "sensitive" categories that reduce visibility—particularly when they involve political content or reference Indigenous rights, extractive industries, or social unrest.

This results in pervasive self-censorship among civil society organizations and journalists. Some groups avoid using key terms to prevent takedowns; others resort to vague language, reducing the clarity and reach of their messaging. [72] In many cases, even verified or paid posts from CSOs face algorithmic deboosting, while commercial greenwashing content circulates freely.

The digital advertising ecosystem further marginalizes environmental voices. Because CSOs are categorized under "social issues, elections, or politics," their ads are subjected to heightened scrutiny. Many organizations lack the financial tools to participate in ad systems—such as access to credit cards, verified accounts, or tax infrastructure—and when they do, the returns are often poor. [73] This compounds existing budget constraints and creates a form of structural digital exclusion.

Appeals processes are opaque and slow, with organizations reporting months-long delays or no response at all. Even the civil society engagement mechanisms of platforms themselves are fragmented and inconsistent. [74] The absence of public-interest safeguards in platform governance is not just a technical problem—it is a democratic one. When environmental journalism is muted, the public loses access to critical information about land conflicts, pollution, biodiversity loss, and corruption.

3.5/ The **Monetization** of **Disinformation**

The spread of environmental and climate disinformation is closely tied to the underlying business models of digital platforms and the wider attention economy. Social media algorithms are designed to maximize engagement, often amplifying sensationalist or polarizing content, while deprioritizing slower, evidence-based reporting. Disinformation actors exploit this dynamic to generate clicks, views, and shares, which translate directly into advertising revenue, subscription conversions, or donations for ideologically aligned campaigns. Coordinated campaigns—including astroturfing, greenwashing, and pseudo-news

(71) Rachel Griffin, "Algorithmic Content Moderation Brings New Opportunities and Risks," Centre for International Governance Innovation, 2023.

(72) Merlyna Lim and Ghadah Alrasheed, "Biased Algorithms and Moderation Are Censoring Activists on Social Media," Carleton Newsroom (blog), 2021.

(73) Peterson K. Ozili, "Impact of Digital Finance on Financial Inclusion and Stability," Borsa Istanbul Review 18, no. 4 (December 1, 2018): 329–40, https://doi.org/10.1016/j.bir.2017.12.003.

(74) Siapera (Eugenia) and Farries (Elizabeth), "Platform Governance and Civil Society Organisations: Tensions between Reform and Revolution Continuum," March 31, 2025, https://doi.org/10.14763/2025.1.2002.

outlets—leverage low production costs and high virality to achieve outsized influence at minimal expense. Platforms themselves often lack transparent or consistently enforced moderation policies, particularly for environmental topics beyond climate change, creating an ecosystem in which misleading narratives are financially rewarded, while independent journalism struggles to reach audiences. The result is a self-reinforcing market where disinformation is profitable, systemic, and increasingly integrated into the monetization strategies of both commercial and politically motivated actors.

The online rise of hashtags such as #ClimateScam during COP27 in Egypt, alongside algorithmic biases that deprioritize climate content, reveal how digital platforms can exacerbate information distortion. [75]

Fossil fuel companies, in particular, have long engaged in disinformation campaigns to delay climate action. From the Global Climate Coalition in the 1990s to online ads sponsored by major polluters today, these actors have strategically misled the public about climate science and the feasibility of renewable energy solutions. These misleading ads from major polluters take many forms, but one study found that the fossil fuel industry alone "has spent $1.4 billion [between 2010 and 2020] to convince us that humans cannot and will not survive without fossil fuels." [76]

Research from Climate Action Network has documented how major oil and gas companies and their industry associations deploy sophisticated communication strategies—across social media, paid advertising, and sponsorship of high-profile climate events—to project alignment with climate action while continuing to expand fossil fuel production. [77] These campaigns frequently emphasize marginal investments in renewable energy, carbon capture, or "net-zero" pledges, while obscuring the scale of ongoing emissions and sustained lobbying against stronger climate regulation. [78]

The Climate Action Network research shows that fossil fuel advertising and sponsored content often evade meaningful scrutiny on major platforms, even when claims contradict scientific consensus or national climate commitments. [79] During key political moments—such as COP negotiations — increased volumes of misleading content framing climate action as economically harmful, technologically unrealistic, or socially divisive were consistently observed. These findings reinforce concerns that platform business models and opaque digital advertising systems facilitate the large-scale spread of climate disinformation.

Analyses conducted by the Conscious Advertising Network (CAN) and other watchdog organizations demonstrate that contemporary digital advertising systems are structurally opaque, and characterized by automated placement and limited transparency regarding both advertisers and content recipients. In the absence of robust "know your customer" standards or financial traceability requirements, advertising revenues routinely flow to websites, influencers, and content networks that disseminate harmful or misleading

(75) "Deny, Deceive, Delay: Disinformation at COP Climate Summits," World without Fossil Ads (blog), accessed July 28, 2025.

(76) Audrey Shreiber "Big Oil Dumps Billions Into Misleading Advertising Campaigns". 2020. earthrights.org/blog/big-oil-dumps-billions-into-misleading-advertising-campaigns/.

(77) CAAD "A 2,900% Increase in Greenwash" 2025. caad.info/wp-content/uploads/2025/11/A-2900-Increase-in-Greenwash_-Big-Oil-Targeted-Brazil-With-Google-Ads-To-Undermine-COP30.pdf

(78) CAAD "Deny, Deceive, Delay: Deemysitified" 2025. caad.info/analysis/reports/deny-deceive-delay-demystified/

(79) CAAD "Climate Action Requires Truth: COP 30 Must Codify Information Integrity" 2025. caad.info/analysis/reports/cop30-open-letter/

information, including climate disinformation. Estimates indicate that global losses from digital advertising fraud reached approximately USD 84 billion in 2023, underscoring the scale of systemic inefficiencies and the extent to which current advertising infrastructures fail to align commercial incentives with public-interest outcomes.

In response, CAN and allied organizations have called for systemic reforms to the digital advertising ecosystem, including mandatory transparency across ad-tech supply chains, financial traceability of advertising placements, and clearer accountability mechanisms for platforms and intermediaries that profit from disinformation. Without such reforms, digital advertising systems will continue to subsidize climate disinformation, distort public debate, and undermine democratic decision-making and effective environmental governance.

3.6/ **Biodiversity Loss** and the **Discrediting** of **Conservation Science**

Efforts to address biodiversity loss—a crisis of equal urgency to climate change—are increasingly undermined by coordinated disinformation and influence campaigns. Disinformation tactics include misrepresenting the conservation status of endangered species, promoting false narratives about the impacts of protected areas on local livelihoods, and discrediting scientists and organizations engaged in biodiversity monitoring. In Brazil, Indigenous-led monitoring of illegal mining in protected areas of the Amazon has been met with both physical threats and online attacks aimed at delegitimizing the data produced by local communities. [80] Similar patterns are observed globally, where powerful agribusiness or extractive interests attempt to reframe habitat protection as an impediment to economic development.

In some contexts, government-aligned media and industry influencers have also accused conservation initiatives of being "foreign-imposed" or manipulated by Western NGOs, sowing suspicion and resistance among local populations. [81] These narratives obstruct efforts to enforce biodiversity protection laws and foster mistrust in scientific institutions. Biodiversity-focused disinformation often intersects with nationalist, anti-globalist, or anti-Indigenous rhetoric, compounding risks for those defending ecologically sensitive regions. [82]

Digital campaigns further exacerbate this trend. In Southeast Asia, research by environmental watchdogs has revealed bot-driven amplification of messages opposing environmental impact assessments for large infrastructure projects in key biodiversity areas. [83] The erosion of trust in conservation science and local monitoring efforts directly undermines both global targets—such as those under the Kunming-Montreal Global Biodiversity Framework—and local community rights to participate in decision-making and access reliable information.

(80) Aline Hoffmann, "The Impacts of Fake News on Democratic States and the Parallel Environmental Impacts Brazil and Spain," Sostenibilidad Económica, Social y Ambiental, no. 7 (2025): 1–43.

(81) Saskia Brechenmacher, "Civil Society Under Assault: Repression and Responses in Russia, Egypt, and Ethiopia | Carnegie Endowment for International Peace," 2017.

(82) Manu E. Saunders, Alexander C. Lees, and Eliza M. Grames, "Understanding and Counteracting the Denial of Insect Biodiversity Loss," Current Opinion in Insect Science 68 (2025), https://doi.org/10.1016/j.cois.2025.101338.

(83) Hema Nadarajah, "Environmental Intelligence: The Ambitious New Global Biodiversity Framework: The View from Southeast Asia," Asia Pacific Foundation of Canada, 2023.

The threats facing environmental journalism are not abstract—they directly shape how societies understand and respond to accelerating ecological crises. As demonstrated during events such as the 2022 Pakistan floods, gaps in accurate and contextualized information can deepen harm, delay government action, and erode public trust, with the heaviest impacts borne by already vulnerable populations. Across regions, disinformation, censorship, intimidation, and shrinking newsroom capacity are weakening the ability of journalists, scientists, environmental defenders, and Indigenous knowledge-holders to provide timely, credible reporting and to hold state and corporate actors accountable.

These pressures fall hardest on structurally marginalized communities, who face both greater environmental risk and reduced access to reliable information, reinforcing patterns of inequality. At the same time, the media systems that should enable transparent and independent environmental reporting—public interest outlets, strong legal protections, diverse civic institutions—are themselves under strain. Taken together, these dynamics undermine the informational foundations required for democratic oversight and effective environmental governance, raising urgent concerns about our collective ability to mount a just, science-informed response to the environmental crises of our time.

4. CURRENT RESPONSES AND REMAINING GAPS

Efforts to counter disinformation and strengthen information integrity in environmental contexts are still largely fragmented, underfunded, and reactive. While climate-focused disinformation has received growing international attention, [84] there is far less institutional awareness or investment in protecting the integrity of information in other critical environmental domains such as biodiversity, deforestation, water pollution, and land use. This section reviews existing responses and identifies key policy, regulatory, and capacity gaps that require urgent attention.

4.1/ Gaps in **Platform Regulation** and **Algorithmic Accountability**

Platform governance remains a critical but underdeveloped component of information integrity. Major platforms continue to operate with limited transparency, inconsistent rules, and weak enforcement—even where policies nominally exist. While some companies have introduced labels or fact-checking partnerships, their policies rarely cover biodiversity loss, pollution, extractive industry abuses, or land-use conflicts. [85] Automated moderation systems frequently misclassify and downrank legitimate environmental reporting, while coordinated greenwashing and astroturfing campaigns continue to spread with minimal friction. These failures are magnified at the local level: Indigenous, rural, and grassroots organizations often

(84) This is demonstrated by responses to the workstream from UN bodies such as the UN Secretary-General, UNESCO, the Office of the High Commissioner for Human Rights, the UNFCCC Secretariat, and the UN Special Rapporteurs on freedom of expression and human rights and the environment, as well as responses from fact-checking coalitions.

(85) OSCE Representative on Freedom of the Media "Safeguarding Media Freedom in the Age of Big Tech Platforms and AI" 2025.

see key content removed or deprioritized, while misleading narratives targeting their communities face little moderation. Appeals processes are slow or inaccessible, and algorithmic incentives continue to reward sensationalist or misleading material over slower, evidence-based journalism.

The need for platform regulation has gained more attention during recent years, with major regulations including the EU's Digital Services Act (DSA). However, in addition to implementation gaps, most of these regulations have yet to specifically address climate and environmental disinformation.

Despite the significant gaps that remain, some national and regional regulatory initiatives illustrate early efforts to operationalize elements of information integrity that are relevant to environmental governance. Australia's Code of Practice on Disinformation and Misinformation, a self-regulatory framework developed by the Digital Industry Group Inc. (DIGI) and overseen by the Australian Communications and Media Authority (ACMA) specifically mentions harms to the environment. [86] Under the code, eight major technology companies—Adobe, Apple, Google, Meta, Microsoft, Redbubble, TikTok, and Twitch—agree to identify, assess, and address misinformation on their services and to publish annual transparency reports on their efforts. Signatories are encouraged to disrupt advertising and monetization incentives for false content, improve consumer information choices, and enhance transparency around platform policies. While early ACMA reports note some modest improvements in transparency reporting and platform arrangements, the voluntary nature of the code and inconsistent implementation across signatories limit its overall effectiveness, highlighting the need for more robust, enforceable mechanisms that would directly address environmental mis- and disinformation as part of broader information integrity obligations.

In Latin America, Brazil has recently seen a landmark judicial intervention expanding liability for digital platforms that could reshape how online information ecosystems are governed. In June 2025, the Brazilian Supreme Federal Court (STF) ruled that key provisions of the country's foundational internet law, the Marco Civil da Internet (Internet Civil Framework, Law No. 12,965/2014), are partially unconstitutional, removing the longstanding requirement that platforms must have a prior court order before they can be held civilly liable for third-party content, and establishing a broader "duty of care" and liability regime for content that implicates fundamental rights. [87] This ruling effectively places platforms on notice that they may be held responsible for user posts—including harmful or misleading content—without needing a judicial takedown order, at least until Congress adopts specific legislation on intermediary liability. The decision has intensified debate in Brazil about the need for clear legislative frameworks, such as Bill No. 2630/2020 (the proposed Brazilian Law on Freedom, Responsibility and Transparency on the Internet), which remains pending in Congress and aims to regulate platform transparency, accountability, and content moderation, but has not yet been enacted. [88]

(86) Australian Government "Online Disinformation and Misinformation" www.acma.gov.au/online-disinformation-and-misinformation

(87) Fernando Galucci "Brazilian Supreme Court Modifies the Internet Civil Framework and Expands Platform Liability" 2025. chambers.com/articles/brazilian-supreme-court-modifies-the-internet-civil-framework-and-expands-platform-liability

(88) Tales Tomaz "Brazilian Fake News Bill: Strong Content Moderation Accountability but Limited Hold on Platform Market Power" Journal of the European Institute for Communication and Culture. 2023, www.tandfonline.com/doi/full/10.1080/13183222.2023.2201801.

At the regional level, the European Union's Digital Services Act (DSA) establishes due diligence, risk assessment, and transparency requirements for online platforms that are directly relevant to the spread of false or misleading information on environmental issues.[89] It recognizes systemic risks which need special risk assessment and mitigation measures, such as risks to freedom of information, democratic processes, and civic discourse.

Recent research by Climate Action Against Disinformation (CAAD) assesses how major digital platforms have responded to the DSA and the Strengthened Code of Practice on Disinformation (now Code of Conduct). Drawing on an 18-point evaluation framework and analysis of recent transparency reports, the study finds that while some platforms have taken limited, procedural steps toward compliance, overall performance remains weak and inconsistent. Even the highest-scoring platforms demonstrate only partial alignment with the intent of EU regulation, while several large platforms show minimal substantive progress. The findings suggest that existing platform responses prioritize formal reporting over meaningful transparency, enforcement, and accountability, leaving climate disinformation largely unaddressed despite its recognized risks to public trust, democratic governance, and climate policy outcomes.

Key findings from the CAAD report include:

- Most platforms fail to adequately categorize climate misinformation within their advertising and content-moderation policies.
- There is a significant lack of transparency and visible enforcement action against users and brands that repeatedly disseminate climate misinformation.
- No major platforms have adopted specific policies to restrict fossil fuel advertising or to prevent climate-related greenwashing.[90]

Nonetheless, far more work needs to be done on this. Without more transparent, participatory, and enforceable platform governance, existing regulatory approaches risk reproducing structural inequities in environmental information access. The knowledge generated by marginalized communities remains especially vulnerable to invisibilization, while civil society lacks the tools to scrutinize platform decisions or influence the design of moderation frameworks. In this context, environmental disinformation flourishes, and the digital infrastructures that shape global understanding of ecological issues continue to privilege powerful interests over public oversight and planetary well-being.

(89) European Union, Regulation (EU) 2022/2065 on a Single Market for Digital Services (Digital Services Act).

(90) CAAD "Underperforming & Unprepared" 2024. caad.info/analysis/reports/underperforming-unprepared/

4.2/ **Weak Protection** for **Environmental Journalists** and **Defenders**

Legal frameworks for the protection of environmental journalists and defenders remain inadequate. Despite international commitments—such as the UN Declaration on Human Rights Defenders and regional instruments like the Escazú Agreement—many governments fail to operationalize protections, or worse, are themselves implicated in the persecution of journalists and activists.[91]

Mechanisms for emergency support, relocation, or legal aid are under-resourced and highly centralized. Local journalists in rural areas rarely have access to the same protection as urban media workers. [92] Gender-based violence against women environmental journalists is poorly documented and rarely addressed in national or international frameworks. [93] Additionally, few protections exist for digital threats—such as doxxing, surveillance, or coordinated online harassment—which increasingly intersect with physical violence and state repression.[94]

Initiatives such as training programs by members of the freedom of expression network IFEX, such as Abraji (Brazil), ADISI-Cameroun, and the Media Foundation for West Africa, are important steps toward building safer reporting environments, but they remain insufficient in the face of growing threats and state-backed impunity. [95]

4.3/ **Inadequate Investment in Environmental** and **Media Literacy**

Environmental and media literacy programs have proven critical in building community resilience to disinformation, particularly in vulnerable regions.[96] However, funding and implementation remain sparse—especially for initiatives that are community-led, linguistically diverse, or rooted in local knowledge systems.

Many existing literacy efforts focus on climate change or digital hygiene, without addressing the political and social dimensions of environmental misinformation. There is limited investment in programs that empower rural, Indigenous, or youth communities to critically

(91) Emily Barrit, "Theme and Variations: The Aarhus Convention and the Escazú Agreement", 2021.

(92) David Macdonald and David Macdonald Macdonald Sonja, "News Deprivation - CCPA," March 21, 2025.

(93) Itai Zviyita and Admire Mare, "Same Threats, Different Platforms? Female Journalists' Experiences of Online Gender-Based Violence in Selected Newsrooms in Namibia," Journalism 25, no. 4 (April 1, 2024): 779–99, https://doi.org/10.1177/14648849231183815.

(94) Jay Stanley Gillmor Daniel Kahn, "Some Steps to Defend Against Online Doxxing and Harassment | ACLU," American Civil Liberties Union (blog), November 30, 2023.CAAD "Deny, Deceive, Delay: Deemysitified" 2025. caad.info/analysis/reports/deny-deceive-delay-demystified/

(95) IFEX, "Promoting Environmental Democracy: Countering Attacks on Access to Information and Reinforcing Civic Space," 2023.

(96) Bateman and Jackson, "Countering Disinformation Effectively: An Evidence-Based Policy Guide," 2024.

engage with environmental narratives, challenge extractive industry propaganda, or access environmental laws and data. Similarly, mainstream journalism curricula in many countries still treat environmental reporting as a niche specialization, limiting broader newsroom capacity to address misinformation across sectors like water, land, and biodiversity. [97]

The potential of community networks, open data platforms, and local storytelling initiatives remains underutilized. Where they do exist—such as Kamnotra in Cambodia, or community radio in the Amazon—they show promise as vehicles for building environmental knowledge and countering disinformation at the grassroots level.

4.4/ **Towards International Recognition of Information Integrity on Climate Change**

One of the most significant shifts in global climate governance in 2025 was the formal recognition of information integrity as a core pillar of effective climate action. Historically, international counter-disinformation efforts focused narrowly on climate denial and misrepresentation of scientific assessments, particularly attacks on IPCC findings. However, these efforts failed to encompass the broader ecosystem of environmental misinformation, attacks against environmental journalists and the broader information ecosystem dominated by private interests. The Brazilian government, in partnership with the United Nations and UNESCO, moved to address this deficit by spearheading the Global Initiative for Information Integrity on Climate Change, a dedicated multilateral effort to strengthen research, policy, and action to protect the integrity of climate information worldwide. [98] This initiative was first announced during Brazil's G20 Presidency in Rio de Janeiro in 2024 and built momentum through 2025, including the launch of the Global Fund for Information Integrity on Climate Change, which received 447 project proposals from nearly 100 countries in its first call, demonstrating widespread global demand for targeted support on this issue.

At COP30 in Belém, Brazil, these efforts achieved a historic breakthrough. For the first time in three decades of UNFCCC negotiations, information integrity was placed at the center of the COP agenda, reflecting growing recognition that misinformation undermines public understanding, delays urgent action, and weakens democratic support for climate policies. The COP decision recognizes information integrity and in addition, the COP30 Declaration on Information Integrity on Climate Change—endorsed by multiple countries including Armenia, Brazil, Canada, Chile, Denmark, Finland, France, Germany, Spain, Sweden, Uruguay, the Netherlands, and Belgium—established shared international commitments to promote consistent, reliable, and evidence-based information on climate issues at international, national, and local levels.

(97) UNESCO, "UNESCO Report Reveals 70% of Environmental Journalists Have Been attacked for their work," 2024.

(98) UNESCO "Call for Partnerships 2025" www.unesco.org/en/information-integrity-climate-change/call-partnerships-2025

The Belém Declaration explicitly calls for support to independent media, protection for environmental journalists and researchers, and cooperation with the private sector to ensure transparency and accountability—measures that go well beyond traditional climate commitments. [99] It also aligns these commitments with foundational principles of the UNFCCC, the Paris Agreement, and Rio Declaration's Principle 10 on access to information and public participation. In addition, the Action Agenda also includes several measures as part of its Objective 30 on information integrity, such as mapping national efforts, promoting national chapters on information integrity, and supporting research globally. [100]

The inclusion of information integrity in COP30 outcomes marks a qualitative expansion of international climate governance. While COP30 also delivered more familiar pledges—such as scaled-up adaptation finance and broad implementation frameworks—the focus on information integrity signals a recognition that science-informed public understanding and resilient information ecosystems are prerequisites to effective climate action. Endorsers of the declaration committed to building inclusive mechanisms to combat disinformation and strengthen the sustainability of diverse media ecosystems, particularly in service of communities most affected by climate impacts.

The Global Initiative and the Partnership for Information and Democracy now provide institutional anchors for these commitments, combining research, funding, and convening power to generate actionable evidence, support local and national efforts, and foster international cooperation on information integrity as a core climate priority.

(99) UNESCO "Declaration on Information Integrity on Climate Change", www.unesco.org/en/information-integrity-climate-change/cop30declaration?hub=780.
(100) UNFCC, Global Climate Action Agenda at COP 30, OUTCOMES REPORT, unfccc.int/sites/default/files/resource/COP30%20Action%20Agenda_Final%20Report.docx.pdf.

5. RECOMMANDATIONS

Efforts to counter climate disinformation are increasingly shifting from diagnosis to the implementation of practical solutions. Participants in the Partnership for Information and Democracy's workstream advanced a diverse set of regulatory, institutional, and market-based interventions that, taken together, outline a roadmap for strengthening information integrity in the climate and environmental sphere.

The findings of this workstream demonstrate that environmental information integrity is now a core governance challenge—shaping climate action, biodiversity protection, and public trust in democratic institutions. The recommendations below outline a comprehensive, multilevel strategy that integrates regulatory reform, media strengthening, scientific communication, and multistakeholder coordination. They are designed to be actionable across diverse political contexts, and include specific guidance on implementation.

1 EMBED INFORMATION INTEGRITY IN ENVIRONMENTAL GOVERNANCE

Objective

Ensure that reliable, science-based information forms the foundation of climate, environmental, biodiversity, land, water, and pollution governance.

Key actions

- **Integrate information integrity standards directly into national climate and environmental strategies**, ensuring frameworks such as Nationally Determined Contributions, biodiversity plans, and pollution regulations include mechanisms for preventing, monitoring, and responding to disinformation and ensuring access to reliable information. This should include incorporating environmental disinformation scenarios into national crisis protocols (e.g., wildfire management).
- **Ensure coordination among institutional actors responsible for environment, climate, digital regulation and media policies** to overcome silos and develop effective strategies.
- **Recognize access to environmental information as a legal right,** drawing on Principle 10 of the Rio Declaration and the Aarhus and, where applicable, Escazú Conventions and **implement this right effectively.**
- **Accelerate ratification and implementation** of access-to-information treaties, and embed their provisions in domestic law.
- **Link environmental governance with media freedom and digital regulation,** recognizing that disinformation ecosystems span across institutional silos.

2 STRENGTHEN REGULATORY AND PLATFORM ACCOUNTABILITY FRAMEWORKS

Objective

Ensure that platforms are governed by democratic rules with clear duties of care.

Key actions

- **Develop legislative and co-regulatory frameworks** that establish clear rules and accountability frameworks and also address the climate and environmental issues. These frameworks should include systemic risk assessments which also investigate risks on environmental issues.
- **Mandate transparency, user empowerment, algorithmic pluralism, due prominence of reliable information, and data access for researchers, civil society and regulators.** Due prominence of reliable information is of particular relevance during disasters. [101]
- **Ground all rules in human rights standards,** ensuring freedom of expression, scientific inquiry, and press freedom are protected.
- **Require platform-level ad libraries,** content moderation disclosures, and proactive demonetization of verified disinformation actors.
- **Differentiate regulatory obligations** by platform function, size, and risk profile (e.g., heightened obligations during ecological crises).

3 REFORM ECONOMIC INCENTIVES AND DIGITAL ADVERTISING MARKETS

Objective

Disrupt financial mechanisms that reward environmental disinformation and redirect revenue toward reliable information ecosystems.

(101) For in-depth recommendations on platform accountability, transparency and pluralism see Forum on Information and Democracy How to End Infodemics (2020), Accountability Regimes for Social Networks and their Users (2022) and Pluralism of Algorithms (2023).

Key actions

- **Mandate financial transparency** across the digital advertising system, including:
  - URL-level disclosure of ad placements;
  - "Know your customer" rules for advertisers and ad-tech intermediaries;
  - Public reporting of revenue flows;
  - Ad-tech transparency registry where advertisers must disclose placement and spend data.
- **Treat the monetization of denial/delay content as a market failure,** subject to oversight from competition, consumer protection, and financial regulators.
- **Promote ethical advertising** that rewards public interest media and accredited journalistic sources by independent self-regulatory standards such as the Journalism Trust Initiative. For public advertising this can be achieved through procurement guidelines.
- **Require platforms to remove monetization opportunities** from accounts repeatedly producing verified environmental disinformation.

4 ENHANCE TRANSPARENCY AND ACCOUNTABILITY ACROSS PUBLIC, PRIVATE, AND CORPORATE ACTORS

Objective

Expose vested interests behind disinformation, prevent greenwashing, and increase corporate accountability.

Key actions

- **Mandate disclosure of fossil fuel lobbying, funding relationships, and public communications,** including political advertising and "issue advocacy." This should include a public registry of environmental lobbying modeled on beneficial ownership transparency.

- **Enforce accurate environmental claims** through regulatory frameworks such as Green Claims standards, which require that sustainability and environmental assertions be truthful, evidence-based, and not misleading, or through sustainability reporting directives that mandate standardized, transparent disclosure of environmental impacts and risks.

- **Require clear, verifiable corporate reporting** on carbon emissions, biodiversity impacts, and environmental performance. Public communications by high-risk sectors (fossil fuels, mining, agribusiness, chemicals) should be required to undergo claim verification.

- **Counter coordinated influence operations** through electoral integrity safeguards, sanctions, transparency registers, and cross-border monitoring.

5 PROTECT ENVIRONMENTAL DEFENDERS AND JOURNALISTS

Objective

Ensure that those exposing environmental harms can work safely online and offline.

Key actions

- **Enact and enforce national legal protections** for environmental journalists and defenders, with clear sanctions for threats and violence.

- **Establish and fund national action plans for journalist safety,** including rapid-response mechanisms, legal assistance, and relocation support.

- **Integrate gender- and intersectionality-sensitive approaches,** recognizing disproportionate harms faced by women, Indigenous leaders, and marginalized groups.

- **Operationalize protection obligations** under the Escazú Agreement and related frameworks.

- **Coordinate environmental, justice, and digital agencies to investigate online harassment campaigns.**

6 STRENGTHEN MEDIA FREEDOM, SUSTAINABILITY, AND PUBLIC-INTEREST ENVIRONMENTAL JOURNALISM

Objective

Build a resilient media ecosystem capable of delivering high-quality environmental reporting.

Key actions

- **Recognize environmental journalism as a public good** and create sustainable funding pathways.
- **Provide equitable state advertising, subsidies, and grant programs** to support local and independent public interest media. This can also include a **national environmental journalism fund** prioritizing underserved regions and languages.
- **Invest in training on biodiversity, land, water, pollution, and climate reporting and include these topics in journalism schools.**
- **Promote solutions-oriented journalism** that counters polarizing narratives and fosters civic engagement.
- **Establish targeted fellowships and cross-border collaborations** for investigative environmental reporting.
- **Support self-regulatory standards** such as the Journalism Trust Initiative.

7 ADVANCE SCIENCE COMMUNICATION, DATA INTEGRITY, AND DIGITAL INCLUSION

Objective

Ensure universal access to reliable environmental information and protect scientific data from distortion and manipulation.

Key actions

- **Improve accessibility of scientific knowledge**, including IPCC/IPBES outputs translated into public-facing formats.
- **Develop standardized metrics and transparent reporting systems** for biodiversity and climate data.
- **Protect scientific data infrastructure** from cyber interference—treating data integrity as an issue of climate and national security.
- **Close the digital divide** by expanding affordable internet access and supporting community-led network models.
- **Support local connectivity initiatives** by streamlining licensing, simplifying spectrum access, and providing grants for community networks.
- **Guarantee open access to environmental data,** avoiding censorship or politically motivated blackouts.

8 PROMOTE ENVIRONMENTAL AND MEDIA LITERACY FOR PUBLIC RESILIENCE

Objective

Build whole-of-society resilience to environmental disinformation by strengthening citizens' ability to critically assess environmental information and participate in evidence-based public debate.

Key actions

- **Integrate environmental and media literacy into school curricula,** vocational education, and public service training, including critical evaluation of digital and algorithmically amplified content.
- **Develop national strategies with education and communications authorities** to promote environmental information integrity as part of digital citizenship and civic education.

- **Provide training and practical toolkits for policymakers,** regulators, journalists, and educators to identify and respond to environmental disinformation.
- **Support community-based and Indigenous-led education and media initiatives** that transmit locally grounded and intergenerational environmental knowledge.

9 STRENGTHEN RESEARCH AND MONITORING ON ENVIRONMENTAL DISINFORMATION

Objective

Improve evidence-based policymaking through expanded, regionally grounded research on the dynamics and impacts of environmental disinformation and attacks on information integrity.

Key actions

- **Increase funding for interdisciplinary research** on environmental disinformation and information integrity, including platform dynamics, influence operations, and corporate and state-driven information manipulation.
- **Support South–South and South–North research collaborations** and regional monitoring initiatives to address geographic and linguistic gaps.
- **Develop shared methodologies, indicators, and open datasets** to enable comparative analysis and long-term tracking of environmental information disorders.
- **Strengthen mechanisms that translate research findings** into policy, regulatory, and platform governance responses

10 BUILD INSTITUTIONAL CAPACITY AND STRENGTHEN MULTILATERAL COLLABORATION

Objective

Develop coordinated national and international systems capable of responding to environmental disinformation at scale.

Key actions

- **Strengthen national and regional multistakeholder coalitions** to implement information integrity measures, including collaboration among governments, media, civil society, scientists, and Indigenous and local communities. Ensure the implementation of COP30 commitments, including the Belém Declaration on Information Integrity on Climate Change.
- **Embed information integrity commitments into all future COP processes and climate negotiations,** ensuring that disinformation mitigation, public access to reliable information, and protection for environmental journalists are integral to climate governance frameworks.
- **Establish shared international norms and mechanisms on transparency, accountability, cross-border data sharing, and the protection of climate-related knowledge,** leveraging existing initiatives such as the Global Initiative and the Partnership for Information and Democracy to coordinate standards, funding, and technical support across countries.
- **Develop cross-border early-warning systems to identify coordinated influence operations around environmental issues.**

Conclusions

The findings of this workstream make clear that strengthening information integrity on environmental issues is not merely a communications challenge, it is a foundational requirement for effective climate and environmental governance in the 21st century. Across regions and disciplines, participants repeatedly emphasized that misinformation and disinformation now operate as structural threats: they distort public understanding, erode trust, polarize debate, weaken policy ambition, and endanger those working on the front lines of environmental protection. These harms are no longer confined to climate denial alone; they increasingly target biodiversity, water, land use, pollution, and other domains essential to ecological stability and sustainable development. Addressing this expanding landscape demands a shift from reactive responses to proactive, systemic solutions.

Over the past year, the workstream's research, consultations, and expert exchanges highlighted several core insights. First, information integrity must be understood as a governance issue embedded across environmental policy frameworks, not as an isolated technical concern. Public access to reliable, science-based information is a precondition for democratic participation, informed decision-making, and accountability. International instruments such as the Aarhus Convention and Principle 10 of the Rio Declaration already articulate these rights; the challenge now lies in universalizing and operationalizing them.

Second, digital platforms play a decisive role in shaping today's information ecosystem. Their design choices, business models, and opaque algorithms can inadvertently amplify misleading or harmful content. Regulatory efforts—whether the EU's Digital Services Act, or emerging national frameworks—demonstrate that it is both possible and necessary to assign concrete responsibilities to platforms while safeguarding human rights. The task ahead is to ensure that environmental information integrity is explicitly integrated into these regulatory mechanisms and that platforms are held accountable for systemic risks, advertising transparency, and data access for independent researchers.

Third, the economic incentives fueling environmental disinformation must be confronted. Advertising supply chains that monetize denial, delay, or greenwashing undermine global environmental goals and reward bad actors. Reforming this system —through transparency, accountability, and ethical advertising standards—is essential to redirect revenue toward public-interest journalism and credible environmental communication.

Fourth, the protection of environmental journalists, defenders, scientists, and communities is non-negotiable. Their work is indispensable to monitoring ecological harms, exposing vested interests, and informing public debate. This requires not only individual safety but also sustainable, independent, and pluralistic media systems which are foundational preconditions for information integrity and meaningful public oversight. Yet they face rising threats, online and offline, particularly in regions with shrinking civic space. Ensuring their safety and enabling conditions is a core pillar of any credible information integrity framework.

Finally, the workstream underscored that no single sector can resolve these challenges alone. Effective responses require multistakeholder collaboration, global coordination, and shared norms across governments, civil society, academia, media, and technology companies. They also require a commitment to global equity—closing the research gap in the Global South, addressing the digital divide, and amplifying local and Indigenous knowledge systems that are too often marginalized.

As the world moves beyond COP30 in Brazil and toward COP17 in Armenia, the stakes could not be higher. Environmental policies will succeed only if societies have access to accurate information, resilient institutions, and trustworthy communication ecosystems. By advancing the recommendations outlined in this report— across governance, regulation, transparency, economic incentives, media freedom, scientific communication, education, and multilateral cooperation—the international community can move toward an information environment that strengthens, rather than undermines, environmental action.

This workstream demonstrates that a more transparent, accountable, and resilient information ecosystem is both achievable and urgently needed. The path forward is clear: embed information integrity at the heart of environmental governance, protect those who produce and defend facts, and ensure that societies everywhere can engage with environmental issues on the basis of facts, not falsehoods. The collective work has begun; implementing these recommendations will determine whether the global community can meet the environmental challenges of this decisive decade.

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