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OPEN LETTER

Open letter: Brazil at a crossroads—Protecting peatlands is essential for post-COP30 climate leadership

OPEN LETTER TO BRAZILIAN POLICYMAKERS AT THE 30TH MEETING OF THE CONFERENCE OF THE PARTIES TO THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE (COP30, BELÉM, BRAZIL, 2025)

COP30, held in Belém, Brazil, reaffirmed the central role of Nature-Based Solutions in addressing global climate challenges. Among these, peatlands were highlighted as critical ecosystems due to their exceptional carbon storage capacity, hydrological regulation, biodiversity, ecosystem services, cultural values, and vulnerability to degradation. The launch of the *Science-based Framework for Global Peatland Targets and Guiding Principles* (FAO et al., 2025; UNFCCC, 2025) offers a unified roadmap for halting peatland loss, restoring degraded areas, and enabling sustainable management practices essential to achieving global climate and biodiversity goals.

Brazil contains the world's largest known extent of tropical peatlands, approximately 226,000 km^2, yet they remain largely invisible within national environmental legislation and climate instruments (BRASIL, 2025). Recent assessments (Beer et al., 2024; GMC et al., 2025) show that these ecosystems are increasingly threatened by agricultural expansion, drainage, fire, and hydrological alterations. At least 3,540 km^2 of peatlands have been degraded since the mid-20th century, generating over 18 Mt CO_2-eq annually (UNEP, 2022). Despite this, emissions and removals associated with peatlands are still absent from Brazil's national greenhouse gas inventory, weakening the accuracy of national reporting and undermining climate mitigation strategies.

This policy blind spot is reinforced by a persistent disparity between forest and non-forest ecosystems in national carbon and biodiversity policies (Pilon et al., 2025). As a result, peatlands across the Cerrado, Pantanal, Amazon, Atlantic Forest, and montane environments remain unmapped, weakly monitored, and insufficiently protected. In the Amazon, hydrological disruptions, compounded by large hydroelectric projects and record droughts (Souza et al., 2023, 2024), are already altering peat-forming environments and affecting traditional and Indigenous communities who rely on them.

These gaps hinder effective decision-making and reduce the country's capacity to fulfill international climate and biodiversity commitments. The international community has emphasized Brazil's responsibility in wetland leadership (Wetlands International, 2025).

In light of COP30 outcomes, and aligned with the Global Peatland Targets, we urge the Brazilian government to advance the following priorities:

1. Formally recognize peatlands as priority ecosystems within national climate, water, and biodiversity policies.
2. Create a Brazilian Peatland Program aligned with the COP30 framework to promote conservation, mapping, restoration, sustainable management, monitoring, and emissions reporting.
3. Integrate peatlands into Brazil's NDC, National Adaptation Plan, and climate-finance mechanisms.
4. Establish a national moratorium on peatland drainage and conversion, as well as on the use of fire and grazing, prioritizing landscapes of high-carbon and hydrological significance.
5. Develop a national mapping and monitoring system for hydrology, fire, greenhouse gas fluxes, and land-use change.
6. Expand investments in ecological restoration and rewetting through incentives such as Payments for Ecosystem Services, high-integrity carbon markets, and bioeconomy programs.
7. Ensure Indigenous Peoples and traditional communities receive equitable access to climate finance and direct support for peatland stewardship.
8. Implement peatland-specific management plans in protected areas.
9. Strengthen public awareness, education, training, and participatory monitoring, including specialized firefighting brigades.
10. Establish multilevel governance connecting federal, state, and municipal entities with academia and local communities.

Protecting and restoring peatlands is among the most cost-effective and scientifically grounded strategies for advancing decarbonization, resilience, and biodiversity conservation. Following COP30, Brazil stands at a decisive moment to transform global commitments into national leadership that safeguards its wetlands, strengthens

climate ambition, and delivers tangible benefits for people and the planet.

KEYWORDS: conservation, COP 30, hydrological restoration, nature-based solutions, the most carbon-dense ecosystem

AUTHOR CONTRIBUTIONS

Suelma Ribeiro Silva, Alexandre Christofaro Silva, Uidemar Morais Barral, and Carlos Moreira de Souza Jr led the initiative and wrote the letter; all the 53 authors read and agreed with all the content of the letter.

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no datasets were generated or analyzed during the current study.

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