Input on technologies related to climate change and their impacts on human rights: the case of Artificial Intelligence Data Centers

LAPIN
LABORATÓRIO DE POLÍTICAS PÚBLICAS E INTERNET

idec
instituto de defesa de consumidores

instituto latinoamericano de terraformación

Authors

Institute for Consumers Defense (Idec)

Julia Catão Dias - julia.dias@idec.org.br

Elian Aurélio Nascimento - elian.nascimento@idec.org.br
Roberta Freire - roberta.freire@idec.org.br

Laboratory of Public Policy and Internet (LAPIN)

Camila Cristina da Silva - camila.cristina@lapin.org.br
Cynthia Picolo Gonzaga de Azevedo - cynthia.picolo@lapin.org.br
Felipe Rocha da Silva - felipe@lapin.org.br
Júlia Melo Rodrigues de Aguiar
Lorena Kelvia de Paula Muniz
Marcelo Aparecido de Faria Junior
Maria Luiza Duarte Sá

Latin American Institute of Terraforming

Paz Peña Ochoa - pazpena@gmail.com

1. The Materiality of Artificial Intelligence

Although artificial intelligence (AI) technologies are often promoted as solutions to planetary crises, their business model reproduces historical dynamics of resource and territorial exploitation that have led to the current socio-environmental and climate crises.

AI relies on physical infrastructures that are intensive in natural resources, such as data centers — responsible for processing, storing, and circulating large volumes of data — which require significant amounts of energy, water, land, and minerals.

Before assessing the potential of these technologies for climate mitigation or adaptation, it is essential to consider how their materiality contributes to the intensification of socio-environmental impacts and to human rights violations, especially in Global South countries, where their territorial and ecological costs tend to be concentrated.

2. Human Rights and Climate Violations Associated With Data Centers

Right to Energy

AI-dedicated data centers consume more energy than traditional cloud and internet data centers. In Brazil, TikTok's data centers in Caucaia (Ceará) and Scala's in Eldorado do Sul (Rio Grande do Sul) illustrate the energy impacts associated with these infrastructures. TikTok's project is expected to demand approximately 5,040 MWh per day, equivalent to the electricity consumption of 2.2 million people,

surpassing 99.9% of Brazilian municipalities.[1] Scala's project could reach 5,000 MW by 2033, exceeding the consumption of entire Brazilian states.[2]

In Quilicura (Chile), data centers use 79% of the area's industrial-commercial electricity, raising concerns about future energy supply and new projects[3]. In Querétaro (Mexico), power outages are becoming more frequent near data centers, fueling concerns that these facilities are straining the grid.[4]

This level of demand directly pressures electrical systems and is part of a global paradigm shift in energy driven by the rapid expansion of AI.[5] It is estimated that between 5% and 9% of global electricity is allocated to information and communication technologies, a share expected to grow in the coming years.[6]

Despite Brazil having a predominantly renewable energy matrix, the country already imposes one of the highest electricity tariffs in the world. Electricity bills are burdened by subsidies that benefit industry, while ordinary consumers absorb the costs of grid expansion and maintenance.[7] In the United States, for example, the

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[1] MARTINS, Laís; AMORIM, Francisco. Data center do TikTok gastará energia equivalente ao consumo de 2,2 milhões de brasileiros, revela estudo interno [TikTok data center will consume energy equivalent to that used by 2.2 million Brazilians, internal study reveals]. *Intercept Brasil*, July 3, 2025. Available at: https://www.intercept.com.br/2025/07/03/data-center-tiktok-energia-estudo-interno/. (in Portuguese).

[2] REINHOLZ, Fabiana; MARKO, Katia. Relatório de subcomissão da Assembleia aponta impactos energéticos, ambientais e políticos de data centers no RS [Subcommittee report from the Legislative Assembly points to energy, environmental, and political impacts of data centers in Rio Grande do Sul]. *Brasil de Fato*, March 26, 2026. Available at: https://www.brasildefato.com.br/2026/03/26/relatorio-de-subcomissao-da-assembleia-aponta-impactos-energeticos-ambientais-e-politicos-de-data-centers-no-rs/. (in Portuguese).

[3] NETO, Marjorie. Los data centers y la energía en Chile: Demanda, infraestructura y posible impacto en precios de la electricidad [Data centers and energy in Chile: Demand, infrastructure, and possible impact on electricity prices]. *DataCenterBoom!*, February 2026. Available at: https://datacenterboom.net/wp-content/uploads/2026/02/Los-data-centers-y-la-energia-en-Chile_demanda-infraestructura-y-posible-impacto-en-precios-de-electricidad.pdf. (in Spanish)

[4] BAPTISTA, Diana; MCDONNELL, Fintan. Querétaro sufre cortes de agua y apagones por los centros de datos hiperescala para sistemas de IA [Querétaro experiences water shortages and power outages due to hyperscale data centers for AI systems]. *ArteesÉtica*, February 22, 2026. Available at: https://arteesetica.org/queretaro-sin-agua-y-sin-luz-por-la-ia/. (in Spanish).

[5] SILVA, Camila Cristina da; AZEVEDO, Cynthia Picolo G. de; SILVA, Felipe Rocha da. *Desafios* socioambientais e regulatórios de custos energéticos de data centers para IA: narrativa de abundância de energia renovável encobre pressão sobre sistema elétrico e comunidades locais [Socio-environmental and regulatory challenges of the energy costs of data centers for AI: the narrative of abundant renewable energy masks pressure on the power system and local communities]. *JOTA*, March 25, 2026. Available at: https://www.jota.info/opiniao-e-analise/colunas/ia-regulacao-democracia/desafios-socioambientais-e-regulatorios-de-custos-energeticos-de-data-centers-para-ia. (in Portuguese).

[6] INSTITUTE FOR CONSUMERS (IDEC). *Não somos quintal de data centers: um estudo sobre os impactos socioambientais e climáticos dos data centers na América Latina [We are not a backyard for data centers: a study on the socio-environmental and climate impacts of data centers in Latin America]*. São Paulo, 2025. Available at: https://idec.org.br/pdf/idec_estudo-nao-somos-quintal-de-data-centers.pdf. (in Portuguese).

[7] *IDEC*. Conta de luz cara: entenda por que você está pagando tanto e como mudar esse cenário [Expensive electricity bills: understand why you are paying so much and how to change this situation]. 2025. Available at:

data center sector has strained local grids to the point that thirteen states recorded residential electricity bill increases of up to 180% in June 2025.[8]

Right to Water

Data centers require large volumes of water, both directly — due to cooling systems needed to prevent overheating of thousands of continuously operating servers[9] — and indirectly, through the energy generation that sustains them.[10]

Their expansion raises concerns about ensuring the human right to water, especially in the context of global water scarcity recognized by the UN,[11] particularly in territories already experiencing drought conditions.[12]

This is the case of Caucaia (Ceará, Brazil), which faced water crises in 16 of the past 21 years and will host TikTok's data center[13]. The project further threatens the population's right to water by planning water extraction from the Dunas Aquifer, a critical source for local communities that already rely on artesian wells and water trucks.[14]

A similar situation occurred in Uruguay, where negotiations for a new Google data center in Canelones were conducted confidentially and only later made public.[15] The announcement coincided with the country's worst water crisis in over 75 years,

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https://idec.org.br/dicas-e-direitos/conta-de-luz-cara-entenda-por-que-voce-esta-pagando-tanto-e-como-mudar-esse-cenario. (in Portuguese).

[8] *ibid*.

[9] *ibid.*

[10] *ibid.*

[11] *UN News*. World enters era of 'global water bankruptcy'. January 20, 2026. Available at: https://news.un.org/en/story/2026/01/1166800

[12] LABORATORY OF PUBLIC POLICY AND INTERNET (LAPIN). *Inteligência Artificial e Data Centers: A Expansão Corporativa em Tensão com a Justiça Socioambiental [Artificial Intelligence and Data Centers: Corporate Expansion in Tension with Socio-environmental Justice]*. Brasília, 2025. Available at:https://lapin.org.br/2025/08/11/confira-o-relatorio-inteligencia-artificial-e-data-centers-a-expansao-corporativa-em-tensao-com-a-justica-socioambiental/. (in Portuguese).

[13] MARTINS, Laís. "Para ficar árido, é só um empurrãozinho": TikTok construirá mega data center em cidade com histórico de seca no Ceará ["It only takes a small push to become arid": TikTok will build a mega data center in a city with a history of drought in Ceará]. *Intercept Brasil*, May 22, 2025. Available at: https://www.intercept.com.br/2025/05/22/tiktok-data-center-cidade-seca-no-ceara/. (in Portuguese).

[14] MARTINS, Laís. Ceará autoriza data center do TikTok a usar sete vezes mais água do que o previsto no licenciamento ambiental [Ceará authorizes TikTok's data center to use seven times more water than stipulated in its environmental permit.]. *Intercept Brasil*, November 27, 2025. Available at: https://www.intercept.com.br/2025/11/27/ceara-autoriza-data-center-tiktok-sete-vezes-mais-agua-licenciamento/. (in Portuguese).

[15] VALLEJOS, Rodrigo. Los data centers llegan a tribunales en América Latina - Análisis de los fallos de la justicia sobre los data centers de Google en Chile y Uruguay [Data centers reach the courts in Latin America - Analysis of court rulings on Google data centers in Chile and Uruguay]. *DataCenterBoom!*, November 1, 2025. Available at: https://datacenterboom.net/wp-content/uploads/2025/11/Los-data-centers-llegan-a-tribunales-en-America-Latina-1.pdf. (in Spanish).

during which Uruguay had to import bottled water from Brazil and rely on non-potable sources for supply.[16]

Mining

Mining, a key stage in the AI production chain, is often overlooked by governments and corporations in policymaking and sustainability reporting.[17] The Global South has become increasingly attractive for data center deployment, partly due to its abundance of critical minerals, such as rare earth elements.[18]

This scenario is aggravated by the fact that the race for critical minerals intensifies territorial conflicts. It is estimated that 47% of undeveloped ore bodies are located on or near Indigenous lands, and 65% of unexplored ore bodies are in high water-risk areas. More than half of current lithium and copper production already occurs in regions under severe water stress.[19]

The consequences of mineral extraction are severe for local populations. Air pollution, contamination, high water consumption, and the risk of large-scale environmental disasters frequently lead to conflicts with communities and potential human rights violations. Environmental damage is accompanied by impacts on human health, including fetal malformations, cancers, and autoimmune diseases.[20]

Greenhouse Gas Emissions and Climate Change

Greenhouse gas (GHG) emissions associated with data centers are increasing rapidly, driven by two factors. The first is the high electricity consumption required for AI data processing. In Brazil, GHG emissions linked to electricity consumption in the sector have increased by 40% in recent years.[21] The second relates to

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[16] IDEC. *Não somos quintal de data centers: um estudo sobre os impactos socioambientais e climáticos dos data centers na América Latina [We are not a backyard for data centers: a study on the socio-environmental and climate impacts of data centers in Latin America]. op. cit.*

[17] LAPIN. *Inteligência Artificial e Data Centers: a expansão corporativa em tensão com a justiça ambiental [Artificial Intelligence and Data Centers: Corporate Expansion in Tension with Socio-environmental Justice]. op. cit.*

[18] *LAPIN*. Contribuição à Subcomissão da Assembleia Legislativa do Rio Grande do Sul que Analisa os Impactos Socioambientais da Instalação de Data Centers [Submission to the Subcommittee of the Legislative Assembly of Rio Grande do Sul that analyzes the socio-environmental impacts of data center installations]. 2026. Available at: https://lapin.org.br/2026/03/12/7872/. (in Portuguese).

[19] *UNITED NATIONS ENVIRONMENT PROGRAMME FINANCE INITIATIVE (UNEP FI)*. Climate Risks in the Metals and Mining Sector. 2024. Available at: https://www.unepfi.org/themes/climate-change/climate-risks-in-the-metals-and-mining-sector/.

[20] *MINISTÉRIO PÚBLICO FEDERAL DO BRASIL (MPF)*. COP30: MPF, povo Xikrin e médico denunciam ecocídio do Rio Cateté (PA) e contaminação por metais pesados [COP30: MPF, the Xikrin people, and a physician denounce ecocide of the Cateté River (Pará) and contamination by heavy metals]. 2025. Available at: https://www.mpf.mp.br/o-mpf/unidades/pr-pa/noticias/cop30-mpf-povo-xikrin-e-medico-denunciam-ecocidio-do-rio-catete-e-contaminacao-por-metais-pesados. (in Portuguese).

[21] LAPIN. *Inteligência Artificial e Data Centers: a expansão corporativa em tensão com a justiça ambiental [Artificial Intelligence and Data Centers: Corporate Expansion in Tension with Socio-environmental Justice]. op. cit.*

continuous operation, which requires energy redundancy — backup mechanisms to ensure uninterrupted services, often powered by fossil fuels.

In the case of TikTok's data center in Ceará, announced as "100% renewable," an expert assessment by the Federal Public Prosecutor's Office identified plans for approximately 120 diesel generators, making the complex comparable to a thermoelectric power plant.[22] In Mexico, Microsoft's Colón, Querétaro data center runs partly on gas generators that can supply up to 70% of consumption during peak hours, producing CO_2 emissions similar to tens of thousands of homes.[23]

Rising emissions disrupt climate balance and impact public health. Experts point out that the release of toxic gases, such as nitrogen oxides, and fine particulate matter (PM2.5) is directly associated with increased cases of cancer, asthma, and other respiratory diseases.[24]

The three largest AI data center operators — Amazon, Microsoft, and Google — have long committed to achieving net-zero emissions. However, actual emissions show exponential growth, indicating a contradiction between announced targets and the current business model of generative AI.[25]

Noise Pollution

The operation of chillers, emergency generators, uninterrupted power supply systems, exhaust systems, and air handling units produces constant noise levels between 70 and 80 dBA, with peaks exceeding 90 dBA — levels close to or above those considered safe for prolonged exposure.

These levels also exceed Brazilian standard NBR 10151:2019, which establishes limits of 50 to 55 dBA for residential areas.[26] Persistent noise pollution is

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[22] MADEIRO, Carlos. Data center de R$200 bi do TikTok no CE despreza danos, diz perícia da PGR [R$200 billion TikTok data center in Ceará disregards damages, says Federal Prosecutor's Office expert report]. *UOL*, December 17, 2025. Available at: https://noticias.uol.com.br/colunas/carlos-madeiro/2025/12/17/data-center-de-r-200-bi-do-tiktok-no-ce-despreza-danos-diz-pericia-da-pgr.htm. (in Portuguese).

[23] DIB, Daniela; ARANDIA, Pablo Jimenez. Los países están luchando por satisfacer las crecientes demandas energéticas de los centros de datos [Countries are struggling to meet the growing energy demands of data centers]. *Rest of World*, 2025. Available at: https://restofworld.org/2025/ai-energy-supply-data-centers/es/#translate. (in Spanish).

[24] IDEC. *Não somos quintal de data centers: um estudo sobre os impactos socioambientais e climáticos dos data centers na América Latina [We are not a backyard for data centers: a study on the socio-environmental and climate impacts of data centers in Latin America]. op. cit.*

[25] LAPIN. *Inteligência Artificial e Data Centers: a expansão corporativa em tensão com a justiça ambiental [Artificial Intelligence and Data Centers: Corporate Expansion in Tension with Socio-environmental Justice]. op. cit.*

[26] *ASSOCIAÇÃO BRASILEIRA DE NORMAS TÉCNICAS (ABNT).* NBR 10152: Acústica – Níveis de Pressão Sonora em Ambientes Internos e Edificações [NBR 10152: Acoustics – Sound pressure levels in indoor environments and buildings]. 2020. Available at: https://www.normas.com.br/visualizar/abnt-nbr-nm/5283/abnt-nbr10152-acustica-niveis-de-pressao-sonora-em-ambientes-internos-a-edificacoes. (in Portuguese).

associated with sleep disturbances, chronic stress, hypertension, and other significant impacts on physical and mental health.[27]

In areas near data centers operated by Meta in the United States, residents report continuous exposure to noise exceeding recommended levels, particularly during simultaneous activation of backup generators.[28] In Ceará, TikTok's data center will add cumulative impacts to an area already affected by noise pollution from the Pecém Industrial and Port Complex.[29]

Electronic Waste

Significant volumes of electronic waste are generated due to the continuous operation of equipment with high technological obsolescence. Furthermore, the potential adoption of nuclear energy to meet the high electricity demand of these facilities introduces risks related to radioactive waste generation and disposal.

AI companies' sustainability reports present limited data and indicators regarding waste expansion. Google claims to have achieved "zero waste to landfill" in 35% of its campuses; however, hardware disposal from its data centers increased from 21,700 metric tons in 2020 to 46,500 metric tons in 2024. Microsoft reported an 83% increase in total waste generation between 2021 and 2024, reaching 41,290 tons, without specifying the share originating exclusively from AI data centers.[30]

Disinformation and Greenwashing

The sector's expansion has been accompanied by narratives linking it to climate crisis solutions while disregarding its material and territorial impacts. There is also a lack of transparency in how companies report socio-environmental and climate data, often available only in english and without territorial disaggregation, limiting public oversight.[31]

In Brazil, stakeholders argue that data center expansion is necessary to accelerate the energy transition, based on promises of renewable energy use and increased efficiency. However, evidence indicates that rising energy demand from these infrastructures tends to pressure electrical systems. Efficiency gains do not

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[27] *ENVIRONMENTAL AND ENERGY STUDY INSTITUTE (EESI).* Communities are raising noise pollution concerns about data centers. March 23, 2026. Available at: https://www.eesi.org/articles/view/communities-are-raising-noise-pollution-concernsabout-data-centers.

[28] WITTENBERG, Ariel. The Industry Comes In and Kills the Work of Local Citizens. *POLITICO*, 2026. Available at: : https://www.politico.com/news/2026/02/13/virginia-prince-william-county-data-center-boom-00779219.

[29] BRASIL. Ministério Público Federal. Procuradoria da República no Estado do Ceará. Inquérito Civil nº 1.16.000.001948/2025-23. Brasília-DF, June 2, 2025. (in Portuguese)

[30] LAPIN. *Inteligência Artificial e Data Centers: a expansão corporativa em tensão com a justiça ambiental [Artificial Intelligence and Data Centers: Corporate Expansion in Tension with Socio-environmental Justice]. op. cit.*

[31] *ibid.*

necessarily reduce total impact; instead, they may lower operational costs and stimulate greater consumption.[32]

Additionally, companies use offsetting mechanisms to promote a misleading perception of sustainability. In practice, they maintain or even increase real emissions and fossil-based energy consumption locally, while "neutralizing" these figures through offsets generated elsewhere. This creates the false impression of emission reductions and masks the direct impacts of these infrastructures on local territories.[33]

This narrative creates the misleading perception that the current model of AI expansion does not generate significant climate impacts.[34] The dissemination of the idea that AI data centers can operate in a fully sustainable or "100% renewable" manner functions as a greenwashing strategy to obscure their true socio-environmental costs, undermining consumers' right to clear and adequate information.[35]

Environmental Racism

These infrastructures tend to be located in historically marginalized territories, disproportionately affecting black populations, indigenous peoples, quilombola communities, and traditional communities.

Whenever projects may affect indigenous peoples, International Labour Organization (ILO) Convention nº 169 establishes the obligation of free, prior, and informed consultation, regardless of the formal recognition status of the territory. However, this requirement is not being respected in Latin American projects.[36] [37]

In Brazil, TikTok's project will be built on land traditionally claimed by the Anacé indigenous people[38], while Scala's "AI City" will be adjacent to the Mbyá-Guarani people[39]. Considering the reported socio-environmental impacts, the

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[32] *ibid.*
[33] *ibid.*
[34] *ibid.*
[35] IDEC. *Greenwashing na transição energética: o caso dos Data Centers [Greenwashing in the energy transition: the case of data centers*]. YouTube, August 20, 2025. Available at: https://www.youtube.com/watch?v=yYKrJZjJ1zE. (in Portuguese).
[36] LAPIN. *Inteligência Artificial e Data Centers: a expansão corporativa em tensão com a justiça ambiental [Artificial Intelligence and Data Centers: Corporate Expansion in Tension with Socio-environmental Justice]. op. cit.*
[37] LAPIN. *Nota de Apoio ao Protesto do Povo Anacé contra o Projeto de Construção de um Data Center em Caucaia [Statement of support for the Anacé people's protest against the data center construction project in Caucaia]*. Brasília, 2025. Available at: https://lapin.org.br/2025/08/08/nota-de-apoio/. (in Portuguese).
[38] MARTINS, Laís. Indígenas Anacé protestam contra data center do TikTok no Ceará e pedem suspensão do licenciamento ambiental [Anacé Indigenous people protest against TikTok data center in Ceará and call for suspension of environmental licensing]. *Intercept Brasil*, 2025. Available at: https://www.intercept.com.br/2025/08/04/indigenas-anace-protestam-data-center-tiktok-ceara/. (in Portuguese).
[39] MARTINS, Laís. Da destruição à especulação: Eldorado do Sul abre portas para projeto bilionário de data center que esconde impactos e ignora população [From destruction to speculation: Eldorado do Sul opens the door to a billion-dollar data center project that conceals impacts and ignores the population]. *Intercept Brasil*, 2025. Available at:

lack of compliance with ILO Convention nº 169, and the absence of transparency and social participation, there is a clear deepening of historical inequalities through environmental racism.

Lack of Social Participation in Environmental Licensing and Policymaking

In the United States, approximately USD 156 billion in data center projects have been blocked or halted due to local protests, resulting in moratoria[40] or suspension of tax incentives.[41] Community resistance has also emerged in Brazil,[42] Chile,[43] Uruguay,[44] and Mexico[45].

In Caucaia (Brazil), the population only became aware of TikTok's project through media reports. Simplified and fragmented licensing contributed to underestimating its real impact. In Querétaro (Mexico), the government concealed the water consumption of twenty data centers. When questioned, it claimed it lacked the authority to request such data from companies, comparing the consumption of a technological facility to that of a restaurant.[46]

In 2025, Chile's Council of Ministers amended environmental assessment regulations that ultimately exempted data centers from review, leaving communities without input or information on energy and water use or local impacts.[47] This pattern of data omission and the simplification of licensing processes is recurrent in Latin America.

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https://www.intercept.com.br/2025/06/23/eldorado-do-sul-abre-portas-para-projeto-bilionario-de-data-center/. (in Portuguese).

[40] SCHWARTZMAN, Paul. Scenic Chesapeake Bay county finds itself in the middle of a data center fight. *The Washington Post*, 2026. D Available at: https://www.washingtonpost.com/dc-md-va/2026/04/13/data-center-opposition-calvert-county/.

[41] DEPILLIS, Lydia. Local Opposition Is Slowing A.I. Data Centers. Wall Street Has Noticed. *The New York Times*, 2026. Available at:https://www.nytimes.com/2026/03/26/business/economy/ai-data-centers-construction-local-opposition.html.

[42] MARTINS, Laís. Indígenas Anacé protestam contra data center do TikTok no Ceará e pedem suspensão do licenciamento ambiental [Anacé Indigenous people protest against TikTok data center in Ceará and call for suspension of environmental licensing]. *op. cit.*

[43] DIB, Daniella; CHANDRAN, Rina. From Chile to the Philippines, meet the people pushing back on AI. *Rest of World*, 2026. Available at: https://restofworld.org/2026/ai-pushback-chile-mexico-kenya-philippines/.

[44] MONTGOMERY, Blake. Datacenters meet resistance over environmental concerns as AI boom spreads in Latin America. *The Guardian*, 2025. Available at: https://www.theguardian.com/technology/2025/nov/10/data-centers-latin-america.

[45] MCDONNELL, Findan; BAPTISTA, Diana. Resistance blooms in Mexico's data centre valley. *Context*, 2026. Available at: https://www.context.news/ai/long-read/resistance-blooms-in-mexicos-data-centre-valley.

[46] IDEC. *Não somos quintal de data centers: um estudo sobre os impactos socioambientais e climáticos dos data centers na América Latina [We are not a backyard for data centers: a study on the socio-environmental and climate impacts of data centers in Latin America]. op. cit.*

[47] How does public policy address the socio-environmental impacts of data centers? *DataCenterBoom!* 2025. Available at: https://datacenterboom.net/en/how-does-public-policy-address-the-socio-environmental-impacts-of-data-centers/.

In 2024, the government of Eldorado do Sul (Brazil) and the company Scala signed a memorandum of understanding for the construction of the "AI City" project, described as the "largest in Latin America," but local communities only became aware of it recently. Moreover, a municipal law was enacted providing for the flexibilization and simplification of the procedure.[48] During a mission to the territory to assess risks of human rights violations, a report by the National Human Rights Council (CNDH) found that the project has been conducted with low transparency and without social participation, including the absence of free, prior, and informed consultation, as well as significant risks of socio-environmental impacts and human rights violations in vulnerable territories.[49]

Regulatory frameworks governing the sector are also being designed without the participation of civil society and potentially affected communities. Chile's National Data Center Plan (PDATA) aims to make the country a data center hub in Latin America by 2030. While PDATA references civil society participation, local groups say they lack real influence, clear information, and oversight.[50] In Brazil, the federal government detailed the National Policy for Attracting Data Centers (REDATA) to U.S. big tech companies while denying access to civil society.[51]

The Special Rapporteurship on Economic, Social, Cultural and Environmental Rights (REDESCA) of the Organization of American States warned of the risks of human rights violations associated with the expansion of data centers, recommending temporary moratoria until adequate impact assessments and effective mechanisms for social participation are ensured.[52]

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[48] *ELDORADO DO SUL (RS).* Lei Ordinária nº 5.949, de 3 de dezembro de 2024: Dispõe sobre a ampliação do perímetro urbano, cria novo Polo Tecnológico de Data Centers para a implantação de data centers e dá outras providências [Municipal Law No. 5,949 of December 3, 2024: Provides for the expansion of the urban perimeter, creates a new Data Center Technology Hub for the implementation of data centers, and establishes other provisions]. Available at: https://leismunicipais.com.br/a/rs/e/eldorado-do-sul/lei-ordinaria/2024/595/5949/lei-ordinaria-n-5949-2024-dispoe-sobre-a-ampliacao-do-perimetro-urbano-cria-novo-polo-tecnologico-de-data-centers-para-a-implantacao-de-data-centers-e-da-outras-providencias. (in Portuguese).

[49] *Conselho Nacional de Direitos Humanos (CNDH)*. Relatório da Missão da Relatoria de Inteligência Artificial do CNDH no Estado do Rio Grande do Sul [Report of the Mission of the CNDH Rapporteurship on Artificial Intelligence in the State of Rio Grande do Sul]. April, 2026. Available at: https://sdhgovbr.sharepoint.com/sites/CNDH-Sec.Executiva. (in Portuguese).

[50] SKOKNIC, Francisca; PIZARRO, Gabriela. Alfombra roja para data centers: sin evaluación ambiental pero con mapa para invertir [Red carpet for data centers: without environmental assessment but with a map for investment]. *LaBot*, 2025. Available at: https://www.labot.cl/alfombra-roja-para-data-centers-sin-evaluacion-ambiental-pero-con-mapa-para-invertir/. (in Spanish).

[51] CAUSIN, Juliana. Idec cobra governo após Haddad apresentar política de atração de data centers para big techs [Idec calls on the government after Haddad presents a policy to attract data centers for big tech companies]. *O Globo*, May 8, 2025. Available at: https://oglobo.globo.com/economia/noticia/2025/05/08/idec-cobra-governo-apos-haddad-apresentar-politica-de-atracao-de-data-centers-para-big-techs.ghtml. (in Portuguese).

[52] *Inter-American Comission on Human Rights (IACHR)*. REDESCA Warns of Digital Infrastructure Impacts on Human Rights and Urges Corporate Human Rights Due Diligence. REDESCA nº RD030/26. February 26, 2026. Available at: https://www.oas.org/en/iachr/jsForm/?File=/en/iachr/media_center/preleases/2026/030.asp

3. Recommendations

Respect for Planetary Boundaries

I. **Differentiate essential and non-essential uses**: prioritize AI applications oriented toward the public and collective interest (such as research, health, and education), while limiting the use of energy-intensive models for purely commercial purposes or without proven social benefit.

II. **Establish absolute consumption limits**: impose caps on energy and water use by data centers, taking into account rebound effects associated with efficiency gains, with binding targets and public monitoring.

III. **Eliminate real GHG emissions**: require direct emissions reductions, prohibiting substitution through offset mechanisms such as carbon credits, and ensuring independent auditing.

IV. **Ensure priority for essential uses**: guarantee that, in contexts of water and energy scarcity, supply to households and essential services takes precedence over data center operations.

V. **Ensure consultation and consent**: guarantee the right to free, prior, and informed consultation of potentially affected populations, in accordance with ILO Convention nº 169, including the possibility of veto over projects that compromise their ways of life and their territorial and cultural integrity.

VI. **Avoid tariff impacts**: implement regulatory safeguards to prevent the sector's expansion from increasing energy and water tariffs for the population.

Transparency, Social Participation, and Accountability

I. **Ensure transparency**: encourage countries to create a public platform with accessible and up-to-date data on energy, water, and mineral consumption, emissions, land use, and waste generation by data centers, with territorial disaggregation and accessible language.

II. **Expand social oversight**: establish permanent mechanisms for social participation in public policymaking and in project licensing processes.

III. **Monitor supply chains**: implement traceability systems for inputs and equipment, with particular attention to the origin of minerals, prohibiting the use of materials sourced from conflict or high socio-environmental risk areas.

IV. **Strengthen accountability**: require standardized periodic reports, audited by independent entities, on socio-environmental impacts and compliance with regulatory obligations, including comparable and verifiable indicators.

Redistribution of Resources

V. **Establish mandatory contributions**: create financial contribution mechanisms proportional to company size and revenue to support public socio-environmental and climate funds.

VI. **Promote social returns on investments**: ensure that economic gains generated by the sector are reinvested in public policies, especially in affected territories.

VII. **Strengthen public and sovereign infrastructure**: direct resources toward the development of public digital infrastructure and research centers in universities, reducing dependence on large technology corporations.