Climate Action Against Disinformation

roots

Who Bears the Weight of the Cloud?

An analysis of official discourses, propaganda and disinformation regarding the environmental destruction caused by data centers in Brazil.

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Abstract

With advances in technology, information processing, and the artificial intelligence market, there is also a need to improve infrastructure, which tends to override the resulting socio-environmental impacts. The main objective of this study is to examine what information about the installation of data centres has been disclosed in Brazil, what the narrative surrounding these projects is, and how it has been perceived by the population. To this end, we analyse the discourse and dissemination of information about this technology, how it is presented by the government and the media, and how it has been perceived by people living near the construction sites, especially through community surveys in Fortaleza (CE), Eldorado do Sul and Guaíba (RS). The aim is to assess whether there is a perception of impacts such as massive consumption of drinking water, increased energy demand, and land conflicts. In addition, official government agencies were contacted through Brazil's Access to Information Act (LAI) to request documentation of environmental impact assessments related to the planned data centre facilities. This report does not seek to erase or appropriate the ongoing resistance led by frontline advocates, but rather to glimpse how disinformation affects their surroundings, often isolating the agenda they raise from the rest of the population equally affected by environmental impacts. In conclusion, the report argues that Brazil's current digital infrastructure development model is characterised by opacity, disinformation and environmental neglect, reinforcing social and ecological injustice. It calls for a collective shift from isolated resistance to shared responsibility, based on transparency, inclusive governance and the recognition that the damage caused by digital expansion is neither invisible nor inevitable.

Introduction

The expansion of digital infrastructure has been announced by the Brazilian government as an essential milestone for economic development, technological modernisation and the affirmation of the state's national sovereignty. In his speech at the United Nations General Assembly in September 2025, President Luiz Inácio Lula da Silva included Brazil's commitment to expanding its digital infrastructure among the central themes. Along with topics such as digital sovereignty, internet governance, and data protection, the president emphasised the development of sustainable data centres as a fundamental pillar of the country's technological agenda (Mauzi et all, 2025). This speech echoes the stance adopted by the federal government. In the same month, Brazil's Minister of Finance, Fernando Haddad, emphasised the strategic importance of national data processing, noting that 'only 40% of Brazilian data is processed within the country, while the rest is sent abroad, outside the scope of our data protection laws' (Agência Brasil, 2025 a).

This official discourse of progress and sovereignty, however, conceals a fundamental tension between the presentation of sustainability and modernisation as central objectives, and the systematic disinformation or obfuscation of their concomitant environmental and social impacts. Within this context, disinformation, which can be defined as the deliberate fabrication of information to mislead publics and foster a distorted comprehension of an issue, functions as a pivotal mechanism for moulding public perception. Despite its frequent presentation as fact-based, such information is intrinsically false, misleading, or incomplete. Consequently, this study examines the operation of this tactic within the narrative promoting data centre expansion in Brazil, with specific attention to its role in masking environmental damage and constraining democratic oversight.

In fact, the Brazilian government has shown a growing interest in setting up data centres in recent years, even though they process data from foreign companies and not necessarily elements relating to the national population. One of the first formal initiatives in this regard was the comprehensive study released in June 2023 by the Ministry of Development, Industry, Trade and Services (MDIC) in collaboration with the Brazilian Industrial Development Agency (ABDI), focusing particularly on data centres. This document describes the country's potential to expand and upgrade its digital infrastructure by nationalising large-scale data processing (Ministério do Desenvolvimento, Indústria, Comércio e Serviços 2023).

The study does not omit the issue of environmental impacts. In fact, it addresses concerns related to environmental sustainability, with the report (starting on page 314) recognising the high energy consumption and carbon emissions normally associated with these facilities. It is precisely in this context that the issue of renewable energy comes into play in matters related to data centre facilities. The report goes on to recommend alternatives such as renewable energy sources (e.g., solar and wind) and waterless cooling systems as strategies to mitigate these impacts. The Ministry of the Environment is also cited as a critical stakeholder in ensuring sustainable implementation. It should be noted, however, that the report also draws an analogy with other existing facilities, such as those in the state of Wyoming in the US, where the local government has eliminated environmental licensing requirements for data centres on the grounds that they have 'minimal environmental impact' (p. 172). When juxtaposed, these two pieces of information raise the question of whether the report really advocates for the participation of government environmental agencies.

A few years after this study, the government launched the Special Taxation Regime for Data Centre Services (REDATA), which reduces taxation on infrastructure and equipment related to the installation of data centres. This measure reduces the cost of building this infrastructure, seeking to attract more investment to the country. In summary, the proposal indicates that companies must invest 2% of their acquisition costs in national research, innovation, and industrial development programmes and offer at least 10% of their processing capacity to the domestic market. For enterprises located in the North, Northeast, and Central-West regions, these obligations may be reduced by 20% (Câmara dos Deputados, 2025).

These fiscal and regulatory mechanisms are part of a broader public policy framework known as the "Strategy for Implementing Public Policies to Attract Data Centres," last updated in July 2025 (Ministério do Desenvolvimento, Indústria, Comércio e Serviços, 2023). Although this strategy presents itself as forward-looking and environmentally responsible —requiring, for example, the use of 100% clean or renewable energy, minimal water consumption, and proof of zero carbon emissions from the outset (Article 11-B of MP 1318/2025) —it is not clear how data centres that are being or have been installed comply with this sustainability requirement. It is noteworthy, for example, that nothing is said about the disposal of electronic waste generated by this installation. In addition, land rights, ecological disruption, community displacement and lack of transparency, especially at the local level, continue to be contested.

Although the REDATA policy and the MDIC/ABD study establish sustainability criteria, they do not require public consultation or mechanisms to ensure that communities in affected regions are fully informed. The prevailing narrative in this implementation is linked to progress, and local voices denouncing the environmental and social impacts of these infrastructures are minimised or obscured.

This narrative of progress over the environment is not exactly new, given that the development of infrastructure for digital modernisation often reproduces extractivist and colonial logics, serving transnational data interests and often neglecting local livelihoods, environmental limits and democratic oversight (Roberts & Montoya, 2023 and Ballari et al., 2025).

Currently, in Brazil, there are already signs of resistance from the affected population, but these narratives are not always highlighted or given equal consideration to those related to supposed progress and economic gains. The environmental issue is therefore underestimated amid the enormous amount of positive information about data centres disseminated by the same communication channels. This framing isolates resistance, diffuses responsibility and limits public debate.

It is amid this scenario of selective communication and deliberate disinformation that this research emerges, seeking to investigate in depth how narratives about data centres are constructed in Brazil, how transparency is demanded or denied, and how affected communities are informed or disinformed. More specifically, the study aims to evaluate the extent of disinformation surrounding the environmental impacts generated by data centres in Brazil. This will be achieved through an analysis of how news related to data centres has been reported between January and September 2025, combined with two case studies (Ceará and Rio Grande do Sul) based on public consultation processes and inquiries with environmental impact assessment bodies at municipal, state, and federal levels. Accordingly, this research seeks to answer the following questions: what are the environmental and social impacts of the new data centres in Brazil? How is disinformation used to obscure these impacts? What resistance movements have emerged and how are they portrayed? And how are local communities informed, or disinformed, about projects implemented in their territories?

The importance of this investigation lies in challenging the narrative of non damage, considering that the impacts are being actively concealed through policy design, selective communication, and regulatory opacity. By analysing not only the existing discourse, but also how it reaches and is perceived by the population, this report seeks to

contribute to ongoing debates on digital colonialism, environmental injustice, and technopolitics in Brazil.

Literature review

Why talk about the environmental impact of data centers?

Before delving into the environmental impacts of data centres, it is important to understand the subject of this research. The expansion of data centres in Brazil, promoted under the narrative of a "digital and green" economy, conceals profound environmental impacts that challenge the very notion of their sustainability. Although government discourse frequently highlights Brazil's predominantly renewable energy matrix as a key competitive advantage (Ministério de Minas e Energia, 2023), the construction and operation of this infrastructure produce a substantial ecological footprint. The installation of hyperscale facilities requires vast tracts of land, large quantities of construction materials, and significant amounts of rare earth elements, fuelling extractive supply chains that are closely linked to deforestation, land-use conflicts, and socio-environmental degradation (Stacciarini & Gonçalves, 2025; Neves, 2023; Venditti, 2023). Projects such as the Scala AI City, occupying approximately seven million square metres, illustrate the territorial intensity and material demands of this sector (Data Centre Dynamics, 2024).

During operation, energy requirements are colossal. The country's installed capacity is projected to increase from 1 GW to 8 GW, potentially requiring 17,716 MW by 2038, an amount equivalent to the electricity consumption of a city of 43 million inhabitants (Veras Mota, 2025). While part of this supply derives from renewable sources, hydropower, solar, and wind generation each carry their own environmental burdens, including ecosystem alteration, community displacement, and the intensive use of water and land (Giongo, Mendes & Santos, 2015; Martins, R., 2025; Meireles, 2011). In addition, data centre cooling systems consume billions of litres of freshwater annually, competing directly with local supply and exacerbating regional water stress (Pengfei et al., 2025).

The resulting pollution is multidimensional, encompassing greenhouse gas emissions estimated at between 1.7% and 2.8% of the global total (Freitag et al., 2021) and an ever-growing stream of electronic waste, inadequately regulated by the REDATA framework. This lifecycle, from mineral extraction to disposal, generates a continuous chain of environmental degradation.

Furthermore, the spatial distribution of these facilities frequently produces what have been described as “green sacrifice zones,” where the social and ecological costs of digital infrastructure are externalised to vulnerable territories and populations (Zografos & Robbins, 2020; Sovacool, 2021). The systematic exclusion of environmental authorities, such as the Ministry of the Environment, from policy discussions on the sector (Martins, L., 2025a) further aggravates this dynamic. It reflects a pattern of deregulatory governance that prioritises economic expansion over genuine sustainability and environmental justice.
In addition to environmental burdens, the narrative of job creation in the data centre sector is largely misleading. Employment opportunities are mostly concentrated in the construction phase, with operational roles remaining very limited due to automation and the need for highly specialised staff (Delfanti & Frey, 2020; Tozzi, 2023). Large projects such as Scala AI City and TikTok’s facility in Ceará may generate thousands of temporary jobs, yet permanent positions often consist of only a few dozen employees, frequently filled by foreign specialists (Damasceno, 2025; The Wall Street Journal, 2025). As a result, the long-term socio-economic benefits for host communities are minimal, highlighting a significant gap between promotional discourse and actual local development outcomes.
This preliminary analysis does not aim to provide an exhaustive account of all matters related to data centres. Rather, it seeks to situate the ongoing debates concerning the environmental impacts of these constructions and mega-projects, with particular attention to the Brazilian context.
The primary objective of this research is to examine whether, and to what extent, the prevailing narrative is shaped by disinformation; that is, by the deliberate fabrication of information intended to mislead the public and foster a distorted understanding of the issue (CAAD, 2022). For that aim, the 5 D Model of Disinformation framework, which considers, “Dismiss, Distort, Distract, Dismay, Divide” was considered. Each one of those aspects encompass what frames the current disinformation model, making it possible to see if and how the discourse of data centers in Brazil fits the disinformation category.
In this way, it is important to clarify that "dismiss" refers to trying to undermine credibility by attacking or discrediting the source, so that the claim itself is ignored, while "distort" distorts or selectively presents facts, using partial truths to create misleading impressions, while "distract" redirects attention from the main issue to irrelevant or secondary topics, "dismay" induces cynicism or helplessness, discouraging engagement or public scrutiny; and finally, "divide" inflames social and identity tensions, eroding collective trust and solidarity(DOROSHENKO and Lukito, 2021).

A critical comprehension of how such strategies operate in projects that inflict environmental and social harm is, therefore, crucial to understanding the political and societal framing of data centre expansion in Brazil. Nevertheless, more detailed information on this complex process involving the implementation of data centers, their construction materials, their consumption and environmental and social impact, even with the use of renewable energy, can be found in the complementary report to the research entitled "Data Centers and its environmental impacts in Brazil: a brief overview".

Methodology

To address the research questions and objectives, this study employed a mixed-methods approach, combining discourse analysis, empirical fieldwork, and technical estimation. These three interconnected strategies were designed to capture not only the dominant narratives surrounding data centre installations in Brazil, but also the perspectives of communities directly impacted by these projects and the projected environmental consequences based on analogous global cases.

The first component consisted of a discourse analysis of national media coverage related to data centres in Brazil. This analysis focused on the period between January and 30 September 2025 and examined how the topic was framed in the country's most accessed news sources. Specifically, the five leading digital news portals were selected based on readership rankings (Prisco, 2025), along with the major national television networks: Globo, RecordTV, SBT, Band, and RedeTV!. These networks are widely recognised for their national reach and influence in Brazilian broadcast media. In addition, the analysis also considered Brazil's most widely circulated print newspapers. According to circulation rankings (Yahya, 2024), the leading national dailies are *O Estado de S. Paulo* (*Estadão*), *Folha de S. Paulo*, and *O Globo*. As *O Globo* had already been included in the review through its television network and digital platforms, it was not counted twice. This approach ensured comprehensive coverage of the media landscape while avoiding duplication across different branches of the same media group. Together, these sources provide a robust dataset for assessing how narratives around data centres circulate in Brazil's mainstream media.

The second methodological component was an empirical investigation involving communities in three Brazilian cities: Fortaleza (CE), Eldorado do Sul (RS), and Guaíba (RS), all of which are sites of planned or ongoing data center construction. A structured

questionnaire was developed and distributed to residents in these areas. The survey inquired about participants' awareness of the data center projects, their sources of information, perceived environmental risks, and whether they knew how or where to seek institutional support or file complaints. Respondents were also invited to share open-ended comments regarding the potential impacts on their communities. At the end of the questionnaire, they were asked whether they would like to be contacted via email to receive further information about data centers, tools for community engagement, and legal resources related to environmental and housing rights. This aspect of the methodology aimed to combine data collection with participatory engagement, acknowledging that informed communities are essential to the democratization of infrastructure planning.

To complement public data and community responses, the study directly contacted public authorities through Brazil's Access to Information Law (LAI). Formal requests were sent to government agencies responsible for environmental regulation and infrastructure development to determine whether Environmental Impact Assessments (EIAs) had been conducted or made publicly available for the planned data centre projects. Questions were forwarded to the government of Ceará, the government of Rio Grande do Sul, and the municipalities of Fortaleza, Eldorado do Sul, and Guaíba. The absence or lack of clarity in official responses was analysed as an indicator of institutional opacity and as a barrier to democratic participation in infrastructure planning.

Rationale for the Approach and Challenges Encountered

The selection of research sites was based on two main criteria: (1) the official announcement of data center projects and (2) the preexisting socio-environmental vulnerabilities in the regions. Geographic diversity was also considered, with Fortaleza representing the semiarid Northeast region and Eldorado do Sul and Guaíba representing the flood-prone South. Each region presents distinct but equally pressing environmental challenges. Furthermore, the populations most likely to be impacted share common characteristics in terms of marginalization—whether by race, class, or geography. In Fortaleza, the community is already socially and economically vulnerable. In addition, Indigenous peoples are among those resisting the invasion of their territory; in Eldorado do Sul, many residents remain displaced after the severe floods of 2024, with limited access to safe housing and public services. In both contexts, the study sought to center

the perspectives of those most affected, rather than relying solely on institutional sources or top-down knowledge.
The study, however, faced some logistical challenges, such as time and the impossibility of interviewing people in person. Since the study was conducted over a two-month period, both the level of engagement and the number of responses were limited. Ideally, the survey should be extended over at least six months and include on-site participation in the target regions. This would help raise awareness of the research, encourage broader participation, and generate a more robust and representative dataset.
However, since the survey could not be conducted in person, strategies were used to disseminate the questionnaire via social media, partnerships were established with other organizations that agreed to support the project, and research centres focused on disinformation, the environment, and human mobility were contacted. Despite its limitations, the results already offer valuable insights and highlights the need for further investment in this strategy.
An important remark is that this research does not intend to speak on behalf of the communities affected, nor to subordinate their political action, and already resistance strategies, to an external academic framework. Instead, it aims to contextualize and expand their actions within a broader systemic analysis.

Results

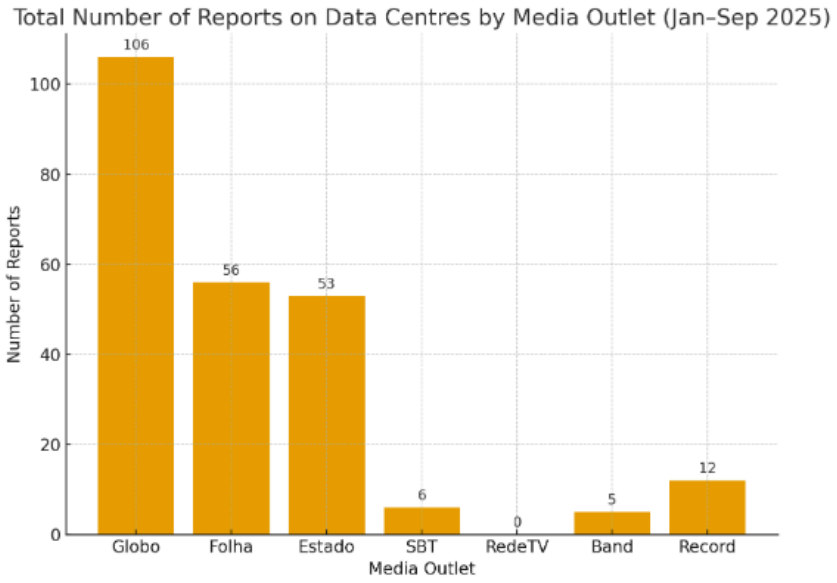
Media narratives

The analysis focused on how data centres were presented in Brazilian mainstream media between 1 January and 30 September 2025. Sources were selected based on national reach and influence, combining broadcast and print/digital platforms. For television, the five largest open-access networks were considered: Globo, SBT, RecordTV, Band, and RedeTV!. Globo was included only once, despite its dual presence as both the country's largest broadcaster and one of the top three most accessed online platforms, to avoid double counting. In the print sector, the analysis incorporated the three leading national newspapers by circulation and digital access – *Folha de São Paulo*, *O Estado de São Paulo*, and *O Globo*. Because *O Globo* belongs to the same group as TV Globo, the content was consolidated into a single category.
Inclusion criteria covered all pieces where data centres were either the central topic or explicitly framed as an "objective to be met by an agenda," "an asset," or "gain." Reports in

which “data centre” was mentioned without explanation or contextualisation were excluded. This ensured that the corpus consisted of substantive reporting rather than incidental references.

Overall coverage

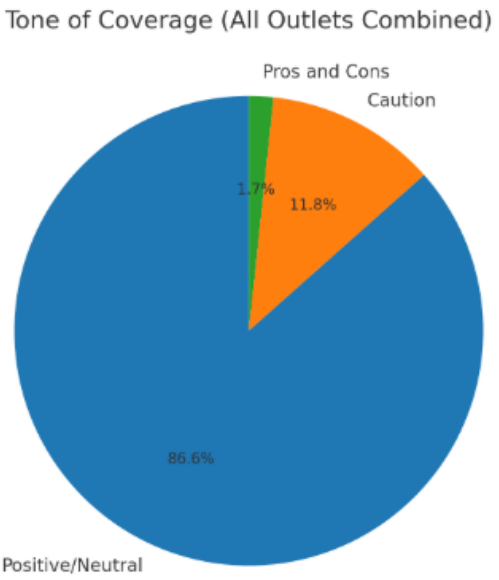
Across all sources, 238 distinct reports were identified. Globo accounted for 106 reports (44.5%), *Folha de São Paulo* for 56 (23.5%), *O Estado de São Paulo* for 53 (22.3%), RecordTV for 12 (5%), SBT for 6 (2.5%), and Band for 5 (2%). Notably, RedeTV! did not produce a single report on the subject during the period examined.



Tone of coverage

In order to conduct this research, the tone in which the coverage was presented was analysed according to the main message presented. Reports were categorised as positive/neutral when they were associating data centres with progress, investment, infrastructure, technological development, or presenting neutral factual updates (such as sales, construction, or business negotiations). It was considered cautionary when raising environmental concerns, highlighting risks such as water scarcity, land conflicts, or the need for regulatory oversight. And finally, it was considered moderate when pointing out “Pros and Cons”, since they were presenting arguments from different perspectives in almost equal proportion.

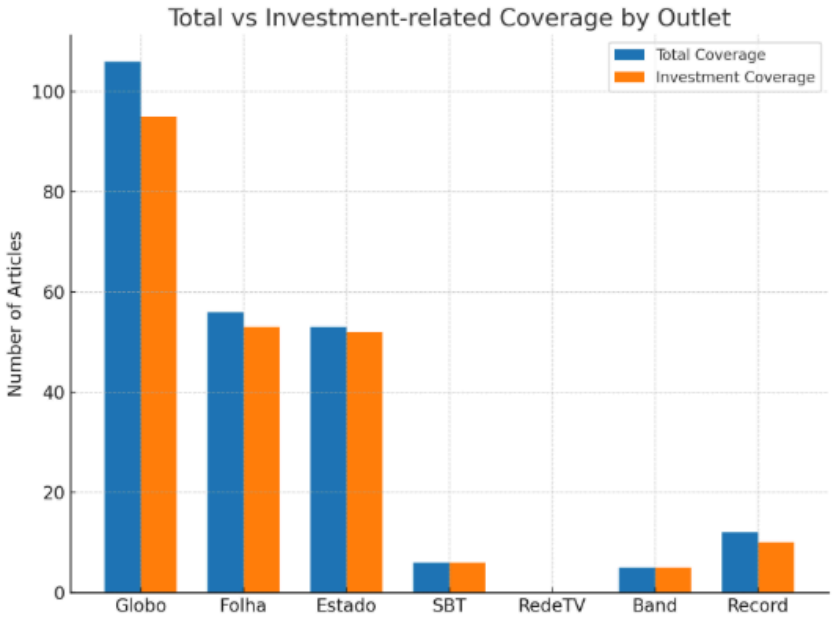
The results show that most reports (206 out of 238, or 86.5%) were positive or neutral. Only 28 reports (11.8%) adopted a cautionary tone, and a mere 4 reports (1.7%), all published in *Folha de São Paulo*, could be classified as genuinely balanced between pros and cons.



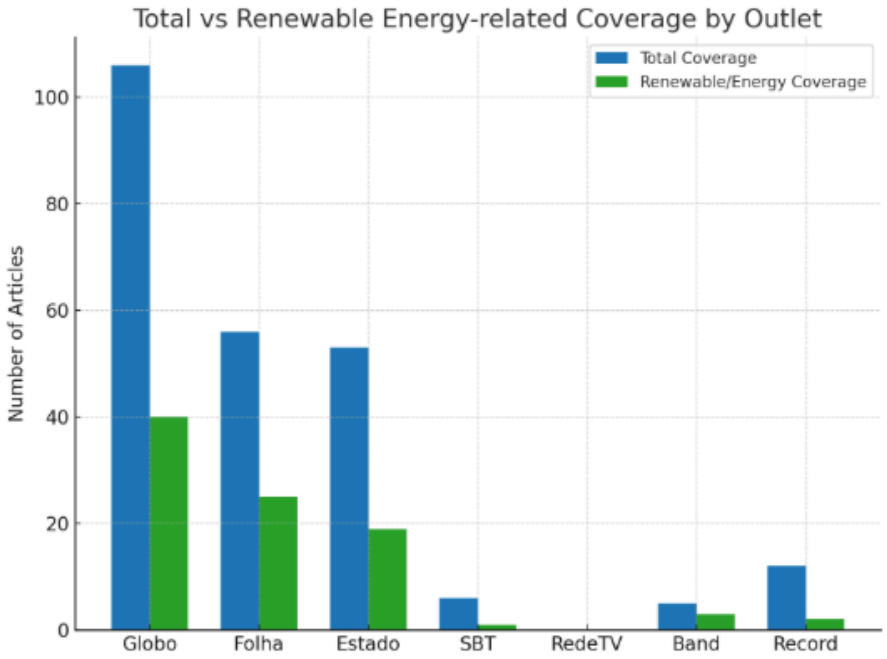
Disaggregating by outlet shows consistent patterns. At Globo, 91 of 106 reports (85.8%) were positive or neutral, 15 (14.2%) were cautionary, and none adopted a pros-and-cons framing. *Folha* was the only outlet to publish balanced reports, four in total (7.1% of its coverage). At *O Estado de São Paulo*, 48 of 53 reports (90.6%) were positive or neutral, while 5 (9.4%) raised environmental cautions. RecordTV mentioned environmental impacts in only three cases (25% of its coverage), whereas SBT and Band made no mention at all.

Framing and associations

A closer look at thematic associations shows that data centres were overwhelmingly tied to business and market success. Considering all the cases analysed, 221 of 238 reports (92.9%) linked the technology to investment opportunities, foreign capital inflows, or corporate expansion. Globo reinforced this angle, with 95 of its 106 reports (89.6%) portraying data centres in discussions involving investments, market and competitiveness.



By contrast, environmental sustainability was referenced in far fewer instances. Only 90 reports (37.8%) mentioned renewable or clean energy, or strategies to reconcile data centre development with environmental goals. Even in outlets that did so most often, like *Folha* (44.6% of its reports), this remained a minority framing.



Many reports also advanced the idea of Brazil's abundance of renewable energy resources, positioning the country as especially suited to host data centres facilities. This framing suggested that the deployment of data centres was not only compatible with environmental sustainability, but indeed beneficial, reinforcing a narrative of Brazil as a natural hub for green technological infrastructure. In doing so, it downplayed questions of resource competition and ecological strain, privileging a discourse that presents data centres as both an environmental and economic opportunity.

The tension between these discourses is striking. Reports that did highlight environmental risks or disputes with local populations, such as the case of Anacé community's struggles in Ceará, were often buried under a flood of coverage that emphasised new projects, capital inflows, and government incentives. Thus, cautionary voices appeared marginalised or camouflaged by the dominant narrative of technological promise and financial opportunity.

Considerations

The results confirm a systematic pattern in the Brazilian media: data centers are predominantly framed as mechanisms of progress and investment, with environmental

and social costs relegated to a secondary position. Although 86% of reports are positive or neutral, less than 12% address the topic with an informative tone about environmental impacts and provide insight into the risks these structures pose, and less than 2% make a genuine effort to weigh the pros and cons. This imbalance risks creating a distorted public debate, in which critical concerns are acknowledged but quickly overshadowed by a constant stream of celebratory or business-oriented narratives.

In practical terms, this means that when one article draws attention to the environmental impact on communities, the same outlet may simultaneously publish several other reports emphasizing investment, job creation, and the sector's "green" brand, diluting or camouflaging the critical perspective. This suggests that, while counterpoints exist, they are structurally marginalized in a discursive environment heavily biased toward portraying data centers as unproblematic symbols of development.

Furthermore, it is important to note that the repeated emphasis on renewable energy and financial investment acquires discursive power, transforming these themes into apparent solutions to the problems posed by data centers. Concerns such as high electricity consumption are often immediately juxtaposed with references to clean or renewable energy, creating the impression that environmental impacts are already mitigated. Through this repetition, the coverage reinforces an illusion of resolution: the suggestion that Brazil's renewable energy potential neutralizes any risks. Framing and repetition techniques can manufacture a sense of consensus or inevitability (LECHELER; KEER; SCHUCK; HÄNGGLI, 2015). In this case, the constant association of data centers with "green" narratives can displace environmental concerns, reframing them as resolved by the supposed sustainability of the national energy matrix.

Specific case studies

To verify how this message reaches—or fails to reach—the population living in and around these mega-constructions, analyses were conducted considering both a survey conducted through official government channels on environmental impact studies conducted in the regions and an empirical study with residents of two regions in particular: Eldorado do Sul (Rio Grande do Sul) and Pecém(Ceara). Before this, however, a brief case study was conducted on each of these regions and their relationship with data centers (considering their specificities and challenges).

Case: Eldorado do Sul (RS)

The Scala AI City project in Eldorado do Sul, Rio Grande do Sul, Brazil, has already been announced as one of the most ambitious data center initiatives in South America (Governo do Rio Grande do Sul, 2024). The city, which was chosen due its availability of electrical power, space for expansion, strategic connections and the anticipated future connection to the Malbec submarine cable (Data Center Dynamics, 2024), is expected to receive large amounts of investments. The initial prediction consisted of an investment of US$500 million for a capacity of 54 MW, with a long-term vision for expansion to 4,750 MW—a total investment that could reach US$80 billion (Data Center Dynamics, 2024; Government of Rio Grande do Sul, 2024).

From an environmental perspective, the construction company, Scala Data Centers, claims it will operate with 100% renewable energy and achieve zero Water Use Efficiency (WUE) through advanced waterless liquid cooling systems (Governo do Rio Grande do Sul, 2024). These commitments, however, must be assessed within the socio-environmental realities of the region.

Eldorado do Sul is located in the Guaíba River Basin, an area severely affected by catastrophic flooding in May 2024. The floods displaced more than 600,000 people across Rio Grande do Sul (Defesa Civil, 2024), with approximately 100% of Eldorado do Sul's urban area submerged and 90% of its population directly impacted (Souza, Granchi, Otto, 2024).

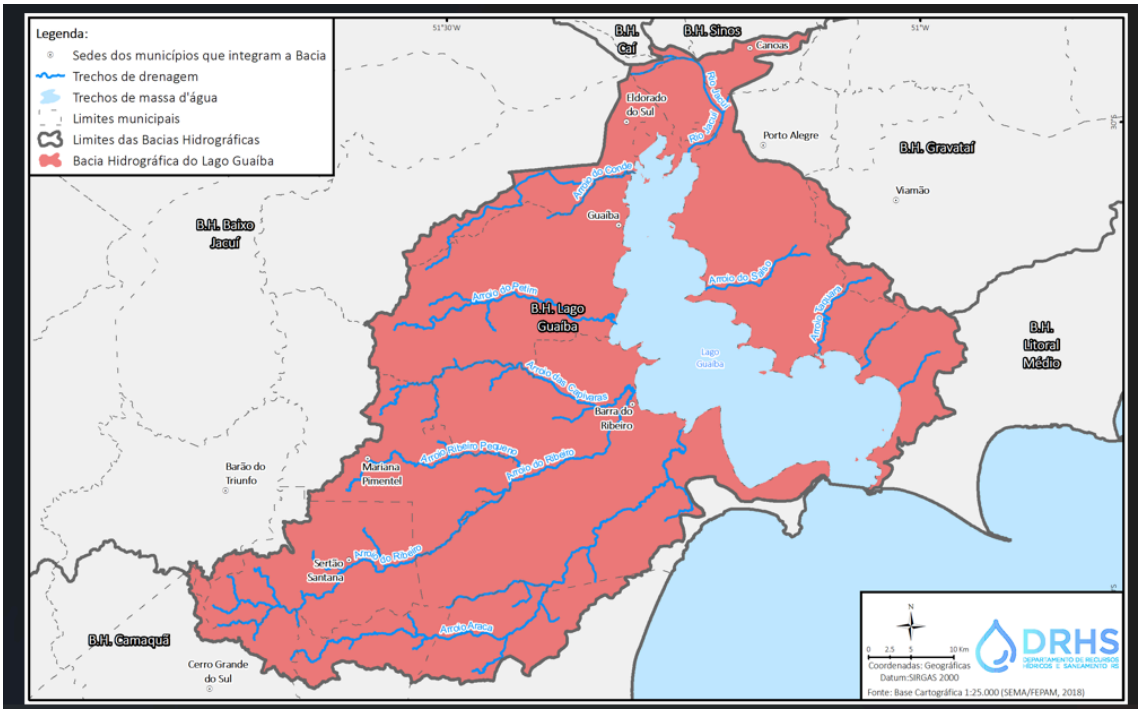


Image of the Guaiba hydrographic basin. Source: Government of Rio Grande do Sul <https://sema.rs.gov.br/g080-bh-guaiba>

The neighboring cities of Guaíba and Porto Alegre also suffered record flooding, with water levels exceeding 5 meters at Lake Guaíba, the highest since 1941 (Paz, M. 2024). As a result, large portions of the metropolitan region faced weeks without access to drinking water (Perachi, 2024). This context of recurring hydrological vulnerability raises deep concerns about the wisdom of building a hyperscale data center complex in an area still recovering from the disaster and that requires clean water, even if not as much as other data centers.

The economic, environmental and social vulnerabilities are not mentioned, however, in the legislation created to deal with this mega installation project. The Municipal Law No. 5,949/2024 of Eldorado do Sul formalizes the creation of the Data Center Technology Park and expands the urban perimeter to accommodate the project (Eldorado do Sul, 2024). The law authorizes the municipality to grant incentives such as exemptions from local taxes and fees, partnerships for technical training, and even the conversion of permanent preservation areas into public parks linked to the development plan. Crucially, it also establishes that Scala Data Centers S/A is solely responsible for all environmental licensing and any damages to third parties, explicitly exempting the municipality from liability. This legal clause effectively shifts environmental responsibility from the public to the private sector, institutionalizing a framework of deregulation that weakens the state's role in monitoring and mitigating ecological damage.

This legislation highlights the priorities of authorities. While expanding the urban perimeter, a legal vacuum regarding specific environmental provisions in data center projects remains. Until September 2025, the resolutions of the National Environmental Council and the State Environmental Council of Rio Grande do Sul also do not provide standards for data center licensing in the country or in the state.

Furthermore, the fact that the data center is located in a region prone to flooding raises other issues, such as the overlapping of financial interests with the social interest of creating safe spaces for the population during periods of heavy rain, especially in a place historically affected and completely compromised by the floodings of 2024.

It is also worth noting that there is a clear interest from the government in making the project work, given that the Ministry of Mines and Energy granted the largest authorization for energy reserves ever granted to a data center company, guaranteeing a connection of 5 gigawatts (GW) of energy (Governo do Rio Grande do Sul, 2025).

Given the project's location in a flood-prone watershed, its enormous projected energy demand, and a local governance structure designed to prioritize private investment over ecological or social responsibility, the Scala AI City initiative exemplifies the contradictions of the "green AI" narrative. Claims of "zero water use" and "100% renewable energy" cannot be evaluated in isolation from the social and geographic contexts in which such infrastructure is deployed, lest the most marginalized communities continue to be the most affected.

Case: Pecém (CE)

Northeastern Brazil also has plans to build a large data infrastructure complex. In a project announced by the federal government as a market giant and a strong implementer of AI in its activities, TikTok (Skinner, H. Charalambous, P, 2025) plans to build a data center in the state of Ceará, at the port of Pecém (CNN Brasil, 2025).

This is a strategic location, given that Fortaleza currently houses 17 submarine fiber optic cables connecting Brazil to North America, Europe, and Africa. The project, still in the development phase, is among the most ambitious in Brazil, with a planned capacity of up to 900 MW—comparable to some of the largest data centers in the world (Ximenes, V. 2025).

The company behind the multi-million dollar project, which is listed as a TikTok partner for all intents and purposes, is Casa dos Ventos, which plans to invest R$50 billion in Ceará, the largest investment ever made in the region (Ximenes, V. 2025). This same company presented a report indicating an average power consumption of 210 MW for the project, which equates to a daily consumption of 5,040 MWh for 24-hour operation (Martins, L., Amorim, F., 2025). This usage corresponds to the residential electricity consumption of approximately 2.2 million Brazilians, based on the national average of 2.27 kWh per person per day. This means that, alone, it will consume more energy than 99.9% of Brazilian municipalities, and its annual demand of 1,84 TWh would exceed the total consumption of the states of Acre, Amapá, and Roraima combined (Martins, L., Amorim, F., 2025). This, however, would represent just 70% of total capacity; being projected to reach at its peak up to 300 MW, implying even greater energy consumption (Martins, L., Amorim, F., 2025).

The high demand did not go unnoticed by regulatory agencies, but despite an initial negative opinion from the National Electric System Operator, Casa dos Ventos managed to obtain a favorable opinion to operationalize the investment (ONS, 2025). The major investment to meet the expected amount of energy will consist of new wind and solar farms to supply all this demand. If insufficient, they will be replaced by a backup system

with 60 diesel-powered generators, which will operate in the event of a power outage, providing enough power to maintain operations for 24 hours (Martins, L., Amorim, F., 2025). Furthermore, the installation of these renewable energy bases is expected to affect surrounding cities, such as Caucaia, which is why it is sometimes identified as the data center hub (Martins, L., Amorim, F., 2025). The government, however, is consistent in stating that water consumption for such facilities will not be significant (Agencia Brasil, 2025c). Even so, concerns about energy and water consumption are already plaguing the local community, which has already mobilized to oppose the construction of this mega-project. A formal complaint has been filed with the Public Prosecutor's Office (MP-CE) and the Federal Public Prosecutor's Office (MPF). In it, the Anacé Indigenous community, which lives in the as-yet-undemarcated territory, as well as several civil society groups, called for the immediate suspension of the licensing of the TikTok data center project in Caucaia and the annulment of the preliminary license already issued by the Ceará State Environmental Superintendence (Martins, Lais, 2025 b). One of the alleged points is that altering the environment without prior consultation with the local Indigenous population would violate Article 169 of the ILO, which would be entitled to this right even without the demarcation of approved lands.

This is not the only legal issue being contested. The project's viability is, in fact, the result of a legal flexibilization. Part of the project, as noted, will be carried out in Caucaia. This second phase is expected to involve an investment of R$100 billion and is to be carried out within a Free Trade Zone (ZPE) (Faria, B. 2025). The truth is that until mid-2025 such an undertaking was not possible in this area, but Provisional Measure 1,307/2025 made this alternative viable (Brasil, 2025). It is clear that the case implies an impact on multiple municipalities in the coastal region of Ceará, close to its capital, and is already causing concern for some of the residents who are already the most historically marginalized.

Requests for information

Requests were submitted under the Access to Information Law to the municipalities of Fortaleza, Eldorado do Sul, and Guaíba—locations identified for potential data centre installations—as well as to the states of Ceará and Rio Grande do Sul, which are directly involved in negotiating these projects.

Each request sought clarification on the existence of environmental impact assessments or related documents that had been produced, presented, or reviewed in connection with the proposed facilities.

Results of the requests

The responses revealed a consistent absence of environmental assessments at both municipal and state levels:

- **Municipalities (Fortaleza, Caucaia, São Gonçalo do Amarante, Eldorado do Sul, and Guaíba)**: Fortaleza, São Gonçalo do Amarante and Guaiba municipalities replied that they had not prepared or received environmental impact reports. Instead, they indicated that responsibility for such assessments lay with the respective state governments, given their role in leading negotiations with private actors. São Gonçalo do Amarant specifically said the agency responsible for environmental licensing and linked to the State Secretariat for the Environment and Infrastructure (SEMA), while Fortaleza stated that this should be addressed with the Ministry of Mines and Energy. This effectively transferred responsibility away from the municipalities, despite their constitutional mandate to regulate matters of local environmental concern. The remaining municipalities did not answer until the end of this research.
- **State of Rio Grande do Sul:** The state, through the Fundação Estadual de Proteção Ambiental Henrique Luis Roessler (FEPAM), the agency responsible for environmental licensing and linked to the State Secretariat for the Environment and Infrastructure (SEMA), stated that *"FEPAM has not, to date, received any request for environmental licensing regarding the data centre."*
- **State of Ceará**: Ceará initially argued that information on the negotiations was confidential. An appeal was subsequently filed, clarifying that the request did not pertain to the terms of negotiation but specifically to whether environmental impact studies had been conducted, and what their findings entailed. The state's subsequent response was that the Ceará State Secretariat of Environment and Climate Change (SEMA) is not responsible for issuing an Environmental Authorization for this project, as it is not located within a State Conservation Unit. Therefore, they do not have records of any proceedings or environmental analyses related to this case.
- **Federal Response**- Following Fortaleza's response, a formal inquiry was submitted to the aforementioned Ministry at the federal level. The reply received stated, in essence, that within the Department of Planning and Concessions for the Transmission and Distribution of Electric Energy and International Interconnections,

under the National Secretariat for Energy Transition and Planning (SNTEP) of this Ministry, there are no records of administrative proceedings, discussions, or any form of negotiation related to the installation of a data centre by the company TikTok.

Responses to requests made under the access to information law

The access to information survey was conducted with a dual purpose. The first was to obtain reliable information from Brazilian authorities about the environmental studies being conducted for the implementation and construction of major infrastructure projects in their territory. The second was to allow reflection on who should be responsible for protecting the environment—a response that should be supported by the constitution, but which ultimately reveals a significant gap in accountability in this specific case.

Indeed, Article 225 of the Federal Constitution enshrines the right of all individuals to an ecologically balanced environment, defined as a common good essential to a healthy quality of life. This provision imposes on both government and society the duty to defend and preserve the environment for present and future generations.

To guarantee this right, the Constitution mandates the adoption of legal instruments and public policies for the protection of biodiversity, the monitoring of activities affecting the environment, and the sanctioning of harmful practices. These regulations could be made by different actors. For instance, Article 24 establishes that the Union can establish general standards regarding the environment, while the States and Federal District can also issue supplementary norms, and municipalities legislate on matters of local concern. In practice, this means that responsibility for environmental care is distributed across all levels of government, each with distinct but interconnected roles.

Thus, the responsibility and the ability to legislate over environmental implications of high-impact infrastructure projects such as large-scale data centres should be assessed by multiple governmental spheres, but that's not what was reported on the answers given. The responses,in that sense, expose a troubling lack of clarity and accountability in the governance of environmentally significant infrastructure. Municipal authorities have distanced themselves from responsibility by attributing competence to state governments. States, meanwhile, either denied the existence of studies (Rio Grande do Sul) or invoked confidentiality (Ceará), raising concerns over transparency and compliance with constitutional obligations to safeguard the environment.

This absence of environmental impact assessments in the early stages of project negotiation raises critical questions about the robustness of decision-making processes

regarding large-scale data centre installations, and whether affected communities' rights to a healthy environment are being adequately safeguarded.

Community awareness

Knowing that government and media discourse do not prioritize dissemination of environmental risks from data centers, it was necessary to understand how this information is being perceived by people living near the areas where these mega-projects are being built. To this end, a report was created via Google Forms, whose questions were validated with community leaders from Eldorado do Sul and activists from the Ceará region.

This report was disseminated to the public through text messages sent via WhatsApp, as well as through videos created by activists and influencers from Rio Grande do Sul on Instagram channels.

The text message was distributed with an specific art for each region (Ceará e Rio Grande do Sul), and with the following message:

"Are you aware? 🤔

A very large infrastructure project is being built in your area, which could affect your life and the environment, as you know!

🏭🔍 The so-called "data center" is being built, and to find out how you're dealing with this information—or not—I'm conducting a survey to see how much you know about it. For example, have you been notified about this construction? Do you know what a data center is? And have you been told anything about the impacts and consequences of this installation?

📄 To participate in the survey, simply complete the online form. Your response is crucial to understanding what kind of information is being shared! The more people who participate, the better we'll be able to understand what's being shared, how you're being notified, and how this project will benefit you and your community.

📲Participate!

[https://docs.google.com/forms/d/e/1FAIpQLSeJpd0h7-5VFyAMMM4FtZZLpvzwN04inALwuY4U0JdqBqIwhA/viewform?usp=header]".

The videos were created and disseminated in partnership with "Eco Pelo Clima," a youth movement from the state of Rio Grande do Sul that seeks to root the climate agenda in Rio Grande do Sul society, represented by Bruno Thomazi Zanette and Frederico Dal Soglio

Reckziegel, and "Kopa Coletiva Arquitetura Popular," a peripheral social impact business located in Restinga, a southern outskirts of Porto Alegre, RS, whose mission is to democratize access to architecture and urban planning, represented by Karol Rosa de Almeida urban planner and popular architect. Contacts with people from Eldorado do Sul were also facilitated by Marina Zwetsch, designer and communicator at the South American Network for Environmental Migrations (Resama). The art for the cards was created by Ana Carolina Moraes, Journalist and communicator at the South American Network for Environmental Migrations (Resama). The support of these organizations was crucial in disseminating the research in affected communities and bringing attention to the issue of data center construction in the region. This demonstrated the need to work with frontline workers and grassroots communities in the regions being studied.

The questionnaire was designed with three main objectives: (i) to obtain participants' consent and comply with legal formalities; (ii) to profile respondents by asking about their ethnicity, age group, gender, and area of residence, which allowed for the exclusion of those outside the study region from the final report; and (iii) to assess participants' knowledge of the relationship between data centers and environmental impacts in their regions. Questions were presented in both open-ended and closed-ended formats. This dual approach aimed not only to determine whether participants had access to certain information, but also to provide space for additional responses and personal insights.

The topics addressed in the questionnaire covered several dimensions: participants' prior relationship with the environment; their perception of environmental changes and safety in their region; their knowledge of data center installations, including what a data center is and how it operates; their perception of the environmental impacts generated by data centers and the potential impacts they anticipate; and whether they associate data centers with water shortages or other environmental issues.

Participants were also asked about perceived benefits of these projects, whether they had been officially consulted or participated in meetings regarding the installations, and if they knew whom to contact in case of problems. Additionally, the questionnaire explored what information companies or governments provided about these projects, how participants obtained this information, whether they trusted the available sources, and whether they felt they had sufficient access to information regarding construction and environmental impacts.

The primary responses collected in the Northeast region were from residents or workers who commute to the Caucaia region, where there is already a center of opposition to the

creation of data centers and public demonstrations in this regard. In Rio Grande do Sul, responses were considered from those living around the Guaiba river basin, given the environmental vulnerability versus the environmental safety of the data center. Responses were accepted from Eldorado do Sul, Guaiba (which borders the installation site), Porto Alegre (given that the project will have a connection to the data center to be installed there), and Canoas (the region between these two cities).

The questionnaire received a total of 66 responses. Some, however, had to be disregarded because they were answered by people outside the defined impacted area. Nevertheless, their contact emails were recorded so they would receive a Portuguese version of the final report as well as an invitation to participate in a later online training session on data centers, the environment, and environmental displacement.

Among the responses considered, 40 were from Rio Grande do Sul and 20 from Ceará. The low response rate is due to both the lack of direct intervention, the short implementation time, and the fact that the survey's supporters promoted the survey more in the South than in the Northeast. In any case, the initial goal of the survey was to obtain up to 50 responses, considering the previous limitations, thus exceeding initial expectations.

The survey aimed to capture a wide range of perspectives by seeking respondents from diverse age, gender, and racial backgrounds. This approach was designed to ensure the results reflected a broad spectrum of voices.

Age distribution

In Rio Grande do Sul, the respondents included two people under 20, seven aged 21-30, thirteen aged 31-40, six aged 41-50, three aged 51-60, and nine over 60. The profile in Ceará was different, with seven respondents aged 21-30, three aged 31-40, six aged 41-50, two aged 51-60, and two over 60.

Gender profile

In terms of gender identity, the sample in Rio Grande do Sul comprised 27 cisgender women, 13 cisgender men, and one non-binary person. In Ceará, 12 identified as cis-women and eight as cisgender men.

Racial and ethnic self-identification

Regarding racial identity, the responses in Rio Grande do Sul were 30 white, four mixed-race, and seven black individuals. Ceará presented a more diverse spread, with six white, six mixed-race, five black, and two indigenous respondents.

The respondents' relationship with nature.

In Ceará, the vast majority reported a strong connection with the natural world, with 14 individuals frequently visiting green areas and one working in an environmental field. Only five respondents reported having no active engagement with the environment.

A similar trend was observed in Rio Grande do Sul, where 28 people frequently visit green areas, four work with the environment, and one lives near an environmental reserve. A minority of six reported no regular interaction with nature.

In total, out of the 60 respondents across both states, 11 reported having no active interaction with the environment, which is equivalent to 18% of the total, being the vast majority (82%) connected with green areas. .

Environmental perception

When asked, "Have you noticed environmental changes in your region in recent years?" The response was overwhelmingly affirmative.

In Ceará, 12 respondents reported noticing many changes, while five had observed a few. Only three stated they had not noticed any changes.

The perception of change was even more pronounced in Rio Grande do Sul, where 30 people reported many changes and nine noted a few. Only one individual preferred not to comment.

In total, 56 out of the 60 respondents across both states have observed environmental shifts in their regions. This represents 93% of all participants, indicating a near-universal consensus on the occurrence of environmental change.

Safety perception

The survey also investigated participants' feelings of safety from environmental phenomena such as floods, droughts, and landslides. The responses revealed a striking contrast between the two states.

In Ceará, perceptions were divided: five respondents considered their area safe, nine felt only partially safe, and five felt unsafe. One person declined to comment. In general, they reported that part of the city floods with heavy rains.
In Rio Grande do Sul, the sentiment was overwhelmingly skewed towards insecurity. A significant majority of 27 respondents stated they did not feel safe, while ten felt only partially safe. Only three considered their area safe.
Analysing the qualitative data, it became clear that these perceptions were heavily influenced by recent events. Responses from Rio Grande do Sul frequently referenced the devastating 2024 floods, which created a widespread feeling of vulnerability. Conversely, those who felt safe often attributed this to not having been directly affected by such disasters.
Overall, the data paints a picture of significant environmental concern. Of the 60 respondents, 32 (53%) stated they do not feel safe. When including those who feel only partially safe, this figure rises to 51 people, or 85%, who have clear reservations or concerns about the environmental threats in their regions.

Knowledge of the installations

Regarding awareness of data centre construction in their regions, the survey revealed a generally low level of public knowledge. In Ceará, out of 20 respondents, only 9 (45%) were aware of such projects. The remaining 11 were either unsure what a data centre is (6 people) or were unaware of any local construction (5 people).
Similarly, in Rio Grande do Sul, less than half of the respondents—18 out of 40 (45%)—reported knowing about the construction. A significant number were unfamiliar with the concept (12 people) or were simply unaware of any projects (10 people).
In total, of the 60 respondents across both states, less than half (27 people, or 45%) were clearly aware of data centres being built in their region.

Familiarity with the concept of a data centre.

In Ceará, knowledge was limited: only 7 respondents claimed a firm understanding of what a data centre is, while 5 had a general idea. A significant portion, 7 individuals, were unsure, and one had no knowledge.

In contrast, respondents in Rio Grande do Sul demonstrated greater awareness, with 20 stating they know what a data centre is and 14 having a general idea. Only 6 reported not knowing.
This data reveals a significant knowledge gap. When combined with the previous finding that less than half of respondents were aware of local construction, it indicates that a large portion of the surveyed population is uncertain about this type of investment and its implications in their region.

Perceptions of data centers' environmental impact

When asked whether data centers cause environmental impact, an overwhelming majority of respondents across both states believed that they do. In Ceará, 14 people answered "yes," compared to only 1 "no" and 5 who "didn't know." This sentiment was even stronger in Rio Grande do Sul, where 28 affirmed an environmental impact, versus 5 who denied it and 7 who were unsure.
Regarding the specific types of impacts, it is notable that energy consumption was rarely cited. Instead, respondents predominantly pointed to other concerns. Water consumption was the most frequently cited issue, mentioned by 22 respondents in total. Deforestation, for its turn, was the second greatest concern with 19 responses, followed by electronic waste production with 15. The fourth most cited environmental damage was the amount of CO2 emissions, which was identified by 12 individuals. A striking finding, however, was that only four respondents across the entire survey mentioned energy consumption.
This reveals a significant gap in public awareness, as the enormous energy demand of data centers, a primary source of their environmental footprint, appears to be poorly understood as a direct consequence for local communities. In contrast, the prominence of water consumption demonstrates that this particular argument has effectively entered the public discourse.

Perceptions of data centers and potential water shortages

The survey also explored specific concerns about data centers potentially causing water shortages in respondents' regions. The findings reveal significant apprehension, particularly in Rio Grande do Sul.
When asked if data centers could lead to water shortages, a majority of respondents in Rio Grande do Sul (21 out of 40) answered "yes," while 5 said "no," and 14 were unsure. In

Ceará, opinions were more divided but still leaned towards concern, with 10 people believing they could cause shortages, 6 disagreeing, and 4 uncertain.
The justifications provided by those who answered "no" reveal interesting regional perspectives. In water-abundant Rio Grande do Sul, several respondents justified their negative response by citing their region's plentiful water resources, indicating a lack of awareness that data centers require clean, potable water. Others mentioned their belief that closed-loop cooling systems would mitigate water consumption.
In Ceará, the rationale for negative responses differed, focusing more on corporate responsibility. Respondents suggested that companies would naturally be conscious of their water usage and therefore avoid excessive consumption, with several also referencing the reduced impact of closed cooling systems.
This highlights a common technical misunderstanding across both states regarding the water requirements of data centers, even as a significant portion of the population correctly identifies water scarcity as a potential risk.

Perceptions of data centers and environmental damage

The perception that data centers pose a threat to the natural environment is a prevailing sentiment among respondents. When asked if these facilities could affect nearby natural areas, the vast majority agreed. This was particularly pronounced in Rio Grande do Sul, where 34 out of 40 respondents answered "yes," with only 1 respondent saying "no" and 5 expressing uncertainty. In Ceará, the conviction was equally strong, with 16 respondents affirming the potential for harm and the remaining 4 unsure.
This overwhelming consensus, even amid some uncertainty about the specific mechanisms, reinforces the findings from earlier questions. Respondents consistently identified concrete impacts like water consumption and deforestation, indicating a deep-seated intuition that the industrial footprint of data centers inevitably encroaches upon and disrupts local ecosystems. The high level of concern for natural areas thus serves as an umbrella conclusion, encompassing the more specific worries about water, forests, and waste previously highlighted.

Perceived benefits of data center installation

When questioned about potential benefits from data center installations, a generally optimistic outlook emerged among respondents, though with notable regional variations. In Ceará, 11 respondents believed these facilities could bring benefits,

compared to 3 who disagreed and 6 who were uncertain. Rio Grande do Sul showed a more divided perspective, with 18 respondents anticipating benefits, 12 foreseeing none, and 10 expressing uncertainty.
Regarding the specific benefits envisioned, the survey revealed a clear pattern in public perception. Job creation emerged as the most frequently cited advantage, mentioned by 26 respondents across both states. This was followed by expectations of increased local development, cited by 21 respondents, and improved infrastructure, noted by 12 participants.
This collective perception of significant job creation and broad local development presents a noteworthy disconnect from industry reality. The overwhelming focus on employment opportunities suggests that respondents may be overestimating the long-term job market impact, as data centers typically require substantial manpower during construction but generate relatively few permanent operational positions. This gap between public expectation and operational reality highlights the need for clearer communication about the actual socioeconomic footprint of such facilities in host communities.

Public engagement perception

There is a significant transparency gap revealed by the question regarding public consultation. In Ceará, an overwhelming majority reported no official communication, with 17 respondents answering "no," 2 unsure, and only 1 confirming they had been consulted. Similarly, in Rio Grande do Sul, 31 out of 40 respondents stated they had not been informed. While 9 people in the southern state answered "yes," the nature or source of this information remained unclear from their responses, highlighting a broader issue of inconsistent and limited public engagement on the subject.

Perception of assistance and responsibility

The survey revealed a profound lack of clear channels for public communication regarding data centers. When asked if they knew who to contact with questions or problems related to these facilities, the vast majority of respondents demonstrated no such awareness.
In Ceará, this was particularly stark: 17 people explicitly said "no," while a further 3 admitted they had never considered the question. In Rio Grande do Sul, the situation was similarly opaque. Although 4 respondents claimed to know who to contact, the

specific entity remained unclear, a significant point given that no official contact or responsible focal point has been publicly established. The overwhelming majority in the southern state (26 people) stated they did not know, and 10 others had never thought about it.
This data underscores a critical transparency gap, confirming that communities feel disconnected from the decision-making process and lack defined avenues for accountability or information regarding data center projects.

Lack of official information

When asked if they had received any official information from the government or companies, a profuse majority reported they had not. In Ceará, 19 respondents categorically stated they received no information, with one person being uncertain. In Rio Grande do Sul, 33 out of 40 respondents said "no," while only 5 confirmed receiving information and 2 were unsure. In total, 55 out of the 60 respondents (92%) had not received clear or informative communication from official sources.

Predominant information channels

In the absence of formal outreach, respondents primarily rely on informal and social channels. Social media was the most common source of information, cited by 19 respondents. This was followed by word of mouth and conversations with friends or neighbors. Traditional media like TV and radio were mentioned by 9 people, while NGOs and social movements were a source for 8. Notably, only 2 respondents in Rio Grande do Sul cited the government as an information source.

A landscape of cautious trust

When questioned about which sources they trust the most, respondents showed a preference for established institutions. Newspapers were the most trusted source (13 respondents), followed by NGOs (7), and a tie between government, websites, and academic research (6 each). However, this stated trust does not fully align with their actual skepticism.
When asked directly if they trust the information they have received about data centers, a majority expressed reservations. In Ceará, 11 respondents trusted the information only "partially," while in Rio Grande do Sul, this figure rose to 22. Only 17 respondents across both states expressed full trust in their available information.

This disconnect highlights a critical challenge: the public is forming opinions based on informal sources they only partially trust, while the official entities responsible for the projects are largely absent from the conversation.

A prevailing sense of being uninformed

The survey reveals a widespread sentiment among respondents that they lack sufficient access to information about developments in their own regions. When asked directly if they felt well-informed, a clear majority expressed dissatisfaction. In Ceará, only one person felt they had adequate access, compared to 14 who stated they did not and 5 who said "somewhat." In Rio Grande do Sul, the situation was slightly better but still concerning, with 5 respondents feeling informed, 23 feeling uninformed, and 12 answering "somewhat." In total, 37 out of 60 respondents explicitly stated they do not have enough information about regional construction and concessions.

This perceived information deficit is directly reflected in their self-assessment regarding a specific and critical issue: the environmental impacts of data centers. When questioned on this topic, the results were even more stark. In Ceará, only one respondent felt well-informed, against 18 who did not and one who was somewhat informed. In Rio Grande do Sul, just 5 felt knowledgeable, while 25 did not and 10 felt only partially informed.

Ultimately, a mere 6 respondents across both states feel they possess good knowledge about the environmental implications of these projects. The overwhelming majority (43 people) feel poorly informed, with a further 11 acknowledging only partial understanding. This means that an overwhelming 90% of the surveyed population lacks confidence in their knowledge about the environmental consequences of these major infrastructure projects.

Regarding spread information

The survey also explored exposure to the common misconception that data centers "don't pollute" or "don't cause environmental impact." The responses indicate that this narrative has reached a notable portion of the population.

In Ceará, 5 respondents confirmed having heard this claim, while in Rio Grande do Sul, the number was more than double, at 13 people. In total, 18 out of the 60 respondents (or 30% of those surveyed) have been exposed to this inaccurate information.

This number is extremely significant when analyzed through the prism of the 5 Ds. The narrative that data centers don't pollute functions primarily as a powerful form of "dismissal," as it seeks to completely invalidate the basis of environmental concerns by presenting the technology as inherently clean, thus ending the debate before it even begins. This narrative, amplified by a media discourse that predominantly frames data centers as vectors of "green" digital progress, thus diverts public attention from their tangible demands for resources.
This figure is notably high, underscoring the challenge of combating disinformation and highlighting the need for clear public communication about the tangible environmental footprint of digital infrastructure.

Self-assessed accuracy of information on data centers

When respondents were asked to evaluate the accuracy of the information they possess about data centers, their self-assessment revealed significant uncertainty and a fragmented understanding across both states. In Ceará, the overwhelming sentiment was one of a lack of information, with 9 respondents stating they could not provide an assessment.
Of those who did offer an opinion, the views were mixed and leaned towards imprecision: 4 described their information as "very imprecise" and 3 as "reasonably imprecise." Only 1 person considered their knowledge "very accurate," with another 1 finding it "reasonably accurate," and 2 positioned in the middle.
In Rio Grande do Sul, the responses were more distributed but still highlighted a considerable degree of doubt. While 11 respondents felt their information was "reasonably accurate," a combined 12 others found it "very imprecise" (7) or "reasonably imprecise" (5). A significant portion, 9 people, remained neutral ("neither accurate nor imprecise"), and 6 had no information to evaluate.
This distribution underscores a critical challenge: there is no public consensus on the reliability of available information. A substantial number of people feel poorly informed or are unable to judge the quality of the information they have, pointing to a landscape where definitive, trusted information is scarce.This collective doubt is a direct consequence of the disinformation ecosystem, as narratives of overtly positive "green" promises and community-shared concerns about water and deforestation create a cacophony that ultimately serves to dismay the public. Faced with this information asymmetry and the vacuum of transparent communication, individuals feel cynical and

powerless, unable to discern truth from misleading claims. This state of confusion and distrust effectively disempowers citizens, discouraging scrutiny and meaningful public engagement.

Public expectations of government and corporate responsibility

The survey results reveal a clear and strong public mandate for accountability and transparency from both governments and companies regarding data center projects. When asked about the role these entities should play, respondents' expectations were overwhelmingly centered on public engagement and environmental oversight.

The data shows that an overwhelming majority of respondents believe that consulting the population is a fundamental requirement, with 46 people (76%) across both states emphasizing this need. Furthermore, an even larger consensus exists around the duty to monitor environmental impacts, cited by 53 respondents (88%), making it the most widely endorsed responsibility.

The obligation to inform the population with transparency was also a dominant theme, highlighted by 49 people (82%). In contrast, the role of encouraging development was a secondary priority, mentioned by only 21 respondents (35%). A striking finding is the near absence of emphasis on reinforcing existing safeguards. Out of 60 respondents, only a single person mentioned the need for governments and companies to strengthen environmental protections.

This suggests that public discourse is currently focused on the processes of communication and impact assessment rather than on the proactive fortification of legal and regulatory frameworks. This gap indicates that while communities are demanding a voice and oversight, the conversation about preemptive, stronger environmental defense is not yet a prominent part of the public agenda.

Discussion

The results of this research reveal a worrying scenario regarding the implementation of data centers in Brazil, marked by a profound dissonance between official rhetoric and socio-environmental reality. The literature review makes it unequivocally clear that these infrastructures, regardless of whether they operate with renewable or non-renewable energy, carry a heavy environmental impact. Considering the extensive use of space, the extraction of raw materials for their construction, the

production of waste, and the high consumption of electricity and water required for their operation, the impacts are significant and widespread.

However, this evidence is systematically overshadowed by the dominant media discourse, which operates mostly in a neutral or overtly positive tone, associating data centers with progress, investment, and job creation, while marginalizing reports on their concrete impacts, therefore operating by systematically distorting the narrative, distracting from core issues, and dismissing community concerns, which in turn fosters a sense of dismay and division. This is reflected in the survey, where the most trusted information sources were newspapers and NGOs, yet the primary channels respondents actually used were informal, such as social media and word of mouth, which they only partially trust.

Of all the news stories analyzed on Brazil's main news channels, only two mention construction projects in the southern region, in their headlines and in their headlines, with only one citing the pros and cons of these projects for the environment. The discrepancy is even more pronounced in Ceará, where of six news stories discussing data centers, only one cites the pros and cons. None of the news stories announcing construction projects in their headlines merely offer a perspective of caution regarding environmental impacts. This narrative asymmetry is not accidental, functioning to distract public attention from most critical issues such as the energy demand and building a sense of inevitability around these projects and legitimizes them as inherently beneficial, thus isolating community resistance and masking socio-ecological risks under the guise of sustainability in the Brazilian energy matrix.

Institutional opacity, evidenced by the responses obtained through the Access to Information Law (LAI), is a central pillar sustaining this situation. The constant shifting of responsibility between municipal, state, and federal authorities regarding who is responsible for conducting Environmental Impact Studies (EIAs) creates an accountability vacuum, dismissing the public right to participate. This opacity is directly experienced by the public, which is perceived by the fact that 92% of respondents reported receiving no official information, and 55 out of 60 had not been consulted about the projects.

In this vacuum, large-scale projects move forward without any governing body assuming the role of environmental oversight. This regulatory vacuum is not accidental, but rather a deliberate condition that allows for the acceleration of investments to the detriment of environmental oversight and the constitutional right to information. The absence of Environmental Impact Assessments (EIAs) and formal licensing procedures, as explicitly acknowledged by the state of Rio Grande do Sul, demonstrates that "attraction strategies"

are being prioritized over environmental protection, relegating the ecological principles enshrined in the Constitution to a secondary role.

This ecosystem of disinformation and opacity directly shapes public perception, as revealed by the opinion poll. The survey reveals a population that is deeply concerned about the environment, in which 93% have noticed environmental changes and 85% feel unsafe or partially unsafe in their houses, but are still systematically deprived of accurate information. A striking 90% feel poorly or only partially informed about the environmental impacts of data centers, and there is a significant gap in understanding their primary impact, since energy consumption was cited by only four respondents. This finding starkly illustrates the success of the distort and distract tactics, where the public's justifiable concerns are funnelled towards manageable topics like water use, while the foundational issue of energy intensity remains largely absent from public discourse.

It is important to acknowledge, however, a methodological limitation of this research: the online data collection process resulted in a small and geographically limited sample, which restricted broader community representation. Nevertheless, the results remain revealing. The widespread lack of information among residents of the affected areas, most of whom are unaware of what data centers are, their environmental impacts, or how to access official channels of participation, reflects the logical result of biased media coverage and state inaction. This is compounded by a profound lack of clear communication channels, with the vast majority of respondents having no idea who to contact with questions or problems, thus cultivating dismay, disincouraging collective action by a sense of uncertainty and cynicism. The combination of celebratory narratives and opaque decision-making processes produces an uninformed public, consequently incapable of meaningfully engaging in debates about the future of their own territory. For future studies, a broader, field-based methodology involving in-person interviews and community engagement in directly affected areas, such as Eldorado do Sul and Ceará, would provide a more accurate and detailed understanding of local perceptions and knowledge gaps.

An analysis of case studies in Ceará and Rio Grande do Sul illustrates the contradictions inherent in this development model. The promise of "zero water use" in Cidade Scala AI, in Eldorado do Sul, sounds particularly cynical in a region still recovering from catastrophic floods and widespread interruptions in access to drinking water. This is especially relevant given that water consumption is the public's foremost environmental concern regarding data centers, cited by 22 respondents, yet technical misunderstandings about water

requirements are common. Similarly, the Pecém project, which will consume an amount of electricity comparable to that of entire states (which is not yet realised by the population), exposes the paradox of the so-called "green and digital economy," which, in practice, is resource-intensive and environmentally burdensome. The claim that renewable energy neutralizes these impacts functions as a form of greenwashing, obscuring the material and territorial costs of predominantly "clean" energy generation. Wind and solar infrastructure themselves often reproduce patterns of extractivism, displacing communities and intensifying environmental degradation in so-called "green sacrifice zones." This dynamic effectively divides society, pitting a narrative of inevitable progress and development against the rights and livelihoods of local and traditional communities, who are framed as obstacles to a greener future.

Taken together, the results suggest that the development of digital infrastructure in Brazil is sustained by a triple mechanism: a public narrative that displaces or sanitizes environmental damage; a governance architecture that institutionalizes opacity and evades responsibility; and a consequent alienation of directly affected communities.

The survey data powerfully confirms this alienation: the public's overwhelming demands are for consultation (76%), impact monitoring (88%), and transparent information (82%), yet these needs are almost entirely unmet.The interplay of the 5 Ds has thus created a governance vacuum where corporate and state interests can advance with minimal oversight, leaving the public disoriented, disinformed, and disempowered.

The burden of the cloud, therefore, is not distributed equally. It falls disproportionately on already vulnerable territories and populations, neglected by the state, rendered invisible by the media, and burdened with the socio-ecological costs of digital progress from which they do not benefit.

Conclusion and recommendations

In conclusion, this research demonstrates that the data center expansion model in Brazil is far from being the emblem of officially promoted sustainable modernity. On the contrary, it is characterized by structural opacity, where media disinformation and a lack of state transparency converge to create fertile ground for environmental injustice. This is starkly evidenced by the survey findings: 92% of respondents in affected areas received no official information, 76% were not consulted, and a vast majority feel uninformed and lack clear channels for communication. The dominant public narrative of progress and

economic growth functions as an organized strategy of disinformation that obscures tangible ecological damage and systematically excludes community voices from decision-making processes. This exclusion occurs despite communities demonstrating a clear understanding of environmental risks and a strong desire for engagement, with 88% of respondents asserting that monitoring environmental impacts is a primary duty of authorities.

The results highlight the urgent need for a complete reassessment of this development policy. The significant gap between public perception and operational reality—where expectations of job creation outweigh the understanding of core impacts like massive energy consumption—reveals a failure of public communication and accountability. The transition to a digital economy cannot reproduce the historical logic of colonial extractivism, externalizing costs onto the most vulnerable populations and sacrificing territories in the name of profit. It is imperative that Brazil adopt a digital governance model based on radical transparency, rigorous and mandatory environmental licensing, and effective social participation from the early stages of project planning. This must include proactive, accessible public consultations and the establishment of clear official contact points, directly addressing the profound communication gap identified in the survey. Only through these measures can digital infrastructure projects align with the country's constitutional commitments to environmental protection and democratic accountability.

Ultimately, this study reaffirms that cloud sustainability is, above all, a matter of socio-environmental justice. The path forward requires a decisive break with the current cycle of disinformation, which has allowed 30% of the local population to encounter the false claim that data centers "don't pollute". Brazil's digital future must be built on open dialogue, accessible information, and unwavering respect for the environment and human rights, ensuring that technological development becomes synonymous with democracy, equity, and genuine ecological responsibility.

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Appendices

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