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The (un)announced disaster in Porto Alegre: limits for the international cooperation at subnational climate policies

O desastre (não) anunciado em Porto Alegre: limitantes da cooperação internacional para políticas climáticas subnacionais

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ABSTRACT

A decade ago, local leaders agreed on a strategy to replace Porto Alegre's status as the "capital of participatory democracy", and become a model for climate resilience. This municipal policy was built through intensive international cooperation and, in 2023, it was awarded the title of Resilience Hub for Latin America by the UN. At the subnational level, few municipalities in the country have access to a similar volume of international cooperation, which is why this capital was selected for a detailed analysis following IPEA's framework for interpreting paradiplomacy based on the measurement of the planned Effect, in this case, the expansion of the Executive's capacity to respond to extreme climate events. As a case study, we used the response to the storm of January 16, 2024, characterized at the time by the Mayor as "the most robust in recent history". Among the results of a decade of Paradiplomacy, we did not see any reorientation of public policies on a scale necessary to mitigate that disaster, nor the operationalization of any type of Polycentric Governance. The goal of establishing Porto Alegre as a national or international benchmark for resilience was not achieved, as evidenced by the impact of the devastating floods that followed in May 2024. We identify Greenwashing in the official narrative. The reduction of the public sector, privatization of municipal bodies, which reduce the capacity to respond to disasters, are not occasional obstacles, but at the essence of municipal policy. This has been approved by the majority of voters over the course of six administrations and, even so, has not restricted international cooperation.

Keywords: climate emergency; resilience; paradiplomacy; Rio Grande do Sul.



RESUMO

Lideranças locais acordaram, há uma década, estratégia para substituir a marca de Porto Alegre como "capital da democracia participativa" para se tornar modelo em resiliência climática. Essa política municipal de enfrentamento da emergência climática foi construída mediante intensiva cooperação internacional e, em 2023, recebeu o título de Resilience Hub for Latin America (Hub de Resiliência para a América Latina) pela ONU. Na escala subnacional, poucos municípios do país têm acesso a semelhante volume de cooperação internacional, justificando a seleção desta capital para uma análise detalhada segundo referencial do IPEA (Instituto de Pesquisa Econômica Aplicada) em interpretar a Paradiplomacia a partir da mensuração do Efeito planejado, nesse caso, a ampliação da capacidade do Executivo em responder a eventos climáticos extremos. Utilizamos como estudo de caso a resposta à tempestade de 16 de janeiro de 2024, caracterizada então pelo Prefeito como "a mais robusta da história recente". Entre os resultados de uma década de Paradiplomacia, não verificamos reorientação das políticas públicas em escala necessária para a mitigação daquele desastre, nem a operacionalização de Governança Policêntrica. Não foi alcançado o objetivo de estabelecer Porto Alegre como referência nacional ou internacional de resiliência, evidenciado pelo impacto das devastadoras inundações que se seguiram em maio de 2024. Constatamos Greenwashing na narrativa oficial. A redução da máquina pública e a privatização de órgão municipais, reduzindo a capacidade de resposta, não constitui obstáculo eventual, mas essência da política municipal. Essa tem recebido aprovação pela maioria dos eleitores ao longo de seis administrações e, mesmo assim, não tem restringido a cooperação internacional.

Palavras-chave: emergência climática; resiliência; paradiplomacia; Rio Grande do Sul.

1. Introdução

The Mayor of Toronto, Canada, led for years the network C40 Cities Climate Leadership Group, and his campaign became widely known for the slogan: "When national governments fail through inertia, cities can and must act". This rationale also underpins the prominence of Porto Alegre (POA) in Brazil's subnational sphere of response to the climate emergency. With 1.4 million inhabitants, the city stands out nationally not as a megacity, but rather for maintaining active engagement with international organizations in developing a resilience strategy against the impacts of global warming.

The starting point, in June 2012, was a coalition of local actors to apply for the 100 Resilient Cities (100RC) Program, a global initiative of the Rockefeller Foundation that provided technical guidance, assistance, and exchange to cities and metropolitan regions, with the aim of enhancing

their capacity to operationalize disaster prevention. A decade later, this initiative was systematized by Poon (2022), drawing on the assessment by McTarnaghan *et al.* (2022), who emphasize that the program understood resilience and risk reduction as integral components of urban planning. To achieve this, strong local alliances and popular participation were required – features that had long shaped both the national and international dissemination of POA's political culture.

Among more than 400 applications submitted to the 100RC program, POA's was quickly accepted at the end of 2013, given the city's renown for promoting popular participation through two decades of successive democratic-popular administrations that had adopted participatory budgeting. The public debate on municipal budget priorities, known as participatory budgeting, was launched in POA between 1990 and 1992, making the city a national and international reference for more than 400 similar initiatives. According to Conti *et al.* (2023),

this constituted the foundation for a future approach to polycentric governance of resilience. The cooperation agreement between POA and 100RC was signed in August 2014.

The local alliance included the Municipal Secretariat of Government and Civil Defense, the Office of Innovation and Technology, and the Disaster Research Center at the Federal University of Rio Grande do Sul. It was coordinated by the Urban Intelligence Center (CIUPOA), a social organization that

was founded by a group of environmental activists who recognized the need to bring global focus to the local sphere. According to CIUPOA (2024, p. 1), it emerged as a heterogeneous group that gradually created a diverse network, potentially serving as the initial link in a broader mesh of initiatives capable of revolutionizing the ways in which the cities of the future can be supported (CIUPOA, 2024, p. 1).

With a donation of R\$ 5 million from the Rockefeller Foundation, the alliance developed the Porto Alegre Resilience Strategy over the course of a year and a half, which was released in December 2015. In this process, a reference network was established, composed of 30 representatives from civil society, universities, community leaders, and public officials. Workshops were held with the participation of more than 500 people across the 17 participatory budgeting regions. Graduate students from the University of Vale do Rio dos Sinos carried out related research in collaboration with the Integrated Civil Defense Command Center (Esser, 2016).

The Porto Alegre Resilience Strategy was launched by the Mayor in January 2016 through a broad public communication campaign, listing

35 priority initiatives for the near future (POA, 2016). The goal established for 2022 was defined as follows:

We want Porto Alegre, already a global reference in participatory processes, to also advance in addressing its risks. Above all, we aspire to be a place where the fullest collaboration is exercised among governments, institutions, the private sector, communities, and citizens. Our ideal is to count on the work of all in transforming our municipality into a reference in building resilience, inspiring neighboring cities across Latin America, and perhaps repeating with resilience the international recognition once achieved through participatory budgeting (POA, 2016, p. 7).

This promise of collaboration among "governments, institutions, the private sector, communities, and citizens" reflects the concept of polycentric governance in addressing the climate emergency, as proposed by Ostrom (2009). At the conclusion of the event, the Mayor and the director of the 100RC Program signed a protocol in which the City committed to allocating up to 10% of its annual budget (approximately R\$ 645 million per year at the time) to strengthening resilience. In return, the Rockefeller Foundation pledged to donate up to US\$ 5 million over five years to the program. This commitment subsequently attracted the interest of several other international cooperation organizations, culminating in 2023 with the recognition of Porto Alegre by the United Nations as the Resilience Hub for Latin America.

This recognition of POA as a global Resilience Hub contrasts with the European Environment Agency's self-assessment, which stated that "the European Union and its member states have advanced in understanding climate risks and in developing

national plans [...] however, the degree of societal preparedness remains low, and the implementation of public policies lags behind the accelerating changes" (EEA, 2024, p. 4, our translation). This contrast gives rise to the guiding questions of the present research: Is Porto Alegre better prepared than the European Union to respond to disasters? How can the expansion of POA's resilience capacity be measured after a decade of international cooperation?

Resilience capacity is defined here according to the Center for Studies and Research in Civil Defense (CEPED) at the Federal University of Santa Catarina:

It is determined by how government and civil society understand the risks they face and are able to self-organize. This self-organization focuses on increasing adaptive capacity by learning from past experiences, planning for the future with investments in protection and civil defense, and implementing sound governance practices aimed at achieving greater future protection, centered on disaster risk reduction measures (CEPED, 2020, p. 25).

In the literature, the traditional methodology for assessing resilience consists of a desk review of documents, complemented by interviews and field visits in a deductive logic (e.g., CGU, 2021; Conti *et al.*, 2023; ICLEI, 2007; TCU, 2020). This approach has been expanded by ISO/DIS 37123:2018, which standardizes the assessment of resilient cities' capacity. In this study, however, we apply a different theoretical framework to evaluate international cooperation for resilience – one based on inductive logic: the Theory of Change advocated by the Brazilian Cooperation Agency (ABC), which emphasizes that "capacity development is not limited to 'donating' or 'transferring' resources or technology,

but rather to creating and strengthening institutions capable of autonomously providing quality services to the local population" (Rizzo, 2019, p. 20). This argument was later reinforced:

Its focus is on capacity development, understood as the identification, mobilization, and expansion of knowledge and skills available in the partner country, aimed at achieving local autonomy for the design and implementation of endogenous solutions to development challenges (Baumann *et al.*, 2022, p. 35).

Classified as an "empiricist option", this framework was expressly recommended by the Institute for Applied Economic Research (IPEA) for evaluating the effects of international cooperation (Schleicher *et al.*, 2022). Accordingly, we propose to examine the effect of international cooperation in Porto Alegre, beginning with the Rockefeller Foundation, which centers on expanding the capacity of the City Hall and its partners to respond to extreme events. Specifically, we analyze the case of the storm on the night of January 16, 2024 – an early test of the municipality's ability to respond to the floods that followed in May 2024. This confirms the argument advanced by researchers at the Federal University of Rio Grande do Sul:

The question is how to bring about a shift in local policies while considering the international context and, at the same time, ensuring greater decentralization of policies and government resources. [...] This dialectic emerges when the city is regarded as an actor in the international system. [...] On the other hand, it examines the action of local political actors through changes in regulations and administrative structures aimed at faster and more effective operations (Marx et al., 2021, p. 273).

The authors emphasize that Porto Alegre is undergoing a new stage of internationalization driven by the Rockefeller Foundation and the World Bank, disseminating models not always suited to Latin American cities. This stage, they argue, is subject to criticism as a "diffuser of narratives that commodify the production of urban space, through the use of concepts such as sustainable and smart cities, in addition to a range of indebtedness undertaken to achieve such paradigms" (Nascimento & Araújo, 2021, p. 1155).

In this study, we present a critical assessment of the effect of international cooperation, understood as the expansion of the municipal Executive's capacity to respond to disasters during the decade beginning in 2012 – with the inception of the resilience policy – through 2023, the year of its international recognition as a Resilience Hub. This analysis was conducted in early 2024, based on a review of publicly available documents, such as the Multi-Year Plan (PPA), as well as news reports and opinion pieces published in the regional media.

We conduct this analysis in five sections. Following the Introduction, we briefly present the concept of polycentric governance, whose presence we seek in the framing offered to the public during the disaster. This concept is complemented by a description of the prominent role POA has acquired as a reference in national and international studies. The second section addresses the city's tradition of paradiplomacy. The next section examines the January 16, 2024 disaster and its reception by the local media, which shaped subsequent narratives in the public sphere. The following section discusses the documented impacts of the disaster in light of the statements and aspirations of the municipal Executive, which has portrayed itself as a bastion

of resilience on the continent. Finally, a brief concluding section presents the outcomes of this analytical process.

2. Theoretical Framework

2.1. Polycentric Governance and the Relevance of the Subnational Scale

In the 1970s and 1980s, research led by Elinor Ostrom introduced into the prevailing dichotomy between markets and the State a third option for the analysis of governance. Drawing from public security policies in U.S. metropolitan areas, the authors elaborated the concept of polycentric governance (Ostrom, 2010). Governance was thus understood not as a public organization, but as a collective decision-making process involving multiple social actors and economic agents at the subnational scale, with the goal of safeguarding the integrity of a common good (Contipelli, 2020).

Ostrom *et al.* (2003) highlight the role of adaptive planning in this context, emphasizing the necessity of decision-making in the face of climate uncertainties, as well as the relevance of articulation in recurring conflicts among individuals and groups who differ in values, interests, and deliberative power. The authors state that "polycentric governance of common resources is always conflictive" (Ostrom *et al.*, 2003, p. 1907) and affirm that their model must be assessed on a case-by-case basis.

At the core of nearly all definitions of polycentric governance [...] lies the idea of multiple centers of decision-making, or multiple managers, none of which hold the exclusive authority to establish a binding decision for the collectivity. The characteristics of

these multiple centers of power are rarely fixed. Their number within a given territory may vary (Stephan *et al.*, 2019, p. 23).

Ostrom (2009) advanced this debate by establishing global warming as the principal market externality that threatens the atmosphere, understood in this context as a "common good".

Efforts to reduce global greenhouse gas emissions constitute a classic collective action problem that must be addressed across multiple scales and decision-making arenas [...] with active involvement of actors at the local, regional, and national levels (Ostrom, 2009, p. 3, tradução nossa).

The author argues that we cannot expect a single, perfect global solution, but must act immediately across different spheres, advancing climate adaptation and mitigation – even if not uniformly or in a fully coordinated manner. "Beyond the risk of waiting too long, 'global solutions' negotiated internationally will not work if they are not grounded in a variety of local, regional, and national experiences" (Ostrom, 2009, p. 4, our translation).

2.2. The Relevance of Porto Alegre in the Evaluation of Subnational Climate Policies

In 2019, Porto Alegre (POA) reached an agreement with the United Nations Development Programme (UNDP) to incorporate the Sustainable Development Goals into its Master Plan (UNDP, 2019). Entitled "POA 2030: Innovative, Integrated, Resilient, and Sustainable" and budgeted at R\$ 10.9 million, the initiative was financed through a loan from the Regional Development Bank of the

Far South (BRDE). It included the updating of the city's emissions inventory (Carneiro, 2020), which was conducted by the consultancies WayCarbon and Ecofinance in coordination with ICLEI South America (Local Governments for Sustainability). The study reported that between 2016 and 2019 the city reduced its greenhouse gas (GHG) emissions by 5%, a result widely publicized in the media and celebrated by the Mayor's Office (Conte, 2021).

This pioneering monitoring effort contributed to POA's inclusion in a select group of Brazilian municipalities that regularly participate in climate adaptation research. A World Bank study on "Green Cities" evaluated POA's emissions alongside four other capitals (WB, 2010). Moreover, it became the first Brazilian city to join the Partnership for Resilience and Preparedness, a World Resources Institute (WRI) study assessing community-based urban resilience (Elias-Trostmann et al., 2018). The capital was included in the sample of the project "Cities, Vulnerabilities, and Climate Change" in comparison with Australia (Serrão-Neumann et al., 2020); it was cited as a case study in the global report "Equitable and Sustainable Cities" (Mahendra et al., 2021); and it is part of a global study on water resource protection funded by the Inter-American Development Bank (TNC, 2024).

The city also stands out in financial innovation. During the launch of the federal program "Low-Carbon Infrastructure Financing in Urban Areas", developed in cooperation with the United Kingdom, POA was the only Brazilian municipality presented. The loan through BRDE was classified as a subnational good practice:

The new financial model, based on triangulation between the international and the regional institution, will enable the municipality to access World Bank resources. This would not be possible through direct operation between the two institutions, since Porto Alegre does not have sufficient fiscal indicators to obtain a sovereign guarantee from the federal government to contract the loan (WRI, 2020, p. 80).

It should be emphasized, however, that these evaluations are based on the traditional methodology of triangulation involving bibliographic review, desk review, in-depth interviews, and occasional field visits.

2.3. References for the Evaluation of International Cooperation

We adopted the recommendation of IPEA (Rizzo, 2019, p. 24), which proposes a new research agenda for a "more precise definition of what processes and results are [...] structuring projects have specific characteristics, and their evaluation entails particular challenges. It is necessary to align distinct conceptions between process and result, considering the role of the beneficiary". In this regard, we apply in this study the Theory of Change, a key reference in international cooperation projects.

This theory originates from the work of Peter Drucker, who in the 1950s popularized Management by Objectives. In 1969, this was synthesized into the Logical Framework for project planning, which became known in Brazil from the 1990s onward as the Marco Lógico for international cooperation projects (Brose, 2021). From the 2000s, it was adopted by IPEA for the evaluation of federal public policies (Brasil, 2018), as well as by the Planning Secretariat of Rio Grande do Sul for the budgetary cycle (RS, 2019).

Essentially, the Theory of Change aligns:

- i) the inputs of public policy with the results achieved through budget execution;
- ii) the adoption of these results by the beneficiaries of the initiative, the effect;
- ii) generating changes in development pathways, the impact.

This study focuses on stage (ii), that is, the extent to which results are adopted by the beneficiary – or, in other words, the effect in the Theory of Change.

A distinctive feature of recent Brazilian international cooperation has been its almost exclusive focus on capacity development projects. [...] Indeed, capacity development emerged as a response to the traditional view of technical assistance, typically associated with cooperation provided by developed countries. In that view, one party was assumed to hold expertise to be transmitted to the other in a largely passive manner, in order to achieve an external objective or so-called 'best practice' (Baumann *et al.*, 2022, p. 35).

In this sense, the primary beneficiary of a decade of international cooperation was the municipal Executive of Porto Alegre. We therefore propose an evaluation of the effect – namely, the expansion of the City Hall's capacity to respond to climate impacts – because "the focus on capacity development makes it possible to study in isolation the relationship between the capacity-building event and its effects within the project context" (Schleicher *et al.*, 2022, p. 7). At the end of a decade of municipal resilience policy, the storm of January 16, 2024, represented the first major disaster that

allows for an external assessment of the effect of this paradiplomacy.

3. Constraints and Effects of Porto Alegre's Paradiplomacy

Over the past decade, the praxis of the City Hall has demonstrated limited capacity in managing megaprojects. The set of urban mobility works launched in 2010 for the 2014 FIFA World Cup has still not been completed (Schatz & Espíndola, 2018). "Of the 18 projects planned for the World Cup in Porto Alegre, only six were delivered [...] Of the remaining 12, two never moved beyond the planning stage and the rest remain unfinished or paralyzed" (Farrugia *et al.*, 2018, p. 1).

The revitalization of the Cais do Porto provides another example. Initiated in 1991 with studies aimed at replicating the Puerto Madero model in Buenos Aires, the first auction in 2010 was canceled a decade later because the consortium failed to carry out the works (Marzulo et al., 2021). In a new auction with a single bid, held in February 2024, the concession for Cais Mauá was formalized with investments estimated at R\$ 353 million (Aires, 2024). The winner was a microenterprise whose shareholders remain undisclosed, registered at the residence of a lawyer who falsified his résumé by claiming to have graduated from Harvard – raising doubts about the legitimacy of the process (De Oliveira, 2024a). The World Resources Institute (WRI) published a blog post entitled "What Other Cities Can Learn from Porto Alegre", highlighting the absence of dialogue in the port revitalization and concluding that the city's traditional participatory mechanisms no longer function (Zottis, 2015).

Complementing this argument, an analysis of the most recent Multi-Year Plans (PPA) reveals the fragility of the Executive's operational capacity in implementing the Resilience Strategy (Table 1).

The current PPA 2022-2025 totals R\$ 3.6 billion for the four-year period; in this context, the R\$ 140,000 allocated to the Resilience Strategy appears irrelevant. For the capital of a state with the third largest GDP in the country, the cumulative R\$ 1.47 million allocated over eight years to the Resilience Strategy (Table 1) is likewise negligible – far from the R\$ 645 million per year promised in 2016. This budgetary fragility underscores the importance of international cooperation in enabling the City Hall to position itself as the capital of resilience.

Both Salomón and Nunes (2007), and Antunes (2021), note that Porto Alegre was a pioneer in establishing a coordinating body for an international agenda aimed at mobilizing new resources. The country's redemocratization, which encouraged decentralization, coincided with the internationalization of the City Hall during two decades of left-democratic administrations. In 1993, the first structure was created: the Extraordinary Secretariat for Resource Mobilization and International Cooperation, with the following objectives:

- Political and technical cooperation;
- Construction of an international image and brand;
- Mobilization of international resources;
- Direct economic and commercial promotion.

The architects of this strategy drew inspiration from Barcelona, a city that built its international brand through the renewal of its port and historic

TABLE 1 – Allocation for the Resilience Strategy in Porto Alegre's Multi-Year Plans (2018-2025).

PPA	Purpose	Budgeted Amount
2018-2021	Actions 2951; 2968; 2969; 3092 – Implement and maintain the resilience strategy	R\$ 1,335,638.00
2022-2025	Actions 3861 and 3682 – Promote leadership as a city of participatory democracy and a reference in resilience	R\$ 140,369.00
	Total	R\$ 1,476,007.00

SOURCE: Authors' elaboration.

center in preparation for the Olympics. In a similar fashion, Porto Alegre sought to construct an international image around its unique feature: the Participatory Budget (PB). Within a few years, PB became the city's identity and an important asset for international cooperation. The experience was so successful that it conferred greater credibility upon the municipal government, boosted revenue collection, and facilitated access to financing from organizations such as the World Bank and the Inter-American Development Bank.

Since 1996, when the HABITAT II Conference in Istanbul recognized the Participatory Budget as one of the 40 best management practices in the world, more than 200 cities began to implement PB based on Porto Alegre's model. The city began receiving delegations from multiple countries interested in learning about the experience and replicating it in their own territories. As Marx (2005, p. 72) observes, "we could say that this project was the driving force that triggered the city's international policy, fostering an international vision for its political project".

Over time, however, the institutional structure responsible for international cooperation was altered due to discontinuities arising from political transitions. After two decades of left-democratic administrations (1986–2004), the electorate chose eight years of conservative governments (2005–2016), followed by a decade of mayors elected on a liberal platform of privatization and state reduction (2017–2028). Paradiplomacy, whose projects and programs over the past decade are summarized in Table 2, essentially continued to serve its role as a marketing tool, without necessarily impacting governance or public policy.

The growing intensity of cooperation and the volume of loans – reaching nearly R\$ 1 billion in 2023, as shown in Table 2 – essentially reflect the outsourcing of the Resilience Strategy. We argue that the impressive sequence of diagnoses, studies, and plans has been produced primarily by organizations external to the public service, thereby posing the risk of weakening the planning and management capacities of municipal civil servants. Moreover, this process reflects a certain subordination of the

TABLE 2 – International Cooperation for Resilience in Porto Alegre (since 2012).

Period	Cooperation Agent	Objectives	Funding Sources
2012-2016	Local Governments for Sustainability (ICLEI)	Model city: "Promotion of low-carbon urban development strategies" and first GHG emissions inventory of Porto Alegre	Donation from the European Union with UN-Habitat
2013-2016	Rockefeller Foundation	Inclusion in the "100 Resilient Cities" program and creation of the new position "Municipal Director of Resilience"	Own resources donation
2014-2016	World Resources Institute (WRI)	Testing the methodology "Urban Community Resilience Assessment (UCRA)" in low-income communities	Donation from Cities Alliance – Cities Without Slums, UN
2016-2017	World Resources Institute (WRI) – Project GEFID9947	Training for civil servants and companies in the "Building Efficiency Accelerator" for renewable energy sources	Donation from Global Environ- ment Facility (GEF), UN
2016-2019	World Bank	Study "Living with Floods: Building Resilience with the Communities of Porto Alegre" and creation of GAIA (Flood Action Group)	Global Facility for Disaster Reduc- tion and Recovery (GFDRR), Japan
2017-2021	Local Governments for Sustainability (ICLEI)	Inclusion in the program "Promotion of Low-Carbon Urban Development Strategies (Urban LEDS) Phase II"	Donation from the European Union with UN-Habitat
2017-2022	German Agency for International Coopera- tion (GIZ)	Inclusion in "Promoting Sustainable Investments in Climate Urban Infrastructure" with the "Light of Knowledge" project for solar panels in public schools	Donation from the German govern- ment
2020-2022	Centro Brasil no Cli- ma	Study "Sustainability Indicators for Urban Public Transport in Porto Alegre"	Google donation – USD 150,000
2020-2030	UN Office for Disaster Risk Reduction (UN- DRR)	Inclusion in "Making Cities Resilient 2030 (MCR2030)" and recognition of Porto Alegre as a Resilience Hub in Latin America	_
2020-2023	UN Development Programme (UNDP) – Project BRA/19/014	Ernst & Young Global revises the Master Plan, preparing the plan "Porto Alegre 2030: Innovative, Integrated, Resilient"	R\$ 6.5 million loan from BRDE
2020-2022	World Bank – Project 170304	Study "Urban Transformation and Infrastructure Financing"	Global Facility for Disaster Reduc- tion and Recovery (GFDRR), Japan
Nov. 2023	World Bank	Training of municipal civil servants in Green, Resilient, and Inclusive Development	_

2019-2023	World Bank – Project 170682	Porto Alegre's experience served as a reference for BRDE in the "Urban Resilience Program of Southern Brazil"	R\$ 515 million for the southern states
2023-2024	World Bank / European Bank	Hiring consultancies for "Climate Action Plan (PLAC)" until 2050	R\$ 1.2 million – donations from Germany and Lu- xembourg
2023-2028	World Bank – Project 178072	Loan (Centro+4D) "Green, Resilient, and Inclusive Revitalization of the Historic Center"	R\$ 400 million, payable over 35 years
2023-2028	French Development Agency (AFD)	Loan (Centro+4D) "Green, Resilient, and Inclusive Revitalization of the Historic Center"	R\$ 264 million

SOURCE: Authors' elaboration.

Executive in climate-related matters. This erosion of the Executive's decision-making capacity has unfolded through the preference for outsourcing planning functions, financed by loans and interest to be repaid over the next three decades, thus constraining the fiscal capacity of future administrations that may have different priorities.

The extent to which this extensive cooperation still relies on the imaginary and the narrative of popular movements and the Participatory Budget of the 1990s can be inferred from ICLEI's description, which justifies three decades of cooperation with POA:

Porto Alegre is the center of the fourth largest metropolitan region in Brazil and one of the country's main cultural, economic, and political hubs. The City Hall employs an integrated urban management system strongly based on popular participation. The Executive was a pioneer in introducing participatory budgeting in the 1980s and has also hosted the World Social Forum since 2001 (ICLEI, s.d. p. 1).

The urban management system referenced in this citation, which was once grounded in popular participation, now reflects new priorities, according to an interview with a prosecutor from the State Public Ministry:

The Municipal Planning Management System was created to provide dynamism and enable a permanent process of updating the Master Plan, but Articles 33(I) and 33(II) make it clear that its purpose is to create channels for society's participation in municipal administration and to ensure management that prioritizes improving the population's overall quality of life – something that is currently being distorted by the City Hall. [...] Public consultation has become a merely formal exercise, as the City Hall now organizes the hearings in such a way that, although they take place, the contributions brought forward by the population have no actual impact on decision-making in urban planning. Thus, I would say these hearings simulate democratization (Sul21, 2023, p. 1).

Thus, in the assessment of a relevant public official who has observed the unfolding of municipal policy, Porto Alegre shifted within two decades

from the hallmark of the Participatory Budget to exercising instruments for the co-optation of participation – an argument echoed in the literature (Melgar, 2014; Siqueira & Marzulo, 2021).

Concluding the record of the Municipal Resilience Policy, initiated in 2012, cooperation with the Rockefeller Foundation was itself not resilient – that is, it did not withstand crises on either side. In January 2017, a newly elected administration with a liberal platform took office and, the very next day, shut down the Resilience Office. The local program administrator relocated to London to pursue postgraduate studies. The vacancy in the 100RC program was filled by the City of Salvador, but the Foundation terminated the global program in 2019.

Nevertheless, the Executive continues to promote to the public a narrative of success, even highlighting polycentric governance, which it refers to as networked collaboration:

> Porto Alegre has stood out as a pioneer in integrating international resilience networks. At the same time, the city has a solid legal framework that strengthens and promotes resilience through networked collaboration. [...] Recently, the capital of Rio Grande do Sul was certified as a Resilience Hub, a title awarded by the United Nations Office for Disaster Risk Reduction. This recognition not only acknowledges Porto Alegre's capacity in disaster risk reduction but also enables it to receive international investments and assigns it the responsibility of sharing lessons learned with the municipalities of the Metropolitan Region Consortium. Another important milestone for the city was the regulation of the Resilience Law in October 2023. This law establishes the Resilience Committee, chaired by the chief executive and composed of more than 20 government bodies, with the purpose of updating and maintaining the Municipal Resilience Strategy. In this context, Porto Alegre positions itself, both nationally and internationally, as an advocate of a

comprehensive approach to resilience, which regards its multiple dimensions as opportunities to address complex problems such as climate change, disaster prevention, and sustainability (POA, 2023 p. 1).

This narrative, directed at shaping public opinion in an almost triumphalist tone, runs the risk of amounting to greenwashing, insofar as the international title was granted not on the basis of a concrete disaster response in the city, but rather through the submission of desk review forms. The concept of greenwashing refers to misleading claims about sustainability. In Brazil, the term has been applied primarily to corporate marketing; abroad, however, it has also been used to evaluate state agencies, particularly regarding communication on the climate emergency. This is why the UN's climate action website lists examples of greenwashing, among others (UN, 2024):

- 1. Publicizing decarbonization targets without investing in concrete actions;
- 2. Running campaigns that are deliberately vague or glamorous, without specifying how climate mitigation or adaptation is being implemented;
- 3. Promoting communications that claim significant impacts when, in reality, the organization is doing no more than complying with the minimum required by law.

Only a few weeks after the City Hall released its optimistic narrative, an extreme event occurred, which we employ here as a test for assessing the Executive's response capacity – that is, the intended effect of international cooperation.

4. Case Study: The Storm at Risk of Being Forgotten

In 2023, the federal government established a panel of state meteorological organizations with the purpose of monitoring El Niño, reporting in December:

Forecasts from coupled ocean-atmosphere models and ocean models indicate the continued manifestation of the El Niño phenomenon in the equatorial Pacific, with peak intensity occurring between December 2023 and January 2024. The climate forecast for Brazil for Jan-Feb-Mar 2024 [in] Rio Grande do Sul indicates a higher probability of rainfall above the normal range (Brasil, 2023, p. 3).

In January 2024, the private company MetSul reported: "In Rio Grande do Sul, the risk of excessive rainfall is greater. By the end of this week, a series of instability zones may bring heavy to excessive rainfall, with totals exceeding 200 mm in some areas and risk of flooding" (Sias, 2024, p. 1). One week later, "MetSul reinforces the alert published Sunday that Rio Grande do Sul will be hit by severe weather this Tuesday and Wednesday, with potential for heavy to excessive rainfall, as well as windstorms and hail, with gusts above 100 km/h" (Nachtigall, 2024a).

On Monday, January 15, 2024, the Governor of Rio Grande do Sul and the head of the Military House released a video (https://www.youtube.com/watch?v=M9t1uRU74ZM) warning of risks between January 16 and 18, while also reassuring the population:

Governor Leite said that all municipalities are already

on alert [stating] we held a preparatory meeting, an alignment meeting, with the State Situation Room, the state's response forces, the Military Brigade, the Fire Department, and all the secretariats directly involved in these events (Estadão Conteúdo, 2024).

The supercell storm that struck the Metropolitan Region on the night of January 16–17 resulted from the collision of two meteorological systems, delivering in 24 hours half of the expected monthly rainfall, accompanied by wind gusts nearing 100 km/h. "The storm's intensity knocked down poles, trees, cables, and signs. When residents stepped into the streets at daylight on Wednesday morning, it seemed as though a typhoon had swept through the capital" (Schaffner, 2024, p. 1).

Porto Alegre recorded 226.6 mm of rainfall between January 1 and the afternoon of the 31st, making it the second-wettest January of the 21st century. This year's total was surpassed only in 2001, when the city recorded 237.7 mm in the first month of the year. The data came from the INMET station located in the Jardim Botânico neighborhood. The period was four times wetter compared to January 2023, when rainfall reached 52.4 mm. [...] The single rainiest day was January 17, with 67 mm (Coimbra, 2024, p. 1).

One person died in the municipality of Cachoeirinha. Flooding, fallen trees, and damaged traffic lights paralyzed car traffic and urban trains. Roofs were blown off. Poles fell and transformers burned out, cutting off electricity to 1.3 million people, which in turn paralyzed water supply and drainage pumps, affecting 781,000 households. Public health units had to be closed. On Wednesday, the power utility predicted that outages in some areas would last until the weekend (Barreto, 2024).

From Thursday, January 18 onward, the scenario was unusual in the so-called capital of participatory democracy, as popular discontent manifested outside institutional channels. After days without drinking water or electricity in their homes, residents of low-income areas – previously the main participants in the old participatory budgeting process – took to the streets to set up barricades, burn damaged furniture, and draw media attention in order to gain a voice with City Hall and the power utility. A resident of Vila dos Ferroviários reported three days after the storm:

The wind hit and funneled into the Humaitá neighborhood, destroying everything in its path, knocking down trees, tearing roofs off houses. It was massive devastation. This is a poor region; most of the people living in Vila dos Ferroviários are children, grandchildren, descendants, or friends of railway workers – like me, a subway worker. [...] The trash left after the mud is still on the streets. No public containers were provided. The debris from destroyed roofs is left on the streets, or else we have to pay for private debris removal ourselves. There is no electricity. No prospect of when it will return. In short, the City Hall leaves much to be desired. People need help. [...] Wagner reaffirms that the situation remains chaotic. He reports that the Mayor came to the village, walked down two streets in the community, and left saying he would send tarpaulins (Leão & Reinholz, 2024).

One of the first protests took place on January 17 in the municipality of Viamão. Soon after, in the capital, residents of the Santana neighborhood blocked the main street; in the Cristal neighborhood, Divisa Avenue and Icaraí Avenue were closed; and in the Restinga neighborhood, residents set up barricades. According to the commander of policing in the capital, after 48 hours without electricity

there were blockades and popular protests against the power outage in about 25 locations across the city (Sul21, 2024). One week after the disaster, the number of protests had reached 80, while 20,000 consumers remained without electricity.

The protests in several regions of the state and in Porto Alegre due to the delay in restoring electricity by Equatorial and RGE – three days after the storm struck – constitute an unprecedented phenomenon in Rio Grande do Sul. Experts from the state's electricity sector affirmed that "[in the past] not even in the most extreme cases did the sense of abandonment come close to what it is now" (Barreto, 2024, p. 1).

The response to this extreme climate event was marked by a lack of coordination and decision-making capacity, improvisation in guidance to the population, and shortages of materials and equipment.

Across different neighborhoods of Porto Alegre, protests against the power outage multiplied on Friday [January 19]. "The legitimate indignation of people who have been without electricity since Tuesday — without water or phone service, losing food in the refrigerator, or unable to bathe [...] More concerning are the protests in which demonstrators block streets and set objects on fire [...] One of the greatest sources of indignation — legitimate, it bears repeating — is the company's claim that power has been restored when, in reality, that building, street, or neighborhood remains in darkness" (De Oliveira, 2024b, p. 1).

As early as the day following the disaster, the Mayor sought to exempt himself from responsibility through social media, as reported in the press:

Since the management of [the company] CEEE Equatorial has not answered the phone in recent hours,

we make an appeal for someone from the company to come to the Integrated Command Center of Porto Alegre and assist us in joint governance to restore normality. There is no water supply without electricity! (Renkovski, 2024).

The populist maneuver did not go unnoticed, being questioned in the media by the end of the week:

Pressed in the wealthier neighborhoods for shifting to the concessionaire the blame for water shortages in the municipal system, the Mayor decided to turn lemons into lemonade in the periphery. Wearing a straw hat, he went to low-income communities to oversee the arrival of water trucks and talk to residents, just as he had done during the election campaign. On another front, the Mayor filed a petition with the National Electric Energy Agency, requesting an urgent investigation of the concessionaire. Riding on the discontent of consumers, the Mayor declared war on the company (De Oliveira, 2024c, p. 1).

Prompting commentators in the local press to reflect on the intangible impacts of the disaster and the uncertainties surrounding the information available for decision-making by those affected:

The most optimistic storm damage analysts estimate that the population of Porto Alegre will suffer for at least two weeks from a lack of electricity, internet, and other shortages. The biggest problem is the lack of structure at CEEE Equatorial and RGE to handle emergency situations. CEEE was a state-owned company that was recently privatized by the State government with the promise of improving services. As an experienced politician, the Mayor of Porto Alegre knows that the storm will influence this year's municipal elections, in which he is expected to run for reelection (Wagner, 2024).

In colloquial language, drawing on professional experience, this commentator expressed the prevailing paradigm in the social sciences that disasters are not "natural," nor are they phenomena that can be managed solely by technocracy. Disasters reflect failures in the territorial development process; their severity and impacts are correlated with public governance capacity. The greater the public governance capacity, the lower the severity of damages and the stronger the response capacity.

One month after the disaster, the Mayor held a press conference stating that the Executive had gained many lessons that "would serve as the basis for measures in similar future episodes" (Egídio, 2024b, p. 16), promising to:

- Expand the municipal budget allocation for tree pruning;
- Map priority electrical networks that supply water pumping stations, hospitals, and strategic points of the city, to enable preventive pruning;
- Establish an integrated work plan with the power utility;
- Produce a disaster report with the aim of creating a historical record to address such phenomena in the future.

Rather than reassuring public opinion, we argue that this minimal list of actions – announced in February 2024 – does not qualify Porto Alegre as a reference in resilience for Latin America. Moreover, it comes more than a decade late despite the massive international cooperation received during this period. This argument was reinforced by the repetition of the disaster, on an even greater scale, in May of the same year.

5. Discussion: Disasters as a Political Problem

The timeline of planned neglect in the disaster response was documented by reports from Bittencourt (2024), Egídio (2024a), Fan (2024), Sul21 (2024), and Trindade (2024), synthesized as follows:

- on Wednesday, January 17, the Mayor used social media to request from the population the loan of chainsaws and the donation of roof tiles;
- in a new post on social media, the Mayor informed the population that the power utility was not responding to his attempts at contact;
- on Thursday, January 18, faced with the incapacity of civil response, the Mayor requested assistance from the Southern Military Command, which dispatched 150 soldiers and engineering equipment from barracks located 580 km away on the border, to cut down trees and distribute water and roof tiles;
- on the same day, a request was filed in the City Council to open a Parliamentary Inquiry Commission to analyze the inefficiency of the utility's response;
- the utility released a motivational video announcing the arrival of technical reinforcements from other companies in the group based in the North and Center of the country (pic.twitter.com/XVMFbaT2eb), while also issuing a statement that by

- Saturday, January 20, the situation would return to normal;
- on Friday, January 19, the Governor felt compelled to assume coordination of the response and held talks with the leadership of the Public Services Regulatory Agency regarding the blackout;
- on January 23, while the utility reported that it was operating normally, the Public Prosecutor's Office filed a class action lawsuit against the company seeking compensation and fines totaling R\$ 200 million;
- one month after the storm, the city still had branches and trunks in squares and public spaces, where residents had begun dumping garbage and debris. The forecast for completing the cleanup was another month.

Even amid the disaster, the head of the Executive – elected on a self-proclaimed liberal platform – did not assume responsibility for the low response capacity and the absence of effective polycentric governance. This disaster context is not "natural"; it constitutes a sociopolitical phenomenon beyond the governability of international agencies and contradicts the discourse presented to the public. As "the intensity of the disaster depends not only on the magnitude of the adverse event but, above all, on the vulnerability of the receiving system – with vulnerability being the determining factor in the degree of damage" (Lima & Aquino, 2023, p. 17).

This conclusion aligns with Silva *et al.* (2023, p. 183), who note that "the resilient POA challenge was not achieved due to political discontinuity."

It also resonates with the audit conducted by the Federal Comptroller General regarding resilience governance:

During the diagnostic process, it was found that there is no uniformity in the response to flood-related disasters. This lack of uniformity stems from inadequate planning, with numerous weaknesses identified, which become evident both in the responses to inquiries and in the analysis of the documentation presented (CGU, 2021, p. 77).

The Executive was not caught by surprise. A meteorology blog summarized: "The violent storm in Porto Alegre is the chronicle of a foretold disaster" (Nachtigall, 2024b). A political commentator similarly noted: "This time, it was not a lack of information. Meteorologists had issued successive warnings that Rio Grande do Sul would be hit on Tuesday night by a storm of major proportions" (De Oliveira, 2024a). Public opinion leaders recalled in the press the neglect during more than a decade of prior disasters in the Metropolitan Region, which we summarize in Table 3.

We highlight in Table 2 the disaster that occurred on January 29, 2016, only a few hours after the official launch of Porto Alegre's Resilience Strategy and exactly eight years before the tragedy repeated itself in January 2024.

Given its geographic position, Rio Grande do Sul suffers on average 13 disasters per year caused by Mesoscale Convective Storms (Lima & Aquino, 2023). This was the reason why, between 2013 and 2017, the federal government financed the Geological Survey of Brazil (CPRM) to map risk areas in Porto Alegre, providing a basis for a municipal policy of vacating vulnerable areas and incorporating

them into public housing programs – measures that were never implemented. A decade later, following flash floods in December 2021, CPRM reaffirmed its recommendation: "to conduct a census-based and socio-environmental study for an accurate diagnosis of the population living in risk areas, and to support actions for the removal and relocation of the affected population" (Brasil, 2021, p. 10).

The current head of the Executive, during his term as Deputy Mayor between 2013 and 2016, witnessed four disasters in Porto Alegre. During his term as State Deputy between 2019 and 2020, he witnessed one disaster. Later, as Mayor in his first term between 2021 and 2024, he signed four decrees declaring a state of emergency in the capital, as shown in Table 4.

There is no possibility of arguing that the municipal Executive was taken by surprise on January 16, 2024, and was therefore inexperienced and unprepared. This argument is reinforced by the Mayor of Rio de Janeiro, who, one day earlier – while commenting on the storm that killed 12 people in Rio de Janeiro – stated: "I am one of those who loathe that little talk of 'record rainfall, it caught us by surprise.' There is no surprise in this; I think we all know that traditionally in Rio de Janeiro it rains in the summer. And it rains a lot. There is climate change, but it has always rained here" (ClimaInfo, 2024).

Extreme climate events are no longer sporadic or rare phenomena in Metropolitan Regions; they have become a routine part of the complex problems of public governance (Viana *et al.*, 2009). The storm of January 16-17, 2024 in Porto Alegre could not have been an unexpected phenomenon for the Executive, especially after the Governor had

TABLE 3 – Extreme Climate Events in the Metropolitan Region of Porto Alegre (Apr. 2011 to Jan. 2024).

Event	Summary of Recorded Impacts	Sources
22–23 April 2011	Strong winds; 77 mm in 24 hours; 200,000 customers without electricity; 12 deaths	Moraes; Aquino (2018)
14 October 2015	Winds up to 130 km/h; heavy rain and hail; 1 death; hundreds of trees downed; 711,000 customers without electricity; estimated damages of R\$ 73 million	Müller Neto (2018)
29 January 2016	Tornado; one of the strongest storms in history; winds above 100 km/h; torrential rain of 37 mm in one hour; 3,000 trees downed; shopping mall roof collapsed; 328,000 customers without electricity for up to four days; estimated damages of R\$ 50 million	Burd (2018); Girardi; Steigleder (2019)
1 October 2017	One of the worst storms in history; winds up to 100 km/h; 2 deaths; torrential rain of 30 mm in one hour; circus tent collapsed; trees downed; 640,000 customers without electricity	Girardi; Steigleder (2019)
30 June 2020	Bomb cyclone; one of the most severe episodes in history; 1 death; winds up to 100 km/h; Guaíba River flooding; 900,000 households without electricity	Binda; Girardi; De Aguiar (2022)
6 December 2021	Exceptional rainfall event; 59 mm in 7 hours; flash flooding in Arroio Passo das Pedras, an area under study since 2013	Brazil (2021)
15 June 2023	Extratropical cyclone hit the Metropolitan Region; most severe disaster in four decades; 142 mm in 24 hours in Porto Alegre, highest in 107 years; winds of 110 km/h; 16 deaths in the state; 15,000 people displaced; 3,000 rural properties destroyed; estimated damages of R\$ 91 million	RS (2023)
12 September 2023	Extratropical cyclone hit the Metropolitan Region; 47 deaths in the state; 25,000 people displaced; winds of 80 km/h; avenue blockages	Brasil (2023)
19 November 2023	Largest Guaíba River flood since 1941; 325 mm of rainfall in the month; highest volume since 1916; 1,000 people displaced; schools and health units closed; urban trains paralyzed	Brasil (2023)
16 January 2024	Severe storm hit the Central, Valleys, and Metropolitan regions; winds of at least 120 km/h; 76 mm of rainfall; at least 2 deaths, 12 people injured, 60 municipalities directly affected; 1.1 million customers without electricity; 1.2 million people without water	Faleiro (2025)

SOURCE: Authors' elaboration.

TABLE 4 – Emergency Decrees under Mayor Melo's First Administration (2021-2024).

Date	Decree	Justification
23 June 2023	No. 22,044	State of Emergency Level I in the Municipality of Porto Alegre affected by the adverse event – COBRADE 1.3.2.1.4, due to Heavy Rains
15 September 2023	No. 22,204	State of Emergency in the Municipality of Porto Alegre due to the adverse event Heavy Rains – COBRADE 1.3.2.1.4
21 November 2023	No. 22,308	Emergency in the Municipality of Porto Alegre due to the adverse event Floods – COBRADE 1.2.1.0.0
18 January 2024	No. 22,343	Due to Heavy Rains, COBRADE 1.3.2.1.4, State of Emergency declared in the Municipality of Porto Alegre

SOURCE: Authors' elaboration.

posted a video online affirming that municipalities were prepared.

The limitations of the municipal Executive in responding to disasters are structural; they do not arise from conjunctural circumstances or isolated events. The diagnosis of the October 2015 flood, financed by the World Bank, had already indicated the need "to provide power generators for pumping stations in the territory: there is a need for autonomous energy pumps" (POA, 2022, p. 258) – a recommendation that was not implemented. Recommendations by international agencies are not followed. After two decades of implementing the Master Plan, a consultancy contracted by UNDP already noted significant weaknesses:

The implementation of the Strategy was limited. None of the planned programs were carried out. The actions of the various secretariats that affect urban development are not coordinated by the Secretariat of Environment, Urbanism, and Sustainability and may at times contradict the guidelines of the Master Plan. The agenda of the Municipal Council for Urban Development is filled mainly with minor issues rather

than major projects. There is no integrated information system that consolidates the data produced by the different secretariats. Much of the data is outdated and unreliable. The performance evaluation, which was supposed to be carried out through indicators produced from this primary data, does not exist (EY, 2023, p. 40/57).

Urban development management in Porto Alegre can be characterized by a system of pre-established regulations that quickly become obsolete in the face of rapid change, rather than by a process of continuous management and monitoring of adjustments and innovation for resilience.

The final evaluation of the 100RC Program, conducted by the Urban Institute in London with the participation of Brazilian researchers, concluded that the program itself was not resilient, as it was terminated in 2019. Similarly, the technical assistance provided to municipalities proved non-resilient: the COVID-19 pandemic between 2020 and 2021 effectively, if not formally, eliminated the capacity of participating cities to withstand shocks and disasters (McTarnaghan *et al.*, 2022).

Allasia *et al.* (2015) documented how the majority perception of disasters in Porto Alegre has changed over recent decades, with risks being downplayed and new partisan agendas prioritized. We argue that there is a structural contradiction between the goal of expanding resilience – i.e., strengthening and capacitating the State – and the political platforms that voters have favored since 2005, electing mayors considered conservative or liberal in orientation.

In a speech delivered to an audience of business leaders in November 2017, the Mayor systematized his approach to moving beyond participatory budgeting: "It will be no one other than the elite of communication, the business elite, and the political elite who will carry out the much-needed reforms. To delegate this to 'Mr. John' and 'Mrs. Jane' is irresponsible" (Sul21, 2017). This local scenario aligns with the national context, in which Salles *et al.* (2023) identified that the environmental agenda is being appropriated by the liberal political field under conspiratorial theories – where the construction of images and branding on social media matters more than concrete political achievements.

This is the context in which we define the Executive's discourse on Porto Alegre's resilience capacity as a model for Latin America as greenwashing, particularly considering that municipal legislation includes no provision for fines, penalties, or sanctions in the event of noncompliance with resilience targets. Not even the disaster of January 16, 2024 – almost forgotten – nor the catastrophic floods that followed in May 2024 proved sufficient to penalize the Melo Administration in the eyes of public opinion, as it was reelected for a second term.

6. Conclusion

Over more than a decade, between 2012 and 2023, with implementation deadlines extending to 2028 and debts projected until 2058, the Municipality of Porto Alegre received massive international cooperation – amounting to more than R\$ 1 billion – to establish the city as a reference in climate resilience in Latin America. This ambitious project was defined in 2012 by local political and business leaders as a strategy to replace the city's historical brand as the "capital of participatory democracy" and host of the World Social Forum.

This objective remains consistent with the will of the majority of voters in the capital, who, over the course of five electoral terms, have repeatedly elected administrations aligned with this proposal – consistent with the continuous reduction of state planning capacity through privatization, outsourcing, staff downsizing, and public—private partnerships, all emanating from the prevailing liberal political culture in the city.

The virtual outsourcing of the city's planning capacity – unparalleled among municipalities in Rio Grande do Sul, despite Porto Alegre being the capital of Brazil's third-largest regional economy – has occurred through partnerships with some of the most recognized international cooperation organizations operating in the country: ICLEI – Local Governments for Sustainability; World Resources Institute (WRI); Al Gore Foundation; Rockefeller Foundation; the German Government (via GIZ); the French Government (via AFD); the European Union (via UN-Habitat); the UN Global Facility for Disaster Reduction and Recovery (GFDRR); the World Bank; in addition to several national and

international consultancy firms. The apex of this project was reached in August 2023, when Porto Alegre was recognized by the UN as a Resilience Hub.

The storm of January 16, 2024 – a disaster long announced throughout more than a decade of extreme climate events in the Metropolitan Region – was expected to serve as the validation test of this international recognition. That validation failed. The disaster found the city as unprepared as in previous extreme events, serving as a preview of the unpreparedness that followed in the catastrophic floods of May 2024. The failure of Porto Alegre's Municipal Resilience Strategy, launched in 2016 and promoted as an emblematic case of subnational climate adaptation policy, confirms the existence of a structural contradiction between the downsizing of the State and its capacity to respond to the impacts of climate change.

This is particularly evident when the outsourcing of planning to international cooperation – if not de jure, then de facto – proves corrosive to the fostering of effective polycentric governance. Even the WRI, a long-standing partner of the Municipality, eventually concluded that it was time to abandon the branding of Porto Alegre as the capital of participation: "we conclude that political commitment to participatory budgeting was central to its success; this public policy was put at risk when the supporting coalition ceased to exist and priorities shifted" (WRI, 2018).

In the face of inefficiency in responding to the impacts of the January 16, 2024 disaster – disregarding prior studies and diagnoses – rather than assuming responsibility for the consequences of its political platform, the Executive's strategic choice has been an outdated marketing strategy: framing disasters as 'natural' and unpredictable phenomena; externalizing blame onto the energy concessionaire; making vague promises of future improvements; and praising the resilience of local political culture through rhetorical maneuvers. This strategy contains elements of greenwashing by the Municipality, as it simultaneously advertises the preparation of greenhouse gas inventories, the drafting of an adaptation plan, and the celebration of emissions reductions – made possible by the active participation of international cooperation actors that subsidize and validate municipal policy.

There is consensus that the mission of international cooperation is to enhance State capacities. It is important, however, to stress that the State is neither neutral nor monolithic. Thus, international cooperation bears the obligation of self-critique regarding the Effect it achieves when assisting subnational organizations. The choice of projects should certainly not be partisan, but there must be evaluation mechanisms that allow cooperation actors to identify cases where, after a decade of support, it was not possible to foster polycentric governance for climate resilience – and to then redirect efforts toward new formats.

Given that a significant share of public policies – both at the federal and subnational levels – related to climate change mitigation and adaptation are advised by the same international organizations now concentrated in Porto Alegre, doubts are justified as to the rigor with which these organizations apply the Theory of Change adopted by the Brazilian public sector in their own activities. The Porto Alegre case underscores that climate change has ceased to be an 'environmental' issue and instead constitutes a political and public management challenge for subnational development strategies. We infer that

the priority established in the evaluation framework adopted by the federal government – through studies coordinated by IPEA – regarding capacity-building as the intended outcome of international cooperation, was not realized in the case of Porto Alegre.

References

Aires, A. Em leilão com lance único, concessão do Cais Mauá é oficializada na bolsa de valores. *Jornal Zero Hora*, Porto Alegre, 06 fev. 2024. Disponível em: https://gauchazh.clicrbs.com.br. Acesso em: 22 jan. 2024.

Allasia, D.; Tassi, R.; Bemfica, D.; Goldenfum, J. Decreasing flood risk perception in Porto Alegre and its influence on water resource management. *Proceedings International Association of Hydrological Sciences*, 370(1), 189-192, 2015. https://doi.org/10.5194/piahs-370-189-2015

Antunes, F. Expansão das atividades governamentais locais: a paradiplomacia de Porto Alegre. Santa Cruz do Sul, Monografia (Graduação em Relações Internacionais) - Universidade de Santa Cruz do Sul, 2021.

Barreto, M. Protestos contra a falta de luz e água, a nova realidade dos serviços privatizados. *Extraclasse*. Porto Alegre, 19 jan. 2024. Disponível em: https://www.extraclasse.org.br. Acesso em: 22 jan. 2024.

Baumann, R. et al. A cooperação internacional brasileira para o desenvolvimento. *In*: Baumann, B. (Org.) *Cooperação internacional em tempos de pandemia*. Relatório COBRADI 2019-2020. Brasília: IPEA, 2022.

Binda, A.; Girardi, G.; De Aguiar, M. A história de um desastre natural: foi um ciclone bomba que atingiu a região sul do Brasil em junho/julho de 2020? *GeoTextos*, Salvador, 18(2), 177-199, 2022. https://doi.org/10.9771/geo.v0i2.50773

Bittencourt, J. MP ajuíza ação contra a CEEE Equatorial. Jornal Zero Hora, Porto Alegre, 23 jan. 2024. Geral, p. 18.

Brasil. Painel El Niño 2023-2024. *Boletim mensal No.* 4. São José dos Campos; Brasília: INPE; INMET; ANA; CENAD, 2023.

Brasil. Serviço Geológico do Brasil. *Avaliação técnica pós-desastre Porto Alegre Dezembro de 2021*. Relatório final. Porto Alegre: CPRM, 2021.

Brasil. Casa Civil da Presidência da República. *Avaliação de políticas públicas*: guia prático de análise ex post. v. 2. Brasília, 2018.

Brose, M. Ondas de difusão do Marco Lógico no governo federal. *International Journal of Development Research*, 11(4), 46427-46434, 2021. https://doi.org/10.37118/ijdr.21692.04.2021

Burd, F. *Downburst ou tornado*: construções do evento atmosférico de 29 de janeiro de 2016 em Porto Alegre. Porto Alegre, Monografia (Graduação em Ciências Sociais) - Universidade Federal do Rio Grande do Sul, 2018.

Carneiro, C. BRDE aprova financiamento do Plano Diretor de Porto Alegre. 30 jun. 2020. Disponível em: https://prefeitura.poa.br/gp/noticias. Acesso em: 5 abr. 2022.

CEPED - Centro de Estudos e Pesquisas em Engenharia e Defesa Civil. Banco Mundial. *Resiliência e risco de desastres*: um guia para a atuação municipal. Florianópolis: UFSC, 2020

CIUPOA - Centro de Inteligência Urbana. *Histórico*. [s.d.]. Disponível em: http://www.ciupoa.org.br. Acesso em: 22 mar. 2024.

ClimaInfo. Prefeito do Rio, Eduardo Paes diz que tempestade que atingiu a cidade e região metropolitana "não tem surpresa". *Climainfo*, 16 jan. 2024. Disponível em: https://climainfo.org.br. Acesso em: 15 mar. 2024.

Coimbra, V. Em 2024, Porto Alegre registra o segundo janeiro mais chuvoso do século. *Jornal Zero Hora*, 31 jan. 2024, Disponível em: https://gauchazh.clickrbs.com.br. Acesso em: 14 fev. 2024.

Conte, V. Capital reduz em média 5% a emissão de gases de efeito estufa. 12 ago. 2021. Disponível em: https://prefeitura.poa.br/smamus. Acesso em: 22 mar. 2024.

Conti, D.; Neiman, Z.; Da Silva, L.; Santiago, L. In pursuit of a more holistic, citizen-centered resilience strategy: the case of Porto Alegre. *Revista Brasileira de Gestão e Desenvolvimento Regional*, Taubaté, 19(3), 369-390, 2023.

Contipelli, E. Da governança dos comuns ao policentrismo: considerações sobre Elinor Ostrom e mudança climática. *Revista Jurídica*, Blumenau, 24(53), 2020.

CGU - Controladoria Geral da União. *Projeto Cidades Resilientes em Municípios do Rio Grande do Sul*: abordagem governança. Relatório de Avaliação. Brasília, 2021.

De Oliveira, R. Leilão do Cais Mauá precisa de mais luz. *Jornal Zero Hora*, Porto Alegre, 23 fev. 2024(a). Política+, p. 8.

De Oliveira, R. Do limão à limonada. *Jornal Zero Hora*, Porto Alegre, 2024(b) p. 6. Política+, p. 6.

De Oliveira, R. Concessionárias têm de se preparar. *Jornal Zero Hora*, Porto Alegre, 2024(c). Política+, p. 6.

Egídio, P. Reforçar prevenção e amenizar danos. *Jornal Zero Hora*, Porto Alegre, 2024(a). Geral, p. 16.

Egídio, P. Um mês após temporal, árvores caídas bloqueiam calçadas e se tornam pontos de acúmulo de lixo em Porto Alegre. *Jornal Zero Hora*, Porto Alegre, 2024(b). Disponível em: https://gauchazh.clicrbs.com.br. Acesso em: 16 fev. 2024.

Elias-Trostmann, K.; Cassel, D.; Burke, L.; Rangwala, L. *Mais forte do que a tempestade*: aplicando a avaliação de resiliência comunitária urbana aos eventos climáticos extremos. Washington: WRI, 2018.

Ernst & Young Assessoria Empresarial (EY). *Consultoria técnica para revisão do Plano Diretor de Porto Alegre*. Leitura da Cidade V.1. São Paulo, 2023.

Esser, T. *Logística humanitária*: um estudo sobre os desastres naturais em Porto Alegre. São Leopoldo, Monografia (MBA em Logística) - Universidade do Vale do Rio dos Sinos, 2016.

Estadão Conteúdo. Temporal deve atingir a Região Sul a partir desta terça, governo do RS faz alerta. *Universo Online*, 16 jan. 2024. Disponível em: https://noticias.uol.com.br. Acesso em: 14 fev. 2024.

EEA - European Environment Agency. *European climate risk assessment*. Executive summary Report 1/2024. Copenhagen, 2024.

Faleiro, F. Lições e traumas na população marcam um ano do temporal histórico de 16 jan. 2024. *Correio do Povo*, 16 jan. 2025. Disponível em: https://www.correiodopovo.com.br/not%C3%ADcias/cidades. Acesso em: 21 mai. 2025.

Fan, R. Exército apoia população atingida por tempestades na região de Porto Alegre. *Defesanet*, 24 jan. 2024, Disponível em: https://www.defesanet.com.br. Acesso em: 14 fey. 2024.

Farrugia, B.; Salgado, D.; Zucchi, G.; Ximenes, M. *O preço de uma copa*. 2018. Disponível em: https://oprecodeumacopa.com. Acesso em: 26 fev. 2024.

Girardi, I.; Steigleder, D. Mudanças climáticas, risco e cidade: meios de comunicação entre o silêncio e a cobertura catastrófica. *In:* Martins; Lemos (Eds.), *III Congresso Internacional sobre Culturas*. Braga: Universidade do Minho, 2019.

Leão, J.; Reinholz, F. Sem luz e água, moradores de comunidades periféricas de Porto Alegre realizam mutirão após temporal. *Brasil de Fato*, 19 jan. 2024. Disponível em: https://www.brasildefato.com.br. Acesso em: 15 fev. 2024.

Lima, K.; Aquino, F. Desastres causados por tempestades e elevados índices pluviométricos no RS em 2011 e 2012. *Revista eletrônica ParaOnde!?*, Porto Alegre, 17(2), 16-34, 2023. https://doi.org/10.22456/1982-0003.126946

ICLEI - Local Governments for Sustainability. *Municipality of Porto Alegre*. [s.d.]. Disponível em: https://iclei.org/network_city. Acesso em: 15 mar. 2024.

ICLEI - Local Governments for Sustainability *Liveable cities*: the benefits of urban environmental planning. Washington: The Cities Alliance; World Bank, 2007.

Mahendra, A.; King, J.; Dasgupta, V.; Beard, A.; Kallergis, E.; Schalch, K. *Sete transformações para cidades mais equitativas e sustentáveis*. Sumário Executivo. Projeto Rumo a uma Cidade Equitativa. Washington: WRI, 2021.

Marx, V. Las ciudades como actores políticos relevantes en las relaciones internacionales: el caso de Barcelona y Porto Alegre. 2005, *Allas*. Disponível em: https://proyectoallas.net. Acesso em: 27 abr. 2021.

Marx, V.; Araújo, G.; Souza, V. Relação global-local e transformação urbana no 4º distrito de Porto Alegre. *Revista Política e Planejamento Regional*, Rio de Janeiro, 8(2), 273-296, 2021.

Melgar, T. A Time of Closure? Participatory Budgeting in Porto Alegre, Brazil, after the Workers' Party Era. *Journal of Latin American Studies*, Cambridge, 46(1), p. 121-149, 2014. https://doi.org/10.1017/S0022216X13001582

Marzulo, E.; Lersch, I.; Fedozzi, L.; Costa, P. *Cais Cultural*: proposta de ocupação do cais do porto de Porto Alegre. Porto Alegre: UFRGS, 2021.

Mctarnaghan, S.; Morales-Burnett, J.; Marx, R. *Urban resilience*: from global vision to local practice. Report. London: Urban Institute, 2022.

Moraes, F.; Aquino, F. Desastres no RS associados a CCM: estudo de caso do evento que correu entre 22 e 23 de abril de 2011. *Revista Gestão & Sustentabilidade*, Florianópolis, 7, 111-134, 2018. https://doi.org/10.19177/rgsa.v7e02018111-134

Müller Neto, J. Estimativa de impacto das cheias de 1941, 1967 e 2015 em Porto Alegre na hipótese de inexistência do sistema de proteção contra cheias do Lago Guaíba. Porto Alegre, Monografia (Graduação em Engenharia Ambiental) - Universidade Federal do Rio Grande do Sul, 2018.

Nachtigall, L. Violento temporal em Porto Alegre é a crônica do desastre anunciado. *Metsul.com*, Porto Alegre, 18 jan. 2024(a). Disponível em: https://metsul.com/2024-01-18-temporal-porto-alegre-el-nino/. Acesso em: 15 fev. 2024.

Nachtigall, L. **Alerta**Chuva intensa a extrema e vendavais no Rio Grande do Sul. *MetSul.com*, Porto Alegre, 15jan. 2024(b). Disponível em: https://metsul.com. Acesso em: 19 fev. 2024.

Nascimento, A.; Araújo, C. Narrativas sobre riscos naturais e resiliência na construção da agenda urbana global neoliberal. *Cadernos Metrópoles*, São Paulo, 23(52), 1135-1164, 2021. https://doi.org/10.1590/2236-9996.2021-5213

Ostrom, E. Beyond markets and states: polycentric governance of complex economic systems. *American Economic Review*, 100(3), 641-672, 2010. https://doi.org/10.1257/aer.100.3.641

Ostrom, E. *A polycentric approach for coping with climate change*. Working Paper N. 5095. Washington: World Bank, 2009.

Ostrom, E.; Dietz, T.; Stern. The struggle to govern the commons. *Science*, 302(5652), 1907-1912, 2003. doi: 10.1126/science.1091015

Poon, L. What can the world learn from 100RC? Bloomberg, New York, 06 out. 2022. Disponível em: www.bloomberg. com. Acesso em: 6 mar. 2024.

Porto Alegre. Secretaria Municipal de Governança e Coordenação Política. *Porto Alegre*: cidade resiliente. (dez. 2023) Disponível em: https://prefeitura.poa.br. Acesso em: 15 fev. 2024.

Porto Alegre. Secretaria do Meio Ambiente, Urbanismo e Sustentabilidade. *Programa de Regeneração Urbana do 4º Distrito de Porto Alegre*. Diagnóstico. Relatório I. Porto Alegre, 2022.

Porto Alegre. Secretaria de Governança e Participação Popular. *Estratégia de resiliência de Porto Alegre*. Porto Alegre, 2016.

PNUD - Programa das Nações Unidas para o Desenvolvimento. *POA 2030, Inovadora, Integrada, Resiliente*. Documento de projeto BRA/19/014, 2019. Disponível em: https://prefeitura.poa.br. Acesso em: 22 mar. 2024.

Renkovski, R. CPI da CEEE Equatorial já tem data para ser instalada na Câmara de Porto Alegre. *Jornal Correio do Povo*. Porto Alegre, 14 fev. 2024. Disponível em: https://www.correiodopovo.com.br. Acesso em: 15 fev. 2024.

Rio Grande Do Sul. Casa Militar. *Ciclone extratropical no RS*: impactos estimados, medidas emergenciais e plano de reconstrução. Porto Alegre: Defesa Civil, 2023.

Rio Grande Do Sul. Secretaria do Planejamento, Orçamento e Gestão. *Marco metodológico PPA 2020-2023*. Porto Alegre, 2019.

Rizzo, A. Cooperação Sul-Sul Brasileira e a avaliação dos projetos estruturantes: o estado da arte e uma agenda de pesquisa. *Boletim de Economia e Política Internacional IPEA*, Brasília, 25, 19-25, 2019.

Salles, D.; De Medeiros, P.; Santini, R.; Barros, C. The farright smokescreen: environmental conspiracy and culture wars on Brazilian YouTube. *Social Media+Society*, 9(3), 1-22, 2023. https://doi.org/10.1177/20563051231196876

Salomón, M; Nunes, C. A ação externa dos governos subnacionais no Brasil: os casos do Rio Grande do Sul e de Porto Alegre. *Contexto Internacional*, Rio de Janeiro, 29(1), 99-147, 2007. https://doi.org/10.1590/S0102-85292007000100004

Schaffner, F. Choque de massas de ar causou tempestade da noite de terça-feira no RS. *Jornal Zero Hora.*, Porto Alegre, 17 jan. 2024. Disponível em: https://gauchazh.clickrbs.com. br. Acesso em: 14 fev. 2024.

Schatz, P.; Espíndola, C. O jogo continua: o legado pós-copa do mundo de 2014 em Porto Alegre. *Boletim de Geografia*, Maringá, 36(3), 17-34, 2018. https://doi.org/10.4025/bol-geogr.v36i3.31740

Schleicher, R.; Miranda, M.; Franco, S. *Avaliação de efeitos da cooperação sul-sul para o desenvolvimento do Brasil:* um modelo geral. Texto para Discussão N. 2780. Brasília: IPEA, 2022.

Serrao-Neumann, S.; Di Giulio, G.; Loe Choy, D. When salient science is not enough to advance climate change adaptation: lessons from Brazil and Australia. *Environmental Science & Policy*, 109, 73–82, 2020. https://doi.org/10.1016/j.envsci.2020.04.004

Sias, E. Previsão do tempo: tendência de chuva para dez dias. *Met.sul*, Porto Alegre, 08 jan. 2024. Disponível em: https://metsul.com. Acesso em: 14 fev. 2024.

Silva, T.; Durães, I.; Ventura, A.; Silva, A. Andrade, J. Análise da estratégia de resiliência de POA: vinculação entre ações, choques e estresses. *Revista Eletrônica de Gestão e Tecnologias Ambientais*, Salvador, 11(2), 172-192, 2023. https://doi.org/10.9771/gesta.v0i2.53046

Siqueira, L.; Marzulo, E. Da democracia participativa à desdemocratização na cidade: a experiência do Orçamento Participativo em Porto Alegre. *Cadernos da Metrópole*, São Paulo, v. 23(50), 399-421, 2021. https://doi.org/10.1590/2236-9996.2021-5016

Stephan, M.; Marshall, G.; Mcginnis, M. An Introduction to Polycentricity and Governance. In: Thiel; Blomquist; Garrick (Eds.). *Governing Complexity*. New York: Cambridge University Press, 2019.

Sul21. Prefeito de Porto Alegre não consegue contato com a CEEE Equatorial e faz apelo. *Sul21*, Porto Alegre, 17 jan. 2024. Disponível em: https://sul21.com.br. Acesso em: 14 fey. 2024.

Sul21. Donos da cidade. *Sul21*, Porto Alegre, 11 nov. 2023. Disponível em: https://sul21.com.br. Acesso em: 15 mar. 2024.

Sul21. A empresários, Marchezan diz que 'elites farão as reformas tão necessárias'. *Sul21*, Porto Alegre, 30 nov. 2017. Disponível em: https://sul21.com.br. Acesso em: 15 mar. 2024.

TNC - The Nature Conservancy. *Beyond the source*: environmental, economic and community benefits of source water protection. Arlington, 2024.

TCU - Tribunal De Contas Da União . *Avaliação da Política Nacional de Proteção e Defesa Civil*. Auditoria operacional. 023.751/2018-5. Brasília, 2020.

Trindade, P. Prefeito de Porto Alegre pede que população doe motosserras e telhas após passagem de temporal. *G1 RS*. Porto Alegre, 17 jan. 2024, Disponível em: https://g1.globo.com. Acesso em: 14 fev. 2024.

UN - United Nations. *Greenwashing*: the deceptive tactics behind environmental claims, 2024. Disponível: https://www.un.org/en/climatechange. Acesso: 20 mai. 2025.

Viana, D.; Aquino, F.; Muñoz, V. Avaliação de desastres no RS associados a complexos convectivos de mesoescala. *Sociedade & Natureza*, Uberlândia, 21(2), 91-105, 2009. https://doi.org/10.1590/S1982-45132009000200007

Wagner, C. A longa noite da tempestade que varreu Porto Alegre só terminará nas eleições municipais. *Diário de Viamão*, Viamão, 25 jan. 2024. Disponível em: https://www.diariodeviamao.com.br. Acesso em: 14 fev. 2024.

WB - World Bank. *Green cities*: cities and climate change in Brazil. Washington, 2010.

WRI - World Resources Institute. *Financiamento de infraestrutura de baixo carbono nas áreas urbanas do Brasil.* São Paulo: Projeto Felicity, 2020.

WRI - World Resources Institute. *Porto Alegre*: Participatory budgeting and the challenge of sustaining transformative change. Washington, 2018.

Zottis, L. What cities can learn from Porto Alegre about inclusive planning. 18 mai. 2015. *The City Fix*. Disponível em: https://thecityfix.com/blog. Acesso em: 12 fev. 2024.