



Civil Society and Budget Priorities: An Analysis of Coping with Environmental Disasters in Rio Grande do Sul

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Abstract

This study examines the influence of civil society in resolving environmental catastrophes in Rio Grande do Sul (RS), highlighting the importance of civic participation in public policy formulation and resource allocation for mitigating and adapting to climate change impacts. The main problem of the research is to investigate how civil society can impact political and budgetary decisions to strengthen the response to environmental threats in the state. The theoretical framework used includes the approach of environmental governance and the quadruple helix model, which emphasizes the collaboration between government, civil society, academia, and the private sector in environmental management. The methodology adopted is a quali-quantitative research approach, involving secondary data analysis and exploring the influence of civic participation in the state's participatory budgeting process. The results reveal a low level of civil society participation, evidenced by an average engagement rate of 1.77%, and an imbalance in resource allocation, with a priority given to productive sectors over essential environmental areas. The study identifies the need for more inclusive environmental governance, demonstrating that civic awareness is crucial for improving participation and engagement in political decisions. Processes such as Consulta Popular show

that civil society has the capacity to influence budgetary priorities and the effectiveness of mitigation and adaptation policies.

Keywords: Civil Society. Environmental Governance. Sustainability. Participatory Budgeting. Climate Change.

Sociedade Civil e Prioridades Orçamentárias: Análise do Enfrentamento de Catástrofes Ambientais no Rio Grande do Sul

Resumo

O presente estudo aborda a influência da sociedade civil no enfrentamento das catástrofes ambientais no Rio Grande do Sul (RS), destacando a importância da participação cívica na formulação de políticas públicas e na alocação de recursos para mitigar e adaptar-se aos impactos das mudanças climáticas. O problema central da pesquisa é investigar como a sociedade civil pode impactar as decisões políticas e orçamentárias para fortalecer a resposta a ameaças ambientais no estado. O referencial teórico utilizado inclui a abordagem da governança ambiental e a quádrupla hélice, que destaca a colaboração entre governo, sociedade civil, academia e setor privado na gestão ambiental. A metodologia empregada é uma pesquisa quali-quantitativa, com análise de dados secundários e exploração da influência da participação cívica no orçamento participativo do estado. Os resultados revelam uma baixa participação da sociedade civil, evidenciada pela média de 1,77% no engajamento, e um desequilíbrio na alocação de recursos, priorizando setores produtivos em detrimento de áreas ambientais essenciais. Constatou-se a necessidade de uma governança ambiental mais inclusiva, evidenciando que a conscientização cidadã é essencial para melhorar a participação e o engajamento da sociedade nas decisões políticas. Processos como o Consulta Popular mostram que a sociedade civil possui a capacidade de influenciar as prioridades orçamentárias e a eficácia das políticas de mitigação e adaptação ambiental.

Palavras-chave: Sociedade Civil. Governança Ambiental. Sustentabilidade. Consulta Popular. Mudanças Climáticas.

Sociedad Civil y Prioridades Presupuestarias: Análisis de la Respuesta a las Catástrofes Ambientales en Rio Grande do Sul

Resumen

Este estudio aborda la influencia de la sociedad civil en el enfrentamiento de las catástrofes ambientales en Rio Grande do Sul (RS), destacando la importancia de la participación cívica en la formulación de políticas públicas y en la asignación de recursos para mitigar y adaptarse a los impactos del cambio climático. El problema central de la investigación es examinar cómo la sociedad civil puede influir en las decisiones políticas y presupuestarias para fortalecer la respuesta ante amenazas ambientales en el estado. El marco teórico utilizado incluye el enfoque de gobernanza ambiental y la quádruple hélice, que resalta la colaboración entre el gobierno, la sociedad civil, la academia y el sector privado en la gestión ambiental. La metodología empleada es una investigación cuali-cuantitativa, con análisis de datos secundarios y exploración de la influencia de la participación cívica en el presupuesto participativo del estado. Los resultados revelan una baja participación de la sociedad civil, evidenciada por un promedio de solo 1,77% de compromiso, y un desequilibrio en la asignación de recursos, priorizando sectores productivos en detrimento de áreas ambientales esenciales. Se constató la necesidad de una gobernanza ambiental más inclusiva, destacando que la concienciación ciudadana es esencial para memorar la participación y el compromiso de la sociedad en las decisiones políticas. Procesos como el Consulta Popular demuestran que la sociedad civil tiene la capacidad de influir en las

prioridades presupuestarias y en la eficacia de las políticas de mitigación y adaptación ambiental.

Palabras clave: Sociedad Civil. Gobernanza Ambiental. Sostenibilidad. Consulta Popular. Cambio Climático.

1 Introduction

In the contemporary context, addressing environmental disasters has become a central concern for societies around the world (Chaikumbung, 2023). Recently, specifically at the national level, the state of Rio Grande do Sul has faced significant challenges in this regard, especially after the extreme weather events that devastated the region in May 2024. These incidents resulted in the declaration of a state of public calamity due to their tragic consequences, including loss of life across the state (RS Gov, 2024), highlighting the urgency and severity of the situation. These events not only pose an imminent threat to local communities and the environment, but also underscore the importance of effective environmental governance, sustainable management of natural resources, and the adoption of resilient strategies to address environmental challenges. The severity of the situation in Rio Grande do Sul serves as a stark warning of the need for coordinated and decisive actions, involving both decision-makers and society as a whole, in the search for solutions that can mitigate the impacts of climate change and promote long-term sustainability.

In this context, environmental governance emerges as a pertinent topic to be studied and integrated into decision-making processes by managers, with the common goal of achieving the greatest possible consensus on how to tackle growing environmental problems and design sustainable management. This process should be characterized by decentralized and responsible participation, assuming a networked and integrated approach. This includes empowering the actors involved in management, who must interact with decision-makers (Jacobi; Sinisgalli, 2012).

From this perspective, model countries have adopted integrated approaches that combine sustainability policies, robust environmental governance practices, and strategic investments in resilient infrastructure (Puertas; Marti, 2021). Sweden, for example, has led an energy transition towards renewable sources, resulting in a significant reduction in greenhouse gas emissions (Euronews, 2023). Similarly, the Netherlands has developed advanced water management and coastal adaptation systems to address recurring floods, exemplified by the actions of the Ministry of Infrastructure and Water Management, as well as the figure of the "Delta Commissioner" (FNU, 2024; Zerohora, 2024). In this scenario, an important and often underestimated aspect is governance, which facilitates communication between different political levels—municipalities, provinces, and the central government.

In the Brazilian context, the federal government is responsible for setting guidelines and providing resources for states and municipalities to implement environmental policies through initiatives such as the National Environment Fund and the Climate Fund (Gaio, 2021). Nonetheless, collaboration between different governmental spheres, civil society, academia, and the private sector is essential to ensure an effective response to environmental crises (Puertas; Marti, 2021), representing the various actors of the so-called "quadruple helix." However, it is

important to adopt a critical view of the role of the government, which often faces challenges in the effective implementation and coordination of environmental policies due to political, administrative, and funding issues.

It is worth noting that the quadruple helix approach recognizes the need for active participation from different segments of society in the process of innovation, management, and sustainable development (Ferreira; Rocha, 2020). In terms of environmental governance and sustainability, the quadruple helix plays an imperative role by integrating different perspectives in policy formulation and the implementation of environmental practices, aiming to overcome barriers and promote more inclusive and effective solutions for contemporary environmental challenges.

In the state of Rio Grande do Sul, the state government, civil society, academia, and the private sector are fundamental in formulating public policies aimed at mitigating and adapting to the impacts of environmental disasters. However, as highlighted by Chaikumbung (2023), these policies require costly technological and behavioral changes. Therefore, ensuring public acceptance of climate-related policies is crucial for their effectiveness. Recent studies have investigated society's preferences and its willingness to support these policies (Chaikumbung, 2023).

In this context, it is essential to recognize that responsibility does not rest solely on the government. In the specific case of this study, civil society in Rio Grande do Sul not only observes but plays an important role in directly influencing government decisions through the Popular Consultation process, which promotes participatory budgeting among citizens. As emphasized by Ferreira and Rocha (2020), society, together with the media as the fourth helix, can influence national innovation systems and public discourse, shifting the prioritization of strategic issues such as education, research, and technology. In environmental governance, society operates through advisory councils, public hearings, and educational initiatives, advocating for investments in research and development of innovative solutions for socio-environmental challenges.

Thus, the environmental disasters in the state require a strategic approach in defining regional budget priorities, in addition to immediate actions. Therefore, through the theoretical lens of environmental governance combined with sustainability, this study seeks to shed light on the reflection that civil society bears responsibility, while also emerging as a proactive agent in the formulation of public policies aimed at mitigating and adapting to environmental impacts, potentially becoming a key player in strengthening the region's resilience to these challenges.

Given the above, this study poses the following research question: "How can civil society in Rio Grande do Sul influence political decisions and resource allocation to strengthen the state's response capacity to environmental threats that directly affect it?" To this end, the research aims to analyze the role of civil society in Rio Grande do Sul in addressing environmental disasters in the local context, through the selection of regional budget priorities.

Therefore, a mixed qualitative-quantitative research approach was adopted to explore the impact of civil society participation in the formulation of public policies aimed at mitigating and adapting to the effects of environmental issues, especially through influence on the allocation of resources to critical areas such as flood

prevention, sustainable water resource management, and the recovery of degraded areas. This study includes, in addition to this introduction, a theoretical framework on the subject, methodological procedures, result analyses, final considerations, and references.

2 Theoretical Foundations

2.1 Governance

To support the analysis of this study, it is essential to explore the concept of governance, which began when property owners started managing their assets remotely, delegating authority to oversee their interests (Teixeira; Gomes, 2019). Álvares, Giacometti and Gusso (2008) place the emergence of governance in the 1930s, a period marked by the separation between ownership and control.

The concept of corporate governance, introduced by Jensen and Meckling (1976) in their seminal study, is at the core of this theoretical reflection. They define it as the set of internal and external mechanisms aimed at guiding and controlling business activities, mitigating agency conflicts between owners and managers (Saito; Silveira, 2008).

The relevance of governance extends beyond the private sector, reaching the public sphere, where the information asymmetry between citizens and public managers is a central concern (Rhodes, 2016; Andrew *et al.*, 2015; Bovaird, 2005). Teixeira and Gomes (2019) emphasize that governance in this context seeks to facilitate decision-making that effectively addresses social demands.

The definition of governance varies considerably in the literature and among institutions, influenced by nationality, ideological orientation, and the emphasis on different aspects (Araújo, 2002; Eyerkauffer *et al.*, 2020). According to the World Bank (2008), governance encompasses the traditions and institutions that shape authority in a country, including the process of selecting, monitoring, and replacing governments, as well as the state's ability to formulate and implement effective policies.

In recent decades, governance models have evolved significantly, shifting from a state monopoly to collaboration among various social actors in search of solutions to complex challenges (Carrapato; Correia; Garcia, 2019). Jacobi and Sinisgalli (2012) emphasize that this transformation has expanded the concept of governance beyond traditional government, incorporating non-state actors and promoting greater efficiency in policy formulation and implementation through cooperation between different sectors of society. In this line, Offe (2009, p. 12) emphasizes that:

The notion of governance can be associated with the increased capacity of state intervention, by enabling the mobilization of non-state actors in the formulation and implementation of public policies, thus contributing to greater efficiency and effectiveness [...]. It is possible to consider the existence of 'auxiliary forces' [and not substitutive] in civil society, which, through appropriate procedures and their specific competencies, can be recruited to cooperate in carrying out tasks of public interest [...] potentially creating a state that is both lighter and more capable.

Thus, in recent years, there has been a significant increase in the discussion of governance, with the inclusion of new actors, specifically greater citizen participation in public policies through multidisciplinary councils and conferences (Farah, 2018). Eyerkauf *et al.* (2020) highlight that contemporary governance involves multiple agents, aiming for the democratization and efficiency of public services.

These new forms of governance, such as shared, participatory, and collaborative models, promote a more integrated management of complex socio-environmental systems, encouraging renewed social and political interactions (Seixas *et al.*, 2011; Krogh; Triantafilou, 2024). Such innovations aim to strengthen the state's capacity for intervention by engaging both state and non-state actors in addressing public problems (Adams *et al.*, 2020).

Thus, it is evident that governance is expanding to include a variety of actors and management strategies, with the goal of enhancing the efficiency and effectiveness of public decisions and policies. In this context, the next section explores environmental governance, which is the focus of this study.

2.2 Environmental Governance

Environmental governance has emerged as a field within contemporary studies of politics and management, reflecting the growing need for integrative and collaborative approaches to address global environmental challenges (Cravo; Cerqueira, 2022). This concept encompasses a complex set of structures, processes, and practices aimed at managing and conserving natural resources while promoting sustainable development and environmental resilience (Brazil, 2016; Alves; Azevedo, 2023).

In this context, the concept of environmental governance refers to the mechanisms and institutions through which social actors, both state and non-state, structure and define policies and actions directed at environmental challenges (World Resources Institute, 2003; Moura, 2016; Adams *et al.*, 2020). Bursztyn and Bursztyn (2012) describe environmental governance as a set of practices involving institutions and various stakeholders to maintain the quality of natural and built environments, based on principles of sustainability. Beyond formal norms, this area encompasses political dynamics that transcend governmental structures, manifesting as a complex landscape of interactions and influences, where governments, social movements, organized lobbies, economic sectors, and public opinion play significant roles (Bursztyn; Bursztyn, 2012).

It is recognized that contemporary environmental problems are broad and complex. To address them effectively, a collective and coordinated approach is needed to guide the use of available resources for environmental sustainability (Cravo; Cerqueira, 2022). The concept of sustainability, or sustainable development, was formalized in the 1980s with the Brundtland Report, titled "Our Common Future." This report presented a formal definition of sustainability and proposed an approach to balance environmental preservation with economic growth (CMMAD, 1991). The formulation of this concept was driven by the environmental issues of the time, leading institutions and social groups to discuss and seek alternatives that integrated economic progress and environmental protection.

Although "sustainability" encompasses various dimensions related to economic growth, environmental preservation, and social justice, scholars like Monerat (2022) highlight its distinct facets, often associated with the capitalist system. This system has exacerbated social inequalities and environmental degradation, making the discussion of sustainability even more relevant. Thus, the focus here is on the environmental dimension of sustainability, as addressed by Alves and Azevedo (2023).

Thus, the environmental dimension of sustainability involves the responsible management of natural resources, the protection of vital ecosystem functions, and the implementation of sustainable practices (Sachs, 2015). To ensure effective environmental governance in cities, it is essential to adopt an approach that combines critical analysis and normative guidelines (Alves; Azevedo, 2023). Rito, Martins, and Lamberti (2019) observe that the environmental dimension has come to integrate debates about development, and although there were divergences among representatives of nations, the topic has evolved into discussions on how to achieve sustainable development.

In this context, climate change emerges as one of the most pressing socio-environmental challenges of our time, posing significant threats to global ecosystems, public health, economic growth, and social and cultural systems (Scheraga *et al.*, 2003; Chaikumbung, 2023). Various policies have been implemented globally to mitigate the impacts of climate change and reduce greenhouse gas emissions, aligning with the principles of sustainability. International agreements such as the Paris Agreement and the Sustainable Development Goals (SDGs) play important roles in this approach (Markkanen; Anger-Kraavi, 2019).

In light of the challenges posed by climate change, environmental governance is crucial for formulating effective strategies. Araújo (2021) emphasizes the importance of a proactive and integrated approach to address these challenges, noting that negative impacts, such as disasters caused by extreme events, can often be anticipated and prevented (Jacobi; Sulaiman, 2016). Gordon (2018) highlights that, although the debate on climate change often focuses on interactions between countries, cities are playing an increasingly relevant role in the global governance of these changes. However, the understanding of what constitutes effective urban climate governance is still insufficient, and many cities have yet to implement the necessary actions (Van Der Heijden, 2019).

Puertas and Marti (2021) investigated the relationship between countries' performance in addressing climate change and their actions and results. The study showed that concern for mitigating climate change is not necessarily associated with the economic level of countries and that there is no uniform pattern among nearby regions. Furthermore, countries with fewer resources often demonstrate greater proactivity compared to those that are still predominantly focused on production, often disregarding the use of clean and efficient energies, which could, in fact, increase their economic profits. However, it is important to note that the data indicate a connection between climate policies, the adoption of renewable energies, and the reduction of polluting emissions.

Therefore, adapting to the adverse impacts of climate change is urgent and requires significant public sector action to promote local adjustment strategies. This necessitates a proactive and collaborative approach based on environmental

governance aimed at mitigating disaster risks and promoting social equity (Jacobi; Sulaiman, 2016; Gordon, 2018; Patterson; Huitema, 2019). From this perspective, Chaikumbung (2023) explores how institutions and cultures influence the availability of resources to address climate change, revealing that countries with lower corruption tend to provide greater support for policies aimed at mitigating these changes.

In this sense, institutional quality plays an important role in the effectiveness of climate policy implementation. Chaikumbung (2023) points out that strong institutions promote trust and collaboration, while weakened institutions affected by corruption undermine trust and the willingness to contribute to the common good (Ostrom, 2000; Hassan *et al.*, 2020). In line with this, Chaikumbung *et al.* (2019) emphasize that democratic governance facilitates access to data and information on climate change.

As a result, establishing effective environmental governance in a capitalist context requires consideration of changes in economic, legal, social, and political interests, as well as the involvement of various societal actors. Furthermore, it is essential that the regulatory framework of environmental policies be more flexible, dynamic, and transparent (Brito; Martins; Lamberti, 2019). Historically, governance was linked to the role of the state and its decision-making processes, but since the last decades of the 20th century, there has been a growing recognition of the need to involve different actors in the formulation and implementation of environmental policies (Jacobi; Sinisgalli, 2012). New governance arrangements, with the participation of multiple social actors, have been developed to address socio-environmental challenges (Castro; Fudemma, 2015; Adams *et al.*, 2020).

Araújo (2021) reinforces that effective environmental governance should prioritize the participation of social actors, as society is directly impacted by socio-environmental problems and has a vital interest in resolving these issues. Society also provides valuable information and facilitates mutual learning on how to address these challenges (Jacobi; Sinisgalli, 2012). Thus, environmental governance transcends the traditional boundaries of government and includes the active participation of local communities, NGOs, the private sector, and academia. Puertas and Marti (2021) argue that collaboration between the private sector and public institutions is fundamental for diagnosing challenges, setting goals, and strengthening collective capacity to respond to complex environmental issues, such as climate change and ecosystem degradation.

In this context, the Quadruple Helix stands out as an innovative model of collaborative governance that integrates society, government, businesses, and universities to promote a coordinated and effective approach (Gabbi *et al.*, 2022). This model aims to redefine governance strategies and stimulate joint efforts to address environmental challenges. It is essential to note that, as the fourth helix of the model, civil society plays essential roles in global environmental governance. Gemmill and Bamidele-Izu (2005) identified five main roles of civil society: 1) gathering and disseminating information; 2) providing data for agenda and policy formulation; 3) carrying out operational tasks; 4) examining environmental conditions and overseeing agreements; and 5) advocating for environmental justice.

Finally, Puertas and Marti (2021) highlight the need for active government policies that invest in projects against global warming and promote renewable

technologies. Despite the growing recognition of the importance of social and civil participation, practice often does not match intentions. The gap between theory and practice in the Brazilian environmental issue underscores the environmental unsustainability faced by the country, even with robust legislation (Vargas, 2021). It is crucial to invest in the development of medium- to long-term plans, with clear goals and identified priority areas, to engage society in meeting these targets (Vargas, 2021).

3 Methodology

Regarding the objective of this study, the research is classified as descriptive. According to Gil (2009), descriptive research aims to detail the particularities of individuals or events, where variables may be correlated. Furthermore, the use of methods that follow a standard data collection pattern is its main characteristic.

The research plays a fundamental role in analyzing the objective, which is to examine the role of civil society in Rio Grande do Sul in confronting environmental disasters in the local reality, through the choice of regional budget priorities. To understand the evolution of the demands of civil society in Rio Grande do Sul, it was opted to verify this through the process of Popular Consultation. When addressing this specific topic, it can be affirmed that this is a theme that permeates a characteristic structure of the State of Rio Grande do Sul, which are the Regional Development Councils (Coredes), which gained greater relevance from 1998 when they became part of the participatory budgeting process, reformulated in 2003, becoming the Popular Consultation (RS Gov, 2019; FEE, 2019; Goulart, 2021).

Thus, the Coredes, which emerge as a regionalized development structure in the State of Rio Grande do Sul, receive funds for the dissemination and execution of the Popular Consultation process, where citizens have the opportunity to vote on projects of interest to their region. It is in the Popular Consultation that the Corede demonstrates its strength, as those who gather the most votes for their projects attract more resources to their regions. Through the enactment of Law No. 11,179, the process of Popular Consultation was established, allowing the population to directly define part of the investments and services that will be in the State's budget (RS Gov, 2021).

In the unfolding of the evolution of regional development paradigms, the quadruple helix approach becomes visible and central, as evidenced in Figure 1, which illustrates the dynamic interconnection between governmental, academic, business, and civil society sectors.

Moreover, Oliveira (2021) emphasizes that regional development is not limited to the modernization of productive structures in peripheral regions, but also involves strengthening local communities through values and resources that enable them to act entrepreneurially and collaboratively to promote their own development. Therefore, this highlights the importance of human, social, and cultural capital in regional development strategies.

Figure 1 - Quadruple Helix of Regional Development



Source: Adapted from Patias and Baggio (2022).

Thus, this work emphasizes the roles of the civil society and government helices by evaluating the participation and choice of budgetary priorities for Rio Grande do Sul during the Popular Consultation processes from 2018 to 2023. This period was chosen because it contains the most recent and analyzable data available through the consultation in the database of the state government. More emphasis will be placed on civil society as it is responsible for participation, voting, and choosing the articulated demands with the government secretariats of Rio Grande do Sul.

Regarding the research approach, it is classified as both qualitative and quantitative. In this perspective, Marconi and Lakatos (2022) affirm that qualitative research requires defining objectives, selecting information, and conducting the investigation, followed by the construction of hypotheses to explain the identified problem if necessary, in addition to defining the field and all necessary aspects for data collection.

In this sense, in the first stage of the research, a literature review was conducted, while in the second stage, secondary data on the Popular Consultation from 2018 to 2023 was collected. This data was extracted from the databases available in the reports of the Memory of the Popular Consultation, accessible on the website of the Secretary of Planning, Governance, and Management of Rio Grande do Sul.

After data collection, data analysis began using a quantitative approach due to its pragmatic and grounded characteristics, determining verifications and evaluations of the reality of events, proceeding from clear and determined parameters (Pereira; Miclos, 2013). It is noteworthy that during the quantitative phase, the descriptive analysis method was used for data interpretation. It is worth mentioning that quantitative data are classified as a way to measure or quantify, where the results are used to represent the characteristics of a specific study, determining the assignment of variables and their association, thus establishing

assumptions to be verified throughout the investigation of the information (Hair Jr *et al.*, 2005; Gabriel, 2014).

4 Analysis and Discussion of Results

4.1 Participation of civil society in participatory budgeting

Civil society participation is fundamental in decision-making processes regarding the implementation of policies aimed at regional, local, or territorial development. Those who live in the local reality can more accurately identify the real needs that will make a significant difference for the region, promoting improvements not only in financial aspects but also in the quality of life of the population (Allebrandt; Ribas; Krüger, 2019). Regarding participation and monitoring by citizens, it can be stated through Table 1 that there is no participatory culture.

Table 1 – Votes in the Popular Consultation compared to the total electoral college of RS

Parameter/Year	2018/2019	2020	2021	2022	2023
Votes from the Popular Consultation	198.257	122.249	186.023	94.604	147.784
Electoral College of RS	8.354.732	8.423.308	8.423.308	8.593.469	8.593.469
Percentage of Participation	2,37%	1,45%	2,21%	1,10%	1,72%

Source: Prepared based on Popular Consultation (2024) and FEE (2024).

It is noted, therefore, that the average participation of the population of Rio Grande do Sul in the Popular Consultation between 2018 and 2023 was 1.77%, reaching levels below 3% in all the years analyzed. This demonstrates that most people do not seek information and do not participate at any level of understanding of the subject, resulting in a disconnect in monitoring issues pertinent to society and public policies.

Although the Coredes represent regional development throughout the year, it is during the Popular Consultation that they gain greater prominence, even receiving state government funding specifically allocated to this process. In 1998, with the enactment of Law No. 11.179, the State of Rio Grande do Sul instituted the Popular Consultation process, allowing the population to directly define part of the investments and services that will be included in the state budget (RS GOV, 2021).

The consultation process begins when the state government defines the amount of resources allocated to the process, the distribution criteria, and then prepares the guideline book for conducting the consultation. Generally, the amount allocated is in the tens of millions of reais. The Coredes then hold public assemblies to discuss regionally relevant projects, creating a list of investments. Subsequently, in the form of a ballot, the projects are submitted to the voting of the people of Rio Grande do Sul. With the investments elected in each region, the State of Rio Grande do Sul allocates them in the budget for the next financial year, and the following year, the budget is executed, and resources are allocated for the implementation of the elected investments, which are then transferred to the responsible municipalities that must later report back to the State (Carvalho, 2021; RS Gov, 2021).

Thus, despite the efforts of the structure and the governmental helix to create a participatory process, society is little engaged with the demands that are made for itself. Therefore, based on this parameter, it is possible to assert, based on numerical values, that part of the responsibility for the situation in the State of Rio Grande do Sul is founded on the disinterest of civil society in engaging with the process of social participation.

However, part of the low participation can be attributed to the governmental helix itself. There is a perception of a reduction in the number of voters over the years in the Popular Consultation, which may be related to the demotivation of the population when observing the State facing difficulties in fulfilling its financial obligations, even in other demands. Moreover, in predominantly rural areas, the shift to 100% virtual voting due to the pandemic hindered many citizens accustomed to voting in person, often even using paper ballots (Lisbinski; Bender Filho, 2021).

In agreement with these parameters, it is possible to infer that this situation of low participation of society in defining its own demands is not something exclusive to the State of Rio Grande do Sul. This is because Ribas *et al.* (2021) conclude that participation and citizenship are continuous processes, in which spaces must be conquered and expanded by the population, which, for a long time, has not had this habit due to the political model in place for decades in Brazil, which prioritizes centralism.

4.2 Definition of priority demands

In addition to the participation, which was found to be low over the years, it is pertinent to highlight the need to verify how the prioritization of resources was aligned with the demands chosen by society. In this perspective, Table 2 presents the allocation of resources made available for the 2023 Popular Consultation, which was the only one to provide data structured by department for public consultation.

When observing the demands of the people of Rio Grande do Sul for the year 2023, it is noted that the priority resources were allocated to the Secretary of Agriculture, Livestock, Sustainable Production, and Irrigation (SEAPI) with 20.89%, the Secretary of Rural Development (SRD) with 17.79%, and the Secretary of Social Development (SEDES) with 14.31%. Despite having the term "sustainable production" in their names, the focus of the actions of SEAPI and SRD is on production aspects, with the development of product commerce, acquisition of inputs and equipment, and the movement of the production chain, all under a productivist logic.

Table 2 - Financial resources and percentage representation transferred to the Secretariats of the State of Rio Grande do Sul according to the Popular Consultation for 2023

Organ	Recurso	Percentual
Secretariat of Agriculture, Livestock, Sustainable Production and Irrigation – SEAPI	R\$12.347.223	20,89%
Rural Development Secretariat – SDR	R\$10.518.391	17,79%

Social Development Secretariat – SEDES	R\$8.457.286	14,31%
Department of Tourism – SETUR	R\$8.360.199	14,14%
Secretariat of Justice, Citizenship and Human Rights – SJCDH	R\$4.175.571	7,06%
Department of Labor and Professional Development – STDP	R\$3.598.185	6,09%
Secretariat for Innovation, Science and Technology – SICT	R\$2.270.714	3,84%
Department of Sport and Leisure – SEL	R\$2.050.286	3,47%
Department of Housing and Land Regularization – SEHAB	R\$1.834.286	3,10%
Department of Culture – SEDAC	R\$1.720.714	2,91%
Secretariat for the Environment and Infrastructure – SEMA	R\$1.382.857	2,34%
Secretariat for Urban and Metropolitan Development - SEDUR	R\$1.021.429	1,73%
Logistics and Transportation Secretariat – SELT	R\$942.857	1,59%
Secretariat for Economic Development – SEDEC	R\$440.000	0,74%
TOTAL	R\$59.119.998	100,00%

Source: Based on Popular Consultation (2024).

This often leads to impacts on soil environmental degradation. The excessive use of natural resources results in the destruction of ecosystems, bringing several problems related to climate change. The impacts of these changes are often uncertain and present a high degree of complexity, as it is necessary to analyze a series of elements that have impacts at both global and regional levels (Ren; He; Huang, 2023).

In this regard, it is evident to highlight that the most involved state secretariat in the post-flood situation, namely, the Secretariat of Environment and Infrastructure (SEMA), with 2.34%, was only the eleventh in the ranking of resources. This reflects much of the role of civil society in not prioritizing fundamental aspects, such as environmental issues in this case. It is emphasized that citizen participation in the public aspect is essential to analyze and supervise what is being done, the public policies adopted, observing the characteristics that compose them, where individuals tend to prioritize practices that should consider the collective interest from various perspectives (Allebrandt *et al.*, 2018; Keunecke; Teles; Melo, 2020; Hassan *et al.*, 2020).

Thus, it is possible to conjecture that, within the quadruple helix of development, all actors ceased to be active, leading the State of Rio Grande do Sul to the state of calamity it currently finds itself in. From the perspective of this study, the results demonstrated that when given the opportunity to participate and allocate resources for priority actions, the population of Rio Grande do Sul not only did not effectively participate in the process but also prioritized demands that leaned much more towards a logic of exploitation than preservation of natural resources.

5 Final considerations

In recent years, Rio Grande do Sul has faced a series of environmental challenges that highlight the region's increasing vulnerability to climate change. Extreme climatic disasters, such as those that occurred in May 2024, underscore the urgent need for an integrated and effective approach to environmental governance. In this context, it becomes essential to analyze the participation of civil society in the formulation of policies and the definition of budget priorities, in order to understand how decisions are made and identify possible failures in responding to environmental crises.

In light of this, this study aimed to analyze the role of civil society in Rio Grande do Sul in addressing environmental catastrophes through the selection of regional budget priorities. The analysis of the collected data allowed for the assessment of the effectiveness of citizen participation in the Consulta Popular process between 2018 and 2023, revealing a concerning situation with an average engagement rate of only 1.77%. This low level of participation indicates a significant lack of interest and involvement in decisions that directly affect regional development and local quality of life. Moreover, it reflects a serious failure to mobilize society to influence political decisions and resource allocation, impacting important aspects such as sustainable development and effective responses to environmental challenges.

The results confirm the discrepancy between theory and practice regarding environmental issues. The Consulta Popular process, which should allow the population to directly influence state investments and services, has proven ineffective. This disinterest can be attributed to factors such as demotivation caused by the state's financial difficulties and changes in the voting process, which particularly affected rural areas.

Additionally, the analysis of resource allocation for 2023 reveals a clear priority for productive sectors such as Agriculture, Livestock, and Rural Development, highlighting an approach that may contribute to environmental degradation. In contrast, the Secretariat of Environment and Infrastructure, essential for managing environmental issues and natural disasters, received a very small fraction of the available resources. This imbalance highlights a concerning neglect of environmental aspects, which are fundamental for long-term sustainability and resilience in the face of climate change.

On the other hand, the low participation of civil society in Rio Grande do Sul reflects a broader pattern of limited civic engagement. The quadruple helix development approach, which includes government, civil society, academia, and the private sector, underscores the importance of collaboration among these actors to tackle complex challenges like climate change. The lack of citizen mobilization and

difficulties in implementing environmental policies by the government highlight the need for a thorough review of participatory processes and resource allocation strategies.

In this sense, the literature indicates that to formulate effective climate policies, it is essential to understand how institutions and cultures influence decisions. Improving the quality of institutions and combating corruption are fundamental measures to build public trust and promote cooperation in mitigation and adaptation actions. Policies that encourage pro-environmental behaviors and support adaptation programs tend to be more accepted than those that impose penalties.

Therefore, to adequately address the challenges posed by environmental catastrophes and promote effective environmental governance, it is imperative to transform how citizen participation is encouraged and valued. Only with active and informed engagement from society will it be possible to develop sustainable and resilient solutions, ensuring a safer and more sustainable future for Rio Grande do Sul.

Finally, among the limitations of the study, it is noteworthy that data collection was restricted to secondary information obtained exclusively from the website of the Secretary of Planning, Governance, and Management of Rio Grande do Sul, as well as the use of descriptive analysis methods. For future studies, it is recommended to include data from other governmental sources and conduct interviews with key agents of the quadruple helix in the state. This will allow for the application of more robust statistical analyses and the cross-referencing of additional variables. Replicating the study in other states could also enrich discussions on promoting effective environmental governance in the national context.

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