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Gestão de abrigos temporários no Brasil: desafios e recomendações do planejamento à desativação

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Gestão de abrigos temporários no Brasil: desafios e recomendações do planejamento à desativação

RESUMO

Objetivo - Este artigo analisa os desafios enfrentados na gestão de abrigos temporários no Brasil, com foco nas crises humanitárias de Roraima (fluxo migratório venezuelano, 2018–2023) e do Rio Grande do Sul (enchentes, 2024).

Metodologia - A pesquisa adota uma abordagem qualitativa e comparativa, com base na análise documental de relatórios oficiais, plataformas de dados abertos e literatura científica sobre gestão de desastres e resposta humanitária.

Originalidade/relevância - O estudo preenche uma lacuna na literatura ao sistematizar criticamente os entraves estruturais e operacionais da gestão de abrigos temporários em contextos distintos, mas recorrentes no cenário brasileiro.

Resultados - Foram identificadas falhas recorrentes nas quatro etapas do ciclo de gestão (planejamento, ativação, operacionalização e desativação), agravadas pela ausência de diretrizes nacionais padronizadas, falta de articulação interinstitucional e escassez de dados locais.

Contribuições teóricas/metodológicas - O artigo propõe um modelo integrado de gestão com protocolos setorizados, banco nacional de locais aptos, planos de comunicação interagências e profissionalização da defesa civil municipal e estadual com base em padrões internacionais como o Manual Esfera.

Contribuições sociais e ambientais - Ao indicar caminhos para fortalecer a resiliência territorial e garantir abrigos mais dignos e eficientes, a pesquisa contribui para a construção de políticas públicas mais equitativas, seguras e sustentáveis no enfrentamento a desastres no Brasil.

PALAVRAS-CHAVE: Abrigos temporários. Gestão de desastres. Planejamento preventivo.

Management of Temporary Shelters in Brazil: Challenges and Recommendations from Planning to Deactivation

ABSTRACT

Objective – This paper analyzes the challenges faced in the management of temporary shelters in Brazil, focusing on the humanitarian crises in Roraima (Venezuelan migration flow, 2018–2023) and Rio Grande do Sul (floods, 2024).

Methodology – The study adopts a qualitative and comparative approach, based on documentary analysis of official reports, open data platforms, and scientific literature on disaster management and humanitarian response.

Originality/Relevance – The research fills a gap in the literature by critically systematizing the structural and operational obstacles in the management of temporary shelters in distinct but recurring Brazilian contexts.

Results – Recurring failures were identified in the four stages of the shelter management cycle (planning, activation, operationalization, and deactivation), worsened by the absence of standardized national guidelines, lack of interinstitutional coordination, and scarcity of local data.

Theoretical/Methodological Contributions – The article proposes an integrated management model with sectoral protocols, a national database of suitable shelter locations, interagency communication plans, and the professionalization of municipal and state civil defense, based on international standards such as the Sphere Handbook.

Social and Environmental Contributions – By outlining paths to strengthen territorial resilience and ensure more dignified and effective shelters, the study contributes to the development of more equitable, safe, and sustainable public policies for disaster response in Brazil.

KEYWORDS: Temporary shelters. Disaster management. Preventive planning.

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Gestión de albergues temporales en Brasil: desafíos y recomendaciones desde la planificación hasta la desactivación

RESUMEN

Objetivo – Este artículo analiza los desafíos en la gestión de albergues temporales en Brasil, centrándose en las crisis humanitarias de Roraima (flujo migratorio venezolano, 2018–2023) y del estado de Rio Grande do Sul (inundaciones, 2024).

Metodología – La investigación adopta un enfoque cualitativo y comparativo, basado en el análisis documental de informes oficiales, plataformas de datos abiertos y literatura científica sobre gestión de desastres y respuesta humanitaria.

Originalidad/Relevancia – El estudio llena un vacío en la literatura al sistematizar críticamente los obstáculos estructurales y operativos en la gestión de albergues temporales en contextos brasileños distintos pero recurrentes.

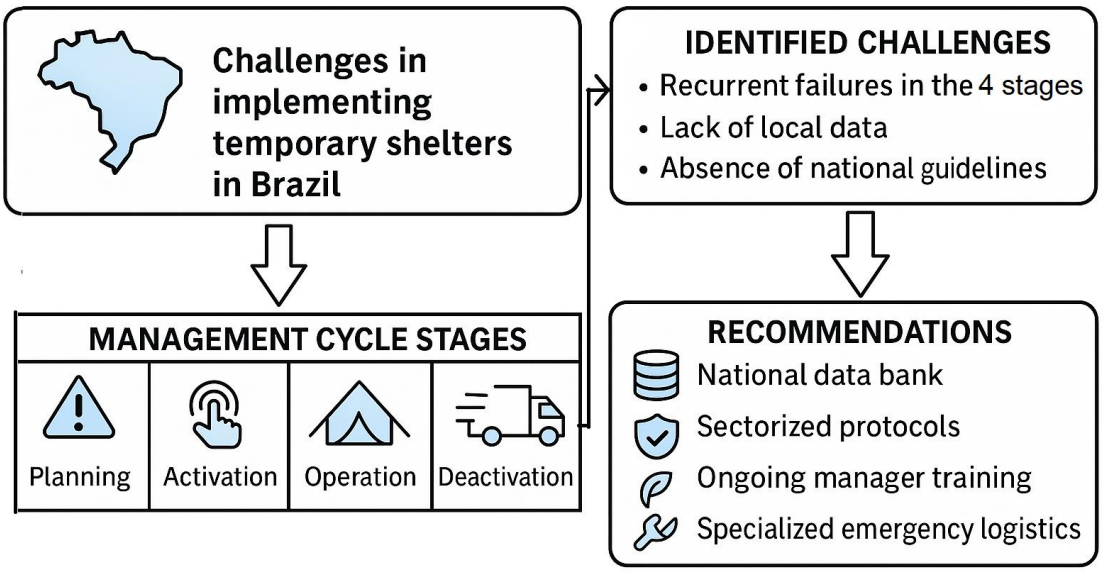
Resultados – Se identificaron fallos recurrentes en las cuatro etapas del ciclo de gestión (planificación, activación, operación y desactivación), agravados por la ausencia de directrices nacionales estandarizadas, la falta de coordinación interinstitucional y la escasez de datos locales.

Contribuciones Teóricas/Metodológicas – El artículo propone un modelo de gestión integrado con protocolos sectoriales, base de datos nacional de lugares adecuados, planes de comunicación interinstitucional y profesionalización de la defensa civil municipal y estatal, alineado con estándares internacionales como el Manual Esfera.

Contribuciones Sociales y Ambientales – Al proponer caminos para fortalecer la resiliencia territorial y garantizar albergues más dignos y eficaces, el estudio contribuye al desarrollo de políticas públicas más equitativas, seguras y sostenibles para la respuesta a desastres en Brasil.

PALABRAS CLAVE: Albergues temporales. Gestión de desastres. Planificación preventiva.

RESUMO GRÁFICO



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1 INTRODUCTION

Temporary shelters play a crucial role in protecting vulnerable populations in the aftermath of disasters of natural or technological origin, as well as in migration crises. They represent the frontline of humanitarian response, providing basic safety, medical assistance, and minimum conditions of dignity (Sphere Association, 2018). Yet, their effective implementation requires a well-structured cycle encompassing the phases of prevention, preparedness, activation, and deactivation—stages that are often marked by systemic shortcomings.

In Brazil, two recent scenarios illustrate these challenges: the Venezuelan migration crisis, which overwhelmed hosting capacity in border states such as Roraima (Carbonari et al., 2024), and the catastrophic floods in Rio Grande do Sul in 2024, which left more than 500,000 people homeless and exposed severe deficiencies in shelter logistics (Simas et al., 2024). Both cases highlight the urgency of improving planning and operational strategies for shelters, particularly in a context of intensifying extreme climate events and forced migratory flows (Makadi et al., 2025).

Several structural problems are evident, with fragmented public policies and recurring failures throughout the shelter cycle. In the prevention stage, risk mapping and pre-installed structures are lacking; during preparedness, there are insufficient specialized human resources; at the activation stage, delays and the absence of clear criteria for site selection are common, often resulting in inadequate facilities being repurposed as shelters, compounded by weak interinstitutional coordination and staffing shortages; and finally, in deactivation, the absence of transition plans prolongs dependence on shelters, escalating both social and financial costs. These gaps lead to delayed responses, precarious living conditions, and ultimately violations of fundamental human rights (UN, 2023).

Recent studies led by the University of São Paulo (USP) through the Urban Adaptation Index (UAI)—which identifies municipalities facing greater difficulty adapting to climate change—show that 54.1% of Brazilian municipalities fall within the two lowest tiers of the index, scoring below 0.44. The problem is more acute in smaller towns with populations of up to 50,000, which achieve scores between 0.33 and 0.44. Moreover, only 36.9% of municipalities have housing plans, 13% possess risk reduction plans, and just 5.5% have geotechnical maps—critical instruments for guiding public policies on climate adaptation and safe land use. These data shed light on why the implementation of temporary shelters in Brazil continues to face persistent structural and operational challenges (USP, 2025).

Against this backdrop, the rationale for this study lies in the urgent need for clear protocols and coordinated actions to mitigate both human impacts—such as exposure to disease and violence in overcrowded, often improvised shelters—and the financial costs of inefficient management (Middelanis et al., 2025). By systematizing lessons learned and providing evidence-based recommendations, this work seeks to strengthen public policies that are more resilient and effective in safeguarding vulnerable populations.

This study aligns with the Sustainable Development Goals (SDGs), contributing to social protection (SDG 1), public health (SDG 3), inclusion (SDG 10), resilience and disaster risk reduction (SDGs 11 and 13), governance (SDG 16), and international cooperation (SDG 17). By proposing improvements in the management of temporary shelters as a mechanism to reduce

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vulnerabilities and promote human rights, it adopts a multidisciplinary perspective consistent with the 2030 Agenda (Brazil, 2025).

2 OBJECTIVES

This paper pursues three main objectives: (1) to map the critical stages in the implementation of temporary shelters in Brazil, from planning to deactivation; (2) to identify the main operational and structural bottlenecks, drawing on evidence from the Venezuelan migration crisis and the Rio Grande do Sul floods; and (3) to propose practical solutions aligned with international humanitarian assistance standards while being adapted to the specificities of the Brazilian context.

3 THEORETICAL FRAMEWORK

The management of temporary shelters in disaster contexts constitutes an interdisciplinary field that requires a solid theoretical foundation, encompassing conceptual, normative, and operational dimensions. This framework is structured into three parts: (1) the conceptualization of temporary shelter as a distinct phase within the disaster response continuum; (2) the national and international regulatory frameworks that establish technical standards and safeguard human rights; and (3) the stages of the shelter management cycle, which guide practical action from planning through deactivation.

3.1 Temporary Shelter

Several authors distinguish between the terms *shelter* and *housing* in crisis situations. While *shelter* refers to a place of immediate refuge following an emergency and during the disruptive event, *housing* implies the resumption of domestic responsibilities and daily routines. Based on this distinction, four phases can be identified: emergency shelter, temporary shelter, temporary housing, and permanent housing. The boundaries between these phases are often blurred, and their duration depends on overlaps among two or more stages. They do not always evolve linearly but rather constitute a dynamic social process (Félix et al., 2015; Félix; Branco; Feio, 2013; Quarantelli, 1995). The involvement of local actors across all phases is crucial to avoiding unsustainable or unintended outcomes (Davidson et al., 2007).

The focus of this study is on the temporary shelter phase, in which facilities are provided for short- to medium-term stays, ideally lasting no more than a few weeks or months. In practice, however, this stage often extends beyond the immediate emergency period, demanding more comprehensive planning, infrastructure, and services (Quarantelli, 1995).

Temporary shelter is defined by UNHCR (2025) as a provisional structure designed to offer immediate protection to populations displaced by natural or technological disasters, conflicts, or other humanitarian crises, while ensuring a safe and healthy environment that guarantees privacy, dignity, and emotional support. Habitability should therefore be a central criterion from the outset of planning, incorporating considerations of thermal comfort, privacy, and accessibility (Choi; Kim; Kim, 2019).

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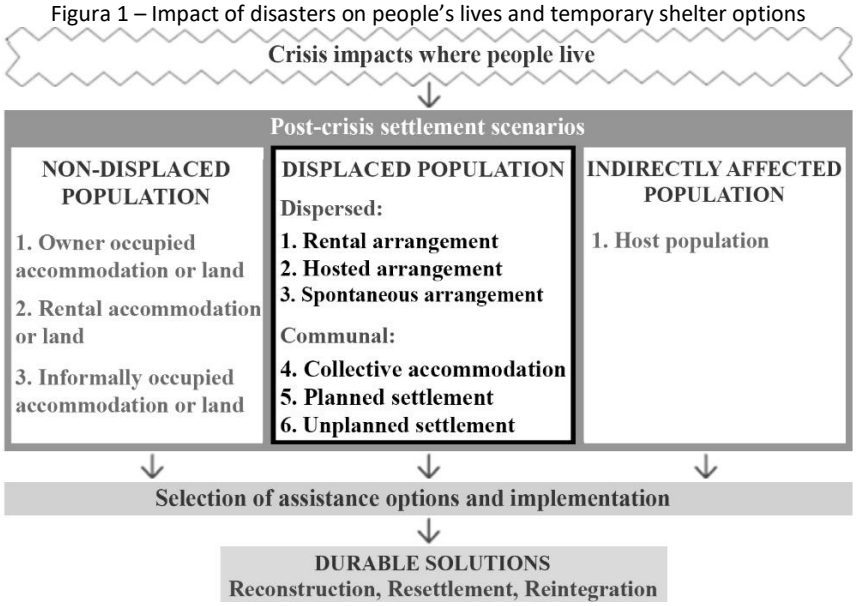
The Sphere Association (2018) categorizes temporary shelter solutions into six types (Figure 1), grouped as follows: dispersed solutions (rental arrangements, hosted arrangements, and spontaneous arrangements); and communal solutions (collective accommodation, planned settlements, and unplanned settlements).

Figura 1 – Impact of disasters on people's lives and temporary shelter options



Fonte: Adapted from Sphere Association (2018).

3.2 Regulatory Framework

The regulatory basis for temporary shelters in Brazil is provided by Law No. 12.608/2012, which established the National Policy on Civil Protection and Defence (PNPDEC). This legal instrument sets guidelines for shelter management, emphasizing disaster prevention, the preparation of municipal and state contingency plans, and interinstitutional coordination through the National Civil Protection and Defence System (SINPDEC). Article 8, section VIII, assigns municipalities the responsibility of organizing and managing provisional shelters for populations affected by disasters, ensuring adequate hygiene and safety conditions. This includes mapping risk areas and designating suitable shelter sites, with technical and financial support from higher levels of government (Brazil, 2012).

Complementing this, international standards provide technical guidance for operationalization. The Sphere Handbook (Sphere Association, 2018), a global reference for humanitarian action, establishes minimum standards for temporary shelters, including metrics for living space, sanitation, and access to potable water. In contexts of human mobility, the United Nations High Commissioner for Refugees (UNHCR) provides additional protocols addressing issues such as gender-based violence prevention, the guarantee of documentation, and mechanisms for the social integration of refugee populations.

Applying these frameworks, however, faces challenges related to the heterogeneity of municipal capacities and the complexity of disaster scenarios. The convergence of national and international norms remains an area of ongoing development, particularly with regard to

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harmonizing sectoral protocols and adapting global standards to local realities.

3.3 Stages of the Shelter Management Cycle

The efficient management of temporary shelters requires a cycle structured into four stages (Sphere Association, 2018; Brazil, 2024):

- Pre-disaster planning:

A proactive phase of prevention, preparedness, and planning during periods of normalcy. It involves risk mapping based on scientific data, master plans, and municipal disaster risk reduction plans, to identify vulnerable areas and preselect sites suitable for shelter use. Priority should be given to safety, accessibility, and basic infrastructure, aiming to minimize improvisation during emergencies.

The predefinition of potential shelter sites is a critical step in planning and can be enhanced through multicriteria models that account for safety, accessibility, and infrastructure, such as the one proposed by Nappi et al. (2019). Furthermore, this site selection process can be guided by shelter-specific frameworks such as that developed by Anjomshoa and Heravi (2025), which emphasizes the integration of natural hazards and available infrastructure.

- Activation:

The immediate disaster response phase, involving the rapid setup and mobilization of shelter facilities. This stage is characterized by swift deployment of teams, resources, and partnerships (e.g., Civil Defense agencies, NGOs), as well as the establishment of occupancy criteria prioritizing vulnerable groups (children, the elderly, and persons with disabilities), in accordance with humanitarian guidelines.

- Operationalization:

The stage in which shelters are fully functioning. It requires the provision of adequate infrastructure and essential services (sanitation, energy, family privacy, health care, food, psychosocial support, among others), as well as efficient coordination through multisectoral management committees involving government, civil society, and affected populations.

- Deactivation:

The orderly closure and transition phase. It includes resettlement in permanent housing or the repair of damaged dwellings, alongside post-crisis evaluations to record lessons learned and improve future protocols, thus completing the learning cycle.

These interconnected stages underscore the importance of continuous planning, preallocated resources, and institutional coordination to overcome the persistent challenges of shelter management in Brazil.

4 TEMPORARY SHELTERS IN RORAIMA AND RIO GRANDE DO SUL

During the peak of the Venezuelan migration crisis in 2018, the capital of the state of Roraima, Boa Vista, established a network of temporary shelters, primarily concentrated in the city's urban area. These facilities hosted around 5,000 refugees with diverse profiles: Waráo and

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Eñepa Indigenous peoples, families with children, vulnerable groups, as well as single adults and LGBTQI+ populations (Carbonari et al., 2024).

The infrastructure combined temporary shelter solutions in collective accommodations—such as adapted sports gyms, as in the case of the Pintolândia shelter (Fig. 2)—and in planned camps, set up in open areas with UNHCR tents or *Better Shelter* structures, as in the Rondon 1 shelter (Fig. 3). Overcrowding was a critical challenge: the Nova Canaã shelter, designed for 390 people, was hosting 444 individuals in August 2018, leading to improvised accommodations and overburdened services. Management involved multiple actors, including the Armed Forces (security and logistics), UNHCR (technical coordination), and NGOs (operations). Basic infrastructure included administrative areas in containers, health posts, and community spaces. However, significant gaps remained in universal accessibility, psychosocial support, and sanitation maintenance (REACH; UNHCR, 2018; Carbonari et al., 2024).

Figura 2 – Temporary shelter in collective accommodation – Pintolândia, Boa Vista – RR

Fonte: Authors (2018).

Figura 3 – Temporary shelter in planned camp – Rondon 1, Boa Vista – RR

Fonte: Authors (2018).

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During the floods that devastated the state of Rio Grande do Sul between April and May 2024, an emergency network of large-scale temporary shelters was mobilized. According to the State Civil Defence bulletin, on June 3, 2024, approximately 30,442 people were homeless, and 478 municipalities were officially recognized as affected by the catastrophe, impacting more than 2.39 million people overall (Rio Grande do Sul, 2024a).

A state government report dated June 4, 2024, indicated that approximately 35,103 individuals were being sheltered, amidst efforts coordinated by municipalities, Civil Defence agencies, and humanitarian organizations (Rio Grande do Sul, 2024b). Official records further show that more than 700 sites were adapted to serve as temporary shelters, including schools, gyms, community centres, and religious spaces (Fig. 4), organized to meet the diverse profiles and vulnerabilities of the affected population (*Agência Brasil*, 2024). These facilities were located outside flood-prone areas and ensured access to basic infrastructure. In some cases, planned camps were established with the support of the Armed Forces in elevated areas of the capital and neighbouring municipalities (Fig. 5).

Figura 4 – Temporary shelter in collective accommodation in Rio Grande do Sul

Fonte: *Agência Brasil* (2024).

Figura 5 – Humanitarian Reception Center (CHA) in Canoas, RS

Fonte: *Brasil de Fato* (2024).

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Even under adverse conditions, the response efforts sought to follow minimum humanitarian principles, such as those outlined in the Sphere Handbook (Sphere Association, 2018), aiming to guarantee safety, dignity, and access to essential services.

5 METHODOLOGY

This study adopts a qualitative approach based on a multiple comparative case study design (Yin, 2015), suitable for an in-depth analysis of the challenges involved in implementing temporary shelters across different crisis contexts. Two representative cases were selected: (1) a natural disaster—the floods in Rio Grande do Sul (2024); and (2) a protracted migration crisis—the influx of Venezuelan refugees in Roraima (2018–2023).

The selection was guided by three criteria:

- Representativeness: both cases involved large-scale population displacement with significant demands for temporary shelter;

- Contrast: the first reflects management during sudden climate-related disasters, while the second illustrates persistent migration crises;

- Data availability: broad documentation, including official reports, public data platforms, and consolidated media coverage.

5.1 Units of Analysis

The cases were examined according to the four stages of the temporary shelter management cycle:

a) **Pre-disaster planning**: risk mapping and pre-selection of suitable sites;

b) **Activation**: shelter installation and definition of occupancy criteria;

c) **Operationalization**: provision of infrastructure, essential services, and coordination mechanisms;

d) **Deactivation**: transition to permanent housing and post-crisis evaluation.

5.2 Analytical Criteria

Each unit of analysis was assessed using the following criteria:

a) **Efficiency of the management cycle**: time elapsed between the event and shelter activation, and compliance with international standards (e.g., *Sphere Handbook*);

b) **Governance**: coordination among federal, state, and municipal governments, as well as participation of civil society and affected populations in decision-making;

c) **Human and financial impact**: number of people assisted relative to conditions provided, and comparative operational costs;

d) **Lessons learned**: identification of successful practices and critical shortcomings.

These analytical criteria were applied across all four stages of the shelter management cycle, enabling the identification of convergences and divergences between the Roraima and Rio Grande do Sul cases.

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5.3 Procedures for Data Collection, Analysis, and Synthesis

a) **Document review**: collection of reports and regulations published between 2018 and 2025 by governmental bodies, international organizations, and humanitarian entities, selected based on relevance, reliability, and completeness. Documents with significant informational gaps or lacking direct relevance to the studied cases were excluded;

b) **Comparative analysis**: cross-application of the analytical criteria to the four management stages, identifying convergences and divergences between cases;

c) **Data triangulation**: cross-checking of information from different sources to strengthen the validity of conclusions;

d) **Systematization of recommendations**: formulation of proposals grounded in the empirical evidence of the cases and international reference guidelines.

By combining multiple case studies, documentary analysis, systematic comparison, and data triangulation, this methodological approach proved effective in addressing the research objectives and in identifying patterns, gaps, and opportunities for improvement in the management of temporary shelters in Brazil.

6 RESULTS

Tables 1 and 2 provide an analytical synthesis of the results across the units and criteria of analysis.

Table 1 – Units of Analysis

Stage	Roraima (2018-2023)	Rio Grande do Sul (2024)
Pre-disaster planning	Site selection: conducted with technical and strategic studies by the Brazilian Army, prioritizing open areas for rapid setup and easy dismantling of structures (Carbonari et al., 2024). Risk mapping: considered social and legal vulnerabilities, excluding regions with histories of sexual exploitation or trafficking (REACH, 2018).	Site selection: Data from the Monitoring Panel (Social RS, 2025) show that 36% of vulnerable municipalities had no contingency plan, leading to improvised shelters in schools and gyms. Risk mapping: 49% of municipalities did not conduct prior surveys of risk areas.
Activation	Setup: Used tents, containers, and modular structures assembled within 72 hours. Occupancy criteria: Access was controlled through identification, with shelters organized for specific profiles (e.g., Waráo, LGBTQI+, elderly, families with children), in line with humanitarian guidelines (Carbonari et al., 2024).	Setup: According to Civil Defense RS (2024), shelters were established within 72 hours, although 17% of municipalities lacked a dedicated civil defense office, causing delays. Occupancy criteria: Initial screening was disorganized, with family separations and no registration system, later corrected.
Operationalization	Infrastructure included containerized toilets, laundry areas, roofing, and communal spaces, though many were underutilized. Health care, food, immunization, and item distribution were provided (REACH, 2018; Carbonari et al., 2024). Management was shared among NGOs, the Army, and UNHCR.	By June 2025, among active shelters, 92% offered health services, 100% food distribution, and 68% were accessible (Social RS, 2025). However, 36% of municipalities lacked basic items such as mattresses and generators. Coordination was strengthened by Army support but limited by shortages of permanent staff.

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Deactivation	The process was slow, with shelters still active in 2024. The Federal Government and UNHCR's Interiorization Program enabled voluntary resettlement (REACH, 2018).	Significant reduction: from 81,285 sheltered individuals (May 2024) to 3,970 (June 2025), according to RS Panel data (Social RS, 2025). However, 12.6% of vulnerable municipalities did not implement structured resettlement measures.

Fonte: Authors (2025).

Table 2 – Analytical Criteria

Criterion	Roraima (2018-2023)	Rio Grande do Sul (2024)
Efficiency of the management cycle	Mobilization delays left many displaced people living in public squares for months (Carbonari et al., 2024). Shelters were overcrowded and failed to meet Sphere standards of 3.5 m² per person (Sphere Association, 2018).	The response was activated within a reasonable timeframe (72h), but disbursement of emergency funds was slow.
Governance	Strong coordination between the Army, UNHCR, and NGOs. Social participation was limited, with exceptions such as the shelter managed by residents at Hélio Campos.	Governance improved with the establishment of the Crisis Management Committee (federal–state–municipal), although civil society involvement remained sporadic.
Human and financial impact	Over 5,000 refugees were hosted, but sanitation, privacy, and accessibility remained limited (REACH, 2018). Operational costs were high, particularly for water consumption and prolonged infrastructure maintenance (Carbonari et al., 2024).	The presence of 24.5% children and adolescents highlighted social vulnerability. Per capita costs reached R$ 14,800, driven by the lack of pre-existing infrastructure (Social RS, 2025).
Lessons learned	Positive outcomes included cultural adaptation (e.g., community kitchens) and training programs. Weaknesses involved insufficient sanitation and infrastructure (e.g., Jardim Floresta shelter) and limited psychosocial support.	Successes included progress with a unified registration system. However, municipalities lacked sufficient funding and infrastructure, as in Maquiné and Arroio Grande. Landslides occurred in unmapped areas.

Fonte: Authors (2025).

The comparison between the two cases shows that, although there were specific advances in the activation and operationalization of shelters, structural shortcomings remain recurrent, revealing a pattern of systemic vulnerability. In both Roraima and Rio Grande do Sul, the absence of consistent pre-disaster planning, inadequate infrastructure, and insufficient resettlement strategies compromised the dignity and safety of affected populations.

The findings presented in Tables 1 and 2 confirm that the management of temporary shelters in Brazil continues to rely on fragmented emergency responses, when it should instead prioritize integrated public policies, standardized national protocols, and more robust governance mechanisms. Thus, despite their distinct origins and dynamics, the two scenarios converge in demonstrating the urgent need for a more preventive, coordinated, and sustainable shelter management model.

7 DISCUSSION: CHALLENGES AND STRATEGIC RECOMMENDATIONS

The comparative analysis of the Roraima and Rio Grande do Sul cases reveals recurring patterns of fragility in the management of temporary shelters, highlighting both structural and

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operational limitations. These findings provide a basis for discussing the main challenges encountered and for outlining strategic recommendations to guide more effective and sustainable public policies in the Brazilian context.

7.1 Key Challenges

a) Insufficient and fragmented planning:

In Roraima, although site selection for shelters was technically informed, the lack of coordination with local communities generated social resistance and hindered implementation. In Rio Grande do Sul, 49% of vulnerable municipalities had not conducted prior risk mapping, and 36% lacked contingency plans, resulting in the improvisation of shelters in unsuitable locations.

In both contexts, the absence of standardized criteria for selecting appropriate shelter sites compromised the effectiveness of local actions. Nappi et al. (2019) emphasize the relevance of multicriteria models for guiding this process, providing greater rationality and accuracy. In this regard, the application of integrated computational models emerges as a promising strategy for optimizing the location and distribution of temporary shelters during large-scale disasters, as demonstrated by Gharib et al. (2022).

The absence of integrated governance amplifies social impacts and delays reparative responses, as evidenced in the Braskem/Maceió case (Fragoso; Gonçalves, 2024). This lack of planning is not isolated: the Urban Adaptation Index (UAI) shows that most Brazilian cities lack even minimal technical and institutional instruments. Findings indicate a structural fragility that undermines municipal capacity to respond to extreme climate disasters, placing most municipalities in a state of chronic vulnerability (USP, 2025).

b) Disorganized activation and weak admission criteria:

In Roraima, shelter installation was delayed, leaving displaced populations in public squares for extended periods. In Rio Grande do Sul, the absence of municipal Civil Defense offices in 17% of affected municipalities compromised the effectiveness of the initial response.

In both cases, admission and screening procedures were deficient, including family separations and the allocation of individuals based on ethnic or social profiles, contrary to the humanitarian principles of the Sphere Handbook (Sphere Association, 2018). Similar situations were documented by Kim, Kim, and Kim (2021) in South Korea, where ineffective screening and the absence of resettlement protocols were identified as recurring obstacles—shortcomings equally evident in the Brazilian experience.

c) Operationalization with inadequate infrastructure and services:

Structural deficiencies — such as inoperative toilets and poorly ventilated accommodations in Roraima, and the absence of mattresses and generators in 36% of municipalities in Rio Grande do Sul — directly compromised shelter residents' dignity. These findings echo Conzatti's (2022) analysis linking shelter design to impacts on health and well-being.

The lack of essential services, such as psychosocial care (Roraima) and medical

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assistance (absent in 32% of shelters in Rio Grande do Sul), further increased vulnerability and limited response effectiveness. Moreover, the operational burden placed on NGOs and the Armed Forces, without adequate institutional coordination, hindered governance and integrated management.

d) Prolonged deactivation and insufficient resettlement:

In Roraima, some shelters remained in operation for more than five years, underscoring the slowness of transitions to permanent housing solutions. In Rio Grande do Sul, although the number of sheltered individuals declined significantly, 12.6% of vulnerable municipalities lacked structured resettlement plans.

The absence of adequate housing alternatives drove up operational costs, which in Rio Grande do Sul reached R$ 1.2 billion—30% higher than in Roraima. As highlighted by Gkoumas et al. (2025), the success of resettlement programs depends on integrated approaches that encompass not only infrastructure provision but also social, community, and long-term sustainability factors. The Brazilian experience indicates that deactivation plans must be developed in tandem with shelter activation. National literature confirms that the absence of clear transition criteria prolongs vulnerabilities and increases costs (Giordani; Pfützenreuter, 2016; Fragoso; Gonçalves, 2024).

7.2 Strategic Recommendations

The recommendations are organized into five interdependent axes:

a) Planning and Preparedness:

- Establish national guidelines for municipal contingency and sheltering plans.
- Develop integrated information, monitoring, and early-warning systems.
- Produce local risk maps with updated geotechnical and socioeconomic data.
- Create a national database of pre-approved shelter sites.
- Apply urban and operational criteria already tested in real shelter deployments for pre-site selection (accessibility, sanitation, screening flows, spatial arrangements), standardizing procedures at the municipal level (Giordani; Pfützenreuter, 2016).
- Implement early-warning systems and intermunicipal mutual aid plans based on advance risk assessments.
- Compile municipal inventories of disaster response resources.
- Train municipal managers and civil protection agents in shelter management.

b) Activation and Initial Response:

- Guarantee the activation of pre-identified shelters within 48 hours (improvement target; currently ~72 hours), as stipulated in contingency plans.
- Establish admission protocols based on vulnerability (children, elderly, persons with disabilities).
- Operationalize emergency operations centers (EOCs) and interagency communication

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plans.

- Provide ongoing training for municipal teams and volunteers in emergency contexts.

c) Operationalization and Maintenance:

- Distribute standardized emergency infrastructure kits (hygiene, energy, water, mattresses, bedding).
- Implement multisectoral protocols with an emphasis on health, nutrition, safety, and well-being.
- Forge partnerships with universities and utilities to provide specialized services.
- Ensure shared governance through crisis committees with representation from affected populations.
- Use digital platforms for dynamic inventories of needs and resources.
- Establish emergency communication plans in coordination with the press.

d) Deactivation and Resettlement:

- Plan shelter deactivation from the outset, with clear timelines.
- Link temporary shelters to permanent housing programs.
- Conduct post-crisis audits to inform future actions with lessons learned.

e) Governance and Financing:

- Consolidate a responsibility matrix across federal, state, and municipal levels.
- Foster community participation in decision-making bodies.
- Establish a rapid-response emergency fund with technical criteria and streamlined execution.

These recommendations aim to break with the reactive logic that has prevailed, establishing a shelter management model that is more preventive, efficient, and aligned with national and international standards. In this sense, the study by Makadi et al. (2025) makes an important contribution by critically reviewing existing models for shelter planning and highlighting gaps in the intersection of logistics, governance, and community participation.

From a practical perspective, implementation requires a situational reading of political feasibility (prioritization, participation, intersectoral agreements) and institutional capacity (teams, budget, data). For municipalities with greater resources, it is recommended to establish an Intersectoral Shelter Committee, integrate a municipal protocol into the contingency plan, and maintain rotating stocks with periodic simulations. For intermediate capacities, priority should be given to selecting 3–5 sites with checklists, standardized admission flows, and cooperation with state or consortium structures for technical support. In low-capacity contexts, municipalities should adopt state/SUAS templates, mobilize regional task forces, and co-produce solutions with universities and NGOs. In all cases, deactivation plans must be established at the time of activation, with benchmarks for T+30, T+90, and T+180; weekly indicators (occupancy, admission time, percentage of services provided, time to housing transition); and public transparency mechanisms. National evidence reinforces the centrality of intersectoral coordination and pre-defined technical criteria for the selection and operation of shelters

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(Fragoso; Gonçalves, 2024; Giordani; Pfützenreuter, 2016).

8 CONCLUSION

The analysis of the Roraima (2018–2023) and Rio Grande do Sul (2024) cases highlights a persistent contradiction in Brazil's management of temporary shelters: while emergency response capacity in the short term—such as assembling structures within 72 hours—is evident, it is not accompanied by robust preventive planning. In both states, the absence of risk mapping and municipal contingency plans undermined the effectiveness of the response and increased social and financial costs, underscoring the urgency of implementing integrated national guidelines, sectoral protocols, and a national database of pre-assessed shelter sites.

Municipalities with structured planning, such as Porto Alegre, demonstrated stronger response capacity, reinforcing the importance of the five strategic axes proposed here: (1) planning and preparedness; (2) coordinated activation; (3) maintenance with adequate infrastructure and services; (4) deactivation with dignified resettlement; and (5) governance supported by streamlined financing mechanisms.

At the same time, the findings reaffirm the limits of temporary shelters as long-term solutions. Territorial resilience — as defined by international standards such as the *Sphere Standards* — requires investment in less vulnerable territories, the strengthening of social protection networks, and the overcoming of reactive approaches. Without these measures, disasters will continue to expose inequalities and compromise the right to dignified and safe housing for the most vulnerable populations.

Despite the convergences identified, it is important to recognize the inherent differences between the two contexts analysed. In Roraima's migration crisis, sheltering assumed a protracted character, with facilities operating for years and requiring significant cultural and social integration, underscoring the difficulty of transitioning to permanent solutions. In contrast, in the Rio Grande do Sul natural disaster, the response was marked by massive and immediate mobilization, with thousands assisted in a short period, but dependent on improvisation and subject to intense logistical pressures. These distinctions reinforce that each type of disaster imposes unique challenges on the shelter management cycle, demanding differentiated strategies for planning, activation, and deactivation. Otherwise, vulnerabilities are perpetuated, and social and financial costs are amplified.

In sum, this study contributes to advancing the understanding of both the limitations and the potential of temporary shelter management in Brazil by systematizing evidence from two critical contexts and proposing pathways for improvement aligned with international standards. Its relevance lies in its capacity to inform more effective public policies, reduce social vulnerabilities, and strengthen territorial resilience in the face of increasingly recurrent migration crises and natural disasters.

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