

EXECUTIVE SUMMARY

Participatory Rapid Mapping

of the Maceió Lagoon
Region



Participatory Rapid Mapping

Challenges and Recommendations for the Maceió Lagoon Region

The **Participatory Rapid Map (PRM)** is one of the methodologies implemented by the United Nations Human Settlements Programme (UN-Habitat) in Brazilian cities with the main **objective of mapping the conditions of urban infrastructure and public services in vulnerable territories**, based on qualitative research to produce primary data.

Created in 2012 by the Pereira Passos Institute (IPP) of Rio de Janeiro Municipality, it was one of the diagnostic and monitoring tools for territories with Police Pacification Units (PPUs), as part of the Rio+Social program, a multidisciplinary initiative coordinated by IPP in partnership with UN-Habitat.

In Alagoas, the MRP has already been applied in 2018 in the 100 grotas of Maceió, generating a set of information and several developments in the actions of the Government of Alagoas, such as the qualification of the Vida Nova in the Grotas Program, and the elaboration of the Grotas Panel.

Between 2022 and 2023, the methodology was applied in the lagoon region of Maceió, a populous and vulnerable region of the city comprising around 120,000 people. With this, it is expected to strengthen and qualify the action and intervention of public authorities and other actors by providing data, indicators and geolocalized and relevant information to urban infrastructure and public services.

METODOLOGY

PRM, as its name suggests, **involve mapping and observation of the territory, speed of implementation and the participation of residents as its main aspects.** The methodology produces disaggregated data from a qualitative questionnaire, from a street area to the whole community itself, quickly and at low cost, allowing interventions of different scales to be planned.

In the lagoon region of Maceió, the characterization of the territory was carried out by a qualified UN-Habitat team who travelled around the territories observing and consulting people who live in the areas to answer specific questions about aspects that cannot be observed visually.

The production of data on access to and quality of the various basic urban services is developed in a logic of territorial division, which **highlights territorial inequalities, allows the public authorities to act on priority problems, focusing efforts on specific locations.**

This logic is implemented by dividing each territory into homogeneous micro-areas. In this way, a community can be seen from its different micro-areas.

11 aspects of the urban infrastructure of each territory visited were investigated. This range of topics allows a diversity of information and knowledge to be acquired and disseminated from areas that had very little data at this level and on these topics.

Routes signs and postal services



Infrastructure for mobility



Access to means of public transport



Housing standards



Water supply



Sanitary sewage



Rainwater drainage



Waste collection and urban cleaning



Electricity supply



Street lighting



Public spaces



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ANALYZING THE RESULTS

All the information generated in the PRM is disaggregated at the level of micro-areas and can be grouped for analysis at the territorial level, which allows a localized analytical view to identify improvements in a given service or urban infrastructure. In the same way, it is possible to make an analysis of neighborhoods that have greater vulnerability and possibly guide a definition of the area of intervention by the public authorities.

To make it easier to analyze the results, the answers obtained are converted into a numerical scale that indicates the level of precariousness in the territory.

Values closer to zero indicate greater precariousness and values closer to six indicate the opposite. In addition, this range is divided into a number of classes which indicate the conditions of the micro-area or territory being investigated.

Vulnerable conditions	red	$\leq 1,50$ (less suitable condition)
	pink	From 1,51 to 2,50
Intermediate conditions	orange	From 2,51 to 3,50
	yellow	From 3,51 to 4,50
Most suitable conditions	light green	From 4,51 to 5,50
	dark green	$\geq 5,51$ (most suitable condition)

MAIN DOCUMENTS PRODUCED

1. **Integrated Report:** general results and results for each territory, with recommendations for interventions;
2. **Methodological Guide:** details of how to apply the methodology, for knowledge management and replicability;
3. **A complete and open database** to provide applied analysis, adjusted to the actions of the various stakeholders involved; and
4. **A booklet of thematic and auxiliary maps**, which identify the results by micro-areas and territories, enabling them to be applied directly by the various stakeholders.

CHARACTERIZATION OF THE LAGUNAR REGION OF MACEÍO

The lagoon region is surrounded by the Mundaú Lagoon, which has historical, economic and cultural value in the daily lives of the resident population, as well as being part of the Environmental Preservation Area of the Mundaú-Manguaba Lagoon Estuarine Complex (MMLEC).

Consisting of mangroves, wetlands and canals that have undergone various interventions, the region has socio-economic characteristics that have resulted from urban interventions that have not occurred in an orderly manner.

Its occupation, mostly developed by the vulnerable population, is a reflection of a series of factors such as the construction of low-income housing developments, aligned with the historical challenges of flooding, irregular occupation and problems with urban infrastructure, which give the local population even more layers of vulnerability.

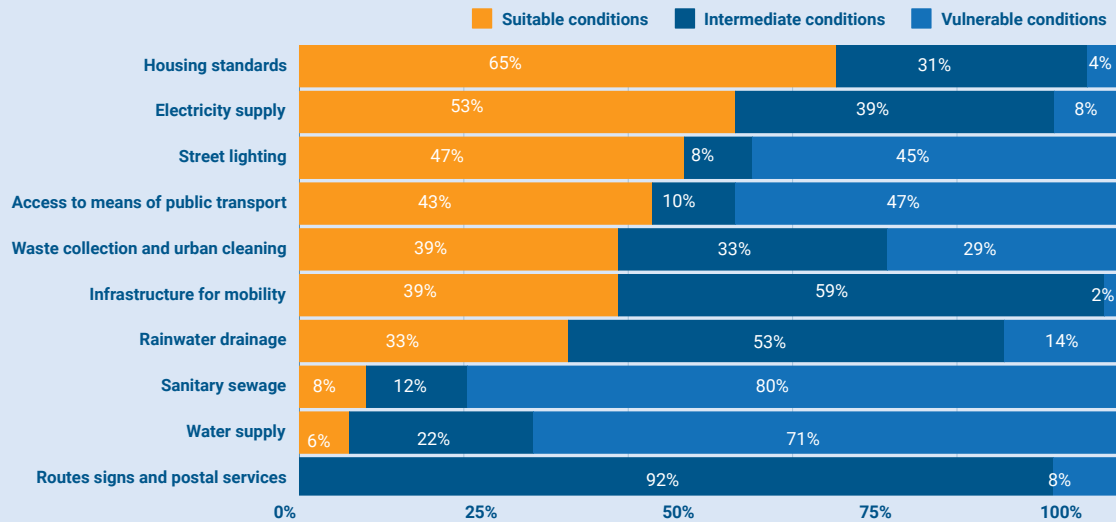
The plural relationship with the Mundaú Lagoon ranges from the extinct waterway transportation through the ports to the activities linked to fishing and shellfish extraction that continue to this day.

Another aspect is the extraction of rock salt in Maceió. Since 2018, this economic activity has caused social, economic and environmental impacts in the municipality, especially in the areas near the Mundaú Lagoon, including land subsidence. Around 60,000 people have already left their homes, practically extinguishing urban life in these areas. This process has also impacted the area covered by this research, such as the Bom Parto neighborhood, where a large number of homes have been vacated and/or are being demolished.

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PROPORTION OF MICROAREAS INVESTIGATED ACCORDING TO PRM PERFORMANCE CATEGORY



• **General index:**
4% suitable conditions | 51% intermediate conditions | 45% vulnerable conditions

MACEÍO LAGOON REGION PRM

17 territories

distributed in the neighborhoods of Bom Parto, Levada, Vergel do Lago and Trapiche da Barra, subdivided into 49 micro-areas



The territories are home to approximately 40% of the population residing in the neighborhoods, which together have around

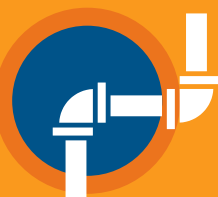
80

thousand inhabitants



MAIN RESULTS

The average score of the analyzed microareas was **2,74** presenting intermediate conditions for infrastructure and public services in the region



None of the categories obtained an average score that represented suitable conditions

Two achieved a performance considered vulnerable

Of the ten categories that score in the MRP methodology, eight have intermediate conditions

MAIN FINDINGS

The socio-environmental disaster affected the availability of transport lines, especially in the Bom Parto neighborhood. There, in **77% of micro-areas** most people spend more than



15 minutes to the bus stop

Only 7%

of the micro-areas have pedestrian sidewalks in good condition



30%

of the micro-areas have residences with walls made of precarious materials and there are micro-areas in the territories of Vila Aratu and Brejal in which the majority of residences are in this situation



There is irregular discharge of sewage in **69% of micro-areas**, being **65% in the drainage system**.

Open sewage was found in **65% of the territories**.



Waste collection and urban cleaning services are not equitable across territories, because only **53% of territories have waste collection** for most or all residents, only **29%** have a dumpster or containers to deposit garbage. Inadequate disposal was identified for all micro-areas.

There is a major deficiency in the provision of formal public spaces in the territories investigated. **There are only two:**

Manoel Leite Pimentel Square in the Vergel do Lago neighborhood, and a football field for collective use

1



2



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CHALLENGES

The topics investigated that have **conditions considered vulnerable** are **sanitary sewage (1.39)**, **water supply (1.84)** and **access to means of public transport (2.74)**.

The issues of water supply and sanitary sewage are directly related to the implementation, supply and maintenance of their infrastructure networks. These are two of the issues that require greater investment from the public authorities in order to provide adequate conditions for the population.

As well as identifying the existence of official infrastructure, the field team checked whether the official network was in suitable condition and whether there were other unofficial networks in the area. In this sense, a striking aspect is the presence of installed official infrastructure, but with poor maintenance and upkeep conditions, indicating the need for improvements.

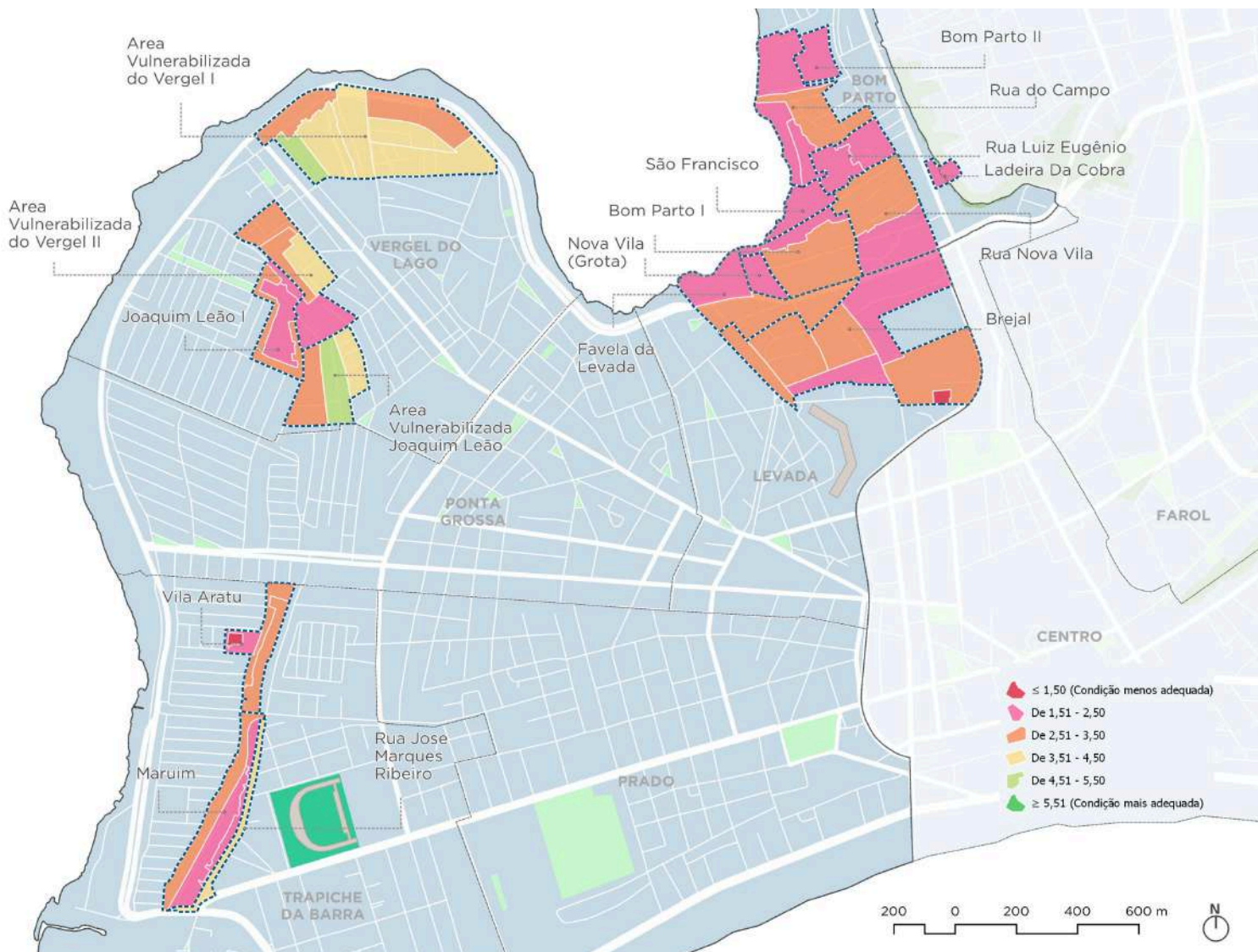
The third most critical aspect relates to the population's journeys to access public transport. One factor that influences this is the time it takes to get to bus stops or train stations, especially in the Bom Parto neighborhood. Other conditions, such as the waiting time for transport to arrive, also showed inadequate results. Both are directly impacted by the subsidence of the soil due to the extraction of rock salt.

POTENTIALITIES

The aspects that stood out positively and obtained **the highest scores** were: **electricity (4.46)**, **housing (4.45)** and **infrastructure for mobility (4.28)**.

The issue of housing is also consolidated in the area studied, as most of the micro-areas have adequate external wall materials, i.e. masonry. A few places still have very precarious conditions, most of which are on land that was the result of irregular occupation or more recent occupation.

The infrastructure results for urban mobility are also directly related to the historical and urban characteristics of the lagoon region. Its proximity to the more central areas of the city, the fact that it is one of the oldest settlements in the municipality, that most of its streets are paved and that it has wide roads, give this area better general conditions than the lagoon region as a whole.



Participatory Rapid Mapping Summary Table of Recommendations for the Lagoon Region

OBJECTIVES	RECOMMENDED ACTIONS	ACTORS AND PARTNERS INVOLVED
Implement an integrated and participatory governance system	<p>The role of public authorities and society in the process of reducing impacts and planning future actions</p> <p>Ensuring public participation throughout the process and governance</p>	<ul style="list-style-type: none"> · Government of the State of Alagoas · Municipality of Maceió · Federal government · Public ministry · Civil society · Academia
Prioritize urban integration actions in the short-term	<p>Implement participatory budgeting actions with the population directly affected</p> <p>Improve accessibility to public transportation</p> <p>Improve the public lighting network</p>	<ul style="list-style-type: none"> · Government of the State of Alagoas · Municipality of Maceió · Public service concessionaires · Civil society
Mitigate impacts of removals in Bom Parto and surrounding areas	<p>Carry out urban, social, economic and environmental impact studies</p> <p>Implement an urban integration and economic development plan</p> <p>Adopt the results of the MRP as a benchmark for short- and medium-term actions</p>	<ul style="list-style-type: none"> · Government of the State of Alagoas · Municipality of Maceió · Public ministry · Public service concessionaires · Civil society

Final considerations

The investigation carried out by the Participatory Rapid Map in precarious settlements in Maceió's lagoon region has highlighted elements of existing socio-territorial vulnerability that were previously only known and experienced by the local population. The data collected in the field made it possible to identify the heterogeneity of the territories and their main problems, in order to strengthen evidence-based decision-making by the various public and private actors involved.

The problems and potential of the lagoon region have cross-cutting characteristics and, therefore, the challenge of overcoming them while exploiting their potential can only be tackled in its entirety with the coordinated action of the various agents working in the territory, making partnerships and encouraging the participation of the population, and avoiding duplication of effort.

Other studies carried out by UN-Habitat as part of the Vision Alagoas 2030 project are useful tools for supporting the state and municipal authorities in designing strategies to improve the living conditions of the population in Maceió's vulnerable areas.

The effective improvement of urban infrastructure can only be built on several fronts. At this point, governance has the central role of acting as a catalyst for efforts, resources and people to carry out the necessary reforms, integrating urban systems and creating coalitions where the main interest is, in fact, **to leave no one and no place behind.**

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