

**Project Sustainable and Inclusive Urban Prosperity in the State of Alagoas:
An Integrated Initiative**

**EXPECTED ACCOMPLISHMENT 2:
IMPROVED KNOWLEDGE AND CAPACITIES FOR SLUM UPGRADING AND
PREVENTION, AND IMPROVED SLUM DWELLERS LIVING CONDITIONS**

Executive Summary

Strategies for the prevention and improvement of grotas in the city of Maceió, including priority issues, deadlines, cost estimates, responsibilities and funding opportunities

Maceió
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This **Executive Summary** presents the main conclusions and recommendations of the Integrated Report **Strategies for the prevention and improvement of grotas in the city of Maceió, including priority issues, deadlines, cost estimates, responsibilities and funding opportunities** elaborated by the United Nations Human Settlements Programme (UN-Habitat) in partnership with the Government of the State of Alagoas, within the scope of the project **Sustainable and Inclusive Urban Prosperity in the State of Alagoas: An Integrated Initiative**, whose objective is to qualify sustainable urban development actions in the State of Alagoas.

This is an output of the Expected Accomplishment **Improved knowledge and capacities for slum upgrading and prevention, and improved slum dwellers living conditions** of the abovementioned project, aiming to:

- Propose strategies for the improvement of urban, environmental and socio-economic conditions;
- Establish priorities for the proposed interventions;
- Present cost estimates of the proposed interventions; and
- Recommend stakeholders, responsibilities, and strategies for the funding arrangements of the proposed interventions.

As a result, assessments, proposals for integrated thematic solutions, and implementation strategies were elaborated for three **groups of grotas in Maceió**: (i) **Benedito Bentes** (grota Iraci); (ii) **Reginaldo** (grotas Artemísia, Vila do Feitosa I and II); and (iii) **Mundaú** (grotas Santa Helena and Santo Amaro). The choice of these grotas aimed to present standard solutions for settlements located in three different drainage basins, bringing representative propositions to different processes of formation and transformation of slum settlements in different urban and environmental contexts.

The solutions and strategies proposed are aligned with the **international and national development agendas**. They are based both on

integrated intervention proposals that recognize and tackle urban, environmental and socio-economic challenges, collaborating towards the construction of a **vision of future based on prosperity and inclusion** of the most vulnerable areas of the city.

The **Preliminary Integrated Urban Plans (PUI-Ps**, in Portuguese) proposed for the grotas of Maceió present standard solutions that generate sustainability, resilience and development. Their implementation is planned to be gradual, given their scale and the dimension of the challenges, taking into account also the guidelines and the proposed intervention scenarios.

PUI-Ps constitute **planning tools** to advance in the formalization of a **structural and integrated urban development project**. Their main challenges are:

- Mitigate both the risk to life and health and the lack of infrastructure, which deteriorate the urban and environmental conditions of other areas of Maceió;
- Provide a better integration with other consolidated neighborhoods in the city that possess better supply of public facilities and services; and
- Balance urban and environmental recovery with the activities of people's economy.

The **methodology** adopted was:

- Selection and classification of grotas in four stages:
 - (i) Definition of natural hazard risks according to the relation between breadth and slope;
 - (ii) Analysis of social vulnerability using data from the Quick Participatory Map (MRP in Portuguese);
 - (iii) Cross-referencing social vulnerability data with natural hazard data; and
 - (iv) Strategic selection of the groups of grotas for analysis.



- Definition of the territory's integration layers, dimensions for diagnosis and solutions and time scenarios for implementing the proposals; and
- Construction of the technical bases and cartographic references.

The **diagnoses of the environmental, urban, and socio-economic** conditions of the grotas analyse the following features:

- Environmental layer: geological and geotechnical features and the elaboration of Geotechnical Risk Maps by group of grotas;
- Urban infrastructure layer: urban drainage, water supply, sewerage and solid waste, and the impacts on water quality; and
- Land use and occupancy: considerations on urban regulation, disaster risk reduction and mitigation, resettlement and environmental protection policies; and
- Socio-economic layer.

The **intervention proposals** include: (i) urban analysis; (ii) general and specific objectives; (iii) feasibility strategies; (iv) proposals for mobility and accessibility systems and (v) specific projects for the three groups of grotas.

In general terms, the **general objectives** aim to:

- Reduce the risk to life through geotechnical consolidation, macro-drainage and, if necessary, resettlement in areas of high and severe risk;
- Conserve existing forest fragments and restore degraded areas with the implementation of basic sanitation;
- Improve the environmental conditions of the drainage basins' downstream seacoast areas, which have been impacted by the sewage discharged *in natura* into the water bodies;
- Restrict reoccupation with the implementation of new residential typologies; and
- Implement and improve the circulation of pedestrians and vehicles, enabling a controlled access to the valleys' lower

parts and connection with the surroundings higher areas.

Considering the particularities of each group, the set of **specific projects** proposed consist of:

- Urban park and environmental recovery projects on slopes and valley bottoms;
- A project for pedestrian circulation on decks and public spaces associated to containment structures, geotechnical consolidation, and surface drainage; and
- Proposal for a vertical typology for housing of social interest on slopes, following the requirements of the current legislation, and the adoption of containment solutions, based on planialtimetric cadastral surveys, structural studies, and geological and geotechnical surveys and analysis.

The Report also presents general **guidelines by thematic disciplines** for: (i) geology and geotechnics; (ii) environmental sanitation (urban drainage, water supply and sewerage); (iii) socioeconomic development; and (iv) institutional actions (regulatory frameworks, risks and precariousness conditions, informality and prevention of new irregular occupations).

A participative and communitarian elaboration of **Integrated Local and Sustainable Development projects** (DLIS, in Portuguese), was proposed for the socio-economic development of the grotas, including four spheres:

- Human capital:
 - Skills, knowledge and competencies for education and professional training;
- Social capital:
 - Cooperation and reliability between people to promote community empowerment, the solidarity economy and cooperativism;
- Entrepreneurial capital:
 - Individual and collective protagonism for the development of incubators, entrepreneurship and micro-credit programmes; and
- Natural capital:



- Environmental aspects of preservation of natural resources and patterns of systemic organisation.

The **strategies for prioritizing the actions and intervention scenarios** correspond to **emergency** actions (to be implemented within six months), **short-term** (six to eighteen months), **medium-term** (eighteen to thirty-six months) and **long-term** (over thirty-six months).

The prioritisation of actions in temporal scenarios considered the concept of progressive urbanisation, seeking to generate gradual and successive gains in protection to life and health, and of habitability and urbanity in the grotas.

The **cost estimates of the interventions**, calculated by thematic solutions, represent preliminary orders of magnitude. It is recommended the development of basic and executive projects for a more assertive approximation in relation to the real cost of the proposed urbanisation programmes.

Furthermore, the decision to urbanise the grotas and the search for funding for the interventions have to be guided by an integrated vision of: (i) external, environmental and urban impacts; (ii) social costs and benefits; and (iii) direct benefits, monetary or non-monetary.

The **funding strategies** consider different sources of resources:

- Adoption of resources already employed, or to be employed, by the local authority, at the state and municipal administrative levels;
- Use of resources from voluntary non-refundable federal transfers;
- Prospecting national and international funding; and
- Raising private resources based on concrete benefits identified in the projects (payment for the right to build, public-private partnerships, development of economically sustainable activities).

The first and foremost strategy thought, as a leverage to the others and as a means of including the third sector, should be the mobilisation of the local population around their own interests related to better enjoying the city and the preservation of life and health.

Finally, the report recommends the **themes, activities, institutional actors, responsibilities, and stakeholders directly involved** in the proposed intervention strategies. It also points out the need for **joint action in strategies to improve and prevent new occupations in the grotas**, by:

- Promoting a socially and economically sustainable use of valley bottoms and drainage headwaters not yet occupied; and
- Implementing adequate and accessible housing alternatives for the low-income population.

It is expected that the **results presented** here will contribute to further the work started by the Vida Nova nas Grotas Programme of the Government of the State of Alagoas, so that, in partnership with UN-Habitat, it may continue advancing the **response to the challenges and aspirations of Maceió's territory and population**.