

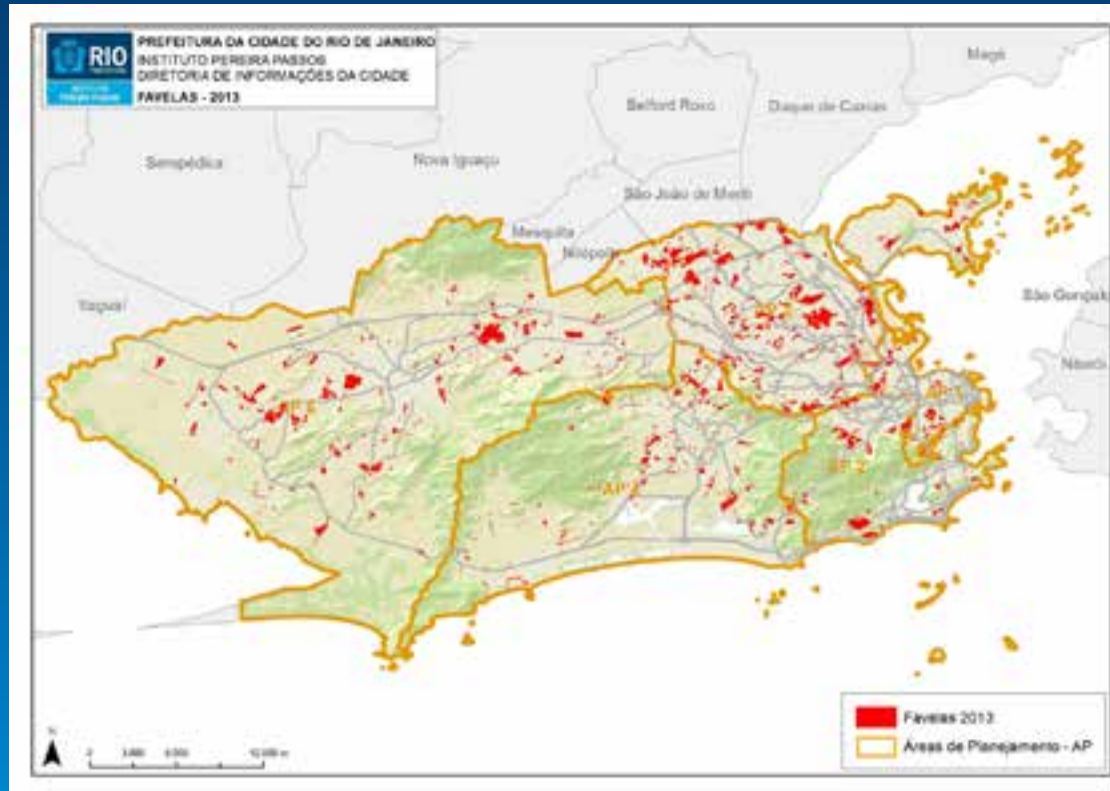
Urban Rapid Participatory Map (“MRP”) in Rio’s Pacified *Favelas*

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Distribution of Favelas in Rio de Janeiro



Background

- **KNOWLEDGE ABOUT SLUMS (“FAVELAS”)**
- **Historical lack of information**
 - **Advancement knowledge on slums’ urban conditions**
 - **There is still little information about the favelas**
- **Heterogeneous realities**
 - **Historically portrayed as homogeneous spaces, uniformly poor**
 - **There are considerable differences between slums**
 - **There are also considerable differences within them**

Perspectives

- **Effectiveness of government actions and services**
 - **Need for qualified and georeferenced information**
 - **Need for information adequate for monitoring**

Objectives

MRP's objectives

Identify internal heterogeneity by mapping the urban conditions within each community

Generate comparability inside and between areas

Identify areas of high vulnerability

Perform general and thematic diagnostics



Ultimate Goal: Support Public Policy

Support decision-making processes

Guide the prioritization of investments

Regularly monitor urban development

Territorial Units

- **Micro areas are the MRP's analysis units**
- **Definition of micro area:**
 - ü **Places with high internal homogeneity and high degree of heterogeneity in relation to others surrounding them, according to selected criteria (urban themes).**
 - ü **Defined through observation and interviews with key local informants.**

Themes

1. Road Signs and Postal Services

2. Infrastructure for Mobility

3. Housing Building Standards

4. Water Supply

5. Sewage System

6. Rainwater Drainage System

7. Garbage Collection

8. Public Lighting and Electricity

Fieldwork methodology

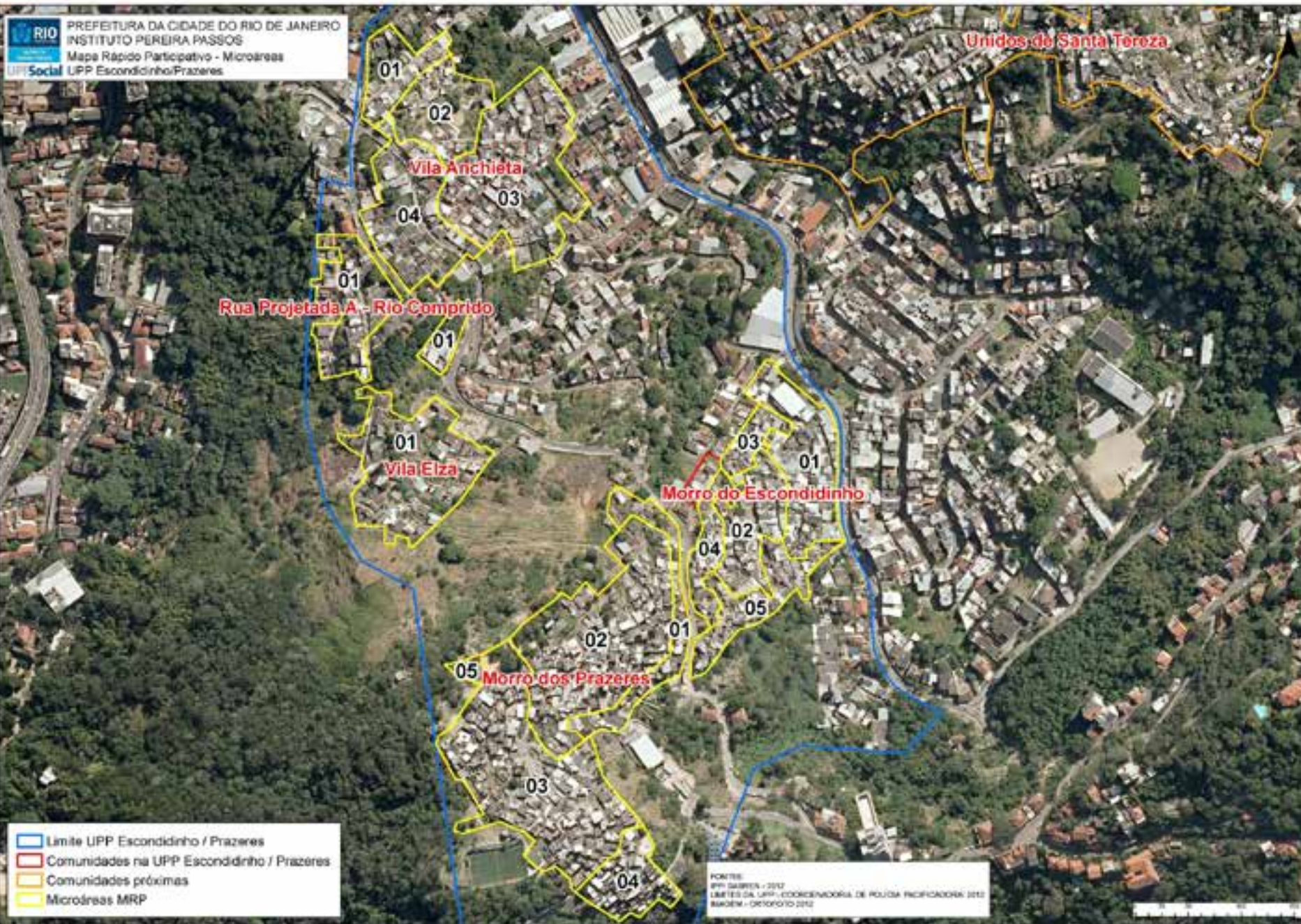
- **Data collection and definition of micro areas performed simultaneously**
- **Empirical observation using a reference guide and a map**
- **Identification of the main settlement patterns**
- **Conduct interviews with residents to deepen the understanding of non-visual aspects**
- **Define territorial units (micro areas)**

Systematization process

- Steps:
 - **Step 1: Georeferencing of micro areas**
 - **Step 2: Description of micro areas**
 - **Step 3: Creation of Method for standardization**
 - **Step 4: Generating of Indicators**
 - **Step 5: Urban Condition Map Production**

Step 1

Georeferencing of micro areas



- Limite UPP Escondidinho / Prazeres
- Comunidades na UPP Escondidinho / Prazeres
- Comunidades próximas
- Microáreas MRP

FONTES:
IPR - SIBRIS - 2012
LIMITES DA UPP - COORDENADORIA DE POLÍCIA PARTICIPATIVA 2012
BARRER - ORTOFOTO 2012

Step 2

Descriptive data

Step 2: Descriptive Data

- Detailed description of micro area by theme

Field Staff Unit	1
Territory	Escondidinho/Prazeres
Slum	Morro do Escondidinho
Locality	Escondidinho
Micro area	3
Code	1EME03
4.5. Iluminação e energia elétrica	<p>Segundo informam as lideranças, não há muitos problemas relativos à falta de iluminação pública. Entretanto, os mesmos interlocutores explicaram sobre o alto grau de perigo para os habitantes da comunidade, pois os postes (que se encontram em número suficiente) estão todos danificados, e com fios muito baixos. Há relógios em muitas casas, e de acordo com a liderança muitos pagam contas.</p> <p>No entanto, percebemos que muitos relógios não funcionam, de forma que há fornecimento através de gatos. Não foram identificadas gambiarras. Não há intervenções do projeto Comunidade Eficiente.</p>

Step 2: Descriptive Data

- Data that are systematized in a descriptive and “live” way are a rich source to perform diagnostics because they point out specific problems of each micro area - they guide the types of interventions to be made
- For the purposes outlined, an exclusively-descriptive method presents:
 - High subjectivity

Step 2: Descriptive Data

- **Comparability problems in large scale mappings**
- **Difficulty in ranking different situations found in different places**
- **Difficulty in periodically monitoring urban development**
- **There's a need for data standardization**

Step 3

Method for standardization

Step 3: Method for the standardization

- **Developed allow for similar situations to be analyzed/presented in similar ways. This makes it possible to compare different territories.**
- **Preparation of closed / objective answer categories**
- **Elaboration of a document to illustrate and describe these categories (“illustrated dictionary”)**

Step 3: Method for the standardization

- **Training of field teams to homogenize the understandings and ensure maximum uniformity of these categories**
- **This instrument enables the creation of variables, making the realities of each microarea comparable**

Step 3: Example Public Lighting coverage

- **There are public lighting equipments (RioLuz) installed in:**
- **The question is directed to the public lighting covering (RioLuz) in the highways, alleys, lanes, stairways and public spaces of the micro area, that is, the existence of infrastructure which has been installed (spots of light), not considering it's state of conservation. Consider as street with public lighting the ones who have one or more equipments installed.**

Step 3: Example Public Lighting coverage

- **All of the streets:** Mark this option when there are spots of light in every street or when their absence is only noted in specific spots.
- **A great amount of the streets:** Mark this option when there are spots of lights in most of the highways, not affecting, though, the totality of the micro area.
- **A small amount of the streets:** Mark this option when there are spots of light in only one part of the highways, not covering the bigger part of the micro area.
- **No street:** Mark this option when there is little or none cover, that is, when the existence of spots of light is very residual.

Step 3: Example Public Lighting quality

How is the state of conservation of the existents lampposts and light bulbs of the public lighting ?

Consider in bad state of conservation the damaged lampposts and light bulbs. It's understood by damaged light bulbs the burnt and broken ones.



- In good state of conservation: Mark this option when there are no damaged lampposts or light bulbs or when their existence is very residual (in specific spots)
- Some are damaged
- Most are damaged

Step 4

Generating indicators

Step 4: Generating Indicators

Ranking of possible situations in regards a question or to a group of questions

Example: Public Lighting - Coverage

Public lighting equipment in all streets and alleys & frequently and sufficiently spread all across them

Public lighting equipment in all streets and alleys & NOT frequently and sufficiently spread

Public lighting equipment in most streets and alleys & frequently and sufficiently spread in those

Public lighting equipment in most streets and alleys & NOT frequently and sufficiently spread

Public lighting equipment in only a small part of streets and alleys & frequently and sufficiently spread in those

Public lighting equipment in only a small part of streets and alleys & NOT frequently and sufficiently spread

No public lighting equipment on any streets or alleys

Step 4: Generating Indicators

Grading each of these situations

Example: Public Lighting - Coverage

Public lighting equipment in all streets and alleys & frequently and sufficiently spread all across them	→	7
Public lighting equipment in all streets and alleys & NOT frequently and sufficiently spread	→	6
Public lighting equipment in most streets and alleys & frequently and sufficiently spread in those	→	5
Public lighting equipment in most streets and alleys & NOT frequently and sufficiently spread	→	4
Public lighting equipment in only a small part of streets and alleys & frequently and sufficiently spread in those	→	3
Public lighting equipment in only a small part of streets and alleys & NOT frequently and sufficiently spread	→	2
No public lighting equipment on any streets or alleys	→	1

Step 4: Generating Indicators

- Standardization to a scale of scores from 0 to 6, whenever necessary
- Example: Public Lighting - Coverage

Public lighting equipment in all streets and alleys & frequently and sufficiently spread all across them	→	6,00
Public lighting equipment in all streets and alleys & NOT frequently and sufficiently spread	→	5,14
Public lighting equipment in most streets and alleys & frequently and sufficiently spread in those	→	4,29
Public lighting equipment in most streets and alleys & NOT frequently and sufficiently spread	→	3,43
Public lighting equipment in only a small part of streets and alleys & frequently and sufficiently spread in those	→	2,57
Public lighting equipment in only a small part of streets and alleys & NOT frequently and sufficiently spread	→	1,71
No public lighting equipment on any streets or alleys	→	0,86

Step 4: Generating Indicators

- **Thematic Indicators**

Synthetic Indicator

Calculated from the geometric mean of the 8 thematic indicators

Refers to the degree of urban integration as a whole and gives visibility to the most vulnerable places taking all the MRP themes into consideration.

Step 4: Example of Indicators

- MRP's urban synthetic indicator and thematic indicators according to the micro areas of the Escondidinho / Prazeres UPP territory– 2013

Slum	Micro areas	SYNTHETIC INDEX	Road Signs and Postal Services	Infrastructure for Mobility	Housing Building Standards	Water Supply	Sewage System	Rainwater Drainage System	Garbage Collection	Public Lighting and Electricity
Morro do Escondidinho	01	4,19	4,20	4,78	6,00	5,14	6,00	4,00	3,20	1,99
	02	3,71	4,20	3,86	5,10	5,14	4,80	4,00	2,20	1,99
	03	3,93	4,20	3,30	4,20	5,14	6,00	4,00	4,00	1,99
	04	2,42	1,70	2,47	3,00	5,14	2,40	2,00	1,90	1,99
	05	2,54	3,20	2,95	3,00	5,14	3,00	2,00	1,00	1,99
Morro dos Prazeres	01	3,78	2,60	4,53	3,30	4,54	3,00	3,50	4,10	5,49
	02	3,00	2,60	2,63	3,30	4,54	2,40	3,50	4,40	1,73
	03	3,17	2,60	2,55	5,10	4,03	2,40	3,50	4,50	1,99
	04	3,06	2,60	2,95	3,30	4,03	2,40	4,00	3,90	1,99
	05	1,46	2,60	2,24	0,70	3,43	1,60	0,50	2,00	0,93
Vila Anchieta	01	3,61	1,70	2,79	4,50	4,29	6,00	6,00	2,70	3,23
	02	2,67	1,70	2,01	1,80	4,29	6,00	6,00	1,00	2,71
	03	3,52	1,70	3,03	3,30	4,29	6,00	6,00	2,80	3,23
	04	4,72	3,50	4,69	4,50	4,29	6,00	6,00	5,60	3,89
Vila Elza	01	3,17	1,70	2,17	3,00	5,40	3,00	6,00	2,70	3,49
Rua Projetada A	01	5,18	5,00	4,96	5,40	5,74	4,80	6,00	6,00	3,89

Step 5

**Production of Maps on the
Urban Conditions**

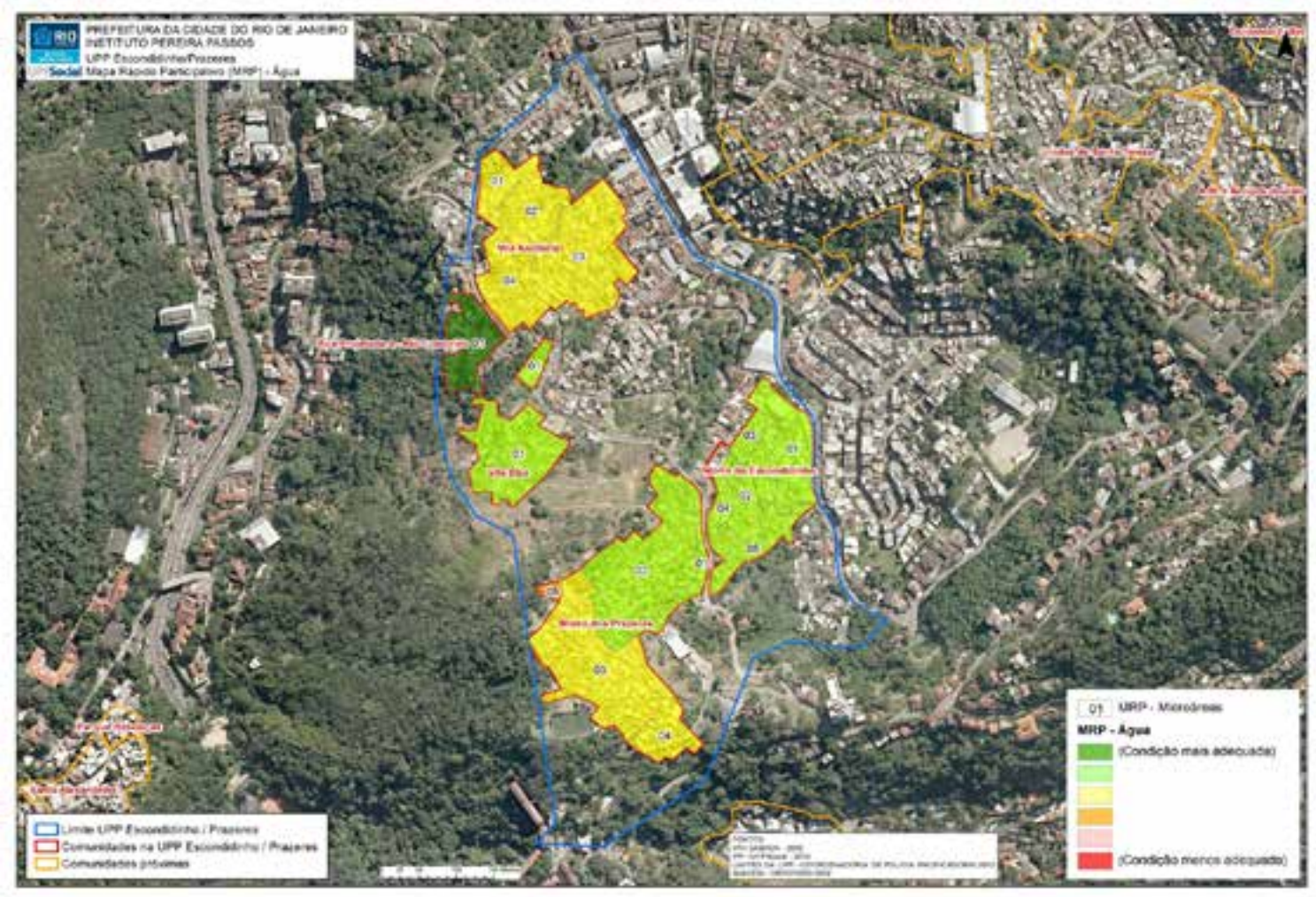
Step 5: Maps on the Urban Condition

- Maps are produced for each indicator, representing different degrees of precariousness.

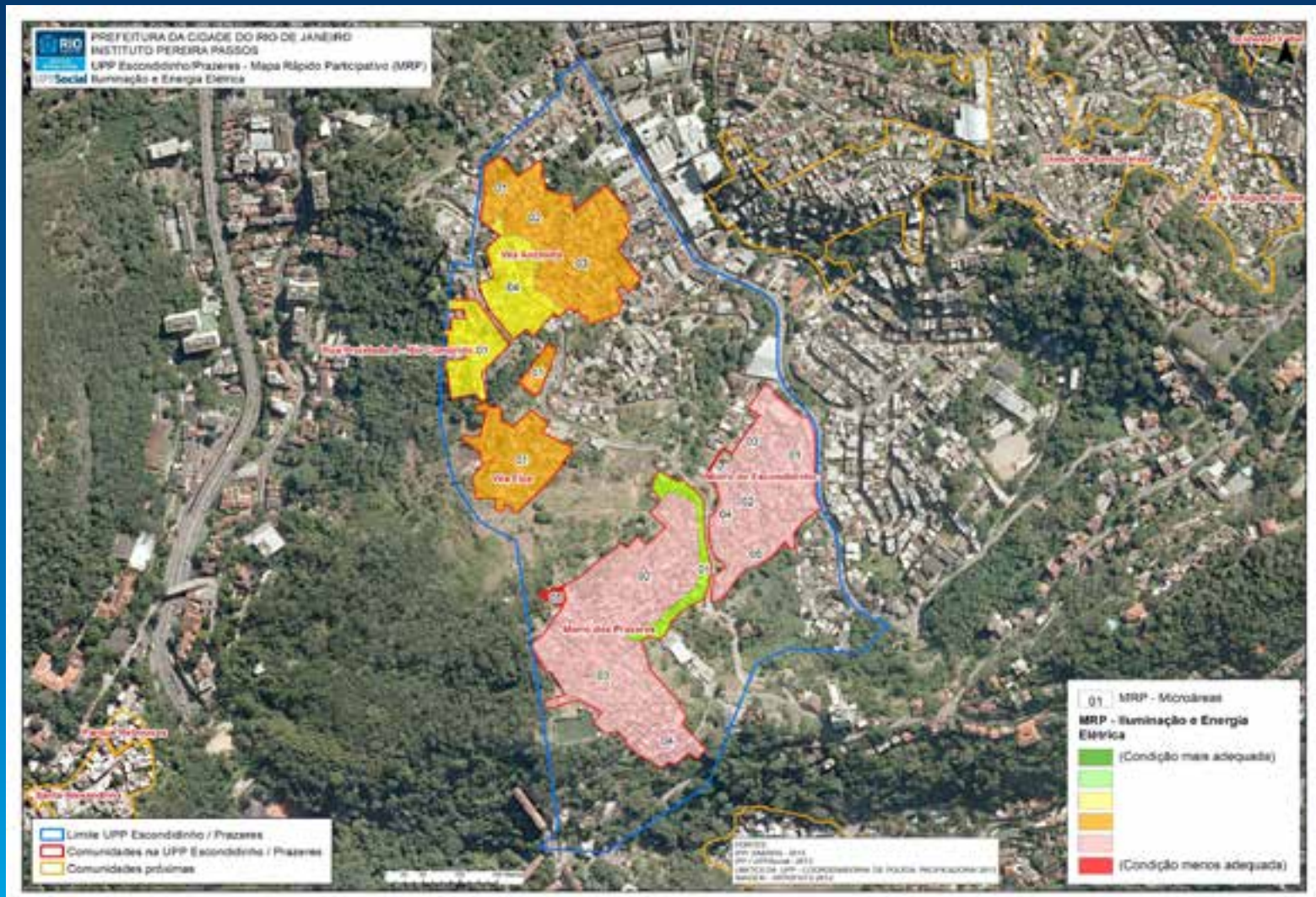
- For spatial representation purposes, six (6) classes / colors were used according to the following numerical intervals:

RED	$\leq 1,50$ (least adequate condition)
PINK	De 1,51 a 2,50
ORANGE	De 2,51 a 3,50
YELLOW	De 3,51 a 4,50
GREEN LIGHT	De 4,51 a 5,50
DARK GREEN	$\geq 5,51$ (most adequate condition)

Water Supply



Public Lighting and Electricity



Thank you !