



# CONTEXTUALIZING OPENSTREETMAP IN MAPPING FAVELAS IN BRAZIL

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## INTRODUCTION

### Favelas ...

... are living area for about 6% of Brazilian population [1];  
... are characterized by their informality, precariousness and social vulnerability [2];  
... have outdated or lack of geographic information, but have high demands for them [2].

First researches that systematized knowledge about the mapping for spaces that are precarious and social vulnerable began in 1990s -> left for PPGIS [3] and PGIS [4,5] mapping techniques -> used analogic tools and Geographic Information Systems [6].  
Web 2.0 provide news tools [6] -> Collaborative Mapping Platforms -> **OpenStreetMap**.

### Research aims:

- To describe the collaborative mapping processes using **OpenstreetMap** in the context of **favelas**.

## METHODOLOGY

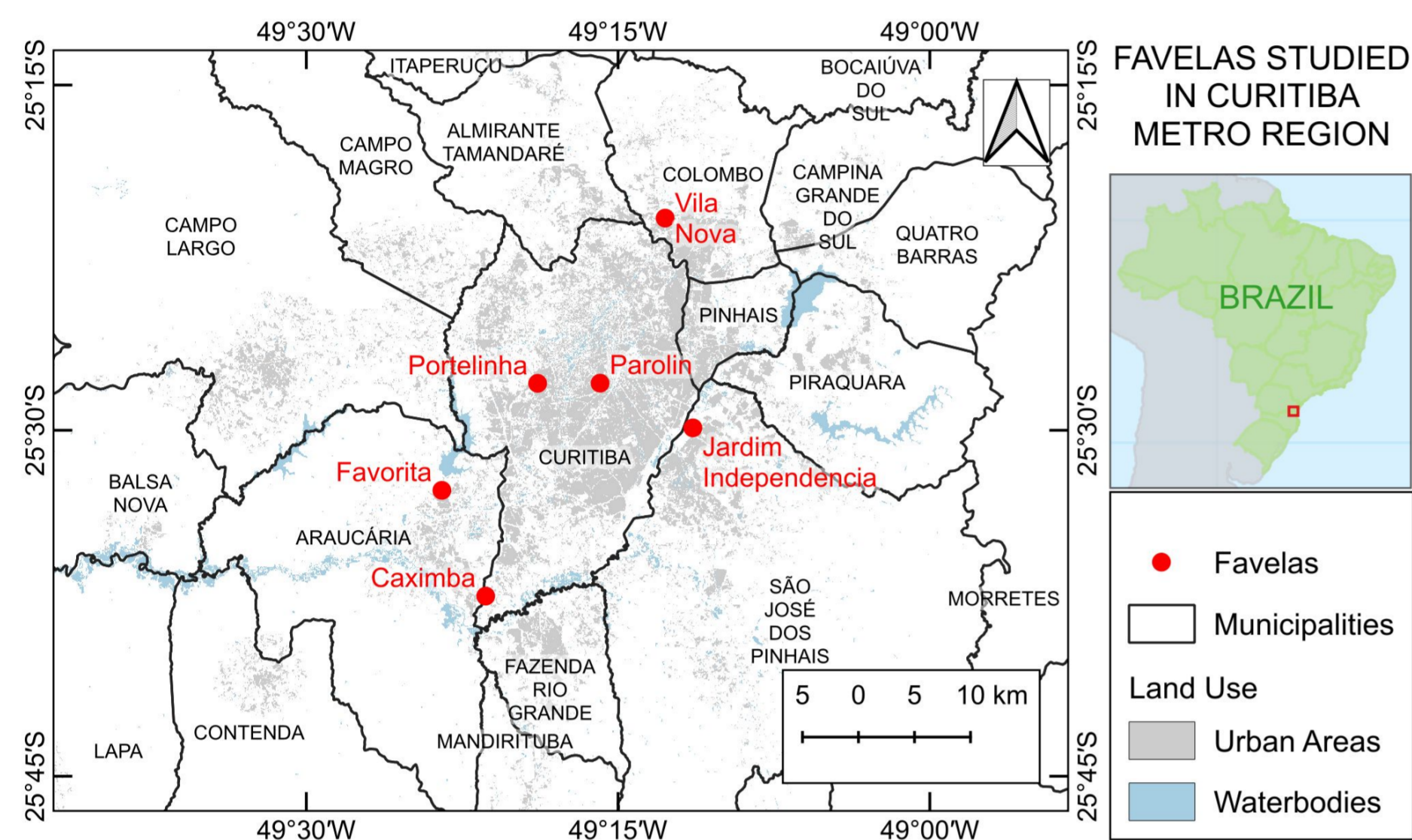


Figure 1: Study area.

Case study -> Mapping activities in favelas' upgrading and housing projects supported by Non-Governmental Organization TETO-Brasil. Study area (figure 1) -> Six favelas that TETO-Brasil works in Curitiba Metropolitan Region, in Parana state, in southern Brazil. Period -> from 2017 to 2018.

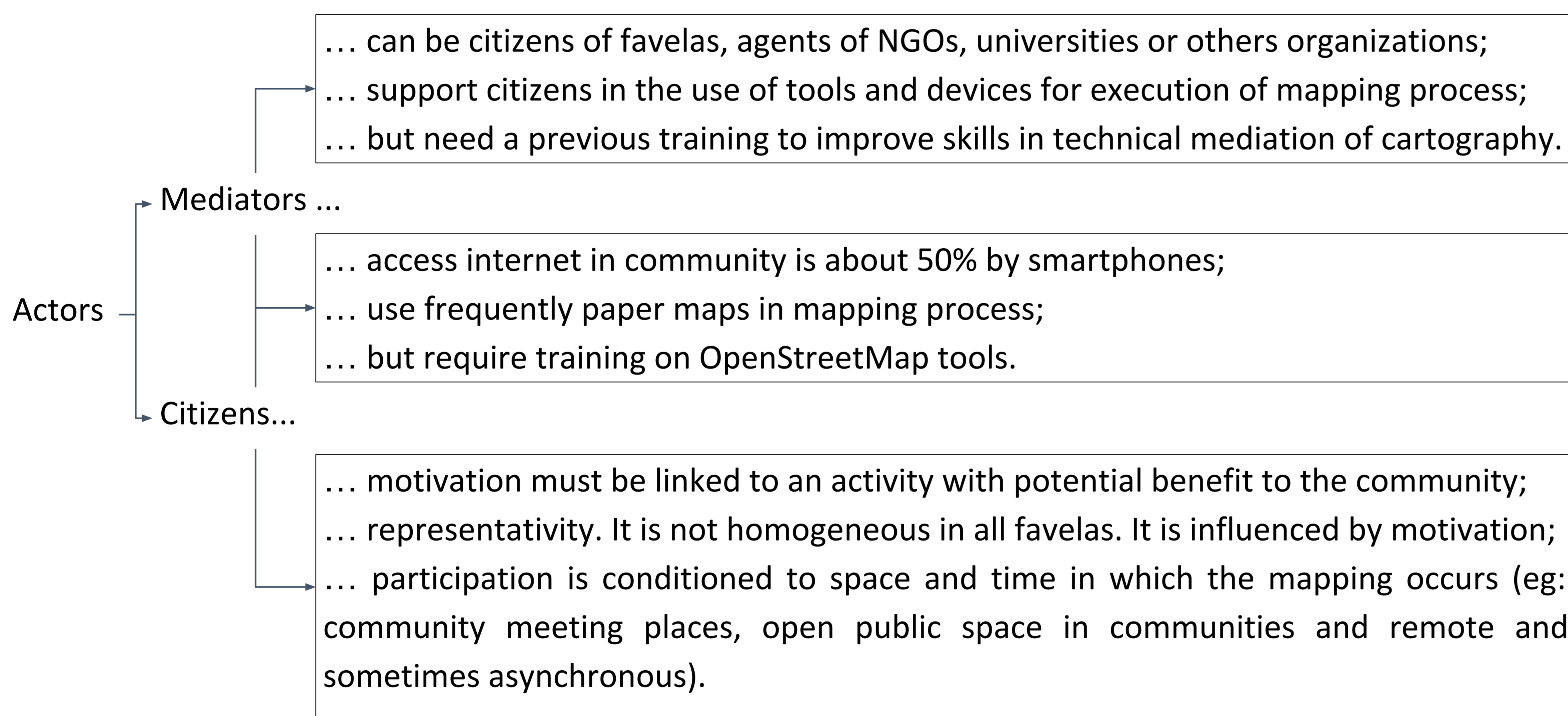
### Methods and Participants (figure 2) ->

- 32 Questionnaires and participant observation -> about 200 volunteers of TETO-Brasil;
- TETO Brasil's favelas census and participant observation -> about 15000 residents of favelas (study area).



Figure 2: Favela's resident and TETO's volunteer in mapping activity in favela (Photo by TETO Brasil).

## RESULTS AND ANALYSES



### Geographic Informations (GI) and their privacy and security:

Because the lack of addresses or generic references points it is necessary to use abstract or personal references (figure 3a); This references do not fit into OpenStreetMap proposal (figure 3b).

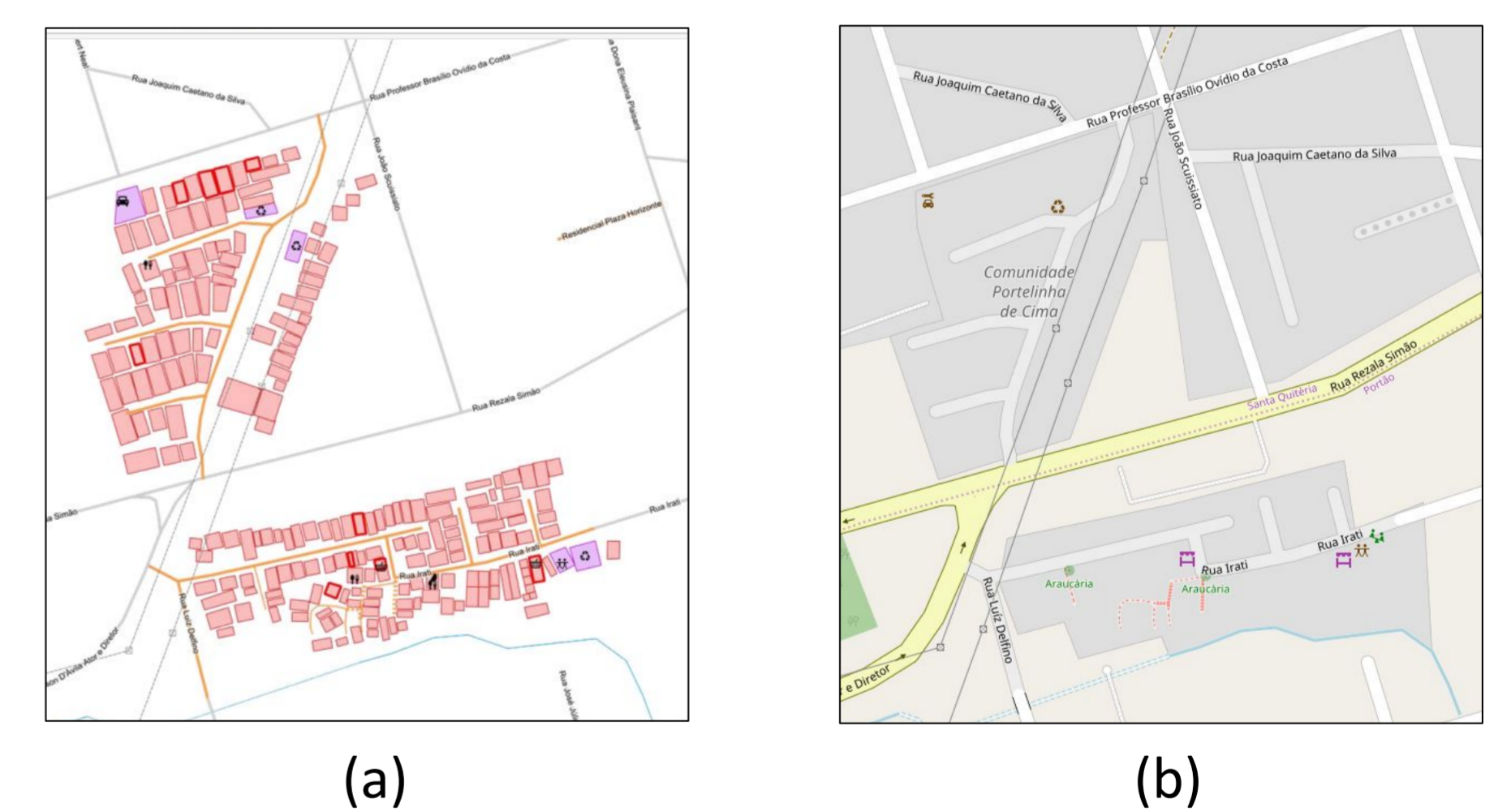


Figure 3: Portelinha Favela Map in 2017. a) GI acquired in mapping activity (by OpenStreetMap contributors and TETO Brasil); b) GI uploaded in OpenStreetMap (by OpenStreetMap contributors).

## CONCLUSION

Using OpenStreetMap to create spatial information in favelas in conjunction with locals requires a lot of care, but this project has shown that its application is possible and can reduce the cartographic invisibility of vulnerable populations.

## REFERENCES

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