

Sustainable Solutions for Urban Problems: Industrial Container Housing for Endangered Communities in Maranhao, Brazil

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Abstract : There is great discussion around populational increase in urban areas of the global south, and, consequently, the growth of inappropriate housing and the different ways humans have found to solve housing problems around the world. Sao Luís, the capital of the state of Maranhao is a good example. The 1.6 million inhabitant metropole is a colonial tropical city that shelters 22% of the population of Maranhão, brazilian state that still carries the scars of slavery in past centuries. In 2016, Brazilian Institute of Geography and Statistic found that 20% of Maranhão's inhabitants were living in houses with external walls made of non-durable materials, like recycled wood, cardboard or soil. Out of this problematic, this study aims to propose interventions not only in the physical structure of irregular housing, but also to serve as a guide to intervene in the way eco-friendly, communitarian housing is seen by extreme poor zones inside metropolitan regions around big cities in the global south. The adaptation and reuse of industrial containers from the Harbor of Itaqui for housing is also an aim of the project. The great volume of discarded industrial containers may be an opportunity to solve housing deficit in the city. That way, through field research in São Luís' neighborhoods mostly occupied by inappropriate housing, the study intends to raise ethnographical and physical values that help to shape new uses of industrial containers and recycled building materials, bringing the community into the process of shaping new-housing for local housing programs, changing the mindset of a concrete/brick model of building. The study used a general feasibility analysis of local engineers regarding strength of the locally used container for construction purposes, and also researched in-loco the current impressions of risky areas inhabitants of housing, traditional housing and the role they played as city shapers, evaluating their perceptions of what means to live and how their houses represent their personality.

Keywords : container housing, civil construction, housing deficit, participatory design, sustainability

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