

## Low-cost low-tech: participatory processes for social housing in Colombia

### Abstract

This research project is to map the existing structure of low-cost social housing delivery in Colombia and to develop an alternative model for sustainable community design through participatory processes. Despite many architect's renewed interest in 'humanitarian design,' cost constraints often exclude social housing in developing countries from design innovation, including the recent focus on sustainability. The proposed research seeks to expand the space within which architects typically formulate design research by conducting an in-depth investigation of the policy and funding vehicles that drive low-cost housing delivery, in order to renegotiate how the design process itself can challenge dominant politico-economic frameworks at play in Colombia and the Global South. Colombia currently faces an extreme housing shortage with a large population of internally-displaced persons, given a decades-long civil war between FARC and ELN guerrillas, narco-traffickers, right-wing militias and the Colombian military. Culturally, Colombian society also displays high level of sensitivity to class status, defined on a system of six 'strata.' The research team will partner with low-income housing association La Union (strata 1-2) and Colombian NGO ProMujer to introduce sustainable construction and resource management through participatory design of a 50-unit social housing community in Facatativa, Colombia. 'Low-cost low-tech' aims to demonstrate through full-scale community prototyping that high-value sustainable building is feasible at low-cost through targeted application of low-tech systems architecture, including passive solar heating and water heating, rainwater harvesting, biogas production and biological treatment of graywater.

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