



Living Informally and Sustainably

A biodigester was built by project partners for the community

GLOBAL IMPACT ARTICLE SERIES

São Paulo, Brazil, is a booming city. Growing, thriving, and leaving far too many people behind in the process. According to the [Washington Post](#), a 2013 government survey found Brazil is short over 6 million housing units, a shortage mirrored in São Paulo. A solution many urban residents consider is joining a land occupation, or “Ocupação” in Portuguese. These are settlements organized on land owned by someone other than the inhabitants.

Ocupação Anchieta started four years ago in Grajaú, a city district on the southern periphery of São Paulo, on land owned by the nonprofit organization Instituto Anchieta Grajaú (IAG). Over 800 families now live on the land, negatively impacting the Mata Atlantica forest and natural springs on the site. Currently, IAG and the residents are collaborating on a solution that balances a right to safe housing with environmental health. As part of this ongoing process, an interdisciplinary team of University of Michigan (U-M) students and faculty is working with residents, IAG, and local architectural and engineering firms to create an environmentally and socially sustainable community.

The Ocupação Anchieta Avança! project team was awarded \$5,000 in seed funding from the first round of the Dow Distinguished Awards competition, which supported work during the summer of 2017. The team also received a \$35,000 large grant in the second round of the Dow Distinguished Awards competition. The additional funds will support the development of civic and environmental infrastructure including housing, landscape, and a biodigester waste management system that can be replicated by the residents. The team will also develop a communication strategy to disseminate the intervention plans and the lessons learned.

A WICKED PROBLEM

Tensions between environmental protection and housing rights of marginalized groups are one of the world’s most complex sustainability challenges. In response to housing scarcity, groups often settle on the urban periphery, encroaching on sensitive ecological areas. The case of Ocupação Anchieta represents an opportunity to address this challenge by creating more sustainable land settlement practices.

In 2017, the U-M team planned an implementation strategy for a proposal they developed with the community as part of an interdisciplinary urban planning capstone and architecture studio course, with travel to Brazil supported by the Taubman College of Architecture and Urban Planning and the U-M International Institute. The implementation plan was also part of the seed-grant phase of their Dow Distinguished Award project and built off the proposal to help Ocupação Anchieta residents and IAG manage the land use conflict.



The team's proposal balanced resident needs with ecological health and stewardship and was submitted to the Ford College Community Challenge, winning \$25,000 in additional project funding.

With the Ford funding and the second round of Dow funding, the team plans to put their strategy into action. In the coming months, they will work with local residents to build housing prototypes with sewage biodigesters and create cultural and recreational spaces in the Civic Center.

COMMUNICATION IS KEY

The team is working closely with both the landowner and the community and communication amongst all parties has been essential. Collaborating within the context of the landowner-occupier relationship has been a challenge, but also the "best part of the project," says Ashish Bhandari, a graduate architecture student working on the project. Balancing the needs of multiple stakeholder groups with differing visions for the land is one of the project's greatest successes. Information sharing and collaboration amongst partners has progressed as team members made site visits, held collaborative design meetings, and got to know the stakeholders. The long-distance aspect of the project—Ann Arbor to São Paulo—adds to the challenge of keeping information flowing and adapting to changing on-site conditions.

Developing the communication tools and strategies to navigate this difficulty has been a valuable experience, according to the team. They have learned to listen to what stakeholders are saying and set aside personal visions and assumptions to effectively balance each party's vision and reach their shared goal: a sustainable community.

Collaboration with on-the-ground architects and the vast network that IAG brings to the table has also been essential to keeping the project moving. The local team includes architects partnering in design and implementation, a contractor, and a local engineering firm designing a biodigester-based sewage system.

RESPONSIVENESS TO COMMUNITY NEEDS

In December 2017, a massive storm destroyed the resident association's headquarters, leading the team to change their plans. Rather than building their planned Culture Shed, they decided to use the Ford funding to work with stakeholders on a new community gathering space. The team will use the Dow funding to implement the housing and sewage infrastructure prototypes. Due to precarious pre-existing site conditions, "we've had to be super agile with meeting community needs while also meeting the needs of the landowner," says Laura Devine, another graduate architecture student on the team.

BROADER IMPACTS

According to the World Health Organization, by 2050, seven out of every ten people will live in cities, and many of those people will be living in informal settlements, which are the dominant type of settlement in many of today's fastest-growing cities. And while helping the residents of Ocupação Anchieta is just a leaf in the forest of the widespread problem of rapid urbanization and land occupation, it's a start that will spur more work on the issue.

"[We have to] tackle [the problem] in small chunks," says Devine.

A major goal of this project phase is to foster transferable solutions that can be implemented in other occupations and new communities. To facilitate this, the team will address the larger issue of unsustainable informal settlements by developing a dissemination strategy that aims to generate conversations around negotiations between the right of adequate housing and the right to a safe environment. The team is also ensuring their plans and designs are easily accessible to all.

PROJECT TEAM

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- Laura Devine, TCAUP
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- Associação de Moradores Anchieta
- Architect Marina Mindlin Loeb

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- STAMPS School of Art and Design
- School of Public Health
- School for Environment and Sustainability

SUSTAINABLE DEVELOPMENT GOALS



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