Riverside Living: Environment and Health of the Amazonian Riverside Dweller

Submitted By: IFPA - Instituto Federal de Educação, Ciências e Tecnologias do Pará



Organization Profile

Organization Name: IFPA - Instituto Federal de Educação, Ciências e Tecnologias do Pará

Organization Type: University and research institution

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Practice Details

Country(ies): Brazil

City(ies): Belém

Start Year: 2023 **Ongoing:** Yes **End Year:** N/A

Main Adequate Housing Components:



Housing Thematic Areas:



Relevant SDGs:



Problem & Context

In the Brazilian Amazon, riverside communities face housing challenges due to limited access to basic sanitation and adequate infrastructure.

Although they live in close harmony with natural cycles and possess ancestral construction knowledge, these ways of life have been undervalued and replaced by standardized solutions that do not respect the local environmental and cultural context.

Furthermore, these riverside communities live in integration with agricultural and extractive activities, sustained by fishing, gardening, raising small animals, and extracting products from the forest and rivers—where housing plays a strategic role.

When implemented in the Amazon, housing policies often disregard traditional ways of life, local knowledge, and environmental specificities, resulting in inadequate housing.

The lack of integrated, participatory, and cross-sectoral policies contributes to the socio-spatial exclusion of these populations.

Solution Developed

The Ribeirizar Project aims to develop parameters to promote healthy and sustainable housing for riverside communities in the Amazon, integrating social technologies and traditional knowledge.

Through a co-creation methodology with two riverside communities in Belém (PA), sustainable and socially contextualized architectural solutions were designed, integrating social technologies for sanitation, solar energy, and rainwater harvesting.

Innovative features include: community leadership in designing solutions; appreciation of traditional riverside knowledge; integration of teaching, research, and outreach; and the use of low-carbon social technologies that connect housing, agricultural production, and environmental conservation.

Implementation

The Ribeirizar Project is currently in the development phase and working to establish partnerships to enable the construction of three experimental healthy riverside housing modules: environmental comfort, social sanitation technologies, and sustainable family production.

Actions implemented so far include participatory diagnostics, co-creation workshops, and architectural project development with strong involvement from the communities of Ilha das Onças and Porto Ceasa.

Participants include IFPA (coordination), community leaders, students, researchers, and institutional partners.

The process began in 2023 and continues through technical, institutional, and community coordination.

The project seeks financial and technical support for the construction of the modules, development and testing of participatory monitoring and evaluation tools, and the

systematization and dissemination of best practices with potential for replication in other Amazonian territories.

Enablers & Obstacles

The main facilitator of the Ribeirizar Project has been strong community engagement and the appreciation of traditional knowledge, which drive the co-creation of solutions adapted to local realities.

The involvement of IFPA strengthens the connection between teaching, research, and outreach, engaging students and professors in socially impactful actions.

Among the main obstacles faced is the lack of land regularization in riverside communities in the island region of Belém, which hinders access to public funding through official calls.

Additionally, there is limited institutional infrastructure for developing prototypes and technologies.

To overcome these barriers, the project has sought technical-scientific partnerships, submitted proposals to public calls, and expanded its engagement in interinstitutional networks to attract resources and collectively build solutions.

Results & Impact

Although still in the implementation phase, the Ribeirizar Project has already achieved important milestones, such as conducting community workshops, socio-environmental diagnostics, and developing architectural designs for three experimental modules: environmental comfort, social sanitation technologies, and sustainable production.

It involved over 60 residents and 40 students from IFPA.

The project has participated in various national and international scientific events, sharing results and receiving an award at I CONEXT (Belém, Mar/25).

In the medium to long term, it is expected that monitoring of the experimental units will generate concrete data on the thermal, sanitary, and productive performance of the adopted solutions.

These results could support public housing policies better suited to the Amazonian reality, promote low-carbon housing, boost the local economy based on family farming, and strengthen community resilience in the face of climate change and territorial inequalities.

Replication & Scale Up

The practice is highly replicable in other riverside regions and traditional communities of the Amazon and other biomes.

Its participatory methodology, based on local knowledge and low-cost social technologies, allows adaptation to different contexts.

For replication, key factors include community involvement, respect for environmental and cultural specificities, and institutional support.

Monitoring of the modules will provide data to support public policies and expand the practice's reach.

The practice can be expanded through the implementation and monitoring of the experimental modules, generating evidence to influence public policies.

Building networks of cooperation among educational institutions, communities, and government agencies will strengthen its scalability.

Systematizing the solutions will enable their reapplication in other Amazonian territories, adapting to local realities and increasing impact in vulnerable communities.

Policy Uptake

This housing practice is a new or innovative practice that is not yet adequately or fully integrated into formal policy frameworks.

It is recommended to integrate the practice into housing policies aimed at traditional territories, recognizing socio-environmental specificities, especially in the Amazon region.

It is essential to include social technologies within the scope of public funding, support participatory projects, and ease land tenure requirements in traditionally occupied areas.

Coordination with housing, sanitation, and sustainable development programs will enhance the institutional impact of the initiative.

Lessons & Takeaways

In retrospect, expanding dialogue with public managers and funding institutions from the beginning could have strengthened resource mobilization and accelerated the implementation of the experimental modules.

We also recognize the need for more effective strategies to address the lack of land regularization, which limits access to public funding calls.

Strengthening institutional and community communication is another area to improve in order to broaden reach and engagement.

Note

The original submission was received in Portuguese. An automated translation was prepared using Copilot to enable broader multilingual access.