

BAMBÚ SOCIAL 2.0

PROJECT SUMMARY

NICARAGUA

Nicaragua is one of the poorest countries in Central America. There is a great shortage of housing and the existing houses have many qualitative shortcomings. This makes that 78% of the population is homeless or lives in very poor conditions.

BAMBOO

Bamboo is a strong building material. It can be produced locally, grows extremely fast, needs few nutrients and helps prevent deforestation of the rainforest. Also, the growth prevents soil erosion and bamboo has a high CO₂ absorption.

BAMBÚ SOCIAL FOUNDATION

Since 2014, Bambú Social does research on local building materials and opportunities in Nicaragua, resulting in the design and construction of a bamboo model house on site. Their mission is to solve the housing problem in Nicaragua by sharing knowledge with the local students and craftsmen and stimulate the social acceptance of bamboo as a standard construction material.

By proving that bamboo housing is feasible, bamboo should become an appreciated construction material and be adopted by the architects and universities, who will be the engineers of the future. This will be an iterative process and will, through a process of transition, eventually meet it's higher goal: contributing to the development of Nicaragua.

BAMBÚ SOCIAL 2.0

Starting in November 2015, team Bambú Social 2.0 will contribute to the development of the housing situation in Nicaragua. Based on the knowledge and experience of the past two years we'll investigate ways to improve the design of a social bamboo house. Our aim is to get one step closer to an affordable, easy-to-build house of good quality that is adaptable to the various needs of the residents of Nicaragua.

Our project contains two main phases; the preparation phase and the execution phase. The 2 months preparation phase takes place in The Netherlands. One of the main activities in this phase is defining our assignment by gaining background knowledge, setting up a business model and writing a project plan. Fundraising is also very important and will be done by applying for funds and personal grants, set up a donation website for fans and supporters and organize a fundraising party. Also gaining (inter)national publicity by posting updates on www.bambusocial.com, facebook and gingerresearch will be a continuous task in this phase.

The execution phase in Nicaragua takes 3 months and exists of three main stages; evaluation research(1), social research(2) and technical research(3).

The first stage will be inspecting the built model house on physical conditions. Also interviews with the involved craftsmen about the building process are important in this stage. The second stage mainly exists of interviews, house visits/gatherings with the local people and design cases and workshops/brainstorm sessions with the students of UCA in Managua.

The first two stages both result in a report. Based on those reports we can conclude what the enablers and the barriers are and which aspects/components of the design of a social bamboo house could be improved in the third stage. By making multiple design options and constructing and testing them we hope to improve a part of the design.

Overall, the most important part of our project is the social implementation. By constantly sharing our findings with local craftsmen and students we hope bamboo will become an appreciated construction material and gets adopted by the local architects and students, so the local research on bamboo can keep developing.

THE TEAM

Team Bambú Social 2.0 consists of three students of the Delft University of Technology and the Leiden University in The Netherlands. Together we will work on the project from september 2015 till january 2016.

Name	Background	Occupation
Thomas Hebbink	Bachelor Architecture	Project Management
Sophie Hengeveld	Bachelor Architecture and Bachelor Psychology	Architectural design
Marie-Louise Greijmans	Bachelor Civil Engineering	Construction design

Each occupation includes certain responsibilities, although on site it is unavoidable that our personal occupation mixes and overlays with others.

Project Management	Design	Construction
Fundraising	Social research	Evaluation research
Planning	Architectural improvement	Construction improvement

STAKEHOLDERS

Juan-Carlos Gaviria Moreno --- founder of Bambú Social foundation, Netherlands

Wim Ravestijn --- educational supervisor at TU Delft, Netherlands

Henky Borgstein --- team member Bambú Social foundation, Nicaragua

Emma Grun --- professor at UCA Managua, Nicaragua

Javier Balmaseda --- planification director El Rama, Nicaragua