The Bamboo House

Post-disaster emergency housing in the Philippines

The Philippines area was severely demaged by the typhoon Haiyan. The project provies a solution to the Post-disaster emergency housing construction by utilizing abundant local materials-bamboo combined with concrete. The solution provides a low-tech, easily operable scheme for local people to construct fast, affordable and sustainable housing in the Visayas islands.

Disaster: Typhoon

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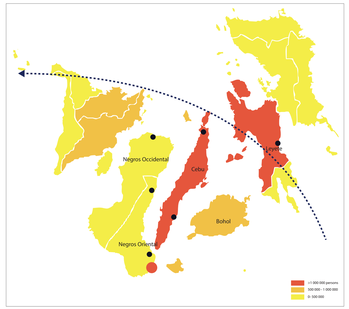
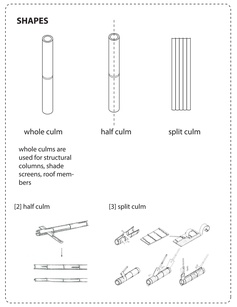


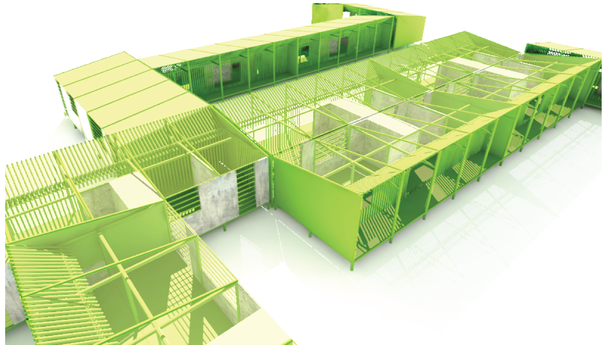
Bamboo has steadily gained popularity not only as a material to use for products, but for buildings as well. It is strong in tensile strength.

bamboo can be harvested every 3-4 years and, after going through a one-month treatment process (where newly cut bamboo trunks are soaked in preservatives to get rid of the starchiness that can make it susceptible to fire and termite infestation), treated bamboo can last for as long as 30 years.

The engineered bamboo produced by PBFI includes a wide range of composite products manufactured by binding together bamboo strips, slats, strands, particles, fibers or veneers with suitable glue.

Solution: Local materials





Construction: Assemble

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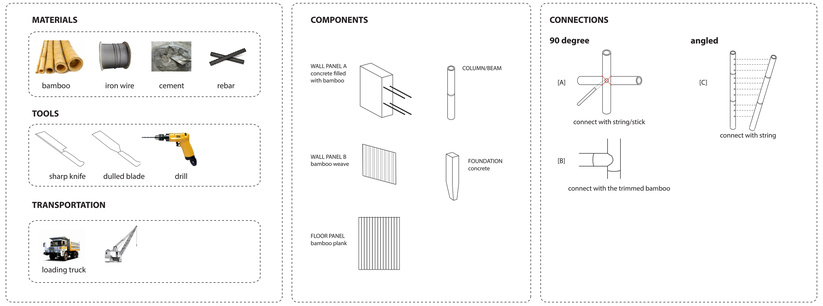
CONSTRUCTION MANUAL

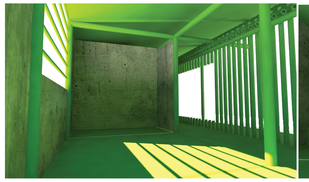
How to build a bamboo concrete house

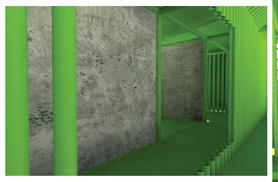
Bamboos are abundant local materials. The project takes advantage of this local source and create a design that is lightweight, aesthetic and respectful of local culture and tradition.

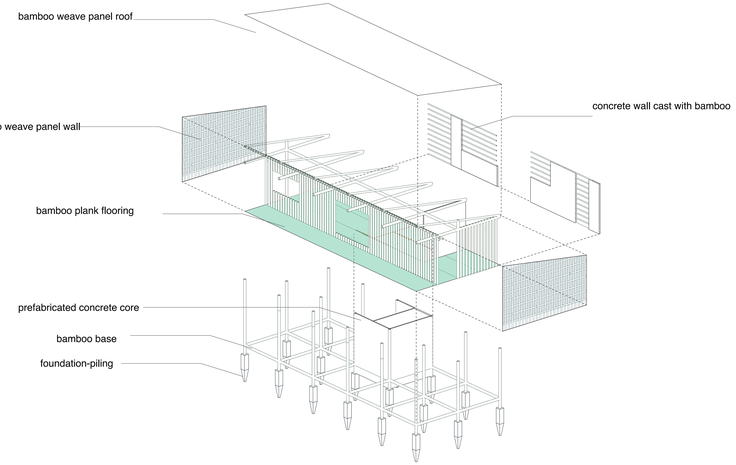
Cutting bamboo could be operated by unskilled/semiskilled local people. Using the knives, cutting could be done by one single labor and it is rela-



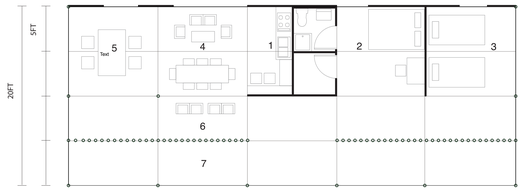
Air circulation, lighting







Typical Plan



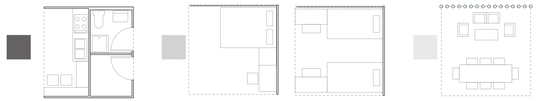
1 service core
2 bedroom
3 communal bedroom
4 dining and living
5 communal
6 communal hallway
7 podium

Growth: Phases

The units could be aggregated and later grow into a larger complex to create a community. The aggregation be based on the grid system, and the program could be rearranged absed on the decomposed units.
The aggregation plan is based on 10′ by 10′ grid system.

Decomposed units

The unit could further be decomposed based on the grid of 10′ x 10′ according to program, openness



core

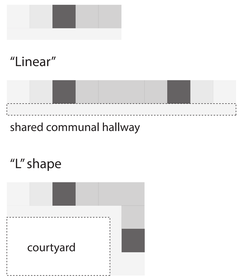
service area
restroom, kitchen and storage
prefabricated and be installed in the house

individual sleeping unit

sleeping unit
contains double bed
room and single beds
room
relatively open

living

communal area
open
could be shared be aggregated and shared by multiple units

closeness → openness

Unit aggregation