HABITAT FOR HUMANITY

Interlocking Bricks

Beneficiary country: Batam, Indonesia

Habitat for Humanity's interlocking bricks at a work site ready to be used.

Conscientious housing projects have to perpetually choose between expensive eco-friendly building materials and existing low-cost options that dominate the market. Habitat For Humanity Singapore's team hopes to set up a research centre to contribute to low-cost, eco-friendly construction and to implement a financially self-sustaining model that provides employment to the local population.

Organisation Bio

Habitat for Humanity (HFH) is a non-profit Christian housing organisation with a mission to eliminate poverty housing worldwide by building simple, decent houses with the help of the homeowner families themselves and volunteers.

www.habitat.org.sg

THE THEORY/PROBLEM

Housing charities in the region are challenged by the need to choose between the more expensive high-quality, eco-friendly bricks and the cheaper but poorer quality slab-bricks in the market, often choosing the latter for its lower price. How can we reconcile eco-friendly housing initiatives with meeting the financial constraints of the beneficiaries?

THE INNOVATIVE IDEA

The team proposes to implement a financially self-sustaining model that provides employment to the local population and to develop a resource centre that continues to contribute to low-cost construction in this region and beyond.

HOW IT WORKS

A brick factory and research station will be set up. The team will begin initially by bringing in "Interlocking Brick" technology (a building method using bricks designed to lock into each other), which will use existing ideas from Habitat for Humanity's work in the Philippines for the benefit of Batam, Indonesia. Subsequently, the team will experiment with other resources such as using cow waste and mineral plastics as raw materials for building houses in the region.

STEPS TAKEN TO IMPLEMENT PROJECT

- Habitat for Humanity Singapore has entered into discussions with local partners in Indonesia;
- Habitat is also further developing existing research on design by engaging relevant specialists in Chiang Mai and Bangkok.

IMMEDIATE CHALLENGES FOR THE PROJECT

- Habitat will need to work to assure that its Indonesian counterparts buy into the idea and adopt the technology.

CHALLENGES THAT HAVE ARISEN, WHICH WERE NOT ANTICIPATED WHEN DRAFTING PROJECT PROPOSAL

- There have emerged many more variations in the technology and approaches for implementation than anticipated. For example, Chiang Mai's model is different from the model in Cambodia.

PLANS FOR ENGAGING WITH COMMUNITY

- Habitat will engage its house partners on the ground once actual construction work begins towards the end of 2010.

COMMUNITY RESPONSE TO THE PROJECT

- Habitat's Indonesian counterparts believe that these new developments will enable them to build houses more efficiently and within shorter time-frames.
- The community has also provided feedback that Habitat's solution is innovative, particularly with regard to the possibility of implementing multi-storey constructions.

COMMUNITY CONTRIBUTION OR PARTICIPATION IN PROJECT

- Local partners suggested another building methodology for Habitat to look into, namely, the Integrated-Block method (which are blocks built around steel reinforcement rods), which Habitat will study for feasibility of implementation;
- Local partners are also revising their target upwards for the number of houses to be built.

Habitat volunteer Paul Gurda working on a wall built with inter-locking bricks. Paul, an architect from the USA, is volunteering for Habitat for Humanity Singapore as a consultant to the Lien i3 Challenge project

Yong Teck Meng, National Director of Habitat for Humanity Singapore, at a house he is building for KhunTanawat, a garbage collector, his wife and their teenage son.