BLOOMING BAMBOO

A modular solution for emergency and green housing

The Vietnamese Studio <u>H&P Architects</u> of Hanoi has built a prototype bamboo house designed to withstand floods up to three meters above ground. This bamboo house has been designed to solve emergency problems caused by natural phenomena such as storms, sweeping floods, landslides and other disasters that the population of Vietnam periodically faces. It is estimated that because of these phenomena, each year more than 500 families are forced to flee their homes, creating problems of poverty for the people and for the affected areas.

Constructions in bamboo are one of the green buildings methodologies recovering strongly in the countries where this plant grows naturally. The largest growth rate of bamboo ensures that it can be easily used and replanted for future use, without harming environmental balance. Thanks to its high strength and elasticity, bamboo is again considered as a green building material for the future.

The prototype house called *Blooming Bamboo* and built by Vietnamese architects, has been designed as a low-cost solution, using local and environmentally friendly materials for people who live in those areas particularly affected by natural disasters and floods.

Combining traditional architectural characteristics, the house is developed with four rooms on two floors, it measures about 6 feet by 6 feet, it is suspended on stilts to allow water to ordinarily flow under without compromising stability. The materials are bamboo canes, woven panels, coconut fiber, palm leaves, ropes and bolts. The structure is solid enough to float in case of floods. It has an open roof which consists in modular panels to ensure air circulation.

The average cost of the house is 2.000 USD and the users can build it by themselves in 25 days. Besides, the house can be mass produced with modules of broader construction plans.

Designed according to effectiveness, modernity and elegance criteria, to solve problems of great social and environmental impact in Vietnam, the *Blooming Bamboo* house is a solution that can be adopted in many countries for ecological construction plans or for territories which are exposed to natural emergencies. In fact Bamboo grows in its different varieties in several countries with different climates, from Asia to Northern Australia, India and the Himalayas, in sub-Saharan Africa and in the Americas from the south of United States to Argentina and Chile









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