Linking reconstruction and development through Local Building Cultures: the case of Haiti Reparh project

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Born from the « Pisé » cultural heritage of the Dauphiné region

Castels, farms and barns
CRATERRE - ENSAG

Our status
CRAterre, an NGO
ENSAG, a university body with
• a research laboratory
• a post graduate program
• a UNESCO Chair

Our mission
• Improve living conditions and fighting poverty
• Better use/manage natural resources
• Value cultural diversity and valorize heritage
• Contribute to sustainable development goals and adaptation to climate change

International recognition
World leading organisation in the knowledge management and use of earth as building material...

3 programmes/axes
• Cultural Heritage
• Materials and Environment
• Habitat
Mayotte

Improving habitat conditions

Habitat and Building Cultures
Earthquake of Port-au-Prince, January 2010

A major disaster in the capital city of a fragile country: huge human loss and impact on building, infrastructures, economy, etc.

Work outside of the capital in affected areas
➢ **Scientific support to reconstruction** of disaster resistant housing in Haiti through local building cultures approach, its characterisation and improvement

➢ **Support to local actors and stakeholders** in charge of (re)-construction in their technical and méthodological choices

➢ **Articulation of scientific and non-academic knowledge** + scientific validation of technical options using local matériel with the view of **dissemination** and expanding use

➢ **Support to** the developpement of a **sustainable integrated reconstruction strategy** through the **reinforcement of local capacities**

**OBJECTIVES OF REPARH**
METHODOLOGY

Field projects (PADE D, PAPDA, etc.)

Agroforestry

Architecture

Engineering

Research project
February 2010: Technical assessment

Strengths:
• timber-framed structure avoid the collapse of the roof over the head of the people living in
• Light-weight roofing
• The in-fill system do not collapse in one piece but in many small parts avoiding severe injured

Weaknesses:
• Lack of proper bonding in the stone masonry wall
• Lack of timber ring-beam within the stone masonry to limit its collapse
• The moisture is rotting the base of the timber pole
• Windows openings in the corner of the construction
« Habitat » assessment: technical, architectural, social, economy + organisation modes, production and living + local knowledge, beliefs and values
Core house:
1 room + terrasse = 22 m²

April 2010: architecurale and technical proposal

Example of extension:
Addition of one bedroom + gallery
SOCIAL ORGANISATION

• Families and « kombite »:
  – Material supply and transport
  – Coffee and meal on site
  – Support to boss on site
Prototype, demonstration and finetuning in September 2010, the start of first operational phase of 400 houses with Kombit!
Test on shaking table: Haïti «300%»
Engineers and building technicians of PADED and EdM joined forces to establish a pole of expertise to train, build and transmit knowledge and know-how.

ATPROCOM: Association des Techniciens Professionnels en Construction Moderne
Supported by Entrepreneurs du Monde
7,000 housing units, More than 300 builders, and the process continue
Thank you for your attention!