



Philippe Garnier, Head of Habitat Programme, CRAterre-ENSAG

International Centre for Earth Construction
National School of Architecture of Grenoble (France)


BUILDING CULTURES & RESILIENCE



Global Platform
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We value ...

- Dust and mud
 - Fragile and vulnerable material
 - Traditions (as living process)
 - And above all...
 - People and knowledge
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- These often come together and was still seen, in the recent time, as hopeless situation that can only be saved by external high-technology and international standards...

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- However, the « conventional » approach is more and more criticised as it does not give sustainable solutions... for the vast majority !
 - Often after reconstruction people are left with products that they cannot duplicate and afford, which rarely comply with their needs and capacities and most of the money spent run immediatly out of the affected communities!

It is easy to criticise but what we can do ?

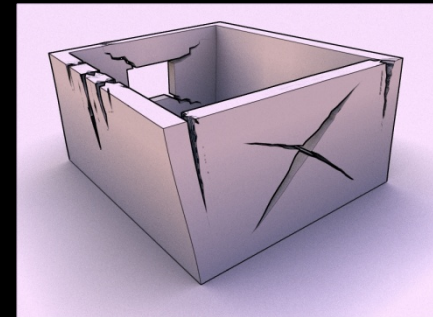
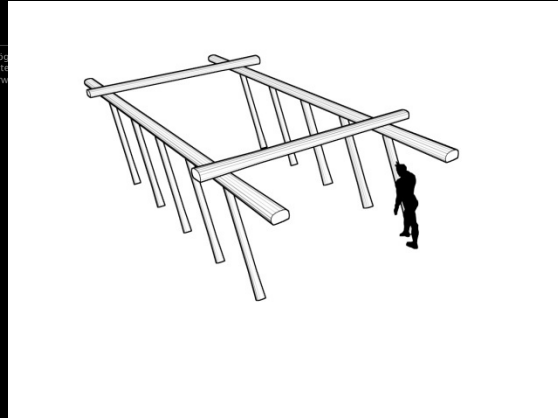
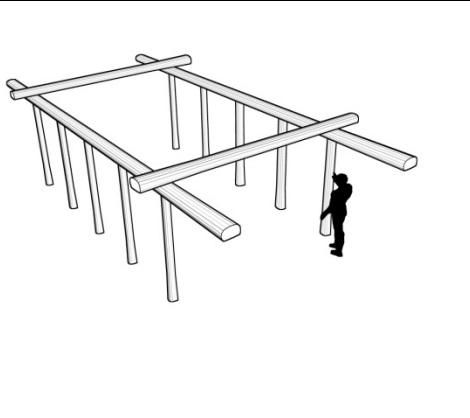
- It is true that people themselves see disasters, a part from its dramatic aspects, as a mean to reach the western world and mirage and very few would accept project that would somehow put them back into their past
- It is true that donors are putting very high pressure to NGO and government to deliver to show that they are efficient in their role
- It is true that trying to answer complex situation require time, knowledge and money as well as that can be unacceptable to emergency situation
- But it is also true that innovative projects have shown that it is possible to do the things differently and efficiently!
- Here are few representatives examples...

Kachmir, Pakistan

Examples of good practices and traditional knowledge

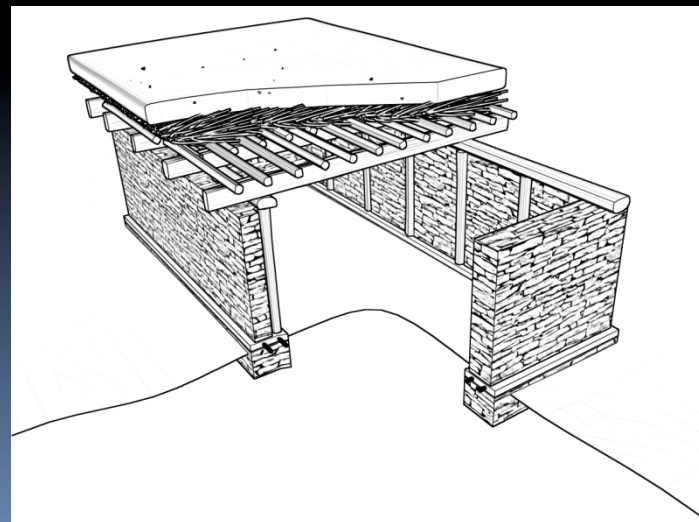


Modeling



Conventional wall behaviour

« ductility » of traditional wooden structure



How the traditional structures work under sollicitation?



Prototype phase



Rebuilding after the disaster: an earth building prototype in Bam (Iran)

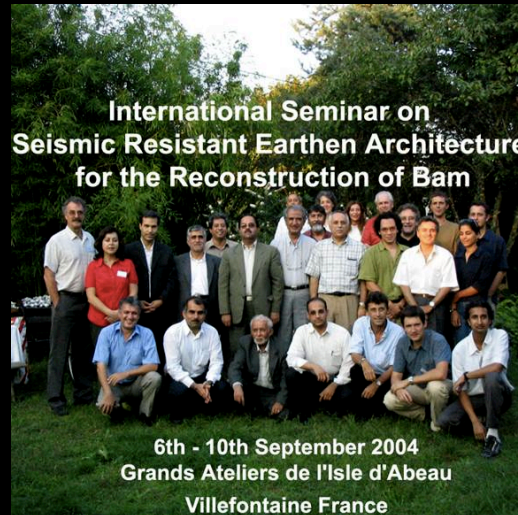


The architectural choice is based on a modular housing of 100m² using adobe and inspired by the traditional typology with the free possibility to develop the proposal without cutting any trees on the plot, palme trees being the main source of revenue for people. Cost and techniques are adapted to local situation to facilitate the replication of the building by local artisans and maximising the socio-economic impact of the Aid.

From Bam to Ardekan: from reconstruction community-based disaster risk reduction

Informer documenter les cultures constructives en zones d'aléas

Comprendre les raisons d'une telle catastrophe



Travailler à la réduction de la vulnérabilité du patrimoine vernaculaire grâce à l'implication des communautés et



Restoration of Tabayi house

Ardakan historic centre
Iran



July 2010

European Community / CRAterre-ENGAS / Hemyeran / Ardakan Municipality / Ardakan District
Towards Community based natural disaster risk reduction in IRAN

Repairing a damaged wall base

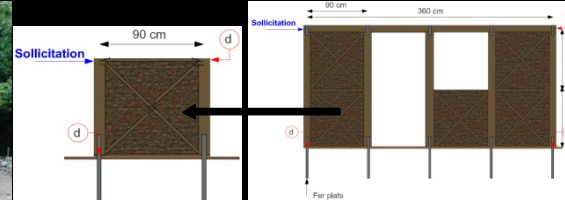
Why are wall bases eroding?
The wall bases erode when they become humid. Many sources of humidity can affect a wall base, including capillary rise, a leaking pipe, the covering of the joints with a waterproof layer, or the infiltration of water from a damaged roof. The process accelerates when the capillary movements are charged with salts.

How to proceed?
- Identify the source of humidity
- Block the humidity infiltration (in this case, the roof was repaired, the cement grout removed)
- Remove all the soil which has led to subsidence
- Insert a capillary barrier before rebuilding the mud-wall

Technical difficulties
The main difficulty is to identify the various factors which led to the wall deterioration, to make sure they are eliminated before the wall base is reconstructed.
Another difficulty is to avoid the collapse of the wall. Working in small sections and propping the wall can be necessary.

1. Remove all the loose soil from the soil base if the damaged part is very wide and deep, proceed in small sections at a time.
2. After allowing the wall to dry for a day, dig 20 cm below the ground floor level to prepare for the construction of the foundation.
3. Prepare a soil/lime mixture and allow to mature before proceeding further.
4. Four the soil-lime mixture and allow to mature before proceeding further.
5. Create a moisture barrier on top of the foundation with cement or ceramic tile, burnt bricks or any other material which prevents humidity movements.
6. Reconstruct the wall with mud bricks without reaching the top level. Allow to dry and settle for at least a day before closing the gap at the top.

Port-au-Prince, Haiti



PLATEFORME D'ARCHITECTURE ET DE CONSTRUCTION DURABLE
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ENSEIGNEMENT DE LA CONSTRUCTION

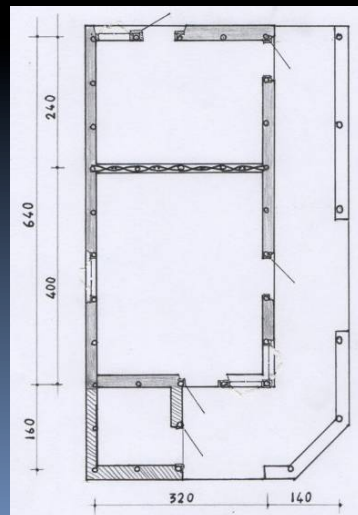
Section S2 - B

STRUCTURE PARA SISMIQUE ET PARA CYCLONIQUE

Mur à ossature en bois
Remplissage en
Clissage - Brique de Terre Moulée - Pierre

MANUEL TECHNIQUE

NEZÉBOUR
C/Alers - B/1046



Conclusions and lessons learnt

- Cultural heritage and traditional knowledge are important assets
- Open your eyes and your mind to see not only the vulnerabilities but also the assets of each territory (natural resources and human ones)
- Be demonstrative and professional to show good examples and to make sure that ownership is obtained at local level
- Count on mutual knowledge availability and development
- Be flexible and open in project development to abandon first glance good ideas and incorporate new ideas coming from field experiences



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Chaire UNESCO
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d'
de école nationale
supérieure
architecture
grenoble

craterre.pgarnier@club-internet.fr

www.craterre.org

www.grenoble.archi.fr

THANK YOU



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