Emergency Short Term Shelters in Pakistan

On the 8th of October 2005, an earthquake destroyed 600,000 houses in 4,000 villages of Pakistan Administered Kashmir and North West Frontier Province (NWFP).

As an emergency response, World Wide Fund for Nature – Pakistan In collaboration with the Emergency Architects, UN-HABITAT built culturally and environmentally friendly short term shelters in Machiara, Kashmir and Siran, Palas, Pattan Valleys in NWFP. The project was funded by the UNDP.

1,782 earthquake resistant houses, each comprising of a room for living and a covered shelter to keep livestock were constructed. The average floor dimensions of the shelter are 15ft in length and 11ft 6in in width. Locally available materials and technology was used. Timber from destroyed houses was used. The lower courses of the walls of these shelters were built from polypropylene sacks filled with soil and bound with 14g wire to the wall plate for wind resistance. For lightness and insulation, the upper courses were built with crop wastes, straw or pine needles. The roof was corrugated iron sheeting, insulated internally the same way as the upper walls and suspended from strings fixed between the timber ridge and the wall plates. The shelters have easily withstood the winter and severe monsoon rains and remain habitable for at least a few years.

UN-HABITAT provided the polypropylene sacks, the roof materials and toolkits at an average cost of US$ 360 per shelter. This is the same price as a tent that has a much shorter lifespan would cost. The shelter design has not only proven to be popular but durable in the harsh mountain conditions.

The design can be easily adapted for use in similar geographical settings in post disaster or post conflict situations, and take 15 person days to construct.

For details:

http://hq.unhabitat.org/content.asp?cid=4920&catid=59&typeid=13&subMenuId=0

In Peru another technology called - Quincha building technology was used to make earthquake resistant houses by Practical action.

For details:

http://practicalaction.org/?id=earthquake_housing