

Reconstruction Realities

Kashmir EQ 2005

Ghazala Naeem, Pakistan

Earthquake 2005, Pakistan

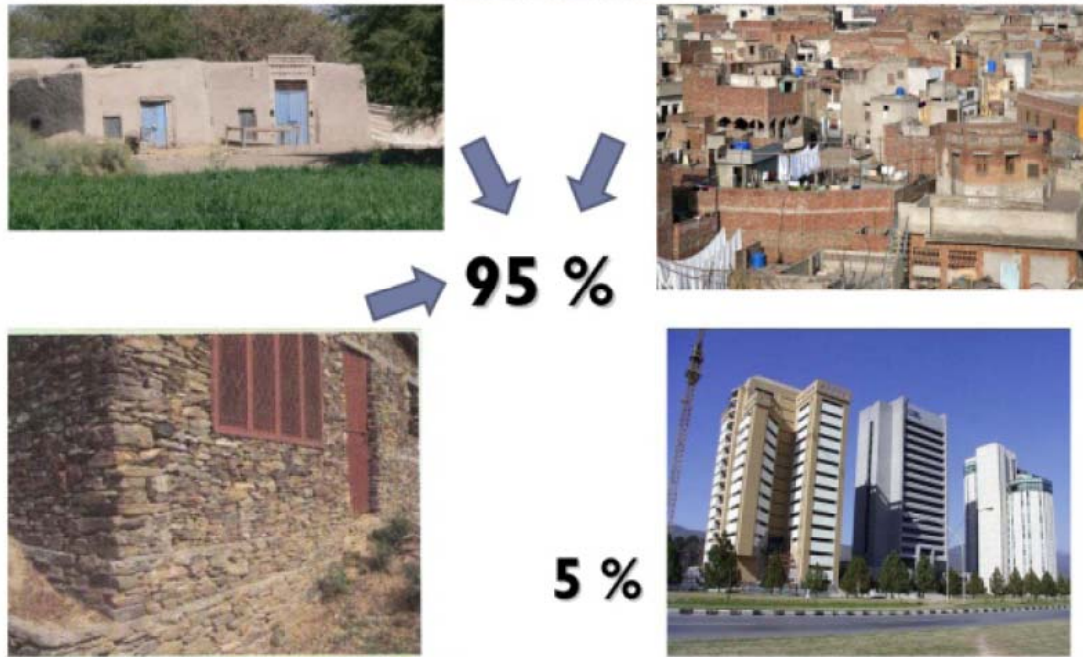
“Earthquakes do not kill people, it is the unsafe buildings which do”

- ▶ Highly fragile built environment when shaken by the M 7.6 EQ,
 - ▶ Devastated 30,000 square kilometers of the area.
 - ▶ Killed more than 73,000 people including 18,000 school children.
 - ▶ About 600,000 families were made homeless
 - ▶ Affecting livelihood and infrastructure in nine districts



Above: Aerial view of devastation caused by EQ 2005- Balakot City, KPK

Built Environment- Current Scenario



▶ ³ Source: Built Env. Research Study , Prof Sarosh Lodi, NED University Karachi

Reconstruction Target

- ▶ 600,000 houses, 6298 educational facilities ,796 health units
- ▶ 6440 km of road network ,50-70 % of the infrastructure
- ▶ **Challenge**
 - ▶ **Who & How**
 - ▶ **No Institutional Arrangement**
- ▶ **Response**
 - ▶ **Earthquake Reconstruction and Rehabilitation Authority” (ERRA) was constituted on 24th Oct 2005**

Housing- Challenges

- ▶ **Unreliable Data Base** (No Updated Documentation Record Individuals & Land)
 - ▶ Legal Aid Centers
- ▶ **Bank Account for Cash Grant**
 - ▶ Special Arrangement for Banking System
- ▶ **Male Dominant Society**
 - ▶ Established Women Committees

▶ 5

Housing- Challenges

- ▶ **Many fold increase in Construction**
 - ▶ Construction Hub in affected Districts
 - ▶ Training of Construction Workers
- ▶ **Building Design/standards**
 - ▶ Non-engineered Structures- Developing Guidelines
 - ▶ Dissemination among self builders and contractors
 - ▶ Seismic Building Code
- ▶ **Monitoring & Evaluation**
 - ▶ Field AI Teams (Assistance and Inspection Teams)
 - ▶ Grievances redress system for house ownerships, land availability and relocation issues.

▶ 6

Housing (updates & Impacts)

▶ **Updates**

- ▶ Progress so far 92 %
- ▶ Over 250,000 trained human resources for seismically safe non-engineered construction.

▶ **Social Impact:**

- ▶ Promotion of safer reconstruction methods and new technologies
- ▶ Established Culture of Compliance
- ▶ Enhanced level of confidence in reconstructed houses. During a survey in 2008; 88 % consider their new house safer.

▶ 7

Housing with Owner Driven Approach



▶ 8

Health

- ▶ **306 health facilities** (267 were pledged by donors but later 92 facilities were dropped)
- ▶ **Challenges:**
- ▶ **Integration** of Smaller Units into Primary Health Care Centre
- ▶ **Sustainability**

*First dialysis center
at AJ& K, Abbass
Institute of medical
sciences
Muzaffarabad*



▶ 9

Health

Updates:

- ▶ 84 % progress
- ▶ very few health facilities are fully operational, primarily due to the lack of government's capacity to maintain and manage.



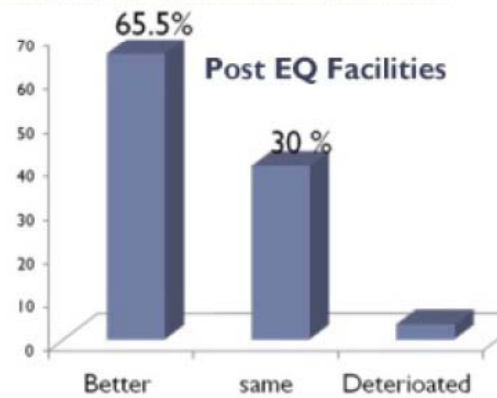
Instead of pre EQ smaller health unit an improved Rural Health Center with modern facilities of minor OT other diagnostic facilities was constructed at Chokothi-AJK

▶ 10

Health

Social Impact

- ▶ A great proportion of patients felt donor/ NGO provided health facilities are better than the facilities managed by the government.



2008 ERRR Social Impact Report 2008

▶ 11

Education

Challenges:

- ▶ Land availability
- ▶ Capacity limitations of Government



Instead of three to ten rooms Pre-EQ facility more than 20 rooms school are built with all allied facilities

▶ 12

Education

Updates

- ▶ 75 % progress
- ▶ Operation and maintenance of completed facilities is the basic challenge for concerned provincial and state government

Social Impact

- ▶ The new enrolment in primary schools has increased 90 % as compared to pre EQ enrolment.
- ▶ Community has a trust in new construction.

▶ 13

Water Supply & Sanitation

Challenges

- ▶ The scattered water sources in the rugged terrain and inadequate supply system



Updates

- ▶ 84% completed

Social Impact

Improved behavioural changes on hygiene and sanitation in the community.



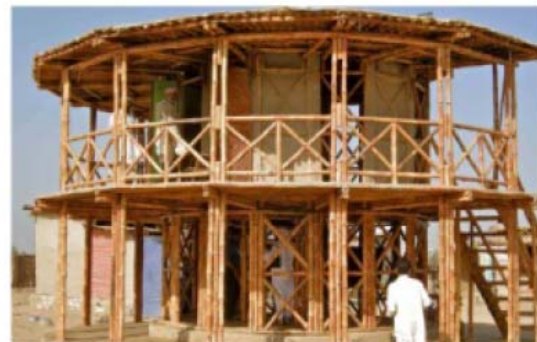
▶ 14

Way Forward

- ▶ **Sustainability** of all the “build back better” facilities by improving capacities of line departments
 - ▶ **Preparedness** for future disaster risks for optimum utilization of country’s scarce resources. NERRA
 - ▶ **Integrating** disaster risk reduction into development. (e.g. B.C. implementation)
 - ▶ **2010 and 2011 mega floods reconstruction demands**
 - ▶ Integration of lessons learnt by ERRA
 - ▶ Measures to reduce carbon footprint & climate change adaptation strategy
-

▶ 15

What we have achieved so far.....



▶ 16