TRADITIONAL KNOWLEDGE IN DISASTER RISK MANAGEMENT

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Fire in Wangduephodrang Dzong, Bhutan, 24 June, 2012

Ayutthaya, Thailand Floods, 2011

Christchurch Catholic Cathedral destroyed by Earthquake in 2010

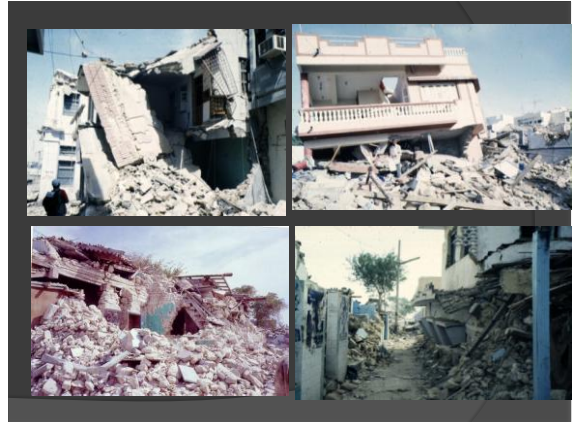## Climate Change and impact on Cultural Heritage

**Cloudburst in Leh, India
6 August 2010**

Cultural Heritage: From merely a Victim to an Asset for Disaster Risk Reduction
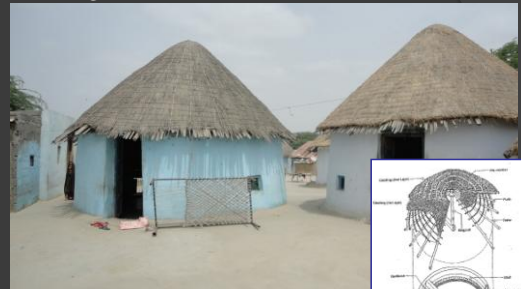
Case Studies

Slide 1

26ᵀᴴ January, 2001

GUJARAT EARTHQUAKE
Mw 7.7 Ritcher Scale

- Killed 20,083 people
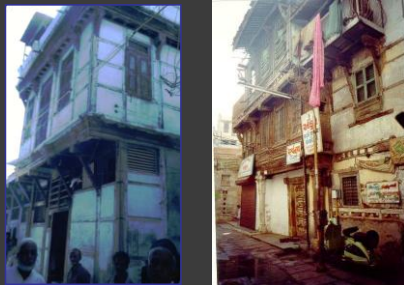- Injured 166,836 people
- Affected 16.04 Million people

Slide 2

Slide 3

The earthquake Survivors !

Slide 4

Bhungas

-Circular form good in resisting lateral forces

-Wattle and Daub constructions with bamboo as reinforcement.

Slide 5

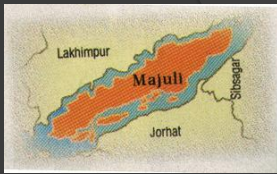### Traditional Masonry Constructions

- Wood Frames with masonry infill

Slide 6

Northern Kashmir Earthquake 2005

Risks from Floods & Soil Erosion – Cultural Landscape of Majuli, Assam, India

Traditional methods of Protection compared to construction of embankments

Link with People's Livelihoods

Vernacular Architecture

Transformation Processes – Increasing Earthquake Vulnerability

Change in the Settlement Pattern

From wooden bridges to permanent Concrete bridges
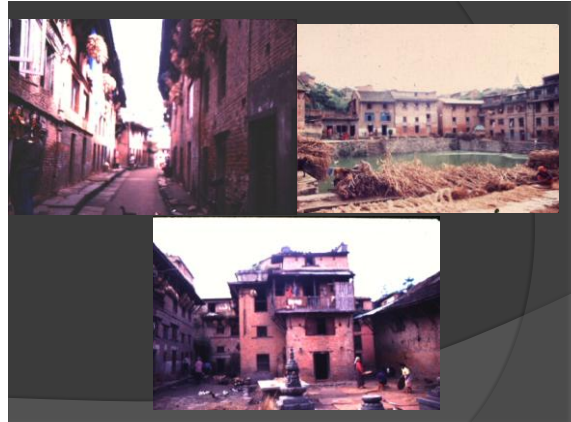

Threats to Movable Heritage Assets

Fighting or Living with Risks?

Need for Adaptation of Traditional Coping Practices

Impact of Urbanization
on Traditional Ecological Systems

BUNGAMATI VILLAGE, KATHMANDU VALLEY, NEPAL

Rituals and Traditionals Collective Community Participation and limiting growth and development through boundaries

Severe Impact on Land – the non-renewable resource

Unregulated Sprawl resulting in loss of landscapes and farmland - Issue of sustainability

Loss of Traditional Knowledge Systems is increasing vulnerability of communities to Disasters

- Loss of Local Skills / human resources
- Increased dependence due to lesser use of locally available resources
- Loss of assets for sustainable livelihoods such as land
- Economic Un-affordability for the marginalized
- Climatic Unsuitability – More energy intensive

Harnessing potential of cultural heritage for Emergency Preparedness and Response

4

Utilizing Traditional Water Systems for Emergency Supplies

Utilizing Traditional Open Spaces for Emergency Refuge

Historic City of Patan, Kathmandu Valley

Utilizing Traditional Management Systems For Emergency Preparedness & Response
social networks, religious institutions etc.

World Heritage of Shirakawa-Gu Villages

Cultural Considerations Post Disaster Recovery

Abandoned Relocated Villages following Earthquake in Gujarat, India

Lack of Cultural Considerations in the Design and Location of Villages

Traditional Village   **Relocated Village**

Loss of Traditional Systems…

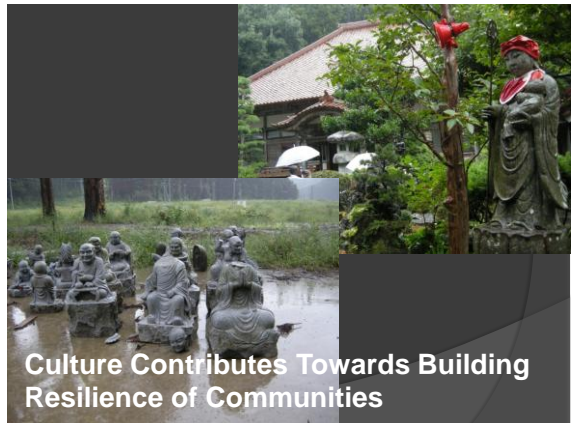Culture Sensitive Reconstruction

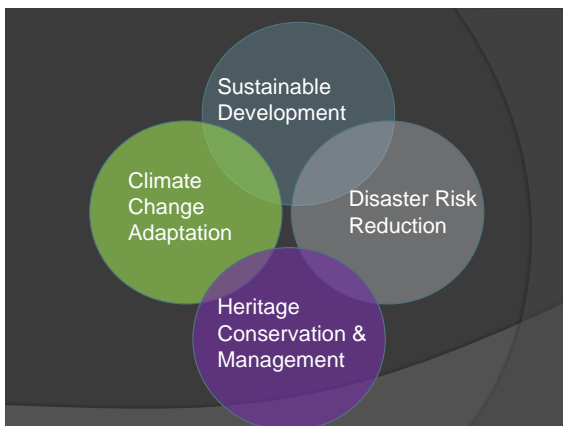Building on people's ability to adapt and bring back cultural identity

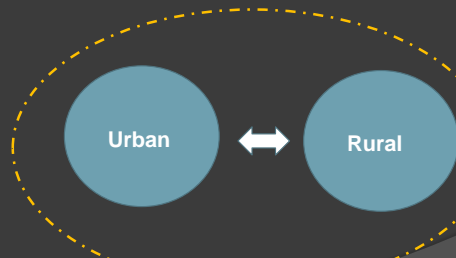Eastern Japan Tohoku Earthquake and Tsunami
March 11, 2011

8 Months Later

Culture Contributes Towards Building Resilience of Communities

Sustainable Development

Climate Change Adaptation

Disaster Risk Reduction

Heritage Conservation & Management

Need a Territorial Perspective for Heritage Protection

Urban ⟷ Rural

Looking for new approaches, tools and methodologies !
Learning from traditional knowledge systems

Coordination between Stakeholders: A Challenge