



Disasters, Disaster Risk Management (DRM) and the Importance of Cultural Heritage in DRM

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ICOMOS – International Council on Monuments & Sites

- **Global NGO**
- **Network of experts:** including architects, historians, archaeologists, art historians, geographers, anthropologists, engineers, city/town planners et al.
- **Conservation Focus:** conservation/protection of cultural heritage: historic buildings, historic cities, cultural landscapes, archaeological sites
- **Scientific technique and practices:** dedicated to promoting the application of theory, methodology, and scientific techniques to conservation of heritage.
- **Advisory Body** of the World Heritage Committee for the Implementation of the World Heritage Convention of UNESCO
- **Volunteer Organization**

ICOMOS facts and figures:

11,000 Members
95 National Committees
27 International Scientific Committees



ICOMOS-ICORP (International Committee on Risk Preparedness)

Protecting Heritage from Disasters

- Prevention/Mitigation
- Preparedness
- Response
- Recovery

Through...

- Creating Awareness
- Capacity Building
- Training
- Site projects
- Research
- Advocacy
- Disaster Response



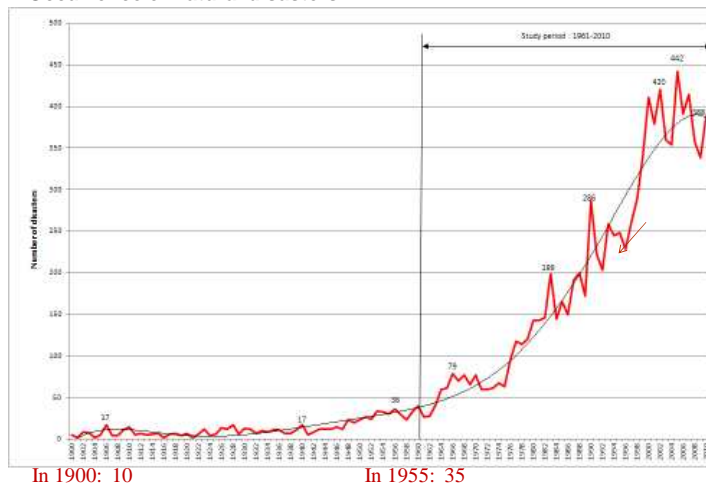
Overview – *Disasters and the Need to Protect Cultural Heritage*

- The Impact of Disasters
- What is Cultural Heritage?
- Benefits of Cultural Heritage & Traditional Knowledge in DRM



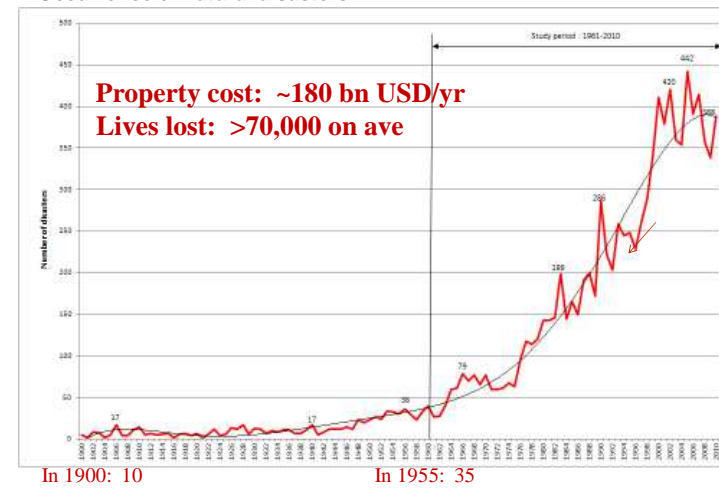
The Impact of Disasters

Occurrence of natural disasters



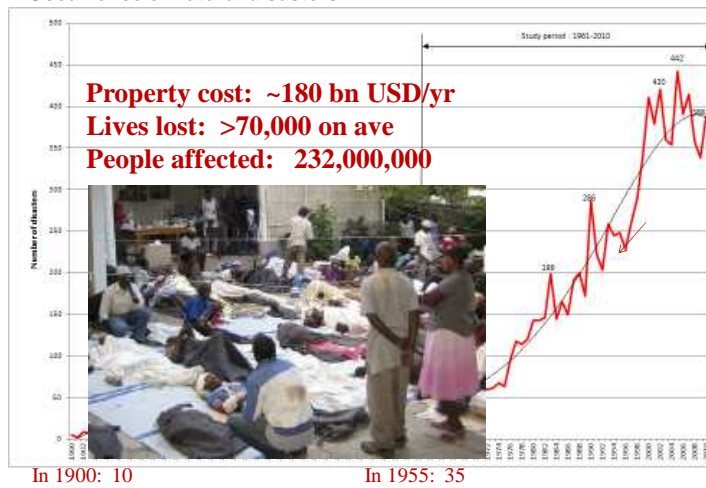
The Impact of Disasters

Occurrence of natural disasters



The Impact of Disasters

Occurrence of natural disasters



Continuing to Lose Cultural Heritage As Well...

Natural Disasters



Earthquakes



Volcanoes



Floods



Avalanches/Landslides

Continuing to Lose Cultural Heritage

Natural Disasters



Fire



Tsunamis



Hurricanes



Wildfires

Continuing to Lose Cultural Heritage

Post Disasters



Post Disaster



Premature Demolition

Continuing to Lose Cultural Heritage

Losses to Cultural Heritage

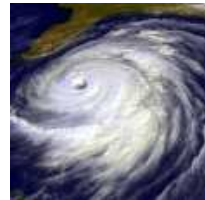
- Challenging to
 - obtain data
 - quantify losses
- However, we are losing our heritage
 - Large scale events
 - Single building/site events



Continuing to Lose Cultural Heritage

What Lies Ahead....

- Climate induced disasters:
 - tornadoes
 - hurricanes
 - typhoons
 - heavy rains
 - high winds
 - wildfires
 - avalanches
 - drought
- Changes in climate – greater frequency and intensity of events
- Trending: increasing loss to life, property and our heritage



What is Cultural Heritage??

What is Cultural Heritage?

Tangible

Intangible



Immoveable

Buildings
Monuments
Archaeological sites



Moveable

Paintings
Sculptures
Manuscripts



Natural

Land
Underwater
Space



Traditions

Oral traditions
Performing arts
Rituals

Cultural heritage is the legacy of physical artifacts and intangible attributes of a group or society that are inherited from past generations, maintained in the present and bestowed for the benefit of future generations.

https://en.wikipedia.org/wiki/Cultural_heritage

What is Cultural Heritage?

Places of Worship



St Peter's Basilica, Italy



Israel – Holy



Mosque at Cordoba, Spain



What is Cultural Heritage?

Tangible cultural heritage: immovable



What is Cultural Heritage?



What is Cultural Heritage?

Temples



Mahabodhi Temple Complex
Bodhi Gaya



Johkang Temple,
Lhasa, Tibet



Temple of the Six Banyan Trees
Guangzhou, China (built in 550 AD)

What is Cultural Heritage?

Temples



Reflection pool at Angkor Wat,
Cambodia

What is Cultural Heritage?

Places of Worship



Mecca, Saudi Arabia

What is Cultural Heritage?

Places of Worship



Mecca, Saudi Arabia



Tiger's Nest,
Bhutan



Amarbayasgalant
Monastery, Mongolia

What is Cultural Heritage?



Kapelbruck Bridge, Switzerland
Built 1300s

What is Cultural Heritage?



<http://imgur.com/HEJ0G.jpg>

U Bein Bridge, Myanmar
built around 1850
oldest and longest teakwood bridge in the world

What is Cultural Heritage?



Cutty Sark Ship
Built 1800s

What is Cultural Heritage?



Namdaemun Gate, South Korea
Built 1400s

What is Cultural Heritage?

Stupas



Gobi Desert Mongolia



108 Bhutanese Stupas at Dochula Pass
3150meters above sea level,



What is Cultural Heritage?

Monuments/Sites



England – Stonehenge



What is Cultural Heritage?

Monuments/Sites

Egypt– Giza Plateau

- Pyramids
- Sphinx
- Temples
- Tombs



What is Cultural Heritage?

Monuments/Sites/Caves

Egypt - ABU SIMBEL



Janta & Allura, India

What is Cultural Heritage?

Mountains/Natural Landscapes



Mt. Kailash, Tibet

What is Cultural Heritage?

Natural heritage



What is Cultural Heritage?

Water



Ganges River, India



What is Cultural Heritage?

Underwater



What is Cultural Heritage?



What is Cultural Heritage?



What is Cultural Heritage?



What is Cultural Heritage?



What is Cultural Heritage?

Intangible cultural heritage (oral traditions, performing arts, rituals)



Songs, music, drama, skills, crafts, etc.

What is Cultural Heritage?

Space Heritage



Why is Heritage Important??

What is Cultural Heritage?



Sacred Sites - a place for....

- developing spirituality
- seeking higher knowledge, wisdom
- physical, emotional, and spiritual healing
- ceremonies
- connecting with our past and future

What is Cultural Heritage?



Significant Roles In A Community

- Meeting places
- Physical anchor within a community
- A sense of local and regional identity
- A sense of belonging
- Maintain community pride



Significance of Cultural Heritage - Community 'Ownership'

Bibliotheca Alexandrina, Egypt



"Hands Around the Library" Protecting Egypt's Treasured Books, Jan 2011.

Significance of Cultural Heritage - Community 'Ownership'



- Eurasia Review, (Nov 1, 2015)

The Need to Protect Our Cultural Heritage

Sendai Framework :: DRM :: Cultural Heritage



- Traditional Knowledge:
 - Safer structures
 - Safer sites
- Engaging communities:
 - Awareness/Prevention
 - Response/Recovery
- Areas of Refuge (during/after)
- Limits economic impact
- Increase resiliency

Help Inform Safer Structures

Traditional Knowledge

Resisting Tsunamis



Photo from January 4, 2005, the Rahmatullah Lampuuk Mosque stands intact after the 2004 tsunami hit the area in Lhoknga, near Banda Aceh, Indonesia.

Mosque Built 1881.

"...at least 27 mosques in the city survived the tsunami, often the only buildings in their neighborhoods to do so..."

The National 'How Indonesian mosques survived the tsunami', Andi Jasmiko, December 23, 2014



Help Inform Safer Structures

Traditional Knowledge

Resisting Earthquakes



Traditional / Indigenous / Local Knowledge

- know-how, skills and practices developed and passed on from generation to generation
- often forming part of one's cultural/spiritual identity.
- important for subsistence and survival
- generally based on accumulations of empirical observation and interaction with the environment.

Traditional Knowledge, DRM and CH

- local building techniques, materials, awareness
- preventing/mitigating/responding to/recovering from disasters.
- proven effective over centuries in mitigating disasters

Help Inform Safer Structures *Traditional Knowledge*

Resisting Earthquakes



Haiti, 2010 Gingerbread Houses

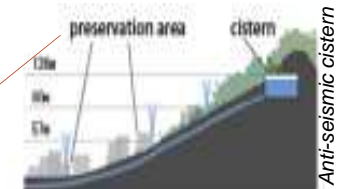


Kashmir Earthquake 2005



Help Inform Safer Structures *Traditional Knowledge*

Resisting Fires



Anti-seismic cistern



**Traditional Knowledge:
Helps Inform Safer Sites**

Help Inform Safer Sites
Traditional Knowledge



Ayutthaya, Thailand Floods, 2011

Help Inform Safer Sites

Traditional Knowledge

Traditional Hydrological System



Heritage Sites often demonstrate indigenous knowledge in planning, siting and water management developed through sensitive understanding of local context that have contributed towards reducing disaster risks.

- Ayutthaya - laid out according to a systematic and rigid city planning grid
- The strategy took maximum advantage of the city's position in the midst of three rivers
- Consisted of roads, canals, and moats around all the principal structures.
- This water management was technologically advanced and unique.

Painting by [Johannes Vingboons](#) of Ayutthaya, c. 1665

Help Inform Safer Sites

Traditional Knowledge

Traditional Hydrological System



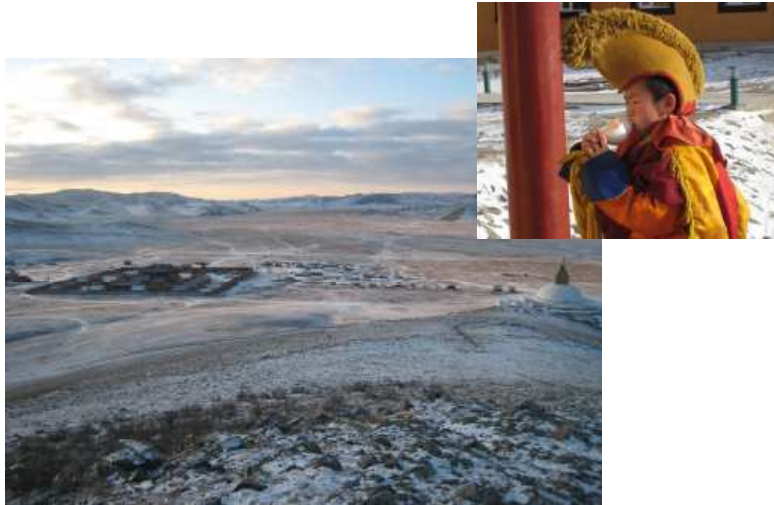
Unfortunately during last few decades:

- many canals filled in/replaced by roads.
- gates no longer exist
- massive urbanization has disturbed ecology around the site

Painting by [Johannes Vingboons](#) of Ayutthaya, c. 1665

Help Inform Safer Sites

Traditional Knowledge – Keep it Simple



Can Assist in Engaging Communities

Engaging Communities: *Awareness, Early Warning & Emergency Response*



Shirakawago, Japan

- Awareness
- Prevention
- Emergency Response Training
- Close coordination: e.g. businesses, heritage managers, emergency responders, city authorities, local communities, et al.

Engaging Communities: *Awareness, Early Warning & Emergency Response*



Engaging Communities: Response and Recovery



Cultural Heritage Sites-

- Focal/gathering point during and after an event
- Opportunity for engaging and coordinating with volunteers and the community



Economic Value

Economic Value



Cultural Heritage and Tourism In Nepal

GDP: 2014: 8.6% (2024: 9.9%)

Tourism Industry : >726,000 people employed

(6.4% of total

employment)

According to the PDNA:

- 7 of 10 World Heritage Sites in Kathmandu Valley damaged and popular trekking routes.

We Need to Protect Our Cultural Heritage from Disasters



Earthquakes



Volcanoes

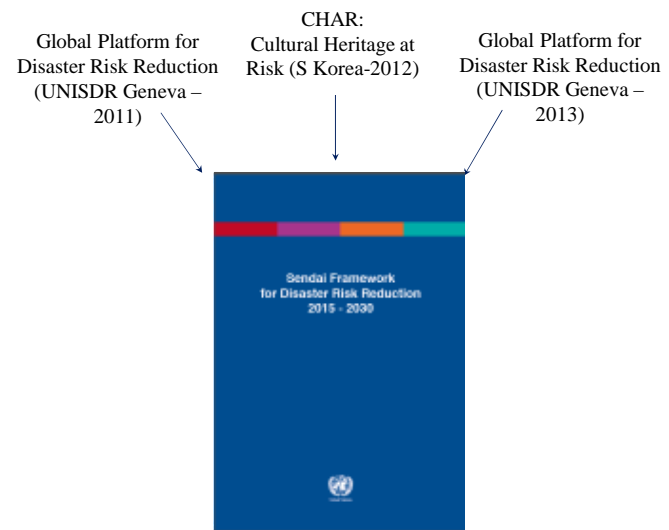


Floods



Fires

We Need to Protect Our Cultural Heritage from Disasters



**Thank
You!**



NCSHPO
National Conference of State Historic Preservation Officers





1965 - 2015
FIRE & RISK CONSULTING



HISTORIC PRESERVATION
EDUCATION FOUNDATION

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