



Disasters, Risks and Disaster Risk Reduction

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Disaster

- Disaster – *a serious disruption of the functioning of a community or a society, beyond its own coping abilities*
- At least one of the following –
 - *10 or more people killed*
 - *100 or more people affected*
 - *Declaration of a state of emergency*
 - *Call for international assistance*



Disaster Risk



“The potential disaster losses – in lives, assets, livelihoods, etc. – which could occur to a particular community or society over some specified future time period” (UNISDR 2009)

Disaster Risk = Hazard x Vulnerability x Exposure



Risk?





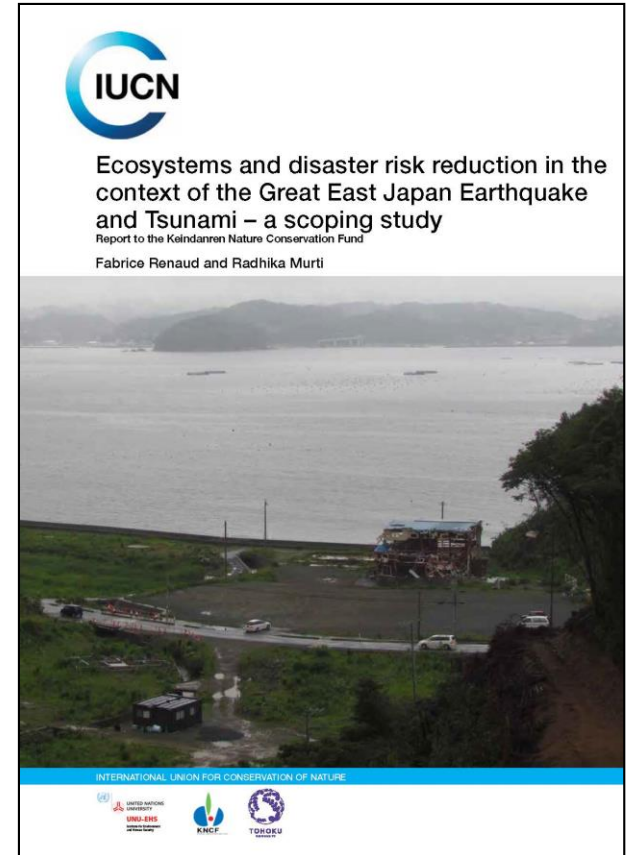
Disaster Risk Reduction

- Disaster **Risk Reduction** – *reducing disaster risks through systematic efforts to analyze and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events*



Coastal Forests of Japan

- acted as filters for secondary debris (such as fishing boats)
- helped in saving lives (people were able to hold on to the trees)
- rice paddies that were protected by the coastal forests were less damaged when compared to exposed paddies
- in specific cases the forests, hills and rocky cliffs contributed to changing the tsunami path, redirecting waves and reducing wave energy



IUCN Coastal Forests of Japan





Lessons from GEJE, 2011

- no amount of preparation can completely allow them to avoid the destruction caused by disasters of this magnitude
- no more exclusive reliance on structural countermeasures
- DRR measures are being encouraged – escape routes, land use planning, multiple defences
- Forest Law includes Disaster Risk Management



Hurricane Katrina – post disaster



- Levees failed with no trees
- Reduced damages due to swamps and salt marshes
- Islands as barriers
- USD 500 million approved by congress for restoration of ecosystems
- However, *only after* a loss of 1833 lives and USD 80 billion



Disasters and Climate Change

- Disasters are increasing in magnitude and frequency
- Weather variability brings about new/sudden challenges
- Pre-disaster conditions determine extent of impact and these conditions are affected by climate change effects



We MUST Reduce Our Risks!

