



## 21° IJBG Meeting

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### Working Groups Contingency Planning and Natural Disaster Management: Perspectives and Shared Projects

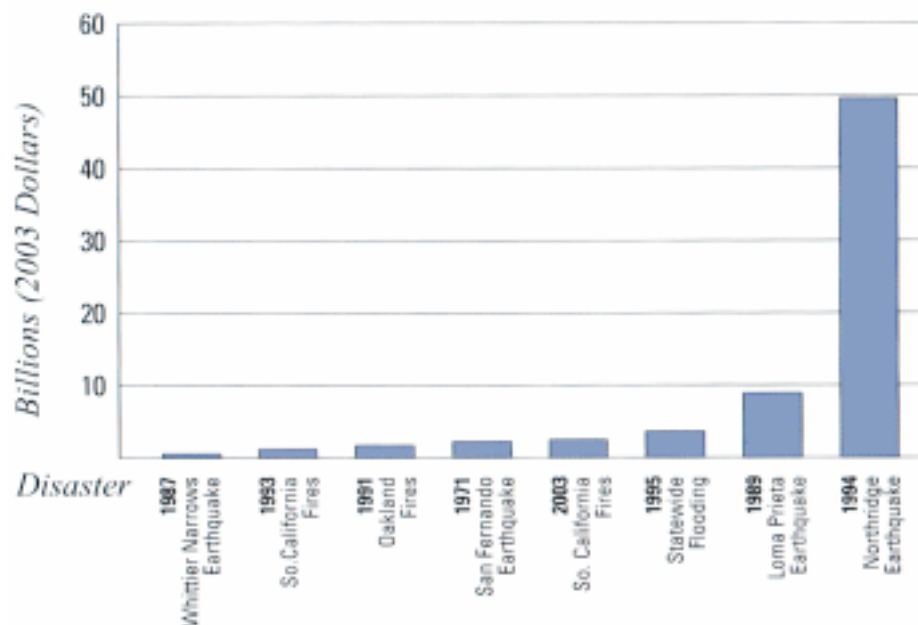
*Ario Ceccotti*

## 3.4 Pilot project #3.4: Multi-storey X-Lam "SOFIE" building

- Joint Italian-Japanese initiative for the design, erection and management of a demonstrative multi-storey X-Lam "SOFIE" building within the frame of the world event **EXPO MILANO 2015**, Italy. On a global perspective, big earthquakes and subsequent effects in terms of victims and damages to the building stock drain yearly a huge amount of financial resources, possibly averting them from social and economic development programs. Earthquake damage prevention can save thousands of lives and billions of dollars, worldwide

The example of California: earthquakes are the costliest disasters

California's Costliest Disasters



### ■ **Pilot project #3.4: Multi-storey X-Lam “SOFIE” building**

- Objective: to erect at the EXPO 2015 one “demo” multi-storey X-Lam “SOFIE” building which will undergo, virtually undamaged, 3-4 times a day to strong earthquakes. The building should be opened to the public between the seismic tests. Occasional damages should be used for demo actions showing the most efficient repairing procedures, the required skills of operators, the safety procedures for end-users, etc. The demo building, in real size, should be erected on a 1D or 3D shaking table programmed to simulate historically recorded earthquakes according to a daily schedule. The demo building should be also monitored, in order to get valuable data about changes in the seismic behaviour due to the earthquake sequence and subsequent adaptation of the repairing techniques
- Expected output: demonstration project, public awareness about seismic safety of buildings, data, models, building retrofitting techniques
- Potential partners: CNR IVALSA-TTI; NIED, EXPO MILANO 2015; Italian and Japanese Government Authorities on Building Safety; Building companies; Engineering companies

