Disaster Data & Statistics the Basis for Building Resilience



Satoru NISHIKAWA Ph.D September 2013

Ranking of Earthquakes 20-21st Century

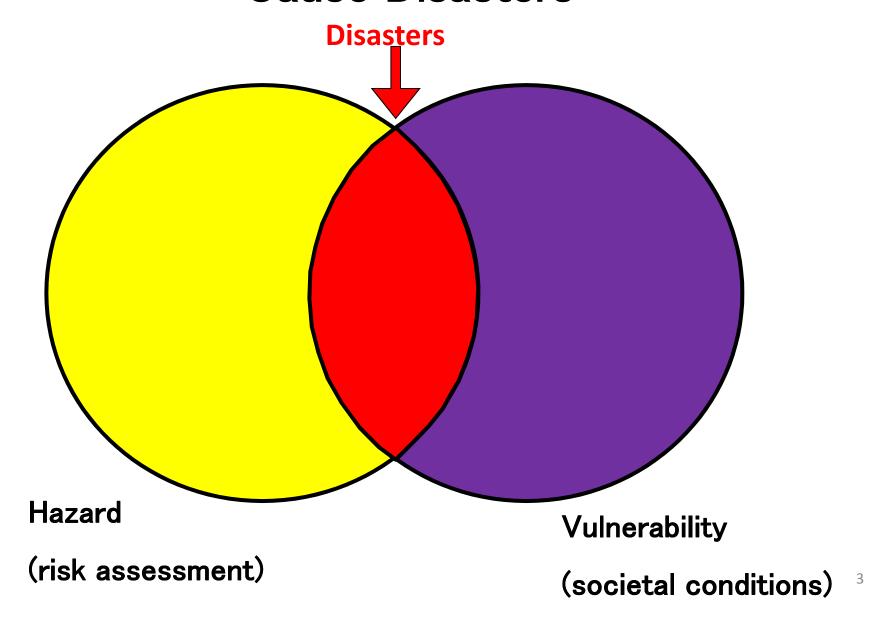
Strong Earthquakes

| Year | Place | Magnitude |
|------|-------------------------|-----------|
| 1960 | Chili | 9.5 |
| 1964 | Alaska | 9.2 |
| 2004 | Indonesia Sumatra | 9.1 |
| 2011 | East Japan | 9.0 |
| 1952 | Kamchatka | 9.0 |
| 2010 | Chili | 8.8 |
| 1906 | Ecuador | 8.8 |
| 1965 | Alaska Aleutian Islands | 8.7 |
| 2005 | Indonesia Sumatra | 8.6 |
| 1950 | Tibet, Assam | 8.6 |
| 1957 | Alaska Aleutian Islands | 8.6 |

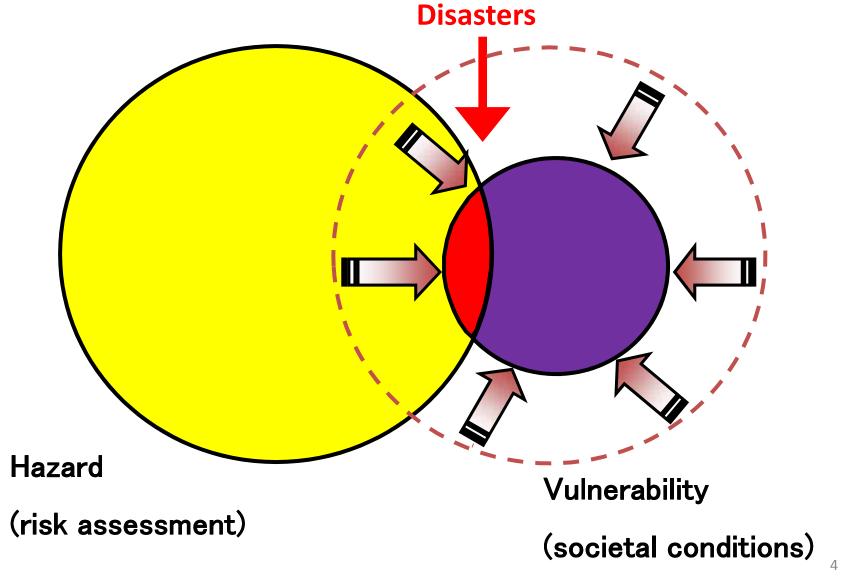
Deadly Earthquakes

| Year | Place | Casualties |
|------|-----------------------|------------|
| 1976 | China Tangshan | 242800 |
| 1920 | China Ningxia | 235502 |
| 2004 | Indonesia Sumatra | 227898 |
| 2010 | Haiti | 222500 |
| 1923 | Japan Kanto | 105000 |
| 2008 | China Sichuan | 87587 |
| 2005 | Pakistan, Afghanistan | 86000 |
| 1908 | Italy Sicily | 82000 |
| 1927 | China Gansu | 80000 |
| 1970 | Peru | 66794 |
| | - | |
| | • | |
| | • | |
| 2011 | East Japan | 18537 |

Hazards Confronting Vulnerable Communities Cause Disasters



Less Disasters



Lack of Investment for Disaster Reduction Lack of Land control





Four Phases of Disaster Reduction

Pre-Disaster

Prevention & Mitigation Preparedness

Post-Disaster

Response

Recovery & Reconstruction

What do we need to implement Pre-Disaster Action?

How can I secure budget for DRR !?

Justifications are required to negotiate DRR budget with the Ministry of Finance.

Unless budget for DRR are sustainable, cannot expect sustainable DRR at national and local level.

Ad-hoc voluntary donations are unstable.

A sustainable DRR cannot rely on "ad-hoc beauty contest for funding".

DRR should be seen as Investments not Expenditures!

To justify investment, B/C (benefit per cost) needs to be explained

Basic Disaster statistics
human casualties
physical damage numbers
economic damage figures

official Report on Disaster Countermeasures on Disaster Reduction) since 1963 in Japan

Descriptive **report** on individual disaster damage & response Disaster **statistics**

Disaster reduction policies

Measurements of achievements on risk reduction action

Reports on expenditures of previous F.Y. and action taken by **sector** and **by four phases** of disaster reduction

Budget for the coming F.Y. by sector and by four phases



Must be submitted to the regular annual session of National Diet To be discussed in the **Special Committee on Disaster** Countermeasures in both houses of the National Diet



a way to table disaster reduction on the national agenda a way to draw public attention to disasters in "peaceful years"

a way to maintain institutional memories of disaster reduction policies regardless of political changes

