



From Resilient Recovery to Sustainable Development

- Development of Recovery and Rehabilitation Measures -

International Recovery Forum 2010
16 January 2010

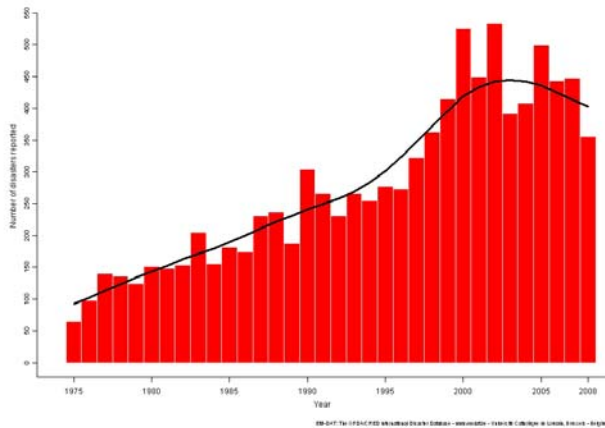
Atsushi KORESAWA
Asian Disaster Reduction Center



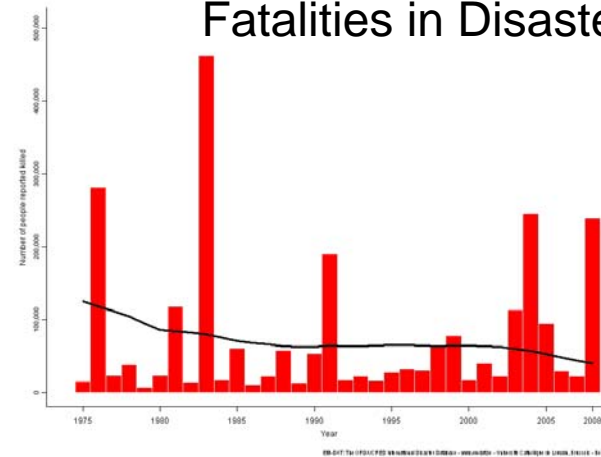
Natural Disaster Trends 1975-2008

The number of disasters, people affected and estimated economic damages all increasing according to EM-DAT.

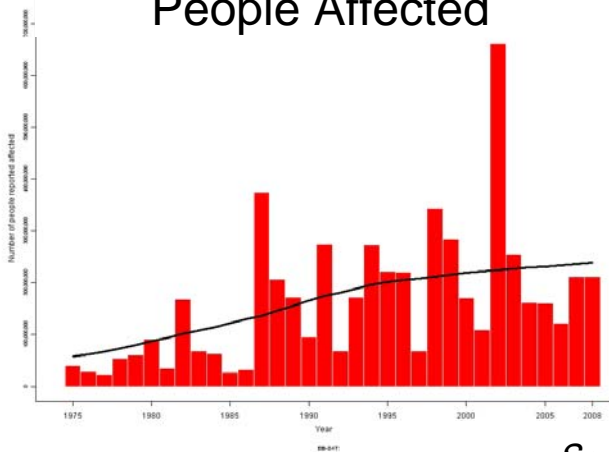
Number of Disasters



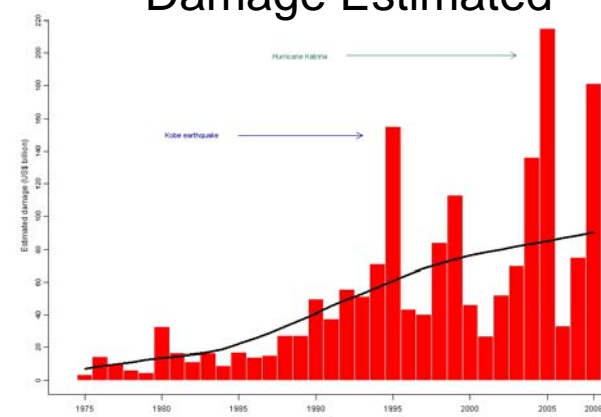
Fatalities in Disasters



People Affected



Damage Estimated



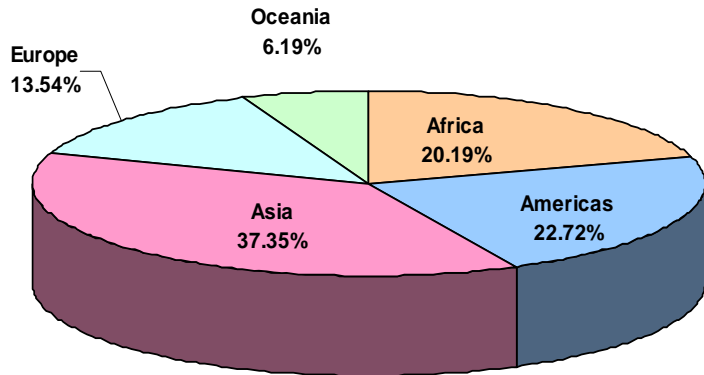
Source: Center for Research on the Epidemiology of Disasters (CRED), Belgium



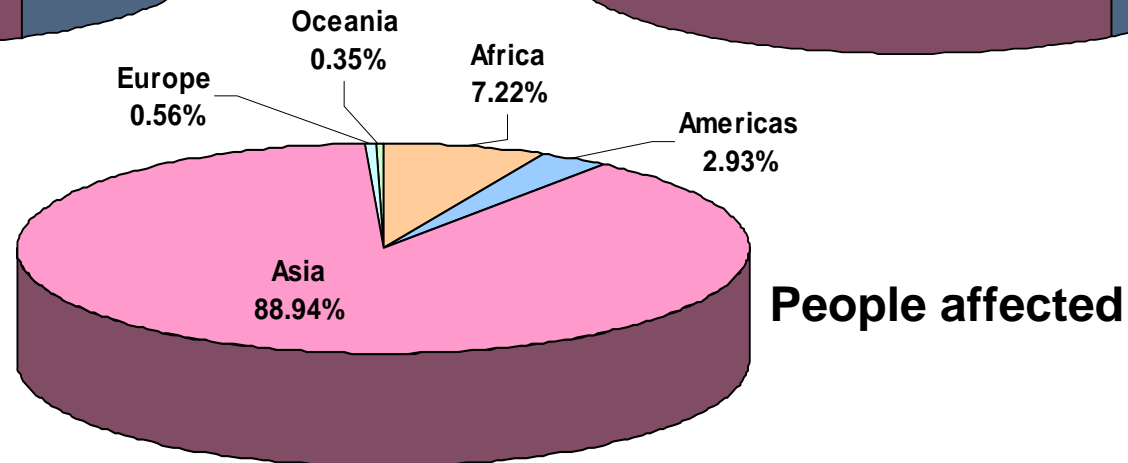
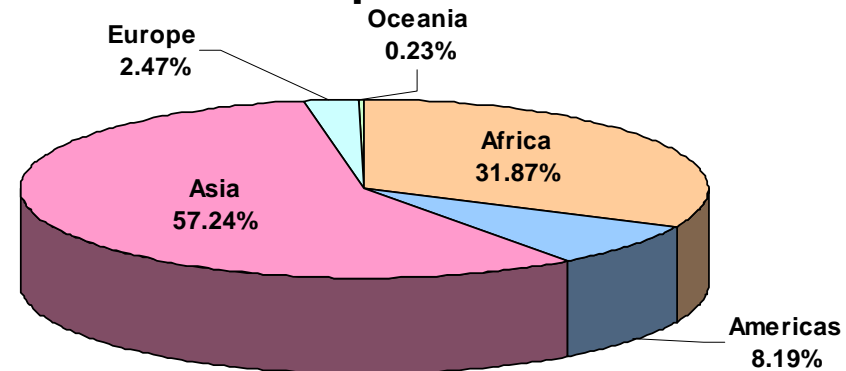
Natural disasters by regions 1975-2007

Approx. 40% disasters occur in Asia, but they account for almost 60% of people killed and almost 90% of people affected

Number of disasters



People killed

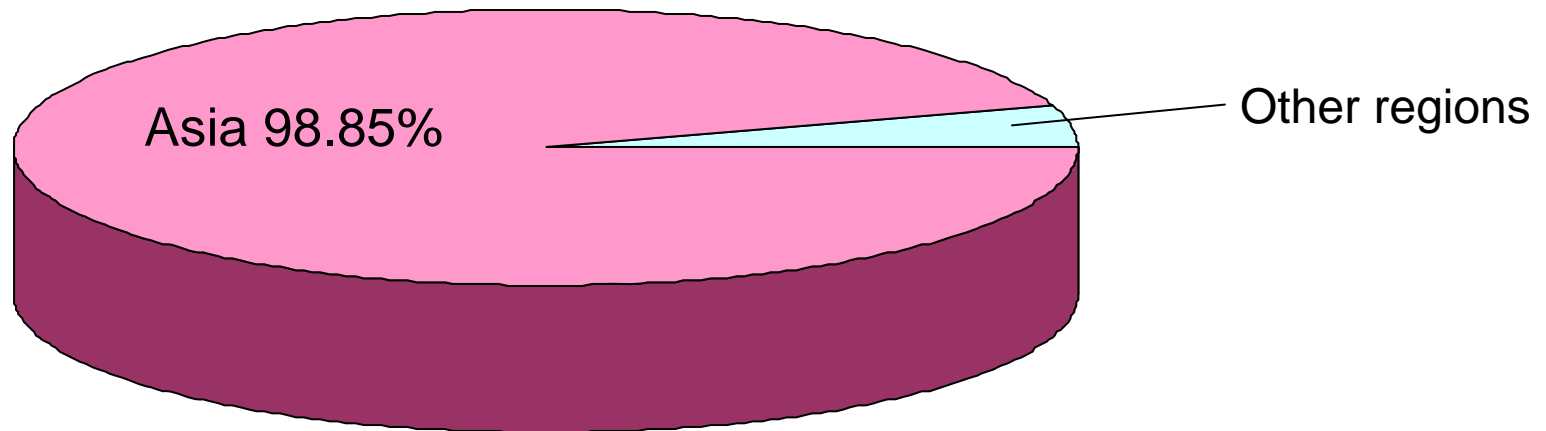


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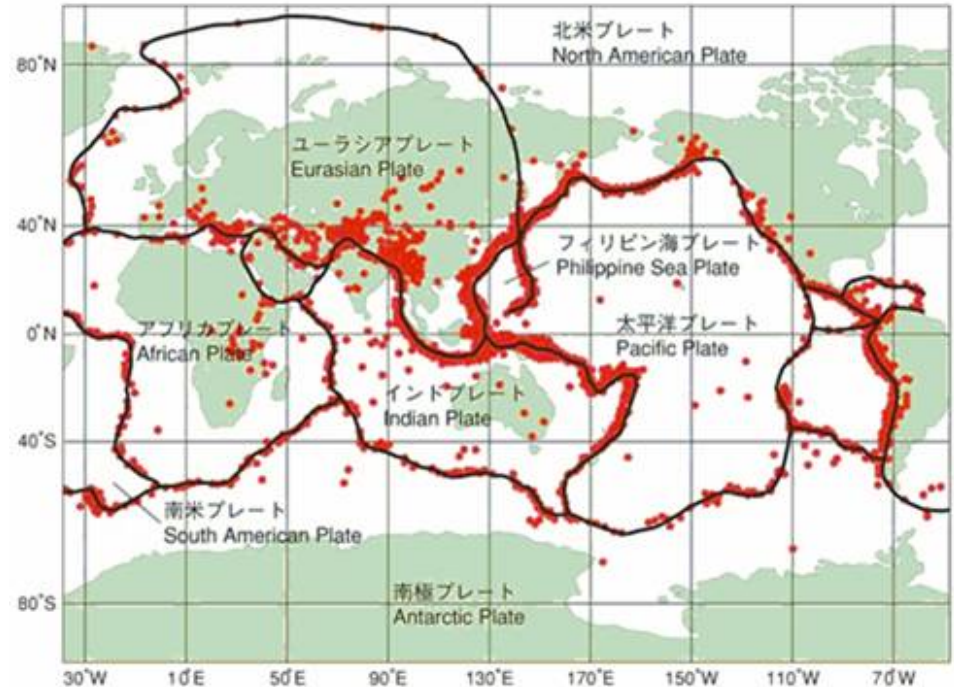
Natural disasters by regions in 2008

- ✓ In 2008, the Cyclone Nargis in Myanmar killed approx. 140 thousand people and the Sichuan earthquake in China killed almost 90 thousand people.
- ✓ The death toll in 2008 was three times higher than the annual average of 66,813 for 2000-2007. Asia accounts for almost 99% in terms of the number of persons killed by disasters.

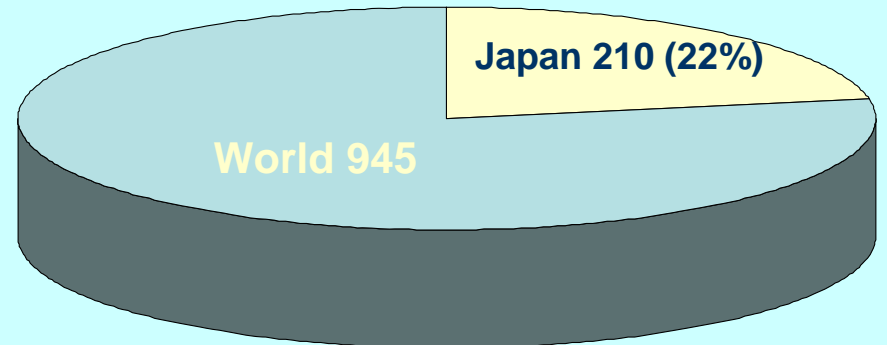


Living with Natural Disasters in Japan

- Earthquake
- Tsunami
- Volcanic Eruption
- Typhoon
- Flood
- Landslide
- Snow Avalanche



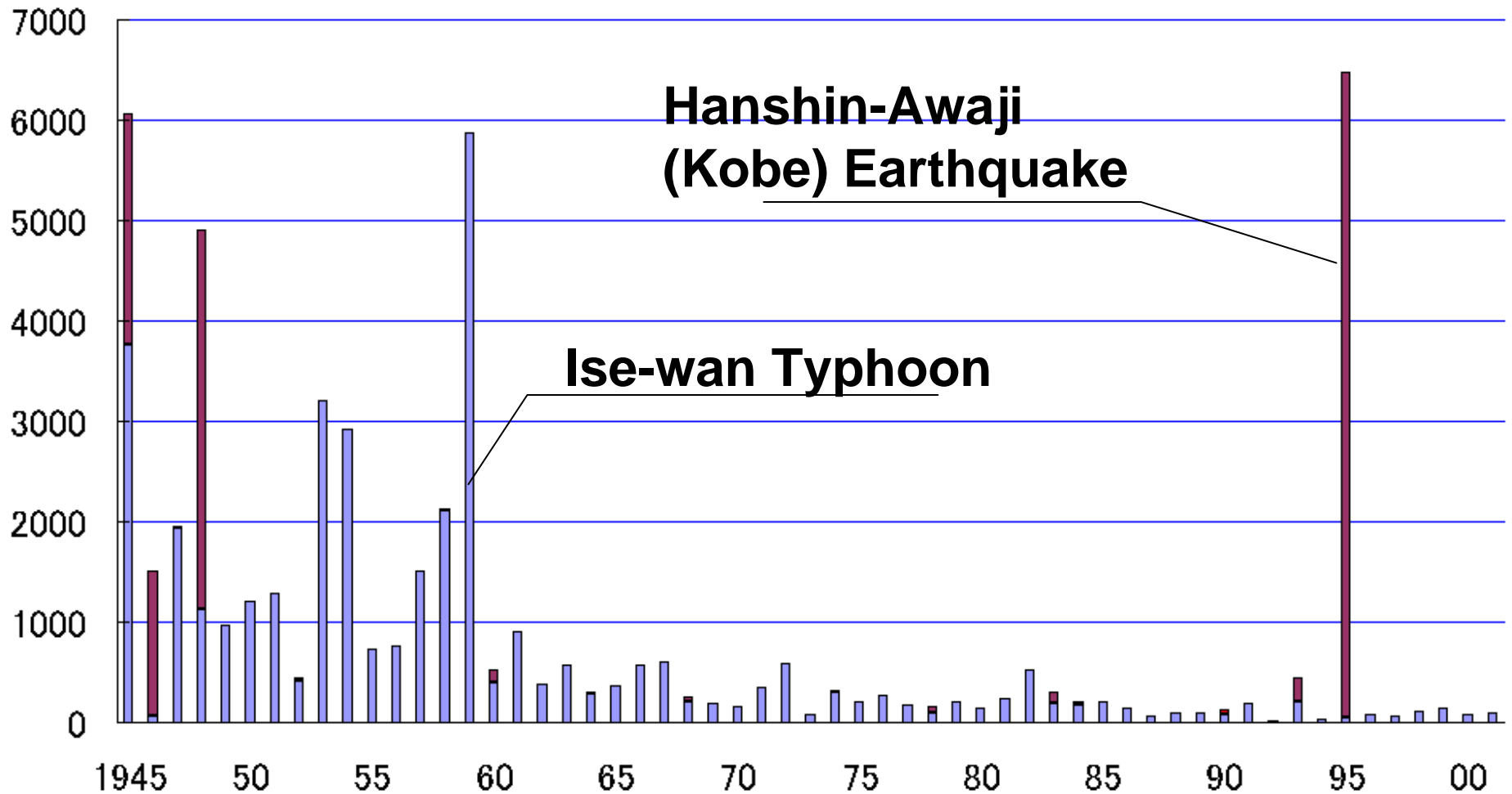
Number of earthquakes with magnitude of 6.0 or larger (1995-2004)





The number of victims by natural disaster

■ Typhoon, Floods & Land Slides, etc ■ Eqs & Tsunami ■ Volcano eruption





1995 the Great Hanshin-Awaji Earthquake

- ✓ Directly hit meg-city, Kobe, and surrounding areas where more than three million people resided and administrative, economic and social functions concentrated
- ✓ Paralyzed information / communication and transport system, lack of on-site information delayed first response
- ✓ Not prepared for an active fault triggered earthquake
- ✓ Buildings insufficient to sustain earthquake





Kobe City Hall damaged

One floor
pancake-collapse





Hyogo Prefecture also damaged



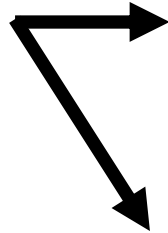


Improvement for emergency response

Issues

Improvement

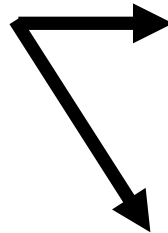
Information collection



Information Collection Center,
24hrs/7days

Disaster Information System

Crisis management



Crisis Management Center,
24hrs/7days

Stand-by Emergency Response Team
of High-Rank Officials

Wide-area Support
System

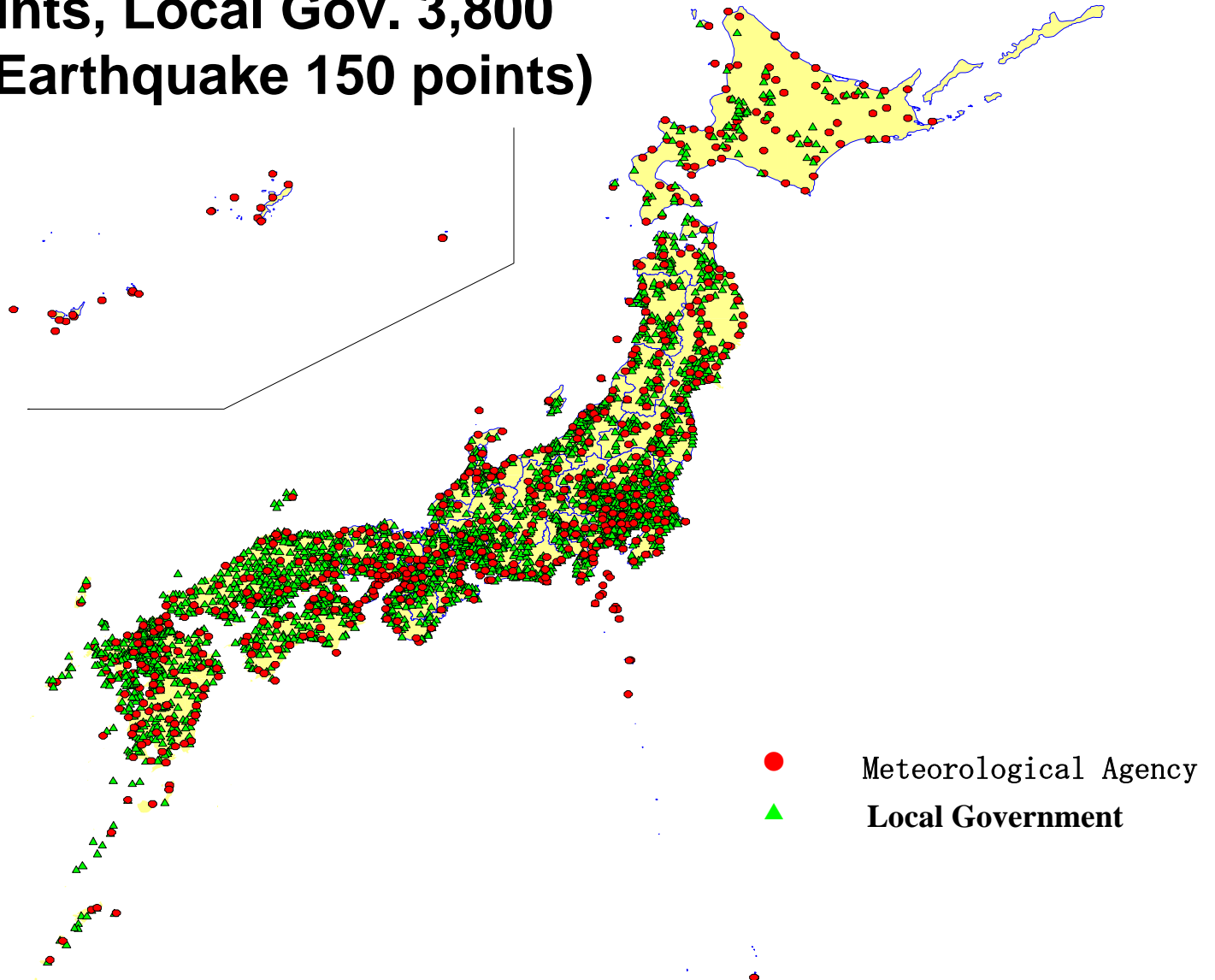


Inter-prefectural Rescue Team,
Disaster Medical Assistance Teams



Seismic Intensity Observation Point

**JMA: 600points, Local Gov. 3,800
(Before the Earthquake 150 points)**





Emergency Response Teams

- ✓ Fire departments are at municipal level
- ✓ Emergency Fire Response Teams operate beyond prefectural boundaries in case of disasters
- ✓ Comprised of 3,751 fire-fighting teams and about 44,000 members are registered



Joint drill undertaken by Emergency Fire Response Teams



Emergency Response to torrential rain



Disaster Medical Assistance Team

Trained Disaster Medical Assistance Team (DMAT) is dispatched to the affected areas in case of large-scale disasters.

Dispatch of DMAT



Triage at Staging Care Unit



Transportation





Disaster Recovery/Rehabilitation Measures

Disaster Recovery Public Works

- public infrastructure, educational, welfare and agricultural facilities, etc.

Disaster Relief Loans

-Low-interest loans to SMEs, low income people, people in agriculture activities, etc.

Disaster Compensation and Insurance

-Earthquake insurance, Compensation for agricultural activities, etc.

Tax Reduction or Exemption

-Tax reduction and exemption, postponement of tax collection

Local Allocation Tax and Local Bonds

-Special tax allocations to affected local gov't and permission to issue local bonds

Extremely Severe Disaster

-Special measures including increased rate of subsidies to local gov't

Assistance for Rehabilitation Plan

-Various assistance for local gov't to implement its rehabilitation plan

Livelihood recovery of victims

-Financial support, grants and loans, to disaster victims



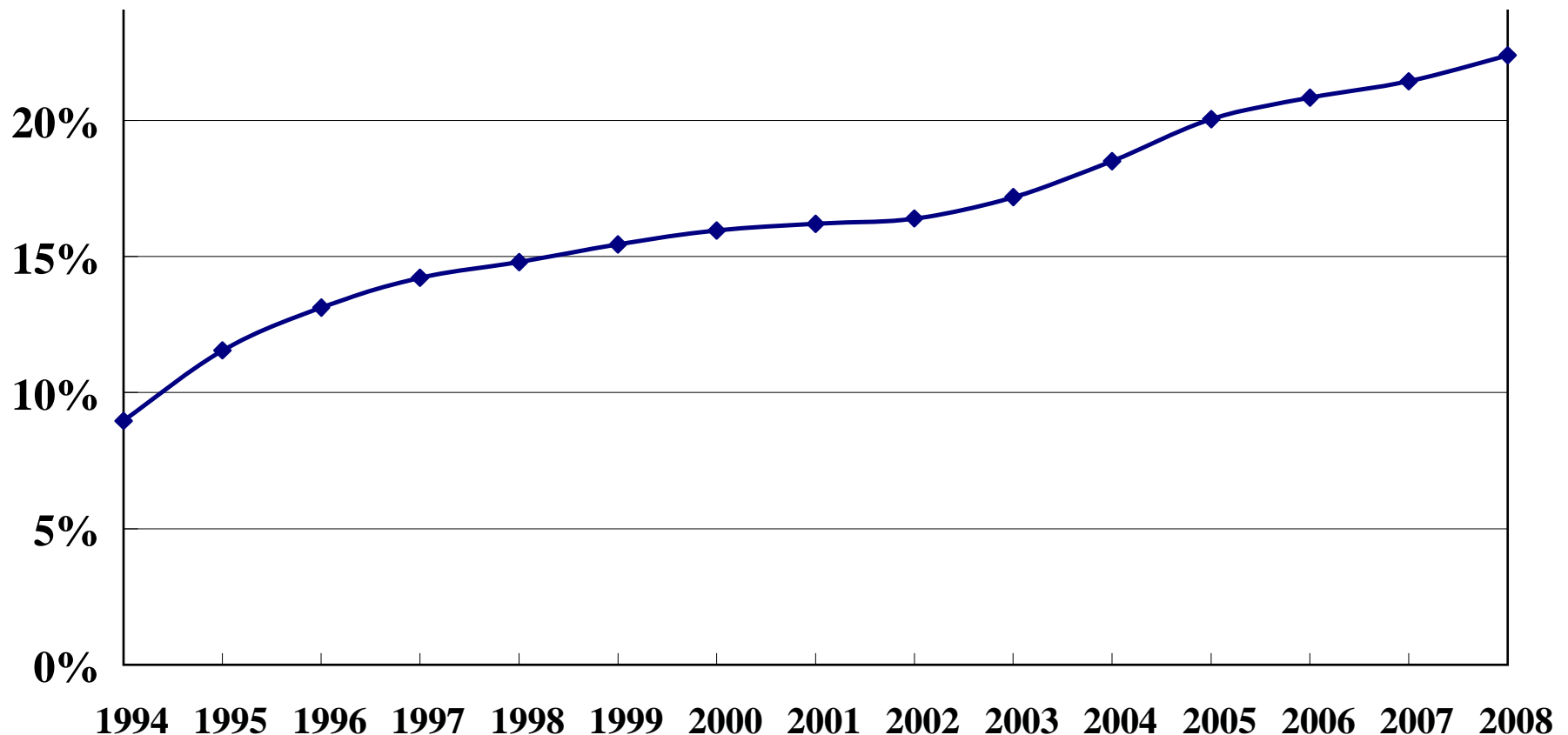
Earthquake Insurance for private houses

- ✓ Established 1966 after Niigata earthquake of 1964
- ✓ For dwelling risk only
 - Attached with fire policy as a special contract
 - Covers shaking damage, volcanic eruption, fire and tsunami following earthquake
- ✓ Sponsored by Japanese government and private insurers
- ✓ Based on the calculation of Probable Maximum Loss (PML), using scientific risk analysis models with 730,000 hypothetical earthquakes



Market Penetration Rate of EQ Insurance

The market penetration rate was low at the beginning, but has gradually increasing as more people concerned about future earthquake risks.

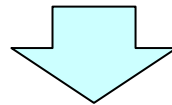




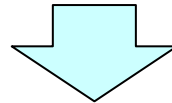
Support for Livelihood Recovery

Various financial support to disaster victims:

- Disaster Condolence Money;
- Disaster Impediment Sympathy Money;
- Loans e.g. disaster relief funds, livelihood welfare funds



The Act on Support for Livelihood Recovery of Disaster Victims was enacted in 1998. Disaster victims were eligible to receive grants up to 1 million JPY per household for buying necessary household items.



The act was revised in 2004 to cover necessary expenses to stabilize living conditions, the total amount increased to 3 million JPY at maximum.



Support for Livelihood Recovery of Victims

Prefectures and municipalities

National Government

Contribution
for mutual aid

Subsidies
(half of total grant)

60 billion JPY

Funds for Disaster Victims Livelihood
Recovery Support System

Application

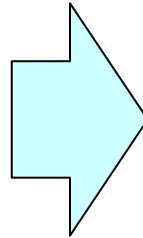
Grant
up to 3 million JPY

Victims of disasters eligible for
receiving grants



Recovery Status in Kobe, Hyogo

Immediately after the Earthquake



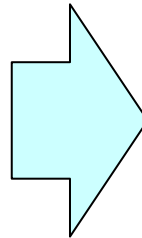
Fully-Reconstructed





Recovery Status in Kobe, Hyogo

Immediately after the Earthquake



Fully-Reconstructed





A hub of disaster-related activities

Institutions

ADRC, APN, DRI, EDM, EMECS, Hyogo Emergency Medical Center, IGES, Japanese Red Cross, JICA, UNOCHA, UNCRD, WHO



Asian Disaster Reduction Center (ADRC) established in 1998

IRP also launched in 2005



From Resilient Recovery to Sustainable Development

Thank you for your attention!