



## Disaster Management System in Japan

*--- Progress Aligned with "HFA" ---*

**Asian Conference for Disaster  
Reduction (ACDR) 2008**

Bali, Indonesia  
12-14 November 2008

Cabinet Office, Government of Japan



## UN World Conference on Disaster Reduction (WCDR)

Adopted the Hyogo Framework for  
Action 2005-2015 (HFA; a guiding  
framework for disaster reduction  
activities worldwide in the next decade)

- Kobe city, Hyogo Pref. ,Japan
- 18-22 Jan. 2005
- over 4,000 participants



## The Hyogo Framework for Action (HFA) was adopted in WCDR

- i. Ensure that disaster risk reduction is a national and a local priority with a **strong institutional basis** for implementation
- ii. Identify, assess and monitor disaster risks and enhance **early warning**
- iii. Use knowledge, innovation and education to build **a culture of safety and resilience** at all levels
- iv. **Reduce the underlying risk factors**
- v. **Strengthen disaster preparedness** for effective response at all levels

Priorities for action 2005-2015



### 1. Ensure that disaster risk reduction is a national and a local priority with a **strong institutional basis** for implementation

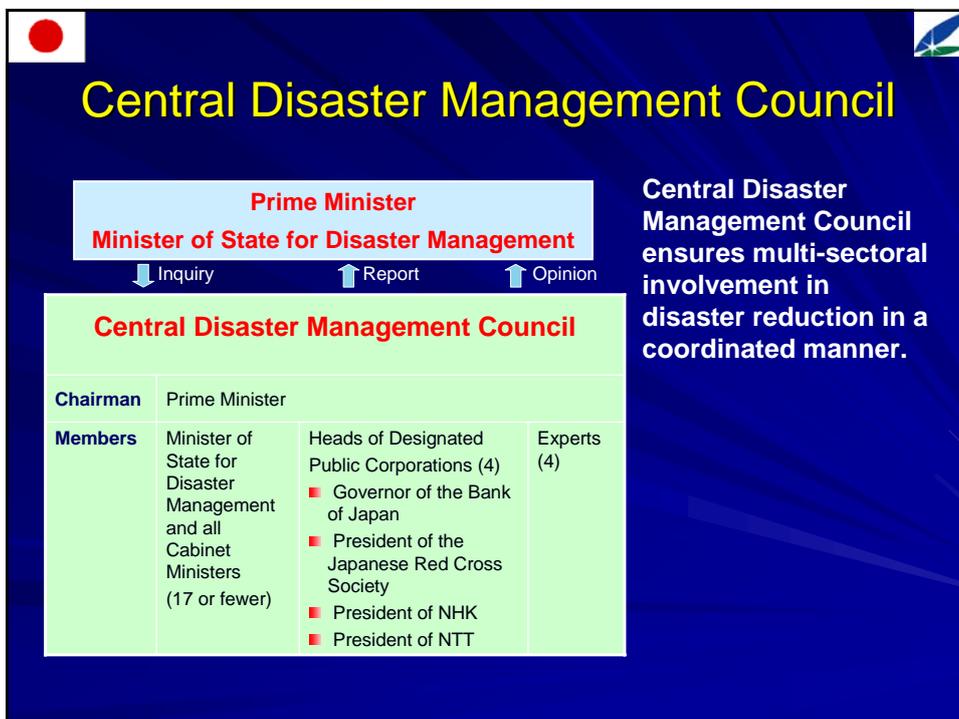
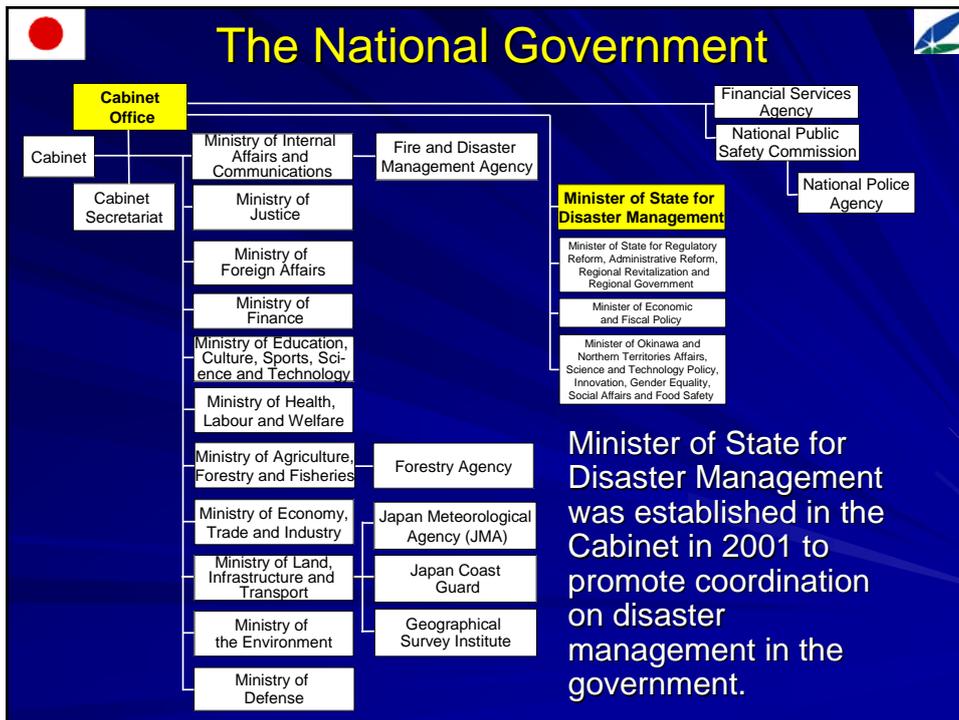
(a) **Administrative System (e.g. Central Disaster Management Council)**

(b) **Initiated nation-wide movement for disaster reduction**

A committee on the promotion of nation-wide movement for disaster reduction was established under the Central Disaster Management Council with members from various stakeholders to formulate basic plan of action for the nation-wide movement.

(c) **Formulated Earthquake Disaster Reduction Strategy**

The Central Disaster Management Council formulated Earthquake Disaster Reduction Strategy, which set an overarching goal to halve estimated damage caused by possible large-scale earthquakes and tsunamis in the next decade.






## How ?

- Involving various local groups in disaster reduction
  - Community Groups
  - Junior Chamber of Commerce Chapters
  - Parent & Teachers Associations
  - Local Shop Unions
- Providing Various Opportunities for Disaster Prevention Education
  - in Elementary & Secondary Schools
  - at Social Education Facilities & Public Libraries
- **Involving the Corporate (Business) Sector**



## Earthquake Disaster Reduction Strategy

(formulated by Central Disaster Management Council on 21 April 2006)

**Setting an overarching goal  
for disaster risk reduction in the next decade**

**Tokyo Inland EQ** Winter, 6PM, Wind speed 15m/s

**【Disaster Reduction Goal】**  
 To halve the estimated *death toll*  
 Approx. 11,000 people ⇒ Approx. 5,600 people  
 To reduce the estimated *economic loss* by 40%  
 Approx. 112 trillion yen ⇒ Approx. 70 trillion yen

**Strategic Targets**

<ul style="list-style-type: none"> <li>◆ Earthquake-proof ratio: 75% → 90%</li> <li>◆ Furniture fixation ratio: approx 30% → 60%</li> </ul>	<ul style="list-style-type: none"> <li>◆ Ratio of companies with business continuity plans: Mostly all (Large companies)</li> </ul>
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2. Identify, assess and monitor disaster risks and enhance **early warning**

(d) Promoting hazard mapping for various disasters such as earthquakes, tsunamis, volcanic eruptions and floods at community level

(e) Enhancing early warning capabilities for all the possible disasters including thorough R&D for emergency earthquake alerts by using the arrival time difference of P and S waves of earthquakes

## NHK (Japan's Public Broadcasting) TV Screen Image

showing Seismic Intensity by Miyagi-ken Earthquake on 26 July 2003

Very quick after the Earthquake with/without Tsunami Warnings

**Alertness to Disaster Information**

**Earthquake Early Warning Information by JMA**

*This is as shown on TV screen*

**Earthquake Early Warning: How can an earthquake alert be announced before tremors are felt?**

**How the Earthquake Early Warning Works**

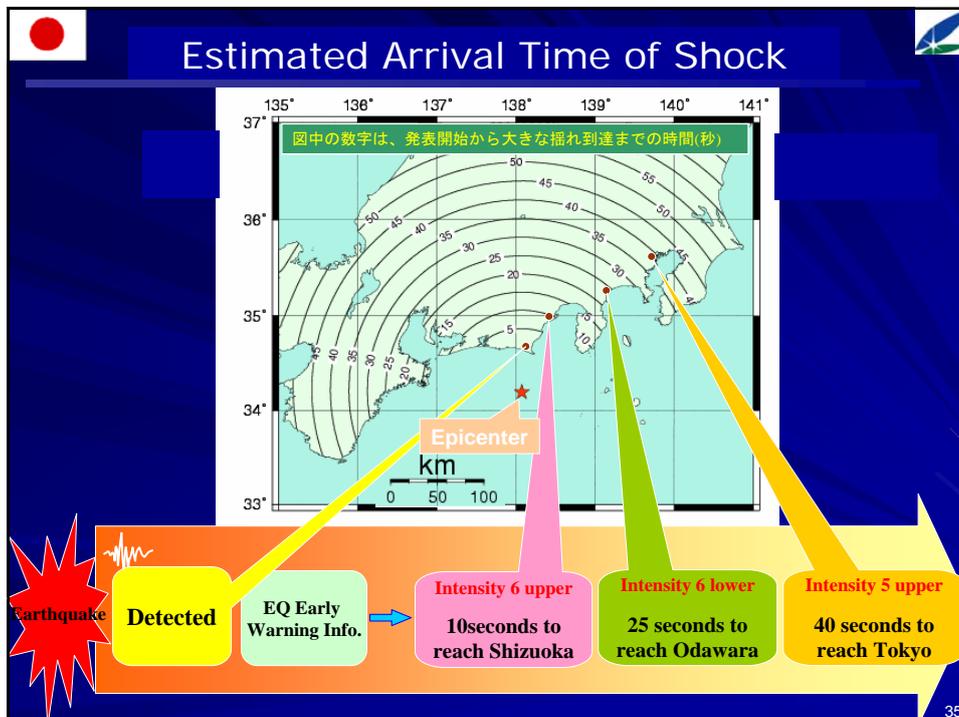
P-waves  
(Primary Waves)  
Speed 4.5mile/sec.

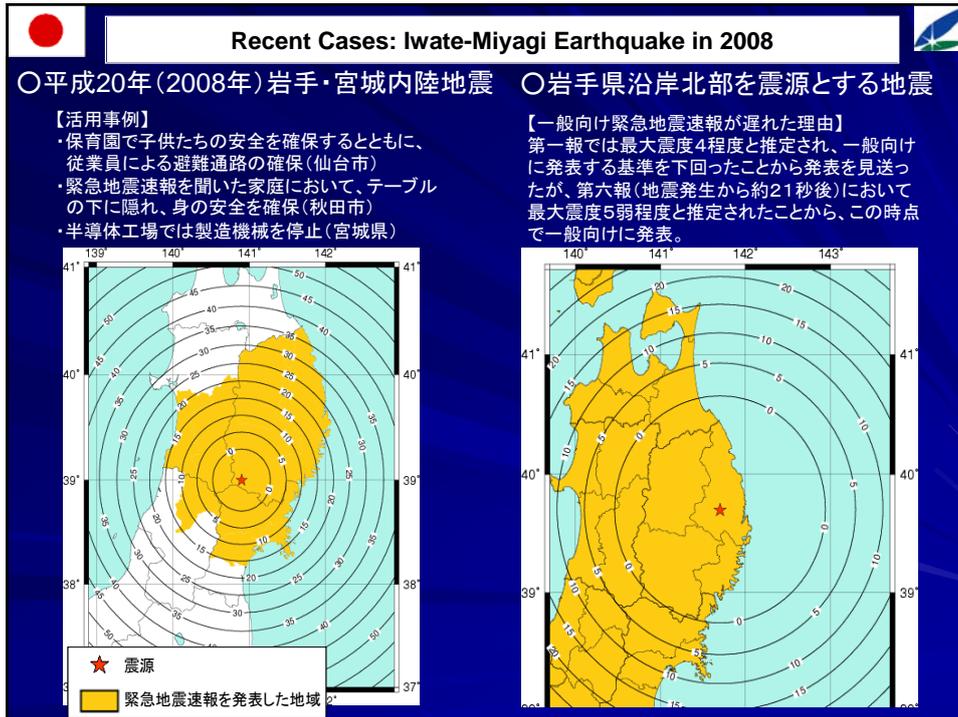
S-waves  
(Secondary Waves)  
Speed 2.5mile/sec.

**Window of time from the announcement until the arrival of the main tremor**  
 Information can be provided before strong tremors begin (those further from the seismic focus will have more time to prepare for the quake)

## Operation of Earthquake Early Warning

- System developed  
Japan Metrological Agency and other organization
- Information providing started  
Since 2006: specific entities such as railway companies  
Since 2007: general people
- Usage  
For mitigating damage by stopping trains and elevators, or crawling under tables and keeping a body safe.
- Problem
  - 1) For inland earthquakes, information may not reach the user before the real strong wave comes
  - 2) The difference between the calculation result and the observed values may exist because of rapid calculation

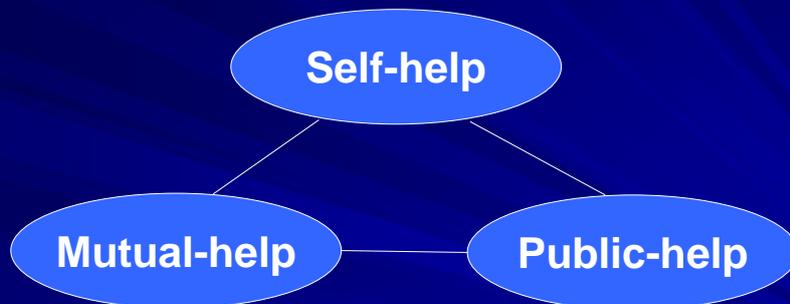




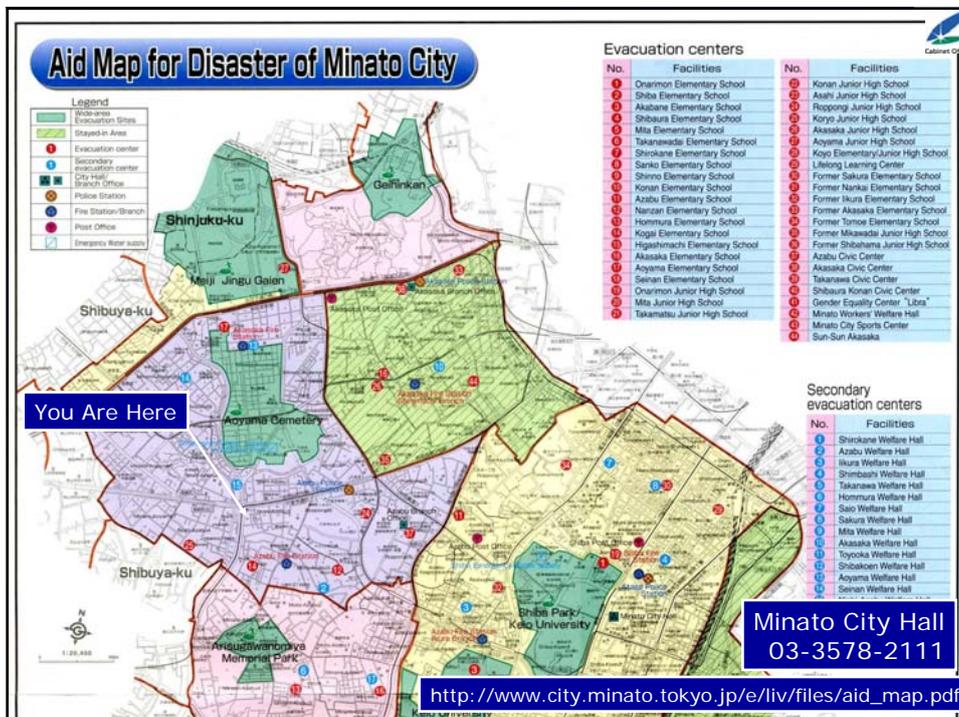
**3. Use knowledge, innovation and education to build a culture of safety and resilience at all levels**

(f) Promoting disaster reduction education for school children including thorough participation-oriented events to involve children in practical disaster exercises

# A Nation-Wide Movement for Disaster Reduction Actions

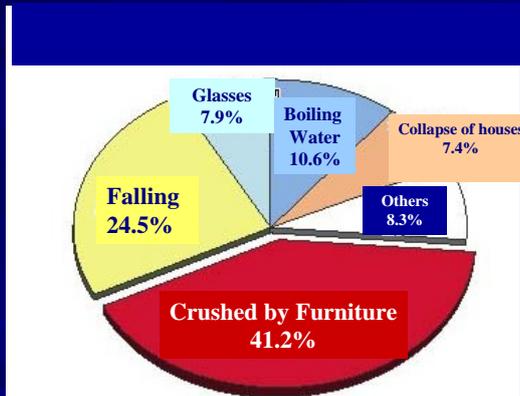


Initiate a Nation-Wide Movement for Disaster Reduction Actions to protect own lives and properties aimed at building the resilience of our nation and communities to disasters



# Secure Your Safety

(Casualties of Niigata-ken Chuetsu Earthquake 2004)



Source : Tokyo Fire Department



# Earthquake-proofing of Houses and Buildings

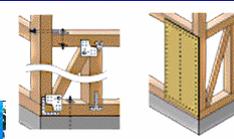
community facility



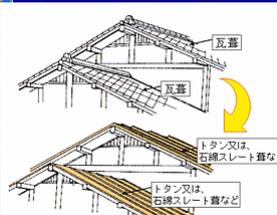
Houses



玉石基礎      コンクリート造布基礎



Weight saving roof



Movie “Arigatou”  
taken from a real story of  
1995 Kobe Earthquake



災害はいつも突然にやってきます。  
でも、あなたはまだ間に合います。  
災害による被害を少なくするための国民運動の輪をひろげましょう  
「ひごろからの備えがあなたを守ります!」

地震や火災の発生  
ガスの切断停止

地震の揺れや火災  
の発生を知らせる  
「ふだんからできることを  
始めよう!」

避難の要領の  
確認方法を共有

ハザードマップ、  
避難経路を確認して備え

おのれにエコーと  
を、連絡の輪

1995年11月17日 阪神・淡路大震災発生  
これは、再び笑顔を取り戻した人々の勇気と感謝の物語。  
11月25日(土) 全国ロードショー

映画 **ありがとう**

内閣府・防災推進協議会  
(防災担当)

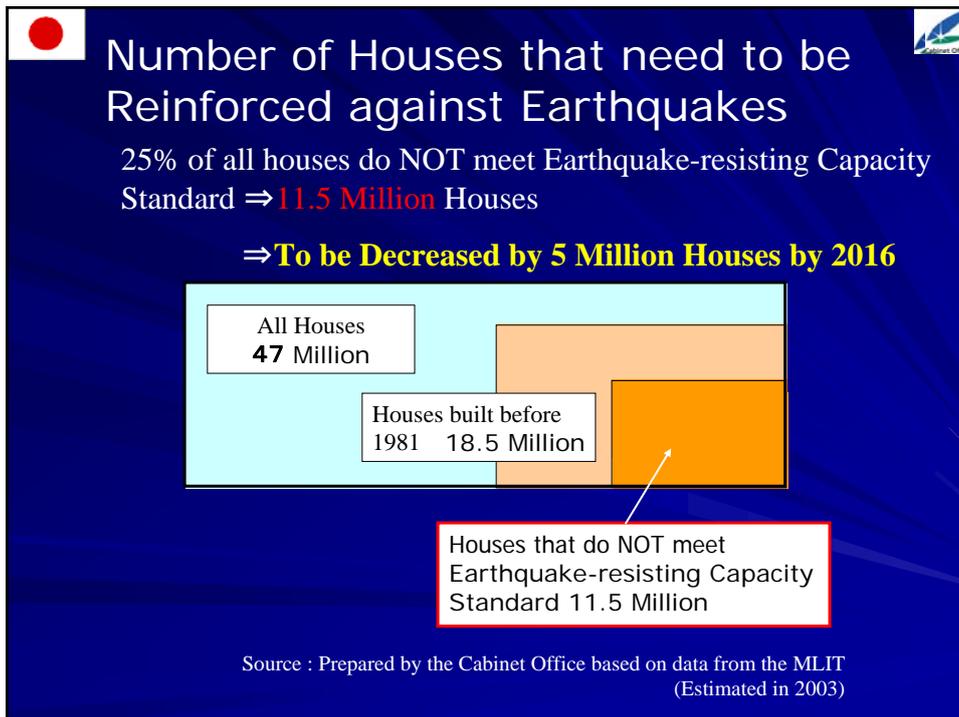


#### 4. Reduce the underlying risk factors

(g) Promoting rebuilding and retrofitting of old houses and buildings vulnerable to earthquakes

To accomplish a strategic goal to decrease the ratio of old houses from 25% to 10% in ten years, the Government is increasing the budget for subsidies and developing a new tax reduction policy for building safer houses.

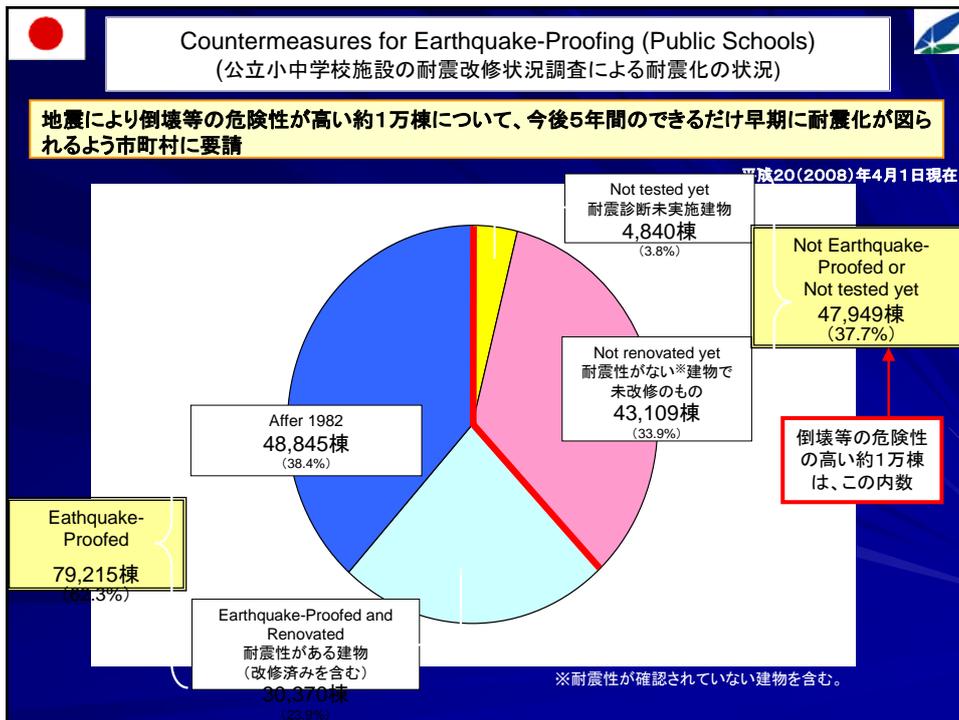
(h) Promoting efforts of the private sector to make Business Continuity Plan (BCP)



**Progress and Target of Seismic Construction (Plan Casualty "ZERO" 犠牲者ゼロ総合プラン)**

Category	Status	Target
<b>Public School</b> (Elementary, and Junior High)	<b>58.6%</b> (2007年4月)	倒壊等の危険性の高い約1万棟を耐震化(10 thousand houses within 5 years)
<b>Hospital</b> (災害拠点病院・救命救急センター)	<b>43%</b> (2005年)	未耐震化施設の約5割を耐震化(50% by 2010)
<b>Houses・Buildings</b>	<b>75%</b> (2003年末)	<b>90% (by 2015)</b>

※上記のほか、水道施設、下水道施設等についても、目標を設定し、耐震化を進める。

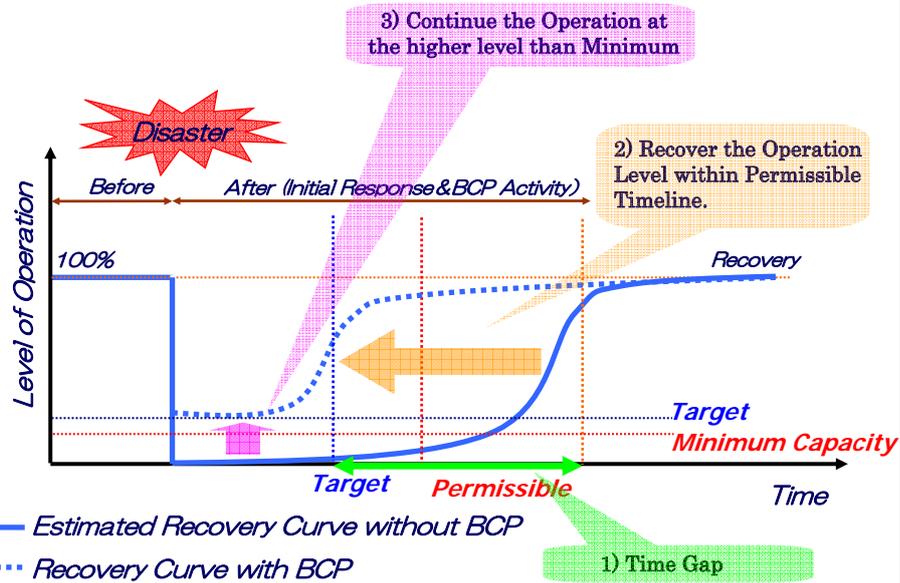


Recent Example (Jul. 2007);  
Niigata Chyuetsu-oki Earthquake

合口(カット部)

- A Car Parts Supplier struck by the EQ
  - ✓ manufacturing key component; seal ring material of transmission
  - ✓ domestic market share of 70%
- Influence by the Business Discontinuity
  - ✓ All 12 Japanese automakers halted in production
  - ✓ Output cut of over 130,000 cars (in July 2007)
  - ✓ Also pushed down overall mining and manufacturing production

# Business Continuity Planning



## Central Disaster Management Council Official Report on Guidelines for Corporate Disaster Reduction

### 1) Business Continuity Guidelines 1st ed.

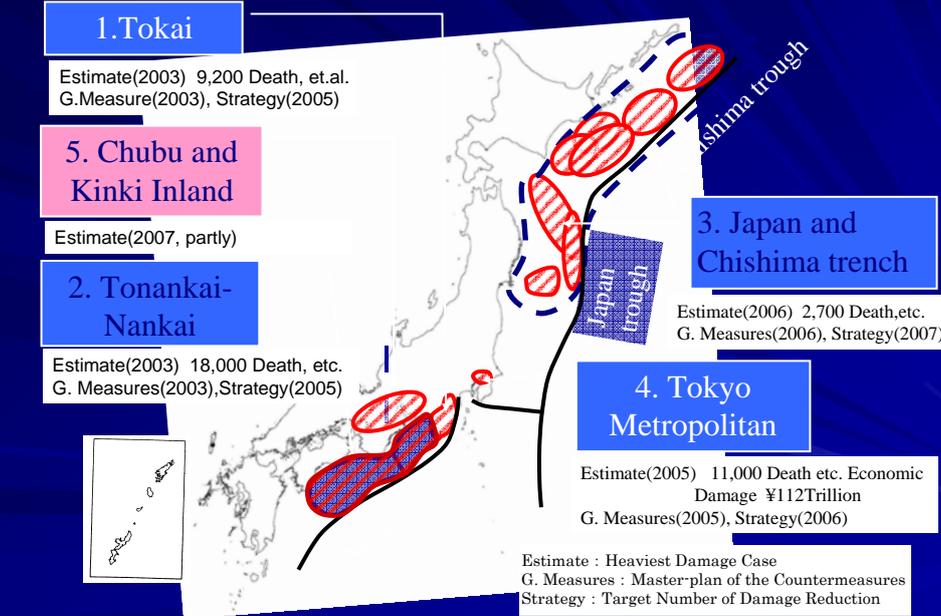
- 2) Checklist for Business Continuity Guideline
- 3) Sample models of Business Continuity Plan
- 4) List of the issues for self-evaluation regarding "Corporate Disaster Reduction Activities"
- 5) Reports for public relations about Corporate Disaster Reduction Activities




## 5. Strengthen disaster preparedness for effective response at all levels

(i) Formulating emergency contingency planning in r  
response to possible large-scale earthquakes such as  
Tonanka and Nankai Earthquake

### Measure for Predicted Large Earthquakes



**1. Tokai**

Estimate(2003) 9,200 Death, et.al.  
G.Measure(2003), Strategy(2005)

**2. Tonankai-Nankai**

Estimate(2003) 18,000 Death, etc.  
G. Measures(2003),Strategy(2005)

**3. Japan and Chishima trench**

Estimate(2006) 2,700 Death,etc.  
G. Measures(2006), Strategy(2007)

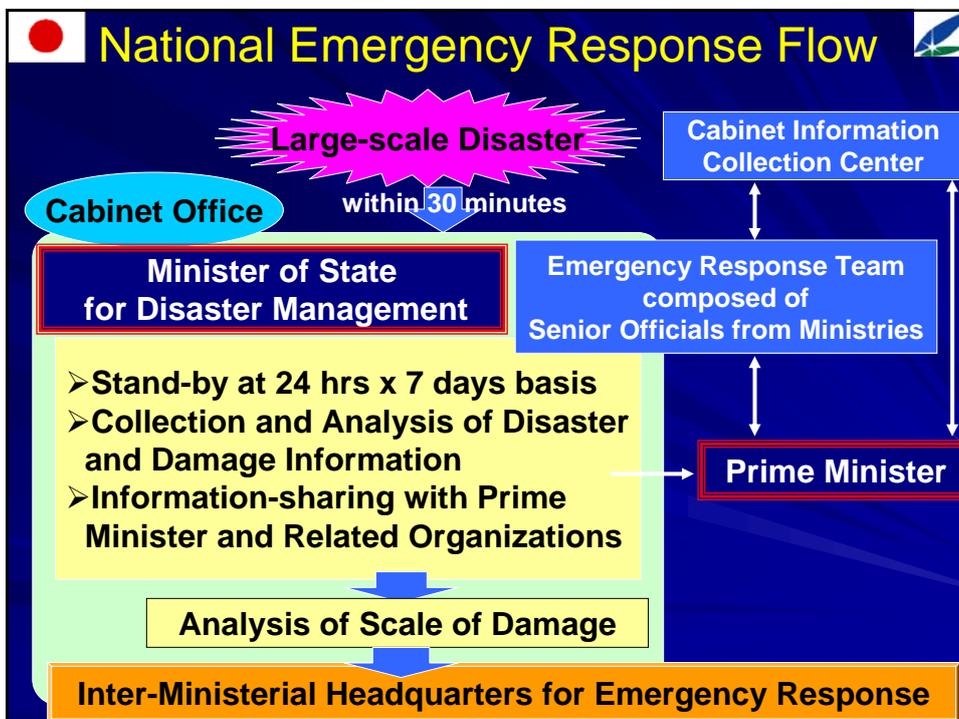
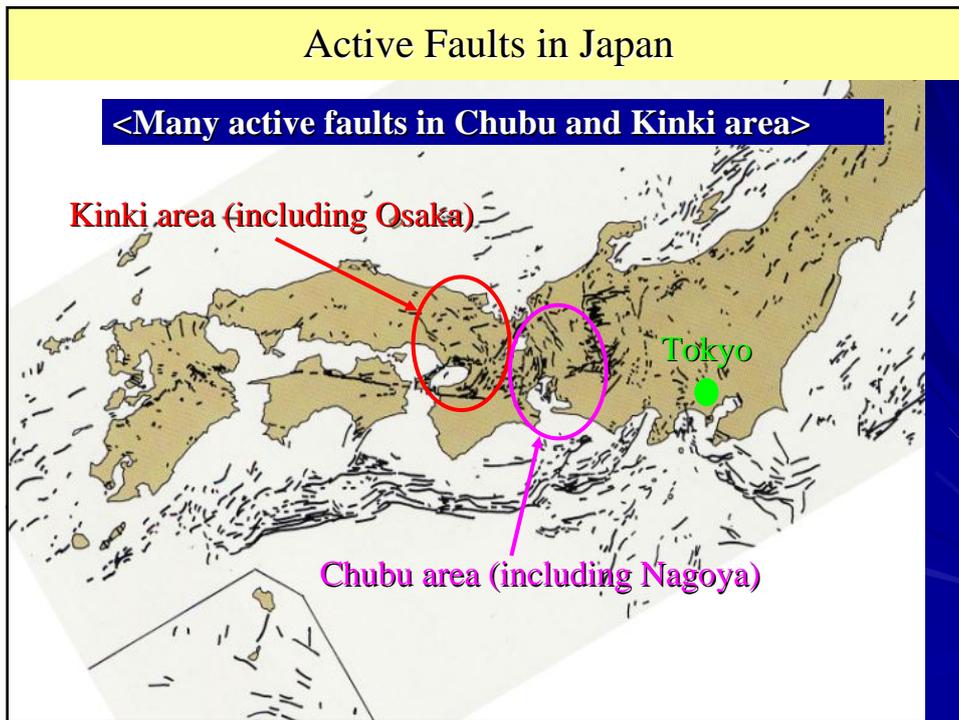
**4. Tokyo Metropolitan**

Estimate(2005) 11,000 Death etc. Economic  
Damage ¥112Trillion  
G. Measures(2005), Strategy(2006)

**5. Chubu and Kinki Inland**

Estimate(2007, partly)

Estimate : Heaviest Damage Case  
 G. Measures : Master-plan of the Countermeasures  
 Strategy : Target Number of Damage Reduction



## Official Lodgment for Crisis Management Staff

Staff could mobilize within 30 min. anytime.

## Priority of emergency mobilization place

- 1. Prime minister's residence
- ↓
- 2. Cabinet office
- ↓
- 3. Ministry of Defense  
(Central control office)
- ↓
- 4. Tachikawa wide-area disaster prevention base (30 km far from Tokyo)

TWO NEW Wide-area Disaster Management Areas has been Opened at Ariake-no-Oka and Higashi-Oaishima

**Tachikawa Wide-area Disaster Management Base**



Tachikawa Substitute Facility of the Government Headquarters for Disaster Countermeasures



約 115 ha

東京消防庁 Fire Dep.

海上保安庁 Coast guard

立川防災合同庁舎

Metropolitan Police Department

警視庁

食糧庫 防災要員宿舎

国立防災東京災害生活センター

Hospital

JSDF Runway

陸上自衛隊立川駐屯地

**Response to Changing Situations and Demands at the Affected Sites**

**Quake**

In 30 minutes (2004)

In 2 minutes (2007)




Press Briefing soonest after the quake

- Emergency calls to the officials in charge of disaster response who rushed to the Crisis Management Centre within Prime Minister's Office
- Setting-up the Emergency Response Team consisting of senior government officials, headed by the Minister of State for Disaster Management (10:15 am, 16 July 2007)
- ◆ Immediate information analysis



## Measures for People Requiring Assistance During a Disaster



In cooperation with relevant ministries, the Cabinet Office published the "Guidelines for Evacuation Support of People Requiring Assistance During a Disaster" in 2005 (revised in 2006) to be implemented at the municipal level.

**the guidelines**

- i) improving the information communications system
- ii) sharing of information concerning people requiring assistance during a disaster
- iii) creating a tangible evacuation support plan for those people
- iv) assistance at evacuation centers
- v) collaboration among related organizations

**tangible countermeasures**

Tangible countermeasures are included such as the issuance of evacuation preparation information which calls for the early evacuation of people requiring assistance, and sharing of information on people requiring assistance among disaster management and social welfare-related organizations.

(exceptional use of social welfare-related personal information to prepare evacuation support systems for the elderly and others)

 <b>災害時要援護者の避難支援ガイドラインの概要</b> <b>Outline of Guidelines for Evacuation Support of People Requiring Assistance During a Disaster</b> 	
<b>災害情報の伝達体制の整備</b> Improving the information communications system	<ul style="list-style-type: none"> <li>○避難準備情報の発令 Announcement of evacuation preparation information</li> <li>○災害時要援護者支援窓の設置 Establishment of a support unit for people requiring assistance</li> <li>○インターネット、災害用伝言ダイヤル等多様な手段の活用による通信の確保 等 Secure communications by making use of various means such as the Internet, emergency call message service, etc.</li> </ul>
<b>災害時要援護者情報の共有</b> Sharing of Information concerning people requiring assistance during a disaster	<ul style="list-style-type: none"> <li>○同意・手上・関係機関共有方式による要援護者情報の収集・共有 Collection and sharing of information on people requiring assistance in various ways</li> <li>○関係機関共有方式(個人情報)の避難支援体制の整備のための目的外利用・第三者提供)の積極的活用 等 Promotion of exceptional use of social welfare-related personal information to prepare evacuation support systems</li> </ul>
<b>災害時要援護者の避難支援プランの具体化</b> Creating a tangible evacuation support plan for people requiring assistance during a disaster	<ul style="list-style-type: none"> <li>○要援護者一人ひとりの避難支援プランの策定 Creation of an evacuation support plan for each individual requiring assistance</li> <li>○防災に強いまちづくりの重要性の明確化 等 Recognition of the importance of making communities resilient to disasters</li> </ul>
<b>避難所における支援</b> Assistance at evacuation centers	<ul style="list-style-type: none"> <li>○避難所における要援護者用窓口の設置の促進 Establishment of an information desk for people requiring assistance at evacuation centers</li> <li>○福祉避難所の設置・活用の促進 等 Establishment of welfare evacuation centers</li> </ul>
<b>関係機関間の連携</b> Collaboration among related organizations	<ul style="list-style-type: none"> <li>○福祉サービスの継続 Continuity of welfare services in disaster situation</li> <li>○保健師、看護師等の広域的な応援 Wide-area support of health nurses</li> <li>○要援護者避難支援連絡会議(仮称)の設置 等 Establishment of a committee on evacuation support of people requiring assistance at the municipal level</li> </ul>

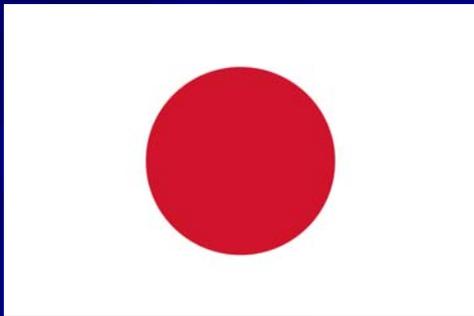


Proverb by Japanese Physics Scientist  
Dr. Torahiko TERADA (1878-1935)

「天災は忘れた頃にやってくる」



**“Natural Disasters will hit us by the  
Time people have forgotten about it”**



*Thank You*