

Great Earthquakes Disaster- Prevention Measures for Houses and Buildings

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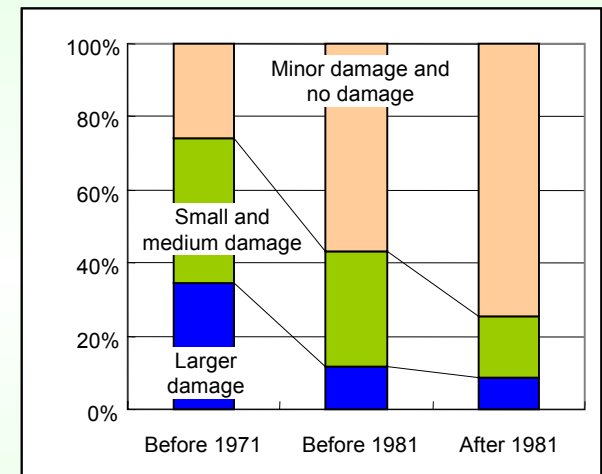
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Damage to Buildings and Other Places Caused by Great Earthquake

(The Hanshin-Awaji Great Earthquake Disaster in 1995)

- Circumstances in the Hanshin-Awaji Great Earthquake

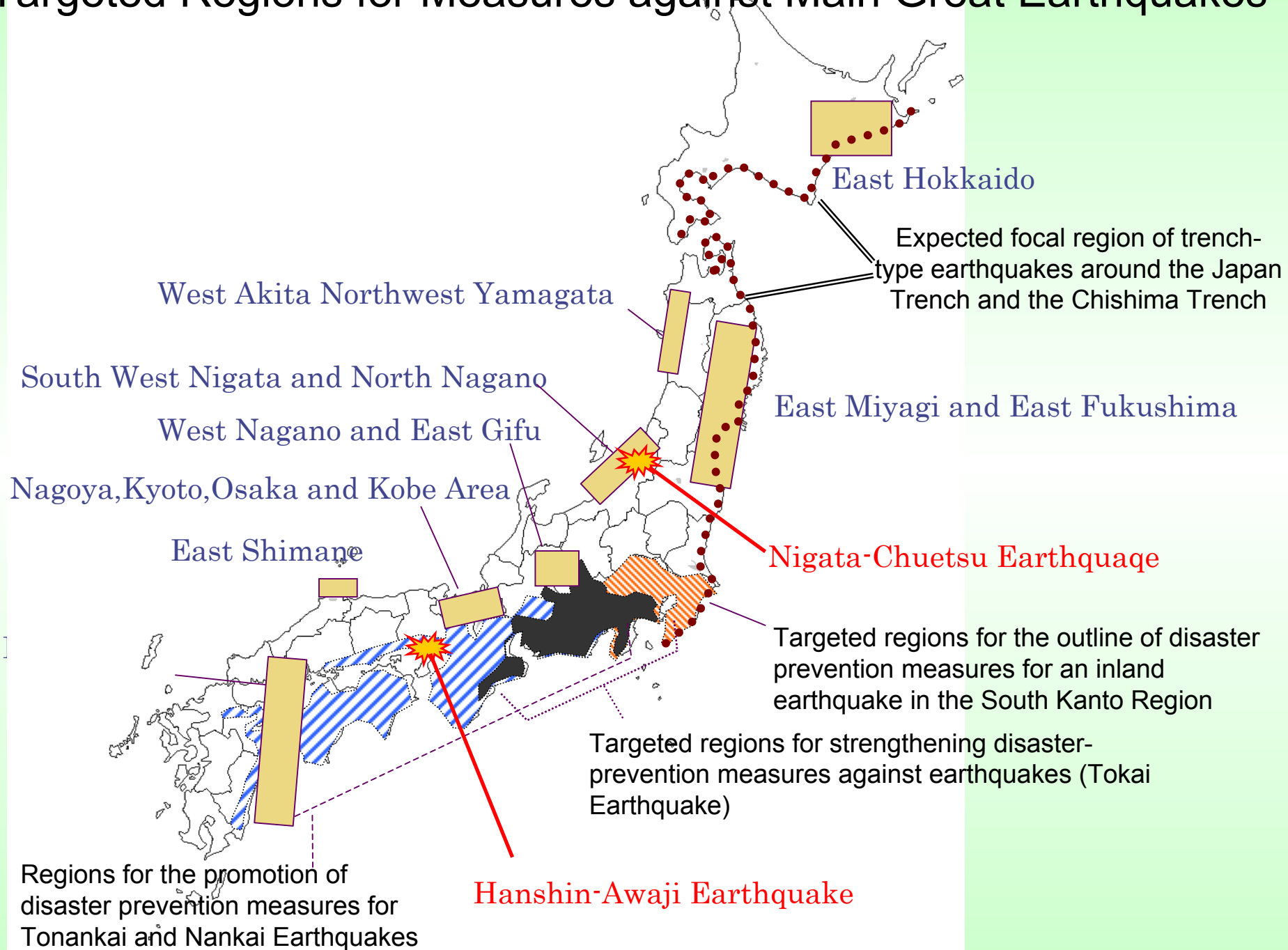
	Number of persons killed
Persons killed by having seemingly been crushed by collapsed buildings, furniture or others	4,831 (88%)
Burned bodies and dead bodies that appeared to have been burned	550 (10%)
Persons killed by other causes	121 (2%)
Total	5,502 (100%)



- Great Earthquakes Presumed to Occur in Future

		Tokai Earthquake	Tonankai and Nankai Earthquakes
Anticipated damage	Casualties from quakes	About 6,700 persons	About 6,600 persons
	Number of buildings completely destroyed by quakes	About 170 thousand buildings	About 170 thousand buildings

Targeted Regions for Measures against Main Great Earthquakes



Number of Buildings Estimated to Have Insufficient Earthquake Resistance

- Housing

	Total houses (Throughout the country)
Total housing units	47 million houses
Number of houses having insufficient earthquake resistance	11.5 million houses
(Percentage of the total number)	About 25%

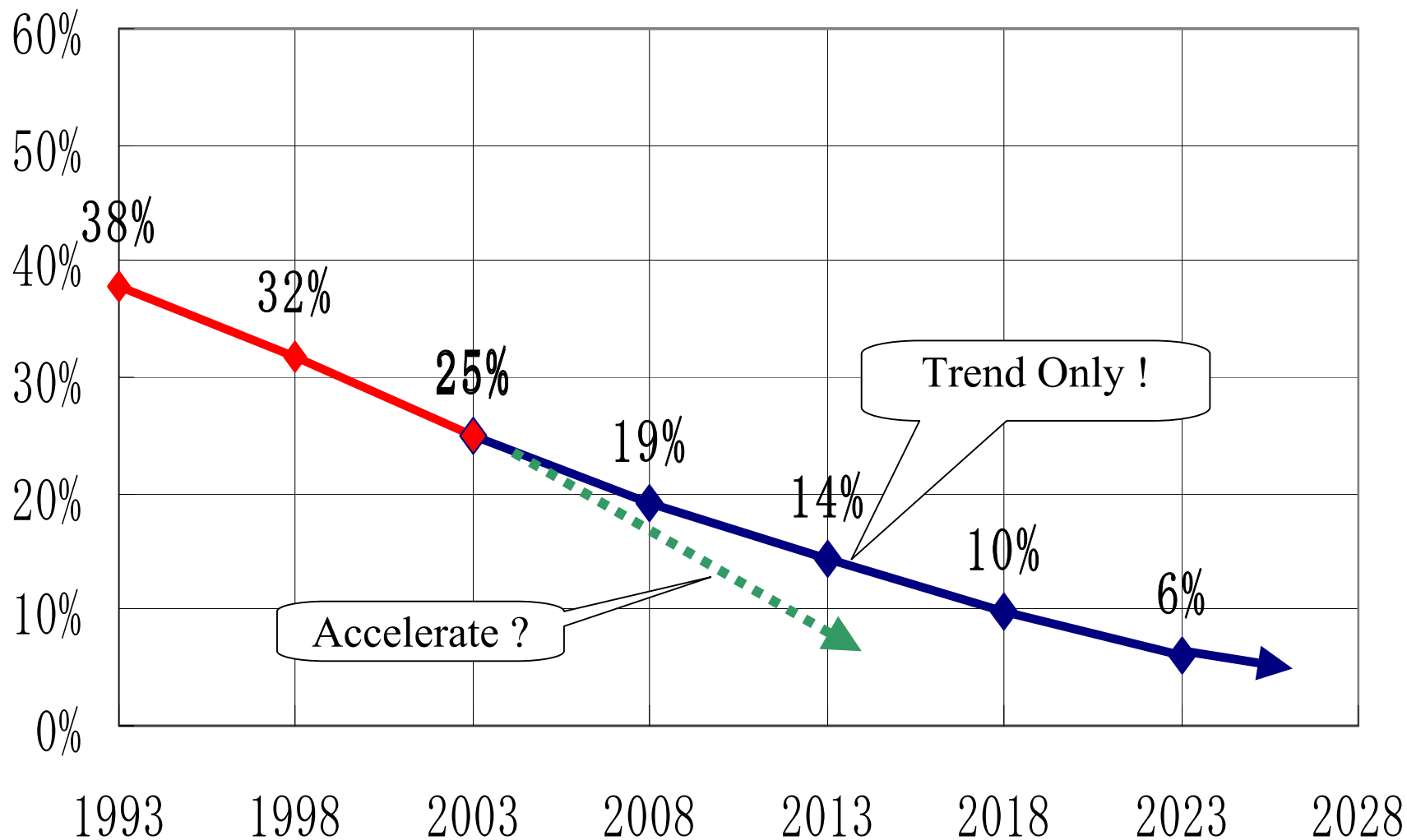
※ Estimated by MLIT as of 2003

- Non-housing

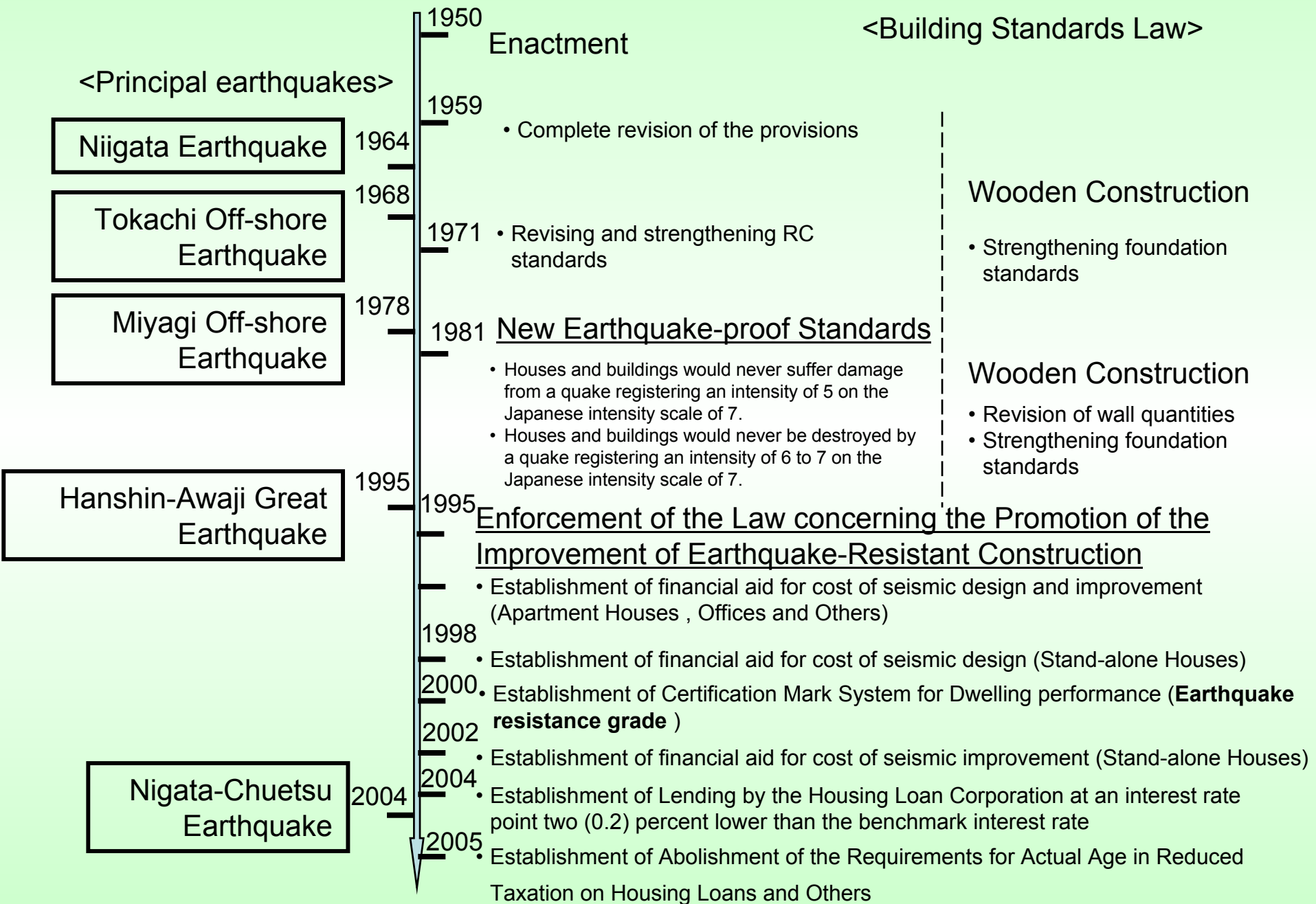
Total number	3.4 million buildings
Number of buildings with insufficient earthquake resistance	1.2 million buildings
(Percentage of the total number)	About 35%

※ Estimated by MLIT as of March 2002

Percentage of houses having insufficient earthquake resistance



Developments of anti-earthquake measures

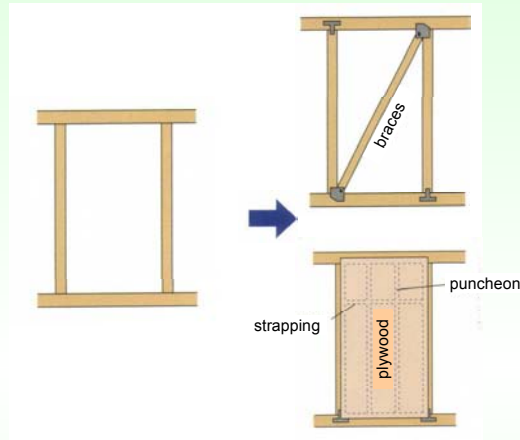


Making Houses and Buildings Earthquake-Resistant

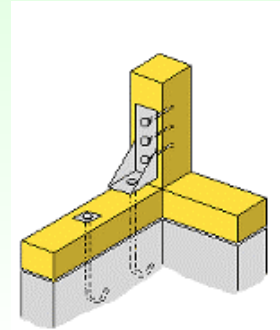
- Enforcement of the Law concerning the Promotion of the Improvement of Earthquake-Resistant Construction
- Assistance by aid, financing and so forth
- Promotion of technical development
- Consultation windows, enlightenment, and so forth
- Adoption of "Seismic Diagnosis Easy for Anybody to Understand"

Examples of Construction Methods for the Improvement of Earthquake-Resistant Construction

Examples of methods for seismic reinforcement of wooden houses



Installation of earthquake-resisting walls and braces



Reinforcement of joints



Damper hardware for seismic control

Examples of seismic reinforcement of apartment houses



Example 1 of reinforcement of pilings



Example 2 of reinforcement of pilings

The Law Concerning the Promotion of the Improvement of Earthquake-Resistant Construction

- Based on the Lessons Learnt from the Hanshin-Awaji Great Earthquake
 - Obligations for the owners of buildings which many people will use to direct their efforts toward seismic diagnosis and seismic improvement
 - Retroaction of matters disqualified other than earthquake-resistant related provisions concerning certified earthquake resistance improvement work
 - Guidance, advice, instructions, and others by the competent authorities of government
- Certification under the Law Concerning the Promotion of the Improvement of Earthquake-Resistant Construction (1995 to 2002)

Use	Number of Certifications	Public	Private
Total	2,709	2,339	370

Support System for Seismic Diagnosis and improvement

- Financial Aid for Seismic Diagnosis and Seismic Improvement of Houses and Buildings
 - Stand-alone Houses: About 16 percent of the cost of the improvement will be financially supported
 - Apartment Houses, Offices and Others: About 13.2 percent of the cost of the improvement will be financially supported(It will become easier to cope flexibly with the state of local governments (Budget in 2005))
- Lending Program for the Improvement Cost of Earthquake-Resistant Construction
 - Lending by the Housing Loan Corporation at an interest rate point two (0.2) percent lower than the basic interest rate
- Reduced Taxation on Housing Loans for the Improvement of Earthquake-Resistant Construction
 - For a period of ten (10) years, one (1) percent of housing loans outstanding can be deducted from the amount of income tax.
- Abolishment of the Requirements for Actual Age in Reduced Taxation on Housing Loans and Others (from 2005)
 - The requirements for actual age in reduced taxation on housing loans and others will be abolished for old houses that meet with earthquake resistance standards, even if they are old. The increase in volume of the purchase and sale of old houses would also help seismic diagnosis and seismic improvement be accelerated.

Fireproof buildings:
Built within twenty-five (25) years

Non-Fireproof buildings:
Built within twenty (20) years



Requirements for actual age will be abolished.
Conformance to new earthquake-proof standards will be required.

Operation Status in Local Governments of the System for Seismic Diagnosis and Seismic Improvement (As of March 31, 2004)

Types of Housing	Categories	Number of Municipalities in Operation
Stand-alone Houses	Seismic Diagnosis	580 municipalities
	Seismic Improvement	254 municipalities
Apartment Houses	Seismic Diagnosis	320 municipalities
	Seismic Improvement	136 municipalities

※Number of Municipalities in Japan : 2 8 5 4 (As of January, 2005)

Actual Numbers of Support for Seismic Diagnosis and Seismic Improvement

- Seismic Diagnosis (Total numbers up to the end of March 2004)
 - Housing: 170,000 houses (160,000 of the houses were financed from the national treasury)
 - Specified Buildings: 40,000 buildings (62 of the buildings were financed from the national treasury)
- Seismic Improvement (Total numbers up to the end of March 2004)
 - Housing: 3,500 houses (40 of the houses were financed from the national treasury)
 - Specified buildings: 10,000 buildings (49 of the buildings were financed from the national treasury)

Measures for Housing for Disaster Victims in Niigata Chuetsu Earthquake

Check for Affected Degree of Damage

■ Emergency Safety Check for Buildings Suffering from Disaster

Attention was focused by emergency checkups for the prevention of the second disaster. The emergency checkups were conducted for 36,143 houses from October 24 to November 10, 2004.

In danger

5243 cases (14%)

Caution needed

11122 cases (31%)

Already checked

19778 cases (55%)



Consultation Framework

■ Creation of Consultation Framework for Housing

- Establishment of consultation offices in thirteen (13) municipalities that were disaster-affected areas.
Registered architects go round evacuation centers to support housing consultation.
Toll-free telephone services are also available.
- Establishment of Information Providing Centers of Vacant Houses to supply centralized information about vacant public rental housing and private housing

Securing of Dwelling Facilities

■ Emergency Temporary Dwelling

- Construction of 3,460 houses
- One-day Caring Center for elderly were completed in Nagaoka City.



■ Moving in Vacant Public Housing, etc.

- One hundred and eighty six (186) public housing units in Niigata prefecture were secured, and partial moving-in was made into that housing.
- Information about vacant public rental housing all over the country is supplied.

■ Introduction of Other Facilities (Ministries and agencies)

- Information about vacant Housing for Job Development and housing for government workers is provided, and Japanese inns and hotels in Niigata prefecture are made use of as evacuation places for the elderly people.

Repairing and Rebuilding

■ Housing Loans for Emergency Restoration by the Housing Loan Corporation

- Lending for construction fund and repairing fund, etc.
(Ordinary interest rate: 2.85% → Interest rate in case of loans for emergency restoration: 1.7% as of December 14, 2004)

■ Emergency Repair by Disaster Relief Law (Ministry of Health, Labour and Welfare)

- An amount up to 600,000 yen is paid per family unit for emergency repair of a partially-destroyed house.

■ Support by Natural Disaster Victims Relief Law (Cabinet Office)

- An amount up to 3,000,000 yen is paid for demolishing a completely and a partially-destroyed house, ground leveling, and interest for loans.

*An additional amount is added to an interest rate subsidy for loans, an emergency repairing subsidy by Disaster Relief Law, and a subsidy by Natural Disaster Victims Relief Law, which is based on a proper system of Niigata prefecture.

■ Establishment of Head Office of Housing Repair Assistance Team

- Making up for shortages of building technicians in case local builders and others perform repairing work; and the introduction of builders to disaster victims