

**National Report of Japan on Disaster Reduction  
for the World Conference on Disaster Reduction  
(Kobe-Hyogo, Japan, 18-22 January 2005)**

Government of Japan

**Component 1 Political Commitment and Institutional Aspects**

**1.1-Are there national policy, strategy and legislation addressing disaster risk reduction?** If yes, please describe to what extent current national efforts and main priority areas of the policy, and mechanisms to enforce the implementation of the policy and legislation are applied (*and/or attach any relevant documentation*)

Yes.

The cornerstone of legislation on disaster risk reduction is the Disaster Countermeasures Basic Act, enacted in 1961, which set out the basis for measures to reduce disaster risk in Japan. There are also organizations involved in disaster risk reduction, legislation on disaster risk reduction and emergency response to disasters, post-disaster recovery and reconstruction, and all-round legislative provision regarding specific disaster risk reduction activities. Disaster countermeasures and risk reduction are comprehensively covered.

Under the Disaster Countermeasures Basic Act, the Basic Plan for Disaster Management has been drafted, setting out comprehensive and long-term plans for disaster risk reduction in Japan: based on this Plan, a comprehensive disaster-management planning system has been established.

The lessons learned from the Great Hanshin-Awaji Earthquake (Kobe Earthquake) of 1995 prompted enhancements to Japan's disaster risk reduction legislation and government policy. In recent years, particular priority has been accorded to countermeasures for large-scale earthquake disasters. Specifically, legislation has been passed regarding countermeasures for large-scale ocean-trench type earthquakes such as the anticipated Tokai, Tonankai and Nankai Earthquakes, earthquake countermeasures for large cities where damage is likely to be wide-ranging have been established, and improvements have been made to the overall framework with regard to legislation on disaster risk reduction and disaster countermeasures.

Documentation regarding government policy implementation and legislation is attached.

**1.2-Is there a national body for multi-sectoral coordination and collaboration in disaster risk reduction, which includes ministries in charge of water resource management, agriculture/land use and planning, health, environment, education, development planning and finance?** If yes, please give detailed information (name, structure and functions). *Attach any relevant documentation or indicate source of information.*

Yes.

Under the Disaster Countermeasures Basic Act, the Central Disaster Management Council was formed, its brief being to ensure the comprehensiveness of disaster risk management and to discuss matters of importance with regard to disaster management. (An organizational diagram and description of roles is included in the documentation attached.)

Within the Cabinet Office, which is the secretariat for this Council, the Minister of State for Disaster Management has been assigned as the Minister State for Special Missions for this issue. This Minister is assisted by the department of the Cabinet Office Director-General for Disaster Management his mandate being to handle planning and central coordination with regard to matters relating to basic policy on disaster risk reduction, and matters concerning disaster countermeasures in the event of a large-scale disaster. The Minister is also responsible for the integrated handling of information-gathering and other emergency measures, working closely with the Cabinet Secretariat, in the event of a disaster.

(Source: White Paper on Disaster Management, 2004.)

**1.3-Are there sectoral plans or initiatives that incorporate risk reduction concepts into each respective development area (such as water resource management, poverty alleviation, climate change adaptation, education and development planning)?** If yes, please indicate some examples and challenges / limitations encountered. If no, does your government have any plans for integrating disaster risk reduction into development sectors? If no, please also specify the major difficulties.

Yes. Examples follow.

(1) Comprehensive National Development Plan (provision of nation-wide spatial plan)

This is a comprehensive plan setting out Japan's policy on developing its national territory, based on the Comprehensive National Development Act. Drafted in 1998, the Plan identifies "making Japan a safe and comfortable place to live" as one of the five fundamental objectives of national development, and defines its aim as improving the country's safety with regard to large-scale earthquakes and other natural disasters. "Disaster mitigation countermeasure reduction measures" based on the principle of minimizing the damage caused by disasters is prioritized as the main task.

Specific objectives are: establishing a disaster-resilient transport and communications infrastructure; introducing public works design standards commensurate with their importance; promoting the assurance of earthquake-resistance capacity in buildings; establishing an earthquake watch network and other disaster watch systems; promoting research into disasters and their prevention; assessing and publishing the degree of risk of local disasters, and reflecting this information in local development and land use; providing disaster management manuals for local, corporate and administrative bodies, tailored to specific disaster type and scale; establishing systems enabling an appropriate response to be mounted in the event of a disaster, such as strengthening information-relaying systems, evacuation, aid and rescue systems, volunteer-dispatch systems, and backup systems for administrative functions and company activities; and provisions for people requiring help in the event of a disaster.

(2) Social Infrastructure Development Priority Plan (provision of social infrastructure)

This is a long-term plan aimed at ensuring that social infrastructure development projects are implemented in a focused, effective and efficient manner. Before March 2002, social infrastructure had been created in accordance with long-term plans specific to operational areas (roads, traffic safety facilities, airports, ports, municipal parks, sewers, flood control, steep slopes, coastal cliffs), but from April 2003 onwards, efforts have been made to improve liaison and efficiency of communication between these operational departments as much as possible, through the implementation of the Social Infrastructure Development Priority Plan. The most important issues are the establishment of facilities to prevent flood damage, facilities and systems for the real-time relaying of information on floods and other natural disasters, evacuation sites and routes, disaster risk reduction facilities, and routes for the provision of aid in the event of disaster.

(3) Long-Term Plan for Land Improvement (improvement of agricultural areas and land)

The aims of this Plan are to mitigate disaster-related damage to agricultural industry, and to increase safety and peace of mind in provincial communities. Specifically, it is focused on agricultural areas where flood damage is anticipated, and its concrete goal is to reduce such areas by roughly 3/4 relative to fiscal year 2002, by fiscal 2007.

(4) Forestry Maintenance and Conservation Projects Plan (forestry)

This is a long-term plan relating to forest maintenance and afforestation projects aimed at maintaining and conserving forests in an appropriate manner. "Creating a society where citizens can live their lives with peace of mind" by preventing landslide disasters through the regeneration of damaged forests and the prevention of further forest damage is specified as one of the Plan's objectives. One of its concrete goals is to increase the number of communities whose surrounding forests have been subjected to mountain disaster-proofing, by roughly 10% relative to fiscal year 2003, by 2008.

(5) Ministerial Ordinance Governing Technical Standards for Water Supply Facilities (water supply operations)

This Ministerial Ordinance includes the following requirements regarding water supply facilities.

Consideration must be given to ensuring that in the case of disaster or other emergency, the suspension of the water supply and other adverse effects on the water supply are minimized; consideration must also be given to ensuring that recovery can be achieved speedily.

Bearing in mind topography, geology and other natural conditions, facilities must be structurally safe with regard to their own weight, the loads they are required to bear, water pressure, earth pressure, uplift pressure, buoyancy, seismic force, weight of accumulated snow, ice pressure, thermal load and other foreseeable loads.

Besides having structural safety with regard to seismic force, commensurate with their importance, facility construction must give consideration to the impact of liquefaction, lateral flow and other phenomena produced by earthquakes.

In order to prevent damage spreading in the event of an earthquake or other emergency, cutoff valves and other necessary fixtures must be provided as required.

Other requirements for disaster-proof construction are set out regarding water intake facilities, water storage facilities and other types of facilities.

**1.4-Is disaster risk reduction incorporated into your national plan for the implementation of the UN Millennium Development Goals (MDGs), Poverty Reduction Strategy Paper (PRSP), National Adaptation Plans of Action, National Environmental Action Plans and WSSD (World Summit on Sustainable Development) Johannesburg Plan of Implementation?** If yes to any of these, who are the main contacts for these initiatives.

Basically, these issues are being addressed, and there are different contacts for each initiative.

Note: PRSPs are drawn up individually by the developing countries; Japan does not have one.

**1.5-Does your country have building codes of practice and standards in place, which takes into account seismic risk?** If yes, since when. Which are the main difficulties in keeping with the compliances of the codes.

Japan has the Building Standard Law (enacted in 1950) and the Act for Promotion of the Earthquake Proof Retrofitting of Buildings (enacted in 1995). It has been confirmed that buildings constructed under the revised Building Standard Law (known as the “New Seismic Design Method”) enacted in 1981 have adequate earthquake resistance.

On the other hand, many buildings in Japan (roughly one-third of the total) have inadequate earthquake resistance because they had been built before the relevant standards were tightened in 1981; it has been pointed out that little progress is being made in improving the earthquake resistance of these aged buildings.

**1.6- Do you have an annual budget for disaster risk reduction?** If yes, is this commitment represented as part of the national budget or project based? Through which institution/s? If no, what other financing mechanisms for risk reduction initiatives are available?

Yes, disaster risk reduction is covered in the state budget. In fiscal year 2003, the budget for disaster risk reduction was approximately 2.7 trillion yen, which is about 5% of the total general-account budget.

**1.7-Are the private sector, civil society, NGOs, academia and media participating in disaster risk reduction efforts?** If yes, how? Indicate existing coordination or joint programming between government and civil society efforts in disaster risk reduction, or major difficulties or constraints for this to be effective.

Yes.

Under the Disaster Countermeasures Basic Act, even in the private sector, persons with responsibilities regarding disaster risk reduction must fulfill their responsibilities faithfully, and local residents, besides taking measures to prepare for disasters, must also make efforts to contribute to disaster risk reduction by, for example, participating in voluntary disaster risk reduction activities.

Specifically, public bodies as well as legal bodies carrying on public business designated by the Prime Minister under the Disaster Countermeasures Basic Act (public institutions such as the Bank of Japan, and corporations running public operations such as electricity and transport) are obliged to participate in the Central Disaster Management Council and draft disaster risk reduction operations plans based on the Basic Plan for Disaster Management, and also bear a range of responsibilities regarding disaster risk reduction activities, including cooperation, in the event of a disaster.

Other private companies are also given more opportunities to participate in evacuation drills and to contribute to society by being involved in disaster risk reduction activities including developing products with extra disaster risk reduction functions,

Academic bodies are playing a major role in carrying out scientific and technical research on disaster risk reduction, and performing voluntary activities including research on natural phenomena such as typhoons, torrential rains, earthquakes and volcanic eruptions. Working in cooperation with the

government, they are supplying expert technical knowledge to the Central Disaster Management Council and a range of specialist investigative committees.

As for the mass-media, NHK (Nippon Hoso Kyokai/Japan Broadcasting Corporation) and the commercial TV stations broadcast subtitles for news-flashes, information about earthquakes, tsunami and meteorological disasters, and volcanic eruption warnings. They also broadcast special disaster features as appropriate, and make a concerted effort to raise awareness about disaster risk reduction.

At the local community level, fire-fighting and flood protection groups have always been active. Members of volunteer fire-fighting groups carrying out fire-fighting activities usually have full-time jobs, and spring in to action when fires break out, motivated by the desire to protect their homes. In recent years, these groups have been facing a number of problems such as dwindling and ageing membership, and an increase in the proportion of members who have full-time jobs.

In recent years, there has been an increase in the number of voluntary disaster risk reduction organizations, including women's and young people's groups, carrying out various disaster risk reduction activities on a regular basis.

Since the Great Hanshin-Awaji Earthquake (1995 Kobe Earthquake), the importance of voluntary activities in disaster risk reduction has become widely recognized, and events revolving around disaster risk reduction and volunteers are now held annually on January 17, which has been designated Disaster Management and Volunteer Day, and over Disaster Management and Volunteer Week, which runs from January 15 to 21.

The Disaster Countermeasures Basic Act explicitly states that national and local public bodies must endeavor to provide an environment conducive to the performance of voluntary disaster risk reduction activities.

Although volunteers also turn out in large numbers in the event of an actual disaster, much remains to be done in terms of creating conditions conducive to the effective utilization of voluntary activities. Depending on the situation in the area, this issue is being addressed by either making sure the community is already aware of the existence and running of volunteer centers, or by setting up and running new volunteer centers based around Community-Based Organizations (COBs), to aid the absorption of volunteers from outside the local area, and to coordinate their activities.

The efforts of disaster risk reduction volunteers are important when things are normal as well as in times of disaster. All over Japan, initiatives aimed at "creating disaster-proof living zones" are now in progress in the private-sector, spearheaded by companies, citizens and NPOs working in cooperation. A good example of this kind of collaboration between the private and public sector, including local public bodies, is the Local Council for Countermeasures Regarding Displaced Residents in the Vicinity of Tokyo Station and Yuraku-cho Station.

## **Component 2 Risk Identification**

**2.1-Has your country carried out hazard mapping/assessment?** If yes, please describe for which hazards, when they were updated and for what geographical scale they exist. Do they include characteristics, impacts, historical data, multi-hazards approach? Which institutions are using the results of the hazard assessment? To whom are they available? (*attach any relevant documentation*)

Japan has carried out hazard mapping with regard to tsunamis, tidal waves, flooding, volcanic eruptions and earthquakes. Progress has also been made in the development of dynamic flood hazard maps which predict how the flooding will spread over time. The scale of these maps varies from 1/2,500 to 1/25,000 according to purpose.

Many hazard maps have been drafted by local public bodies: the Cabinet Office, the Ministry of Agriculture, Forestry and Fisheries of Japan, the Fisheries Agency, the Ministry of Land, Infrastructure and Transport and other agencies have drawn up manuals on the subject. Many of these maps have been made available to the general public on the internet and elsewhere.

Several examples of hazard maps are attached.

**2.2-Has your country carried out vulnerability and capacity assessments?** If yes, please describe the methods used and major social, economic, physical, environmental, political and cultural factors considered in the assessment(s). Who are the main contacts for these assessments (*or attach any relevant documentation or contact information.*)

Assessment of disaster-management capacity:

The Fire and Disaster Management Agency has drawn up a procedure enabling local public bodies to make an objective assessment of their own disaster risk reduction and crisis-management systems. Assessment is carried out using results based on replies to roughly 800 questions, each offering 2 to 4 alternatives (see documentation attached).

Department responsible: Disaster Management Division, Fire and Disaster Management Agency, Ministry of Public Management, Home Affairs, Posts and Telecommunications.

Self-evaluation Method for Disaster Prevention:

The Cabinet Office provides with an efficient methodology to self-evaluate and moreover enhance community-base performance to collect information, foresee probable disaster and ensure quick evacuation. Currently, two evaluation methods/systems for sediment disaster as well as flood are available on Web page.

Department responsible: Director for Disaster Preparedness, Cabinet Office for Disaster Management.

Assessment of vulnerability:

The Central Disaster Management Council and local governments have anticipated the damage that would be caused in the event of a major earthquake, and have assessed vulnerability by, among others, evaluating the earthquake resistance of buildings and infrastructure in as well as by appraising the awareness of community members with regard to disaster risk reduction.

**2.3-Does your country have any mechanisms for risk monitoring and risk mapping? If yes, who is responsible?**

Yes, Japan has such mechanisms. Provision for promoting hazard mapping and keeping the public informed regarding disaster countermeasures is included in the country's basic disaster-risk reduction plan. The institutions responsible are the Cabinet Office, other relevant government agencies, and local governments.

**2.4-Is there a systematic socio-economic and environmental impact and loss analysis in your country after each major disaster? If yes, are the results available?**

Although Japan's central government does not carry out this kind of analysis regarding all disasters, the competent administrative bodies assess disaster damage with regard to rivers, roads, forestry and fisheries facilities, educational facilities, health and welfare facilities and other public facilities in order to expedite their swift recovery. The stricken area is subjected to disaster damage assessment from the viewpoint of providing state aid for the recovery operation.

In addition to this, loss assessment is carried out by private-sector think-tanks and local government bodies. The damage caused by the Great Hanshin-Awaji Earthquake (1995 Kobe Earthquake), for example, was estimated (by Hyogo Prefectural Government) at approximately 10 trillion yen. In the case of the 2003 Tokachioki Earthquake, damage was estimated (by the Hokkaido Prefectural Government) at approximately 25.4 billion yen. These results have been published and are available for use.

For the purpose of inheriting the experiences and knowledge precisely, increasing disaster management consciousness and being useful for disaster management after this on past large disasters, Organization of Central Disaster Management Council established Organization for the Technical Investigation on Disaster Lessons (October 2003). The organization systematically pigeonholes information of the state of the damage, response of authorities, inferences on people living condition and socio-economic impacts.

**2.5-Are there early warning systems in place? If yes, for what hazards and for what geographical scope. Do you have any example when the system was activated lately? Which are the main institutions involved? Please indicate any relevant lessons-learnt from the use and public reaction to early warnings issued.**

Yes.

All of Japan's national territory is covered by early warning systems for storms, blizzards, torrential rains, heavy snow, landslides of various kinds, tsunamis, tidal waves, high surf, inundation and floods, the Ministry of Land, Infrastructure and Transport, the Japan Meteorological Agency and local

government bodies being the main institutions involved. Areas deemed to be at particularly high risk of earthquake or volcanic eruption are also covered by specific countermeasures.

The lesson learned from public reaction to early warnings is that evacuation is too slow. Another fact emerging from the results of a survey was that residents of stricken areas who had previously seen the flood hazard map started their evacuating activities about an hour earlier than residents who had not seen the map. Besides raising individual awareness, more effort needs to be made by those issuing early warnings such as improving the reliability of meteorological warnings.

A system has also been developed whereby the size of an earthquake and its epicenter can be estimated instantly from its preliminary tremors (or “P wave”), enabling alerts to be sent out, mere seconds after the P-wave arrives, to local governments and fire-fighting headquarters all over Japan. This system has been operating on a trial basis since February 2004.

#### Example 1: Usuzan Volcanic Eruption (March 2000)

The seismic activity which began on the morning of March 27 became gradually more pronounced, and on March 29, the Coordinating Committee for the Prediction of Volcanic Eruptions deemed the possibility of an imminent eruption to be high. Thus notified, the Japan Meteorological Agency issued an emergency volcanic alert. In response to this, the relevant local government bodies issued evacuation instructions, and the local residents (numbering up to 15,815) were swiftly evacuated before the eruption took place. Thanks to this, and to the establishment of the Mount Usu On-Site Liaison Association (renamed the Mount Usu On-Site Disaster Management Headquarters after the eruption) --- comprised of the central and local governments, plus 41 other organizations, and the first such body to be established in Japan before a volcanic eruption -- sound disaster risk-reduction countermeasures were adopted, and large-scale loss of life was averted.

#### Example 2: Torrential Rains in Southwest Kochi Prefecture (September 2001)

On September 6, record-breaking rains fell in Tosashimizu, Sukumo, Otsuki Mihara and other parts of southwest Kochi prefecture. However, an alert was issued through the early announcement of a heavy rain warning based on a forecast by the Japan Meteorological Agency. In the course of the warning announcements, disaster alerts specific to the relevant municipalities were also issued with regard to localities where the danger of landslide disasters was deemed to be particularly high, judging from the current rainfall status and forecast. Consequently, the local residents voluntarily completed their evacuation in good time, and although mountain-area ground collapses and debris flow occurred in over 1,000 locations in Kochi prefecture, a damage to human lives was averted.

## **Component 3 Knowledge Management**

**3.1-Does your country have disaster risk information management systems (governmental and/or non-governmental)?** If yes, what kind of information on disaster reduction is available, how is it collected, how is the information disseminated and who are the main users? (indicate relevant sources of information, if applicable)

Examples of systems used to inform the public of risk in the event of impending disaster are listed below.

Government systems:

- Disaster Risk Reduction Information Sharing Platform: Targeted at national and local government bodies and the general public, this initiative is designed to grasp the “big picture” of damage swiftly.
- Climate-related system: Terrestrial and marine weather observations and high-altitude weather observations regarding rainfall volume, wind direction, wind speed, air temperature and other parameters made in Japan and overseas, including on ships, plus a variety of observation data including weather radar data and cloud observations made by means of weather satellites, are gathered, and analyses and forecasts of meteorological phenomena are made using supercomputers. When the emerging forecast results regarding rainfall volume, wind or other factors, indicate that a major disaster is likely to occur, the Japan Meteorological Agency issues a weather warning, and this, as well as being disseminated online to organizations involved in disaster risk-reduction, is also released on TV, on radio and on the internet, and utilized by the general public.

- Earthquake and tsunami-related system: Observation data from seismographs, seismic intensity meters, tsunami observation facilities and the like are collected and processed on a round-the-clock basis, and within minutes of an earthquake's occurrence, the Japan Meteorological Agency issues a tsunami forecast and earthquake and tsunami information. As well as being circulated online to organizations involved in disaster risk-reduction, these warnings are also released on TV, on radio and on the internet, and utilized by the general public.  
A system has also been developed whereby the size of an earthquake and its epicenter can be estimated instantly from its preliminary tremors (or "P wave"), enabling alerts to be sent out, mere seconds after the P-wave arrives, to local governments and fire-fighting headquarters all over Japan. This system has been operating on a trial basis since February 2004.  
A system is also in operation which is designed to provide support for swift and sound decision-making by the government regarding emergency countermeasures, by performing a swift damage estimate immediately after an earthquake has occurred, and displaying information relating to infrastructure facilities such as roads and railways, and disaster risk-reduction facilities such as fire stations and hospitals, on a map along with damage information, information on the status of emergency countermeasures, and so forth. This system is in use at government agencies.
- Volcanic eruption related system: The activity status of volcanoes requiring monitoring is monitored comprehensively round the clock by the Japan Meteorological Agency, which collects and processes a wide range of data, which it uses to perform swift diagnosis. Abnormalities in volcanic activity are detected promptly, and if alerts and warnings are required, the relevant information is released quickly by the Japan Meteorological Agency, as well as being transmitted online to organizations involved in disaster risk-reduction, and released on TV, on radio and on the internet for use by the general public.
- River-related system: Instant radar readings on rainfall volume, telemeter readings on water-levels and rainfall volume, flood warnings, inundation warnings and other river information are relayed by internet and mobile phone. The considerable public need for information of this sort is attested by the 1.5 million-odd access "hits" per day recorded when Typhoon No.10 was approaching Japan in August 2003.

Non-government systems:

#### UrEDAS

The JR (Japan Railway) Group uses its Urgent Earthquake Detection and Alarm System (UrEDAS) in the running of Shinkansen (bullet train) and conventional rail services. When preliminary earthquake tremors have been detected and deemed likely to interfere with rail services, the rail system's power supply automatically shuts off.

#### SUPREME

SUPREME is a real-time seismic disaster-prevention system launched in July 2001. It is essentially a more evolved version of the duct network earthquake warning system SIGNAL, launched in 1994 by Tokyo Gas. New SI sensors have been deployed in each of the 3,800 block governors (regulators which adjust the gas pressure from medium to low) in a service area of roughly 3,100 km<sup>2</sup>, and a newly-developed device for remote observation in the event of an earthquake (the Disaster Mitigation DCX) and a remote breaker unit have been installed. Using general circuits (which take priority in the event of earthquake damage), multiple block governors can be shut off promptly and reliably all at once: this is the world's first system to make this feat possible.

Other systems relaying risk information from a long-term perspective include the following.

Government systems:

Long-term assessment of active faults and ocean-trench earthquakes by the Headquarters for Earthquake Research Promotion

The Earthquake Research Committee evaluates factors such as the intervals between periods of activity of Japan's principal active faults and ocean-trench earthquakes (quakes accompanying the sinking of plates), and the likelihood of occurrence of the next earthquake (location, magnitude and occurrence probability), and publishes its findings as needed.

Non-government systems:

“Active Faults in Japan” (Revised Edition)

The Research Group for Active Faults of Japan publishes distribution graphs and reference charts showing the various aspects of the distribution of active faults in Japan and on the surrounding sea-bed (degree of certainty, degree of movement, timing of movement, and so forth).

**3.2-Are the academic and research communities in the country linked to national or local institutions dealing with disaster reduction?** If yes, please describe the mechanisms for information sharing and indicate any example of usefulness and effectiveness. Which are the main research and academic institutions dealing with disaster reduction related issues (please list, if available, and indicate how their research work is related to the country’s disaster risk reduction needs.)

Yes.

Experts belonging to academic and research institutions in Japan, work closely in partnership with national and local institutions involved in disaster risk reduction as members of the Central Disaster Management Council or of the specialist study groups which are its subordinate organizations. Thus, they share information in the field.

The Headquarters for Earthquake Research Promotion formulates overall basic policy on earthquake research.

In addition, research and development in areas such as earthquake disaster-prevention science and technology as well as emergency and disaster risk reduction communications technology are cited as priority tasks in Science and Technology Basic Plan. In the field-specific implementation plans within this Basic Plan, safe construction has been assigned a high priority in terms of infrastructure, and nine research and development (R&D) areas have been set out, along with their principal (R&D) targets for the next 5 years. The results obtained from this research will be used to raise the efficiency of disaster risk reduction measures, and to improve them on an ongoing basis.

**3.3-Are there educational programmes related to disaster risk reduction in your public school system?** If yes, for what age-range? Do you have any educational material developed to support the teachers in this area? *(please attach any relevant documentation)*

Yes.

These programs cover the age-range from 3 to 18 years (i.e. the whole of a child’s school career, from kindergarten through high-school). With a view to improving disaster risk reduction education at school, the Ministry of Education, Culture, Sports, Science and Technology is implementing policies such as providing teachers with reference material to be used in safety guidance and planning evacuation drills, developing and distributing disaster risk reduction training materials focusing on how to prepare for and behave in the event of an earthquake or other natural disaster, and holding disaster risk reduction education training sessions (at the National Center for Teachers’ Development). For more information, see “Implementing Disaster Risk Reduction Education Designed to Foster the Fortitude to Live: a Reference Document for Disaster Risk Reduction Education.”

**3.4-Are there any training programmes available?** If yes, please list (if available indicate scope and target audiences of the courses). Do you have any indication on how these courses have been useful to change any practices at local or national scale?

Yes (see list attached).

It has been confirmed that the caliber and risk-management capacities of administrators with responsibility for disaster risk reduction have been improved by these training courses. Verification and confirmation have been carried out with regard to the practicality of emergency disaster countermeasures, particularly in all-round disaster risk reduction training.

**3.5-What kind of traditional indigenous knowledge and wisdom is used in disaster-related practices or training programmes on disaster risk reduction in your country?**

When drawing up hazard maps or carrying out evacuation drills, areas that will be covered with mud, areas that were submerged in past tsunamis, and so on, are explicitly factored in.



**3.6-Do you have any national public awareness programmes or campaigns on disaster risk reduction?** If available, who are the main players for raising public awareness? How are the mass media and schools involved? Who are the targeted groups and how do you evaluate the programmes?

Yes.

For example, on National Disaster Prevention Day (September 1) and during National Disaster Prevention Week (August 30 to September 5) every year, awareness-raising events, drills and so forth are carried out in order to increase public awareness of disaster risk information and improve preparedness for underlying disasters. Additionally, on Disaster Management and Volunteer Day (January 17) and Disaster Management and Volunteer Week (January 15-21), events and voluntary activities relating to disaster risk reduction, are held all over Japan. These events are held by the central government, local government bodies, and other organizations (jointly, in some cases). In addition to publicity on TV, radio, in newspapers and leaflets, special features are presented by various press organizations. Schools participate by creating slogans and participating in disaster management poster contests and voluntary activities, among other things.

These programs target the populace at large.

Two prize-winning works of disaster management poster contest (2003) are attached.

#### **Component 4 Risk Management Applications/Instruments**

**4.1- Is there any good examples of linking environmental management and risk reduction practices in your country** (*key areas of environmental management may include coastal zone, wetland and watershed management, reforestation and agricultural practices, amongst others*). If yes, please indicate in what areas. (*Attach any relevant documentation ore references*)

Examples can be seen in agriculture, fisheries and forestry.

With regard to agriculture, these practices contribute to the conservation of the national territory and the natural environment, the protection of water resources, the creation of pleasant scenery, and so on. They also have more specific functions such as calming the flow of water through rice-paddies and fields when rain falls, thus averting disasters and maintaining safety for city-dwellers living downstream, and of preventing soil outflow and landslides in mountainous areas.

Practices of this kind in the fishing industry involve fishermen and residents of fishing villages carrying out activities to conserve the environment of coastal areas; fishing boats, which have maneuverability that comes in useful in natural disasters, shipping accidents, oil spills and other accidents, also play an important part in rescue activities.

In rural districts and coastal areas, facilities required for forest conservation and regeneration, and afforestation projects for forest maintenance, are carried out as public works projects, targeting forests (forest reserves and the like) which are particularly important in terms of their role in preserving private dwellings, farmland, roads, and so on from damages caused by outflows and avalanches of soil, wind storms, high tides and other hazards.

**4.2- Are financial instruments utilised in your country as a measure to reduce the impact of disasters** (*e.g. insurance/reinsurance, calamity funds, catastrophe bonds, micro-credit finance, community funds, etc.*)? If yes, please describe what these instruments are and when they were established, who manages them and who are eligible to them.

Yes. Principal examples are listed below.

Type of financial instrument		Estab- lished	Run by:	Eligible as insurees:
Disaster insurance	State-run forest insurance	1937	Central government	Forest owners

	Agricultural disaster compensation system	1947	Agricultural mutual aid societies Agricultural mutual relief associations Central government	Agricultural businesses (as defined under the relevant legislation)
	Guarantee system for fishing-boat loss or damage	1952	Fisheries insurance unions The Central Society of Fishing Vessel Insurance Associations Central government	Owners of fishing-boats(as defined under the relevant legislation)
	Fishery disaster compensation system	1964	Fisheries mutual aid societies Fisheries mutual relief associations Central government	Small and medium fishing businesses (as defined under the relevant legislation)
	Earthquake insurance and mutual aid	1966	Non-life insurance companies Mutual aid organizations	Ordinary citizens Ordinary companies
	Earthquake re-insurance	1966	Central government	Non-life insurance companies
Grants for disaster counter-measures	Disaster aid grants	1947	Prefectural governments	
Small short-term loans	Disaster assistance loans	1973	Municipal governments	People who have been injured or suffered damage to their home or property as the result of one or more natural disasters, and who live in a municipality belonging to a prefecture where the Disaster Relief Law on Natural Disasters has been applied
Disaster loans	Disaster recovery initiatives		Ministry of Finance	Local public bodies stricken by disaster
	Disaster loans	1953	Agriculture, Forestry and Fisheries Finance Corporation	Agriculture, forestry and fishing businesses stricken by disaster
	Disaster loans		National Life Finance Corporation Japan Finance Corporation for Small Business	Small and medium enterprises stricken by disaster
	Special credit guarantee measures		Credit guarantee corporations	Small and medium enterprises stricken by disaster
	Natural disaster relief loan system	1955	Municipal governments	Agriculture, forestry and fishing businesses stricken by disaster
Group grants	Aid grants for fishing grounds damaged by oil spills	1975	Oil-spill Damaged Fishing Grounds Aid Foundation	Fishing businesses stricken by oil spillages of unknown origin
Local loans	Disaster-related local loans		Ministry of Public Management, Home Affairs, Posts and	Local public bodies stricken by disaster

			Telecommunications, and local government bodies stricken by disaster	
Reconstruction loans	Great Hanshin-Awaji Earthquake (Kobe Earthquake) reconstruction grants	1995	Hyogo Phoenix Plan	Hyogo Prefectural Government, Kobe Municipal Government
Other	Earthquake loans	1999	Non-life insurance companies	
	Earthquake risk securitization	2003	Non-life insurance companies	
	Abnormal weather insurance		Non-life insurance companies	Ordinary companies

**4.3- Please identify specific examples of technical measures or programmes on disaster risk reduction that have been carried out in your country (see below, case studies).**

**Tokai Earthquake Countermeasures**

The Tokai Earthquake Countermeasures are aimed at mitigating disaster by implementing a raft of disaster risk-reduction countermeasures based on the relevant observation data in the event that the tell-tale signs of an imminent earthquake – known as “warning pre-slippage” – are observed. The Japan Meteorological Agency is carrying out real-time processing of observation data thought to be useful in detecting warning signs of the Tokai Earthquake using the Earthquake Phenomena Observation System (EPOS), and performing comprehensive monitoring. Should warning signs occur, investigations will be made as to whether the Tokai Earthquake is occurring, and if it is deemed possible that this is indeed the case, the Prime Minister will issue a Warning Declaration on the basis of earthquake prediction information released by the Japan Meteorological Agency. The Japanese government and local government bodies will also work together to issue comprehensive alerts and put things on an emergency footing.

**Measures to Improve Weather Warnings**

To mitigate damages, the Japan Meteorological Agency has stepped up its observation activities, adding extra observation points, introducing new observation equipment such as radar and weather satellites, and carrying out observation periods at shorter intervals, in order to gain a more accurate grasp of the weather situation.

Forecasting of heavy rain, typhoons and other phenomena causing major damage is based not only on relevant observation data from within Japan, but also on numerical forecasts calculated using overseas weather data (i.e. forecasts, based on the laws of physics, and made using supercomputers, of future air-pressure distribution, atmospheric currents, distribution of the airborne water vapor that is the source of rainfall, and other parameters.) Since the reliability of weather warnings depends on the accuracy of these forecasts, the Japan Meteorological Agency is currently enhancing its numerical forecasting and developing related measurement technologies, in parallel with improving the observation systems mentioned above.

With regard to technology for forecasting heavy rains, for example, technology has been developed for the hourly forecasting of rainfall distribution up to 6 hours ahead, on a grid with spaces measuring about 5 km, covering the whole of Japan: this has made it possible to issue heavy-rain warnings that are more specific in terms of time and locality.

It is vital that weather warnings are user-friendly to the local authority employees and citizens who will be carrying out the disaster risk-reduction response. To this end, forecasting technology needs to be improved, the content of the Japan Meteorological Agency’s weather warnings needs to be enhanced, and the systems for relaying the warnings needs to be expanded.

## **Component 5 Preparedness and Contingency Planning**

**5.1- Do you have disaster contingency plans in place? Are they prepared for both national and community levels?** If yes, please describe their main components, who is responsible for activating the plan(s)? Are the plan(s) updated on annual basis? Have you ever used the contingency plan(s) that was or were developed? If yes, what was the result?

Yes. Disaster contingency plans are in place at both national and local levels.

### Basic Plan for Disaster Management

At national level, there is the general Basic Plan for Disaster Management drafted by the Central Disaster Management Council, and the disaster management operation plans drafted by designated administrative bodies (see documentation attached). At local level, there are the Disaster Management Local Plans drafted by the prefectural and municipal Disaster Management Councils. Emergency countermeasures are applied at the time of the specific disaster.

Building on lessons learned after the Great Hanshin-Awaji Earthquake (Kobe Earthquake) of 1995, the basics of disaster countermeasures were comprehensively revised in 1995 and 1997 in terms of the aspects listed below, to make the plans more specific and practical.

- 1) Separate plans were formulated for each type of disaster;
- 2) Revisions were made, giving consideration to the time-priority of different elements of the response;
- 3) The responsibilities of the state, local public bodies and residents were made clearer;
- 4) The role of the public, in the form of activities of voluntary disaster risk reduction groups, was made clear;
- 5) Changes were made to accommodate recent changes to the structure of Japan's society and economy;
- 6) Accident countermeasures were reinforced.

In March 2004, revisions were made to the Basic Plan for Earthquake Disaster Prevention for the Tokai Earthquake, and, in view of recent developments in earthquake countermeasures, including the formulation of the Basic Plan for Implementing Disaster Countermeasures Regarding the Tonankai and Nankai Earthquakes, revisions were made, centering on the earthquake countermeasures section. These revisions focused on the countermeasures specified in plans for the earthquakes mentioned above: the provisions set out below, which need to accommodate the whole of Japan, were added to the Basic Plan for Disaster Management.

- 1) Research regarding the impact of long-period tremors on buildings;
- 2) Tsunami countermeasures (automation and remote operation of floodgates, evacuation countermeasures to stop people getting stranded, et cetera).

### Emergency fire-fighting support units

Building on lessons learned from the Great Hanshin-Awaji Earthquake (1995 Kobe Earthquake), emergency fire-fighting support units were assigned the duty of carrying out fire-fighting in stricken areas, at the request and under the instructions of the Director General of the Fire and Disaster Management Agency. This was done in order to ensure that, should an earthquake or other large-scale unusual disaster which could not be dealt with unaided by the fire-fighting manpower of the stricken area, occur in Japan, lifesaving and related activities would be carried out in a speedy and effective manner.

### Flood brigades

Japan's Flood Prevention Law is designed to mitigate disasters caused by flooding, through the use of flood defenses and the issuing of flood alerts. Municipal governments are held responsible for flood risk-reduction, and municipal groups established for this purpose are known as flood control groups. Besides being able to establish their own fire brigades, the 3,200 or so such groups in existence throughout Japan are also empowered to have standing fire-fighting bodies engage in the groups' flood risk-reduction activities under the groups' overall control.

Meanwhile, prefectural governments are held responsible for ensuring that the flood risk-reduction activities of the flood control groups are performed adequately, for drafting flood risk-reduction plans required so that the flood control groups fulfill their flood risk-reduction function, for issuing and

providing notification of flood forecasts and flood warnings, for issuing vacation notices in times of emergency, and for providing assistance with flood disaster-reduction expenses, among other things.

**5.2- Has your government established emergency funds for disaster response and are there national or community storage facilities for emergency relief items – mainly food, medicine, tents/shelters? If yes, please provide some details.**

Under the Disaster Countermeasures Basic Act, local public bodies are required to set aside a disaster countermeasures fund to cover emergency expenditure necessitated by disaster countermeasures. Specifically, they are required to save a specific sum of money, as a disaster relief fund under the Disaster Relief Law, for each of the prefectures they serve.

Although the state has not set aside a specific sum of money, full consideration has been given to contingency funds and budgetary measures underwritten by the Treasury in order to ensure that in the event of disaster, Japan's financial system will continue to run smoothly.

Emergency funds are set up on a case-by-case basis (the Hyogo Phoenix Plan being a good example).

By establishing disaster spot hospitals possessing a disaster medical-treatment support function and facilitating an emergency system available on a 24-hour basis, provision has been made for medical treatment in the event of a disaster.) More specifically, as of March 1, 2003, 54 hospitals have been designated as "core" disaster medical-treatment centers, and 492 have been designated as local disaster medical-treatment centers (including 4 hospitals which double as "core" centers).

Provisions have also been made throughout Japan for the storage of emergency-relief supplies.

Approximately 62 square meters of storage facility floor space has been allocated per 10,000 members of the population. The quantities of stored emergency-relief supplies per 10,000 citizens are roughly 1,294 hardtack biscuit servings, 730 kg of rice and 430 blankets. Each emergency-relief facility has an average of 2.7 tents and 23.5 toilets.

**5.3- Who is responsible for the coordination of disaster response preparedness and is the coordination body equipped with enough human and financial resources for the job? Please comment on the effectiveness of the coordination work done so far?**

Responsibility lies with Japan's Minister of State for Disaster Management. This Minister is invested with the power to direct the policies of administrative departments with regard to disaster risk reduction -- which is one of the most important items on the Cabinet's agenda -- and he plays a central role in disaster risk reduction policy.

The Cabinet Office, which assists the Minister of State for Disaster Management, is responsible for basic policy on disaster management (disaster prevention, emergency disaster countermeasures, post-disaster recovery and reconstruction), for drafting plans and carrying out overall co-ordination with regard to action in the event of a large scale disaster, and other business concerning disaster management. The Cabinet Office is assigned a budget from the state treasury to fund its activities to this end.

Here is an example of co-ordination results: in July 2003, a landslide occurred in Minamata, Kumamoto Prefecture, due to torrential local rains. The Cabinet Office held a liaison meeting with the agencies involved in disaster management, and ensured that every effort was made to implement emergency countermeasures and collect information. The Cabinet Office dispatched 3 staff as members of the Advance Information Team and also dispatched the government inspection team, who played a coordinating role. By accurately assessing the stricken area's need for aid, they also succeeded in expediting the flow of administrative assistance to the stricken area.

**Component 6 Call for good practices in disaster risk management**

Based on the above analysis and information provided, please provide at least two examples of any successful implementation of disaster reduction activities in your country (could be of local, national or regional scale); any project or community based experience, national policy, interaction between sectors, etc., would be welcome. Provide maximum one page on each example, indicating area of work, institutions and actors involved, duration, impact of the activities, lessons-learned and if the example have been replicated. You may also kindly direct us to relevant web-based information/organization.

See documentation attached.

- Example 1: Supplying and Sharing Disaster Information with Local Residents at the time of the Usuzan Volcanic Eruption
- Example 2: Earthquake Response and Reconstruction Initiative by a Voluntary Organization Working in Cooperation with Local Residents of the Mikura District of Kobe
- Example 3: Establishment of Evacuation Routes by the Local Community (in the Form of a Voluntary Disaster Management Association)
- Example 4: Mountain District Disaster Management Helper Scheme

### **Component 7** Priorities you want addressed at World Conference on Disaster Reduction

What do you think are the priority topics to be agreed upon at the World Conference to enhance and strengthen national policy and practice to reduce risk and vulnerability to natural and technological hazards? Please list any other thematic areas or specific topics of discussion that you consider of importance to increase the effectiveness of disaster risk reduction for your country.

In the light of the challenges the world is currently facing with regard to co-operation in disaster risk reduction, focusing on the theme of “creating a disaster-resistant society”, we need to agree on and disseminate a political message encouraging not only policy-creation and action at the global and national level, but also action at the local and community levels. For details, see the Concept Paper distributed at the First Session of the Preparatory Committee.

Targets and fields to be tackled with a view to disaster risk reduction, as set out in the Concept Paper

No.	Main item	Sub-item
1	Prioritizing Disaster Reduction in National Policies	Strengthening institutional capacity and policy framework
		Investment in disaster reduction
		Mainstreaming Disaster Reduction into Development Policy
		Strengthening Capacity for Better Recovery and Reconstruction with Consideration for Future Disaster Reduction
2	Sharing and Dissemination of Disaster Information, and Risk Management by Utilizing Technology	Identification and Dissemination of Disaster Information
		Establishment of Early Warning Systems
		Information Sharing
		Human Resources
		Education
	Utilization of Technology	
3	Encouragement of Disaster Reduction Activity at All Levels	—
4	Strengthening Cooperation and Collaboration among International Organizations	Strengthening cooperation and collaboration among international organizations
		Strengthening the regional (trans-national) network
5	Portfolio of Actions for Disaster Prevention	—

Please also indicate any particular experience or project that your country would like to exhibit or present at the Conference.

## 1 防災法制度・体制の歩み

## Progress in Disaster Management Laws and Systems

### 法律・制度の制定過程 The Enactment of Laws

年 Year	災害対策にかかる法制度 Disaster Management Acts	防災計画・体制等 Disaster Management Plans and Systems
明治13年 1880	・備荒儲蓄法(明治32年廃止) Provision and Saving Act for Natural Disaster	・日本地震学会発足 Establishment of Seismological Society of Japan
明治17年 1884		・内務省測量司全国天気予報開始 Department of the Interior Land Surveyor Weather Report starts
明治29年 1896	・河川法(昭和39年全面改正) River Act	
明治30年 1897	・砂防法 Erosion Control Act ・森林法(昭和26年全面改正) Forest Act	
明治32年 1899	・災害準備基金特別会計法(明治44年廃止) Disaster Preparation Funds Special Account Act	
明治41年 1908	・水害予防組合法 Flood Prevention Association Act	
明治44年 1911	・治水費資金特別会計法 Flood Control Expenditure Funds Special Account Act	
大正14年 1925		・東京大学地震研究所発足 Establishment of Earthquake Research Institute, Tokyo Imperial University
昭和16年 1941		・津波警報組織発足 Establishment of Tsunami Warning Organization
昭和22年 1947	・災害救助法(10月) Disaster Relief Act ・消防組織法(12月) Fire Organization Act	
昭和23年 1948	・消防法(7月) Fire Service Act	・建設省設置 Establishment of Ministry of Construction ・震災予防調査会発足 Establishment of Board of Inquiry for Prevention of Damage from Earthquakes
昭和24年 1949	・水防法(6月) Flood Control Act	
昭和25年 1950	・農林水産業施設災害復旧事業費国庫補助の暫定措置に関する法律(5月) Temporary Measures Act for Subsidizing Recovery Projects for Agriculture, Forestry and Fisheries Facilities Damaged due to Disasters	
昭和26年 1951	・公共土木施設災害復旧事業費国庫負担法(3月) Act Concerning National Treasury Share of Expenses for Recovery Projects for Public Civil Engineering Facilities Damage due to Disasters	・京都大学防災研究所発足 Establishment of Kyoto University Disaster Prevention Research Institute
昭和27年 1952	・気象業務法(6月) Meteorological Service Act	・国家消防本部発足 Establishment of National Fire-Fighting Headquarters
昭和30年 1955	・天災による被害農林漁業者等に対する資金の融通に関する暫定措置法(天災融資法:8月) Temporary Measures Act for Financing Farmers, Forestry and Fishermen Suffering from Natural Disasters	
昭和31年 1956	・海岸法(5月) Seashore Act	・気象庁発足 Establishment of Japan Meteorological Agency



関東大震災 Great Kanto Earthquake, 1923  
写真提供: 共同通信社 Photo: Kyodo News



福井地震 Fukui Earthquake, 1948  
写真提供: 毎日新聞社 Photo: Mainichi News

年 Year	災害対策にかかる法制度 Disaster Management Acts	防災計画・体制等 Disaster Management Plans and Systems
昭和33年 1958	・地すべり等防止法(3月) Landslide Prevention Act	
昭和35年 1960	・治山治水緊急措置法(3月) Soil Conservation and Flood Control Urgent Measures Act	・自治省消防庁発足 Establishment of Ministry of Home Affairs Fire and Disaster Management Agency ・遠地津波警報システム開始 Distant Area Tsunami Warning System starts
昭和36年 1961	・災害対策基本法(11月) Disaster Countermeasures Basic Act	・防災の日創設 Designation of “Disaster Management Day”
昭和37年 1962	・豪雪地帯対策特別措置法(4月) Act of Special Countermeasures for Heavy Snowfall Area  ・激甚災害に対処するための特別の財政援助等に関する法律(激甚法:9月) Act Concerning Special Financial Support to Deal with the Designated Disaster of Extreme Severity	・中央防災会議設置 Establishment of Central Disaster Management Council
昭和38年 1963		・防災基本計画策定(6月) Formulation of Basic Disaster Management Plan  ・国立防災科学技術センター (現防災科学技術研究所)設立 Establishment of National Research Institute for Earth Science and Disaster Prevention
昭和39年 1964	・河川法全面改正(7月) River Act (Revised)	・測地学審議会「地震予知」について建議 Geodesy Council’s Proposition on “Earthquake Prediction”
昭和41年 1966	・地震保険に関する法律 Act for Earthquake Insurance	
昭和44年 1969	・急傾斜地の崩壊による災害の防止に関する法律(7月) Act Concerning Prevention of Steep Slope Collapse Disaster	・「地震予知連絡会」設置 Establishment of Coordinating Committee for Earthquake Prediction
昭和45年 1970	・海洋汚染及び海上災害の防止に関する法律(12月) Marine Pollution Prevention Act	
昭和47年 1972	・防災のための集団移転促進事業に係わる国の財政上の特別措置等に関する法律(12月) Act Concerning Special Financial Support for Promoting Group Relocation for Disaster Mitigation	
昭和48年 1973	・活動火山周辺地域における避難施設等の整備等に関する法律 (7月。昭和53年4月に活動火山対策特別措置法に改正) Act Concerning Improvement etc. of Refuges etc. in Vicinal Areas of Active Volcanoes (revised to the Act on Special Measures for Active Volcanoes in 1978) ・災害弔慰金の支給等に関する法律(9月) Act for the Payment of Solatia for Disaster	・火山噴火予知計画建議 Proposition for Volcanic Eruption Prediction Plan
昭和49年 1974		・火山噴火予知連絡会設置 Establishment of Coordinating Committee for Prediction of Volcanic Eruption  ・国土庁発足 Establishment of National Land Agency
昭和50年 1975	・石油コンビナ - ト等災害防止法(12月) Act on Prevention of Disaster in Petroleum Industrial Complexes and other Petroleum Facilities	
昭和51年 1976		・地震予知推進本部設置 Establishment of Headquarters for Earthquake Prediction Promotion
昭和53年 1978	・大規模地震対策特別措置法(6月、地震防災基本計画) Large-Scale Earthquake Countermeasures Special Act (Basic Plan for Earthquake Disaster Prevention)	



伊勢湾台風 Typhoon Ise-wan, 1959  
写真提供: 共同通信社 Photo: Kyodo News



長崎大水害 Torrential Rains in Nagasaki, 1982



年 Year	災害対策にかかるとる法制度 Disaster Management Acts	防災計画・体制等 Disaster Management Plans and Systems
昭和55年 1980	・地震防災対策強化地域における地震対策緊急整備事業に係る国の財政上の特別措置に関する法律(地震財特法:5月) Special Fiscal Measures Act for Urgent Improvement Project for Earthquake Countermeasures in Areas under Intensified Measures against Earthquake Disaster	
昭和59年 1984		・国土庁に防災局設置 Establishment of Disaster Prevention Bureau in the National Land Agency
昭和60年 1985		・国際緊急援助隊発足 Establishment of Japan Disaster Relief Team
昭和62年 1987	・国際緊急援助隊の派遣に関する法律(9月) Act Concerning Dispatch of Japan Disaster Relief Team	
平成元年 1989		・国際防災の10年(IDNDR)推進本部設置 Establishment of Headquarters for the International Decade for Natural Disaster Reduction (IDNDR)
平成4年 1992		・南関東地域直下の地震対策に関する大綱制定(8月) General principles relating to Countermeasures for Earthquakes Directly Below the Southern Kanto Region
平成7年 1995	・阪神・淡路大震災復興の基本方針及び組織に関する法律(6月) Act for the Statement of Principles and Organization of the Great Hanshin-Awaji Earthquake Revival ・災害対策基本法一部改正(6月) Partial Revision of Disaster Countermeasures Basic Act ・地震防災対策特別措置法(6月) Earthquake Disaster Management Special Measures Act ・災害対策基本法及び大規模地震対策特別措置法一部改正(11月) Partial Revision of Disaster Countermeasures Basic Act and Large-Scale Earthquake Countermeasures Special Act ・建築物の耐震改修の促進に関する法律 Act for Promotion of the Earthquake Proof Retrofit of Buildings	・防災基本計画修正(7月) Amendment of Basic Disaster Management Plan ・地震調査研究推進本部設置 Establishment of the Headquarters for Earthquake Research Promotion
平成8年 1996	・特定非常災害の被害者の権利利益の保全等を図るための特別措置に関する法律(6月) Act Regarding Special Measures to Weigh the Preservation of Rights and Profits of the Victims of Specified Disasters	
平成9年 1997	・密集市街地における防災街区の整備の促進に関する法律(5月) Act for Densely Inhabited Areas Improvement for Disaster Mitigation	・防災基本計画修正(6月) Amendment of Basic Disaster Management Plan
平成10年 1998	・被災者生活再建支援法(5月) Act Concerning Support for Reconstructing Livelihoods of Disaster Victims	
平成11年 1999	・原子力災害対策特別措置法(12月) Special Measures of Nuclear Disaster Act	・地震防災基本計画修正(7月) Amendment of Basic Plan for Earthquake Disaster Prevention
平成12年 2000	・土砂災害警戒区域等における土砂災害防止対策の推進に関する法律(5月) Sediment Disaster Countermeasures for Sediment Disaster Prone Areas Act	・国際防災連絡会議設置 Establishment of International Disaster Prevention Liaison Conference ・防災基本計画修正(5月、12月) Amendment of Basic Disaster Management Plan
平成13年 2001		・省庁再編に伴い、内閣府に防災部門設置 Establishment of Disaster Management Section in Cabinet Office in Connection with Restructuring of Government Ministries and Agencies.



北海道南西沖地震 Hokkaido-Nansei-oki Earthquake, 1993  
写真提供:共同通信社 Photo: Kyodo News



阪神・淡路大震災 Great Hanshin-Awaji Earthquake, 1995  
写真転載:阪神・淡路復興対策本部編「阪神・淡路大震災復興誌」  
Photo: Reprinted from the Headquarters for Reconstruction of the Hanshin-Awaji Area (ed.) The Great Hanshin-Awaji Earthquake Reconstruction Report "

### (3) 中央防災会議

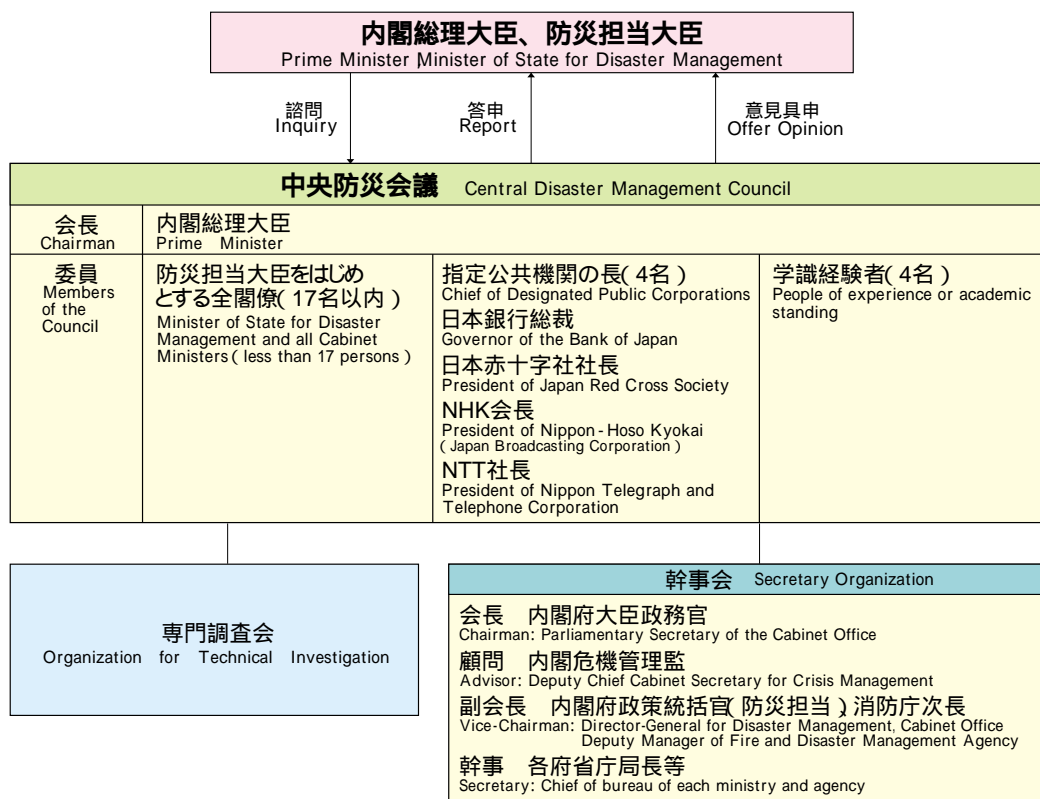
政府には、総合的な災害対策を推進するため、内閣総理大臣を会長とし、国務大臣等を委員とする中央防災会議が設置されています。

### (3) Central Disaster Management Council

The Central Disaster Management Council was established for the purpose of promoting comprehensive countermeasures in which the Prime Minister takes the chair and other Ministers of State are members.

#### 中央防災会議組織図

#### Organization of Central Disaster Management Council



#### 【役割】

防災基本計画及び地震防災計画の作成及びその実施の推進  
 非常災害の際の緊急措置に関する計画の作成及びその実施の推進  
 内閣総理大臣・防災担当大臣の諮問に応じた、防災に関する重要事項の審議(防災の基本方針、防災に関する施策の総合調整、災害緊急事態の布告等)等  
 防災に関する重要事項に関し、内閣総理大臣及び防災担当大臣への意見の具申

#### 【Duties】

- Prepare and promote implementation of the Basic Disaster Management Plan and draft the Earthquake Disaster Management Plan.
- Prepare and promote implementation of the urgent measures plan for major disasters.
- Deliberate important matters pertinent to disaster management according to requests from the Prime Minister and/or Minister of State for Disaster Management (general coordination of basic disaster management policies and disaster management measures, declare emergency situations caused by disasters etc.)
- Offer opinions regarding important matters pertinent to disaster management to the Prime Minister and Minister of State for Disaster Management.



中央防災会議  
Central Disaster Management Council

### (3) 火山ハザードマップ(防災マップ)の作成

火山ハザードマップは噴火等による影響の及ぶ範囲や避難施設等を地図上に示したもので、火山防災対策の基礎となるものです。平成12年有珠山噴火災害の際にはハザードマップが事前に住民に周知されていたことなどから、避難が的確に行われ、死傷者がありませんでした。このことからハザードマップへの関心が高まり、平成14年3月現在、主要な24火山で作成されているほか、未作成の火山でも作成が進められています。富士山では、地元都県や市町村及び国の関係機関が富士山火山防災協議会を設立し、ハザードマップの作成をはじめ火山防災対策の推進が図られています。

火山は周辺に温泉や美しい風景などの恵みも与えています。このことから「火山との共生」を図ることが大切であり、ハザードマップはその役割を担っています。

#### 火山分類地図

#### Classification of Volcanos



注：□で囲んだ13火山が「活動的で特に重点的に観測研究を行うべき火山」、それ以外の24火山が「活動的火山及び潜在的爆発活力を有する火山」である。

Note: □ Volcanos which are active and for which observation and investigation are made selectively, others active volcanos or volcanos having eruption potential.

資料：気象庁資料を基に内閣府において作成

Source: Prepared by the Cabinet Office based on data from the Japan Meteorological Agency

### (3) Preparing a Volcano Hazard (Disaster Management) Map

The Volcano Hazard Map provides a graphical indication of the areas predicted to be influenced by an eruption together with evacuation facilities. It is a key component utilized in determining disaster management countermeasures. At the time of the Mt. Usu eruption disaster in 2000, residents were familiar with the Volcano Hazard Map. Progress has been made according to the establishment of the Mt. Fuji Volcano Disaster Management Conference by related organizations and agencies of the Government and the prefectural and municipal governments.

Given the environment (e.g., hot springs and beautiful landscapes) offered by volcanic mountains, it is important to plan to live in harmony with them. The Volcano Hazard Map has this role.

#### 有珠山ハザードマップ Hazard Map of Mt. Usu



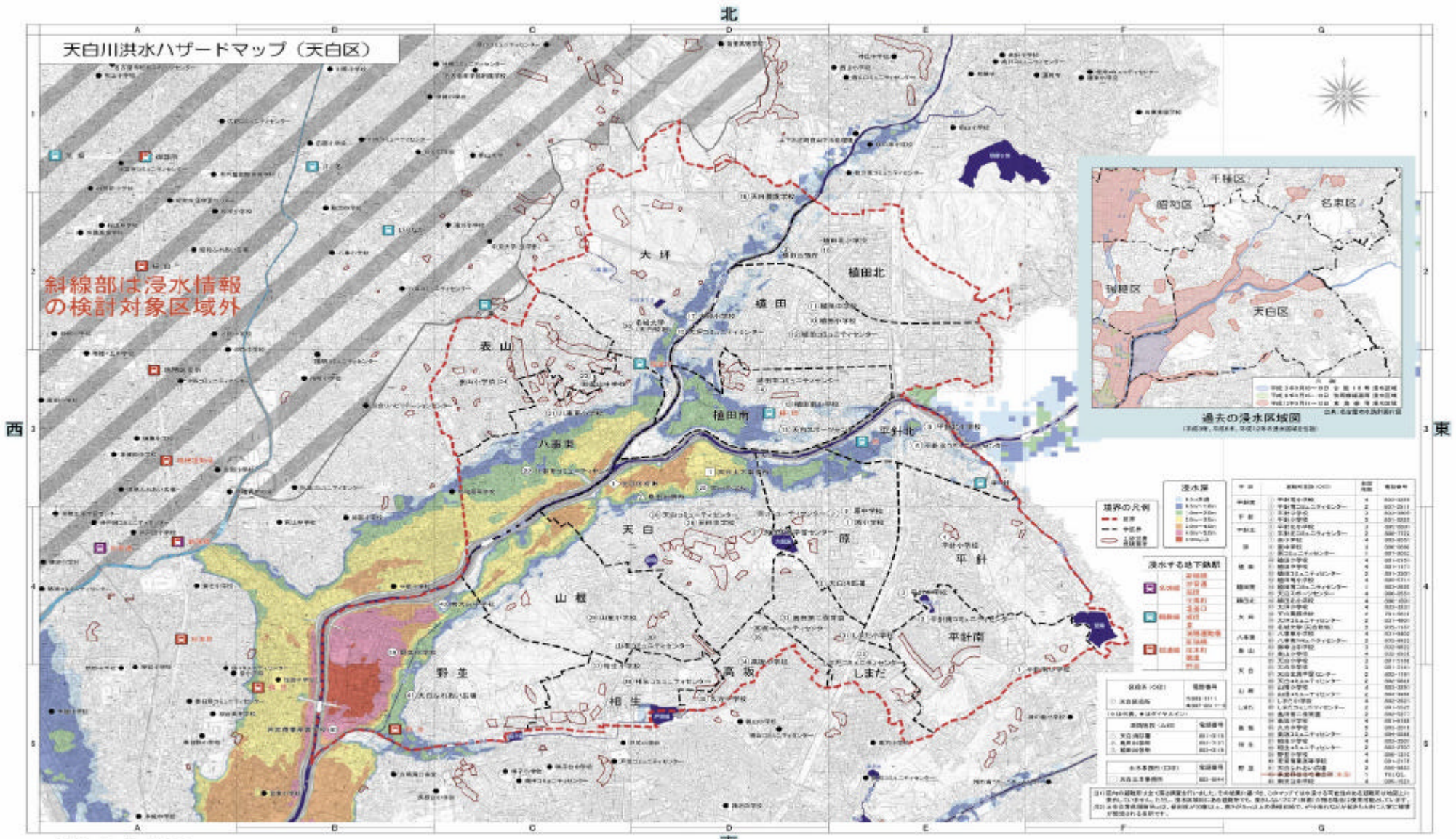
火山ガスを含む噴煙が続く三宅島(2001年7月)

The Fumes with Volcanic Gas Continually Rises from Miyakejima: July, 2001

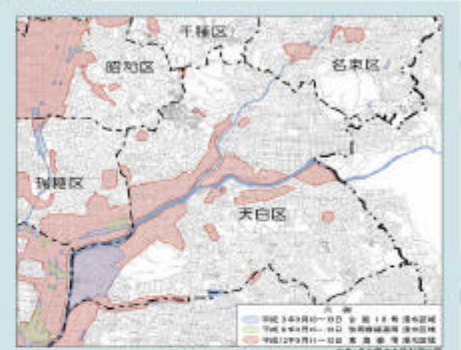
写真提供：産業技術総合研究所 地質調査総合センター

Photo: Geological Survey of Japan, AIST

Flood Hazard Map -Tenpaku River-



斜線部は浸水情報の検討対象区域外



境界の凡例

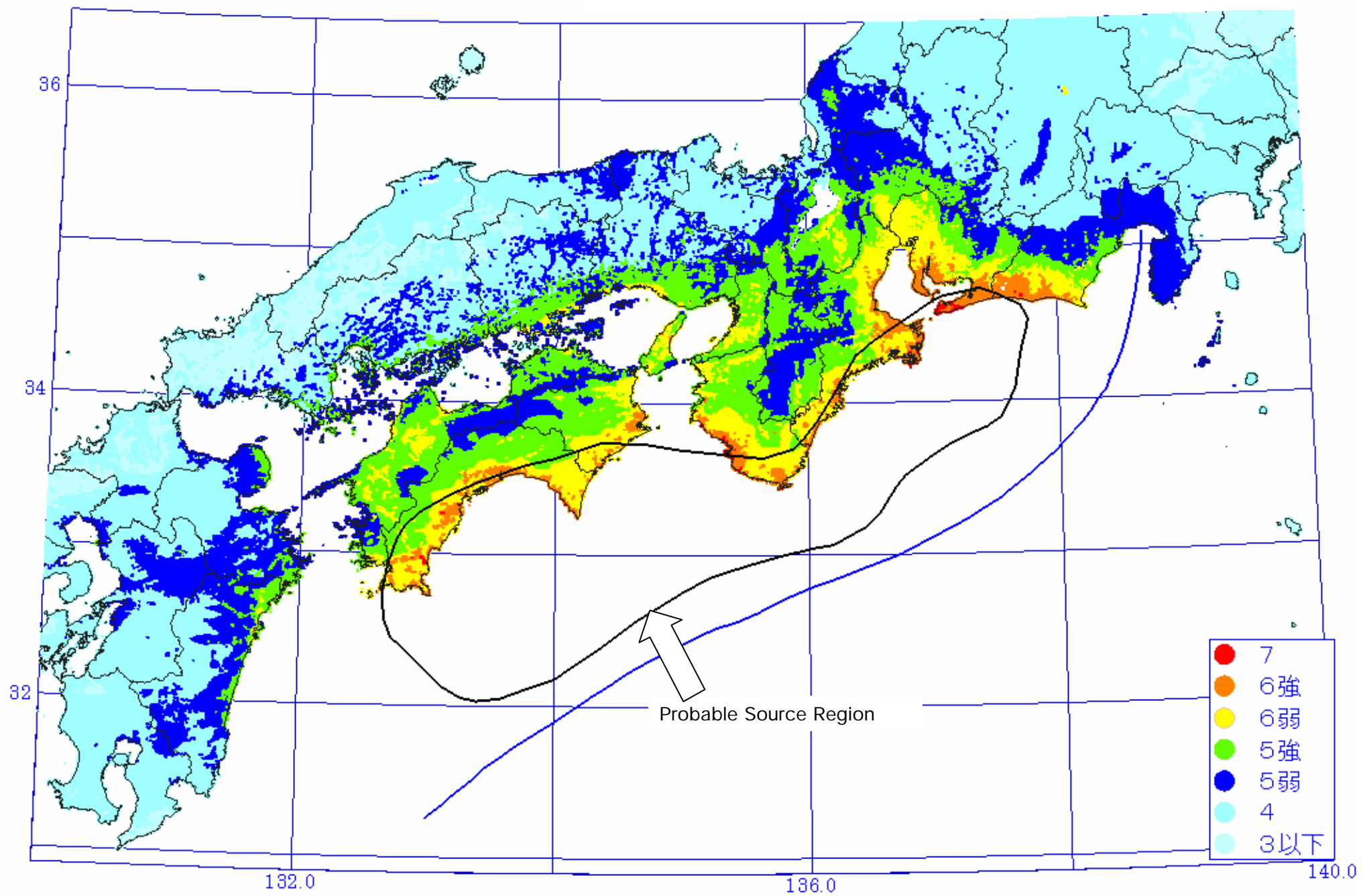
浸水する地下鉄駅

区画番号 (5桁)	建物番号
天白河原	88-1018
山麓	88-1019
相生	88-1020
天白南	88-1021
天白北	88-1022
天白東	88-1023
天白西	88-1024
天白南	88-1025
天白北	88-1026
天白東	88-1027
天白西	88-1028
天白南	88-1029
天白北	88-1030
天白東	88-1031
天白西	88-1032
天白南	88-1033
天白北	88-1034
天白東	88-1035
天白西	88-1036
天白南	88-1037
天白北	88-1038
天白東	88-1039
天白西	88-1040
天白南	88-1041
天白北	88-1042
天白東	88-1043
天白西	88-1044
天白南	88-1045
天白北	88-1046
天白東	88-1047
天白西	88-1048
天白南	88-1049
天白北	88-1050

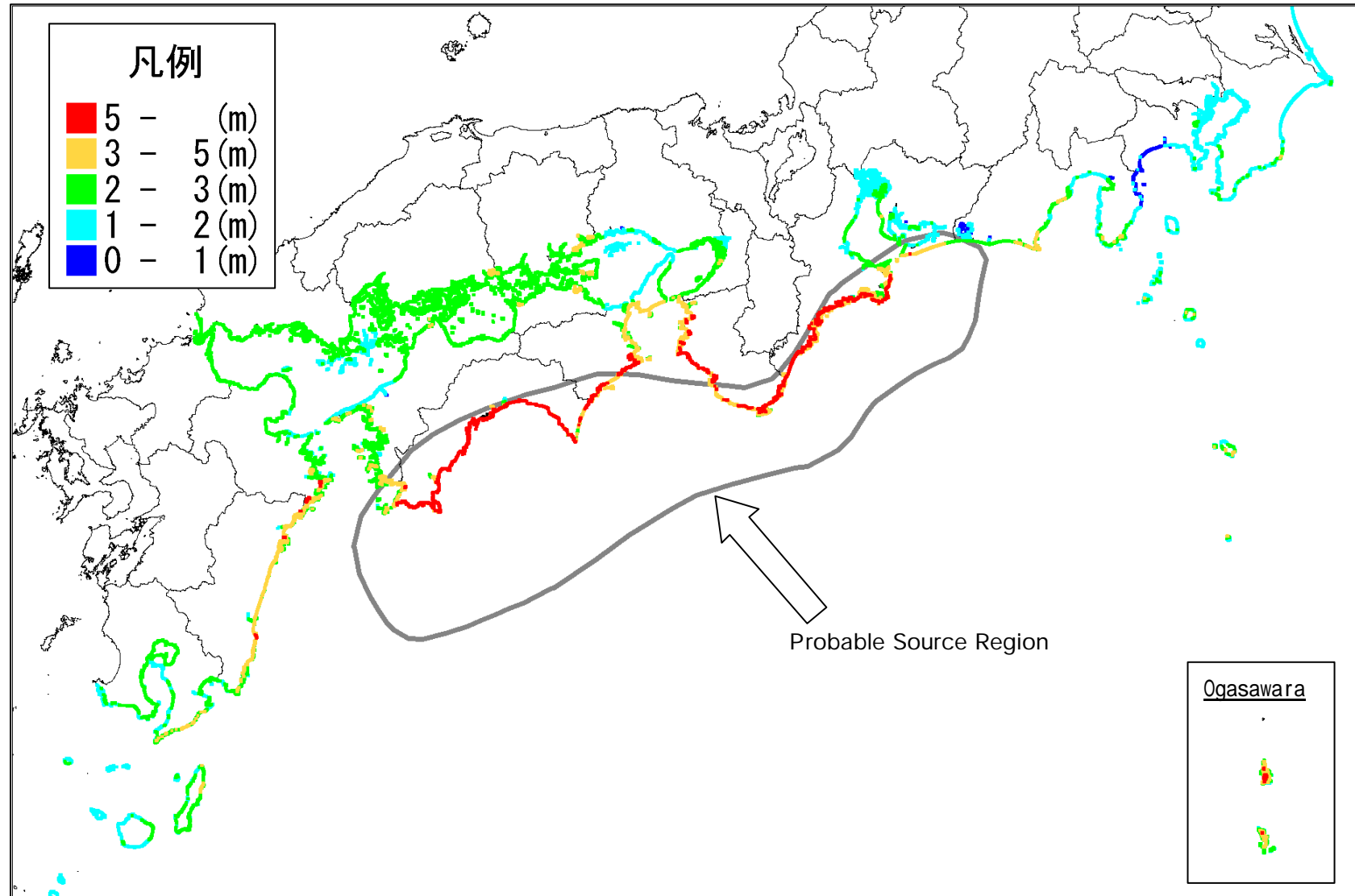
このマップは赤色ほど危険です。ときには表示より深くなる場合もあります。



### Estimated Distribution of Seismic Intensity -The Tohnankai and Nankai Earthquakes -



Estimated Height of Tsunami at high tide -The Tohankai and Nankai Earthquakes -



## 2.2 Assessment of Disaster-Management Capability

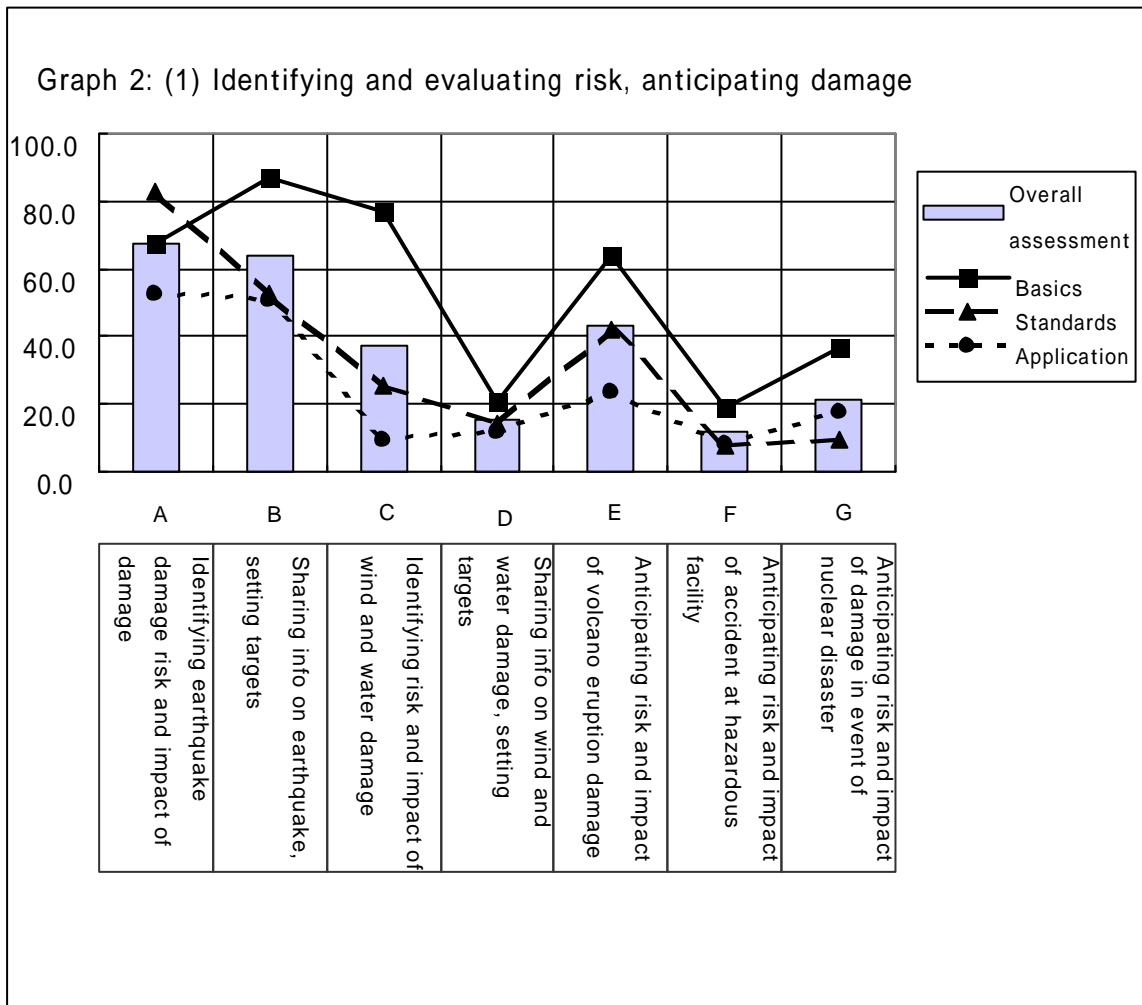
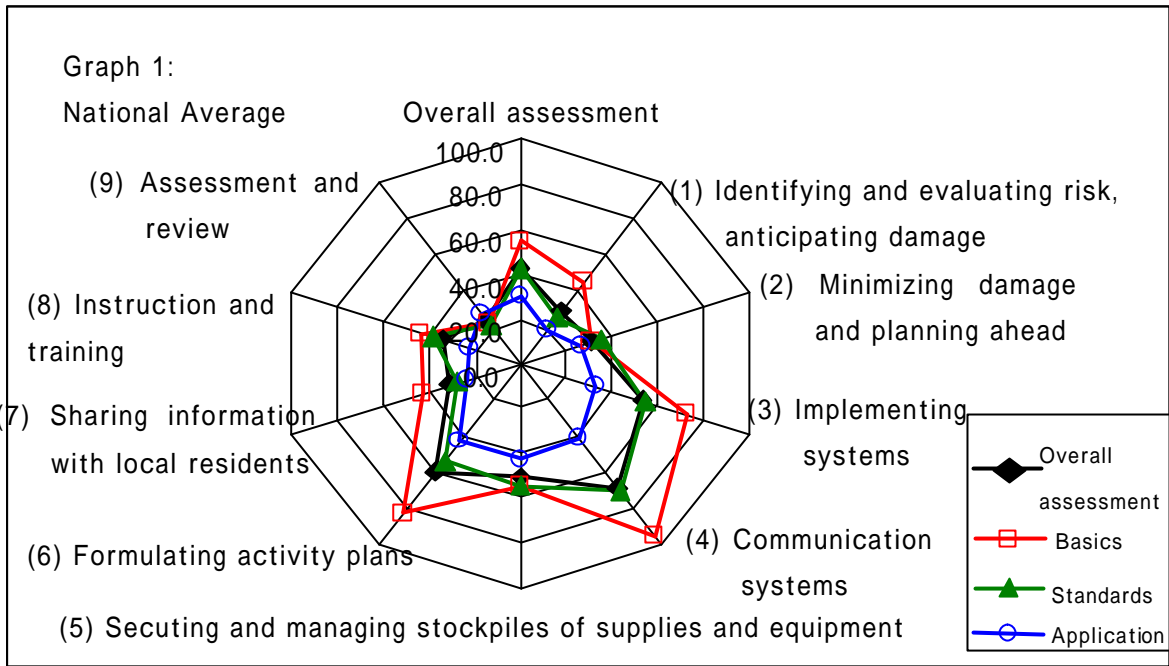
### Excerpt from questionnaire

Does your prefecture have the kind of disaster-management and crisis-management organizations and systems listed below? In the following list, please circle all those items that apply.

1. Disaster-management and crisis-management organizations have been established at the local level and higher.
2. A full-time disaster management chief, crisis management chief and other key personnel have been appointed (at deputy general manager level or higher).
3. At least 3 deputies (the director of disaster countermeasures headquarters and others) have been appointed in priority order, to take charge in the absence of the prefectural governor.
4. At least 3 deputies have been appointed in priority order, to take charge in the absence of each key staff member responsible for disaster management.
5. The staff of the current disaster management department includes personnel with at least 5 years' experience (over the course of his/her career) in disaster-management operations.
6. The staff of the current disaster management department includes personnel with practical experience (obtained during the last decade) of the activities of disaster countermeasures headquarters.
7. Staff rotation is carried out on a planned basis to ensure that personnel responsible for disaster management become proficient in duties relating to disaster management.
8. When budgetary assessment is carried out, the disaster management department checks the measures and budgets of other departments from a disaster-management perspective.
9. Particular external experts and academic specialists have been designated as sources of expert advice on disaster management.
10. Information is exchanged regularly with designated external experts and academic specialists providing expert advice on disaster management.



Example of Assessment Results Output



### 3.2 The Academic and Research Communities dealing with disaster reduction

Organization	Activity	Website
National Institute for Land and Infrastructure Management (NILIM), Ministry of Land, Infrastructure and Transport (MLIT)	The mission is to conduct comprehensive research and development relevant to planning and policy-making. They are related to the works of the Ministry of Land, Infrastructure and Transportation regarding housing and infrastructure technology in the use, development and conservation of national land.	<a href="http://www.nilim.go.jp/english/eindex.htm">http://www.nilim.go.jp/english/eindex.htm</a>
Meteorological Research Institute (MRI), Japan Meteorological Agency (JMA), Ministry of Land, Infrastructure and Transport (MLIT)	MRI is engaged in analyzing and predicting meteorological, geophysical, hydrological and oceanographic phenomena, as well as developing extensive related technology. And also, they promote the cooperation with domestic and overseas research institutes.	<a href="http://www.mri-jma.go.jp/Welcome.html">http://www.mri-jma.go.jp/Welcome.html</a>
Independent Administrative Institution, National Research Institute for Earth Science and Disaster Prevention (NIED)	The mission is to create a safe living environment through the development of efficient and dependable technology. They also accelerate their products promotion to contribute national disaster mitigation measures.	<a href="http://www.bosai.go.jp/index_e.html">http://www.bosai.go.jp/index_e.html</a>
Geological Survey of Japan (GSJ), National Institute of Advanced Industrial Science and Technology (AIST), Independent Administrative Institution (IAI)	The GSJ, as the research constituent of the AIST, contributes to the economic developments of our country and foreign countries and improves in the quality of life through geoscientific research activities.	<a href="http://www.gsj.jp/HomePage.html">http://www.gsj.jp/HomePage.html</a>

<p>Incorporated Administrative Agency Public Works Research Institute (IAI-PWRI)</p>	<p>They are systematically promoting researches and development about civil engineering technologies and infrastructures. They currently focus on three categories; "Ensuring safety", "Conserving and restoring healthy environments", and "Efficient construction of infrastructures."</p>	<p><a href="http://www.pwri.go.jp/eindex.htm">http://www.pwri.go.jp/eindex.htm</a></p>
<p>Incorporated Administrative Agency Building Research Institute (BRI),</p>	<p>BRI promotes researches on the advanced construction and city planning technologies as well as development infrastructure. They quickly response to major public interests concerning infrastructure.</p>	<p><a href="http://www.kenken.go.jp/english/index.html">http://www.kenken.go.jp/english/index.html</a></p>
<p>Port and Airport Research Institute (PARI), Independent Administrative Institution</p>	<p>Their activities are to improve technologies relating to ports, coasts, and airports and contribute to their efficient and effective construction.</p>	<p><a href="http://www.pari.go.jp/english/index.htm">http://www.pari.go.jp/english/index.htm</a></p>
<p>Headquarters for Earthquake Research Promotion, Ministry of Education, Culture, Sports, Science and Technology (MEXT)</p>	<p>The aim is to promote research into earthquakes with the goal of strengthening disaster prevention measures, particularly the reduction of damage and casualties from earthquakes.</p>	<p><a href="http://www.jishin.go.jp/main/index-e.html">http://www.jishin.go.jp/main/index-e.html</a></p>
<p>National Research Institute of Fire and Disaster (NRIFD), Independent Administrative Institution</p>	<p>Their research topics are mainly divided two, fundamental and project based. The former is a fire and disaster prevention administration based on science and technology. For example, "the study on information acquisition for disaster mitigation during earthquakes and formulation of systems" is the one of priority research projects.</p>	<p><a href="http://www.fri.go.jp/cgi-bin/hp/index_e.cgi">http://www.fri.go.jp/cgi-bin/hp/index_e.cgi</a></p>

Earthquake Research Institute (ERI), University of Tokyo	The mission has been to investigate earthquakes and volcanic eruptions and to develop methods mitigating disasters caused by earthquakes.	<a href="http://www.eri.u-tokyo.ac.jp/index.html">http://www.eri.u-tokyo.ac.jp/index.html</a>
International Center for Urban Safety Engineering (ICUS/INCEDE), Institute of Industrial Science (IIS), University of Tokyo	The Center mainly focuses on research and developments in the field of urban safety engineering including maintenance and management of infrastructures from an international point of view. The Center consists of three major divisions namely; Sustainable Engineering division, Urban Safety and Disaster Mitigation division and Infrastructure Information Dynamics division.	<a href="http://icus-incede.iis.u-tokyo.ac.jp/index.htm">http://icus-incede.iis.u-tokyo.ac.jp/index.htm</a>
Disaster Prevention Research Institute (DPRI), Kyoto University	They have 5 research divisions; Integrated Management for Disaster Risk, Earthquake Disaster Prevention, Geo-Disaster, Fluvial and Marine Disasters, Atmospheric Disaster, and 6 research centers; Disaster Environment, Earthquake Prediction, Sakurajima Volcano Research Center, Water Resources, Disaster Reduction Systems, and Landslides.	<a href="http://www.dpri.kyoto-u.ac.jp/web_e/index_e.html">http://www.dpri.kyoto-u.ac.jp/web_e/index_e.html</a>

National Institute for Rural Engineering (NIRE), An Independent Administrative Institution	NIRE conducts researches and analyses of technologies relating to construction and management methods for agricultural engineering. They also develop disaster prevention technologies for farmland and agricultural facility.	<a href="http://ss.nkk.affrc.go.jp/index-e.html">http://ss.nkk.affrc.go.jp/index-e.html</a>
Forestry and Forest Products Research Institute (FFPRI)	FFPRI promotes research on forest functions such as the conservation of soil resources, land, water resources, and living environments, develops methods for forest management to fulfill these functions, and advances technologies.	<a href="http://www.ffpri.affrc.go.jp/e_version/index-e.html">http://www.ffpri.affrc.go.jp/e_version/index-e.html</a>
Fisheries Research Agency (FRA)	FRA researches the safety of fisherman, fisher boat, and fishing port related facilities. And also, they promote technological development.	<a href="http://www.fra.affrc.go.jp/english/eindex.html">http://www.fra.affrc.go.jp/english/eindex.html</a>
Maritime Disaster Prevention Center	MDPC researches and surveys about maritime disaster prevention technology develop equipment and materials. And they are keen to promote their activities.	<a href="http://www.mdpc.or.jp/">http://www.mdpc.or.jp/</a> (in Japanese)

Asian Disaster Reduction Center (ADRC)	This center has been established to facilitate exchange of disaster reduction experts from each country and concerned bodies, accumulate and provide disaster reduction information, and carry out research into multinational disaster reduction cooperation.	<a href="http://www.adrc.or.jp/">http://www.adrc.or.jp/</a>
The Great Hanshin-Awaji Memorial Disaster Reduction and Human Renovation Institution (DRI)	It has been established to pass on the experience and lessons learnt from the Great Hanshin-Awaji Earthquake to the future, and to contribute globally to the reduction of the impacts from future disasters. DRI functions for human resource development, research and study, as well as collection, exhibition and preservation of materials related to the Great Hanshin-Awaji Earthquake.	<a href="http://www.dri.ne.jp/e/index.html">http://www.dri.ne.jp/e/index.html</a>

### 3.4 Training Programs

Name	Content	Targeted at:
Comprehensive disaster-management training at government level	<ul style="list-style-type: none"> <li>• Simulation of the Tokai Earthquake and the strong local earthquake likely to occur in the Southern Kanto region.</li> <li>• Verification and confirmation of the effectiveness of emergency disaster-response measures</li> <li>• Role-playing map exercises</li> </ul>	Government bodies Competent public bodies in the provinces
Education and training within the Metropolitan Police Department	• Emergency disaster-response measures, etc.	Prefectural police chiefs
	• Training exercises on wide-area dispatch of wide-area emergency teams, rescue and relief training, etc.	Police stations in all precincts
	• Disaster-security training	Prefectural police forces and related bodies
	• Training in special technology used for rescue purposes	Rangers
	• Practical disaster-security communications training	Mobile police communications units
Education and training within the Defense Agency	• Comprehensive disaster maneuvers for the Self Defense Forces (full operations/command post exercises)	Defense Agency, Self Defense units, etc.
	• Participation in disaster-management training for local government bodies	Self Defense units, etc.
Education and training within NHK (Japan Broadcasting Corporation)	• Comprehensive training incorporating a wide-area support system aimed at ensuring broadcasting capability in the event of a large-scale disaster	All NHK broadcasting stations
Practical drills in emergency communications	• Provision of an emergency communications system	Emergency Communications Council of the Ministry of Public Management, Home Affairs, Posts and Telecommunications
Education and training within the Fire and Disaster Management Agency	<ul style="list-style-type: none"> <li>• Disaster management and response in the event of disaster</li> <li>• Education and training designed to instill a high level of expertise and skill in fire-fighting, flood management, rescue, emergency medical treatment etc.</li> </ul>	Officers involved in prefectural fire-fighting, and members of local fire-fighting bodies
	• Training sessions in risk management, designed to improve disaster response capabilities in the event of a large-scale disaster such as an earthquake	Local leaders and officers who are responsible for disaster management at prefectural and municipal levels

	<ul style="list-style-type: none"> <li>• Training sessions in air fire-fighting and disaster management</li> </ul>	Leaders of fire-fighting and disaster-management air fleets
	<ul style="list-style-type: none"> <li>• Training sessions in emergency fire-fighting assistance</li> </ul>	Leaders of local emergency fire-fighting support units
Education and training within the Ministry of Justice	Ministry of Justice Emergency Communication Network communications exercises	Ministry of Justice
Training for emergency medics	<ul style="list-style-type: none"> <li>• Emergency medical treatment</li> </ul>	Ministry of Health, Labour and Welfare Medical workers
Chemical disaster training	<ul style="list-style-type: none"> <li>• Medical treatment in the event of a chemical disaster</li> </ul>	Ministry of Health, Labour and Welfare Doctors and other medical workers at emergency medical centers and disaster hospitals in the stricken area
Education and training within the Ministry of Land, Infrastructure and Transport	Training courses in general knowledge and techniques relating to disaster management and other disasters (the courses “Disaster Management and Disaster Assessment” and “Construction Planning III” include practical sessions and are designed to provide a high level of general knowledge and improve risk-management capabilities)	Officers at national and local public bodies with responsibility for national land administration
Education and training within the Japan Meteorological Agency	<ul style="list-style-type: none"> <li>• Training sessions held regarding meteorological aspects of disaster management, and “Weather Fair” aimed at introduction of meteorological observatories and dissemination of disaster preparedness knowledge</li> </ul>	Officers from disaster-related organizations, and general public
	<ul style="list-style-type: none"> <li>• Briefing sessions held regarding relaying of early-warning information, etc.</li> </ul>	Staff in relevant posts at disaster-management bodies
	<ul style="list-style-type: none"> <li>• Training in knowledge and skills required for meteorological operations</li> </ul>	Japan Meteorological Agency officers
Education and training within the Japan Coast Guard	<ul style="list-style-type: none"> <li>• Education and training in various disaster countermeasures</li> </ul>	Japan Coast Guard, etc.
	<ul style="list-style-type: none"> <li>• Training in advanced skills for use in disaster management and rescue</li> </ul>	Mobile protection units Special rescue units, etc.
	<ul style="list-style-type: none"> <li>• Marine accident prevention training sessions, etc.</li> </ul>	Open to all (not only for marine-related officers, but for broad general public)
	<ul style="list-style-type: none"> <li>• Training in handling accidents on car ferries and other passenger vessels</li> </ul>	Transport service staff



Training for disaster management officers	<ul style="list-style-type: none"><li>• Practical know-how based on lessons learnt from the Great Hanshin-Awaji Earthquake</li><li>• Including necessary fields for large-scale disaster management in a systematic manner.</li><li>• Map exercise with the role-playing method using the computer network system</li></ul>	High officials in charge of disaster management at local government level (ex. governors, directors, managers )etc.
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### (3) 中央防災会議

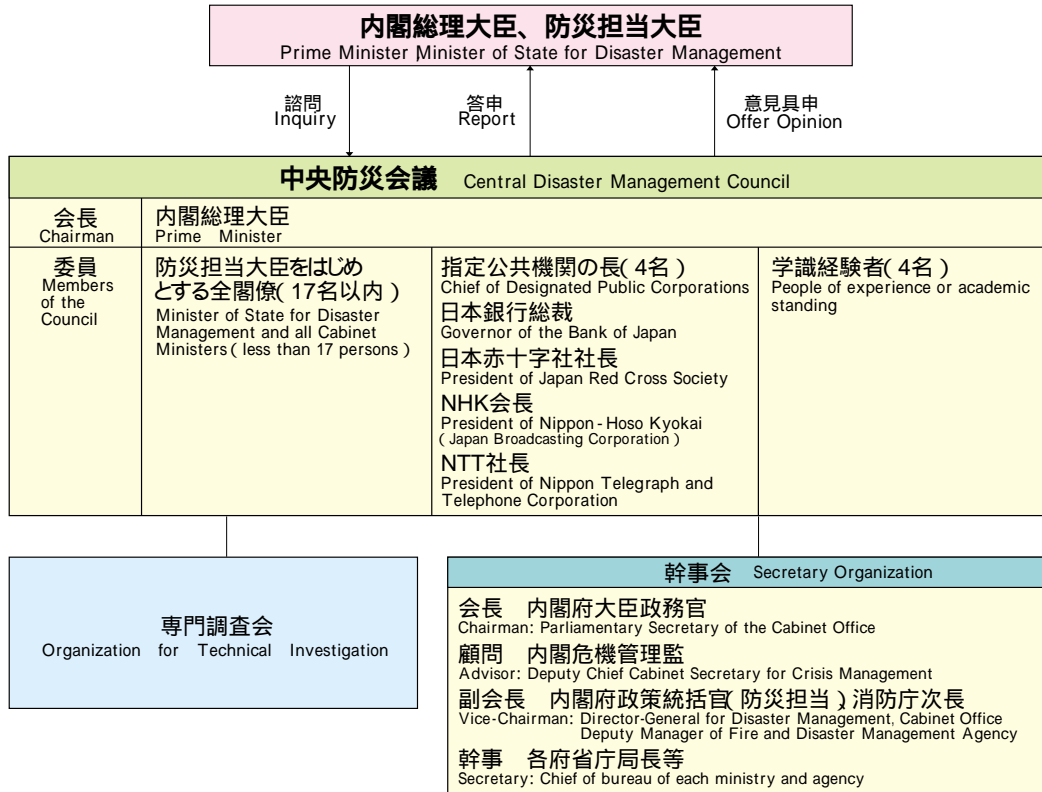
政府には、総合的な災害対策を推進するため、内閣総理大臣を会長とし、国務大臣等を委員とする中央防災会議が設置されています。

### (3) Central Disaster Management Council

The Central Disaster Management Council was established for the purpose of promoting comprehensive countermeasures in which the Prime Minister takes the chair and other Ministers of State are members.

#### 中央防災会議組織図

#### Organization of Central Disaster Management Council



#### 【役割】

防災基本計画及び地震防災計画の作成及びその実施の推進  
 非常災害の際の緊急措置に関する計画の作成及びその実施の推進  
 内閣総理大臣・防災担当大臣の諮問に応じた、防災に関する重要事項の審議(防災の基本方針、防災に関する施策の総合調整、災害緊急事態の布告等)等  
 防災に関する重要事項に関し、内閣総理大臣及び防災担当大臣への意見の具申

#### 【Duties】

- Prepare and promote implementation of the Basic Disaster Management Plan and draft the Earthquake Disaster Management Plan.
- Prepare and promote implementation of the urgent measures plan for major disasters.
- Deliberate important matters pertinent to disaster management according to requests from the Prime Minister and/or Minister of State for Disaster Management (general coordination of basic disaster management policies and disaster management measures, declare emergency situations caused by disasters etc.)
- Offer opinions regarding important matters pertinent to disaster management to the Prime Minister and Minister of State for Disaster Management.



中央防災会議  
Central Disaster Management Council

# 3 防災計画

# Disaster Management Planning

## (1) 防災計画の体系

**防災基本計画:**わが国の災害対策の根幹となる各種防災計画の基本となる計画で、災害対策基本法第34条に基づき中央防災会議が作成する防災分野の最上位の計画です。

**防災業務計画:**防災基本計画に基づき、各指定行政機関及び指定公共機関が作成する防災計画です。

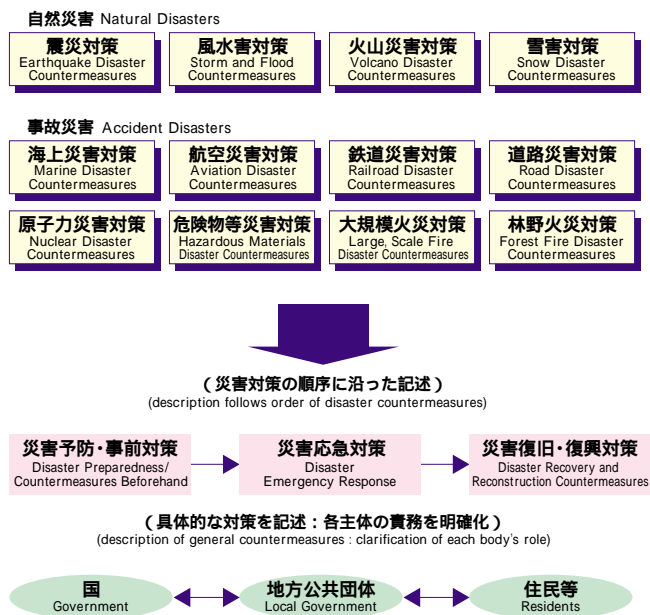
**地域防災計画:**防災基本計画に基づき、都道府県及び市町村の防災会議が、地域の実状に即して作成する防災計画です。

## (2) 防災基本計画

防災基本計画は、阪神・淡路大震災の経験を踏まえ、平成7年に全面的に改訂されました。同計画では、国、公共機関、地方公共団体等が行う施策について、それぞれの責務を明確に記述しています。また、講じるべき対策が容易に参照できるよう災害の種類別に予防、応急対策、復旧・復興と、災害対策の順序に沿って記述しています。

### 防災基本計画の構成

Structure of Basic Disaster Management Plan (varies by type of disaster)



## (1) The System for Disaster Management Planning

**The Basic Disaster Management Plan :** This plan sets forth the basic activities for each type of disaster management plan, which is the foundation of the nation's disaster management measures. In the discipline of disaster management, it is the master plan prepared by the Central Disaster Management Council in accordance with Article 34 of the Disaster Countermeasures Basic Act.

**The Disaster Management Operation Plan :** This is a plan made by the respective Designated Administrative Organizations and Designated Public Corporations according to the Basic Disaster Management Plan.

**The Local Disaster Management Plan :** This is a plan made by respective prefectural and municipal disaster management councils according to local circumstances and the Basic Disaster Management Plan.

## (2) The Basic Disaster Management Plan

The Basic Disaster Management Plan was revised entirely in 1995 based on the experiences incurred at the time of the Great Hanshin-Awaji Earthquake. The plan clarifies the duties assigned to the Government, public corporations and the local government in implementing measures. For easy reference to countermeasures, the plan also describes the sequence of disaster countermeasures such as preparation, emergency response, recovery and reconstruction according to the type of disaster.

### 防災基本計画の策定・修正経緯

Circumstances for Drafting and Revising Basic Disaster Management Plan

年 Year	内容 Contents
昭和38年 1963	初めての策定 Initial plan drawn up
昭和46年 1971	地震対策、石油コンビナート対策等に係る修正 Revision for earthquake countermeasures and petrochemical complex countermeasures
平成7年 1995	自然災害対策編の全面的な修正 Overall revision of Natural Disaster Countermeasures
平成9年 1997	事故災害対策編の追加 Addition of Accident Disaster Countermeasures
平成12年 2000	原子力災害対策編の全面的な修正 Overall revision of Nuclear Disaster Countermeasures
	省庁再編に伴う修正 Revision parallel with reorganization of ministries and agencies
平成14年 2002	風水害対策編、原子力災害対策編の修正 Revision of Storm and Flood Countermeasures and Nuclear Disaster Countermeasures

## 6 Call for Examples of Good Practice in Disaster Risk Management

### Example 1: Supplying and Sharing Disaster Information with Local Residents at the time of the Usuzan Volcanic Eruption

An example of good practice in disaster risk management	Supplying and Sharing Disaster Information with Local Residents at the time of the Usuzan Volcanic Eruption
Time frame	March to July 2000
Organizations involved	The Japanese government, regional public bodies, and 41 other organizations
Overview	<p>In the case of the Usuzan Volcanic Eruption on March 31, 2000, up to 15,815 people had received evacuation instructions and advice in advance: building on lessons learned from the Great Hanshin-Awaji Earthquake, a joint on-site disaster management headquarters was formed. The first organization of its kind in Japan, it has a membership including central government and local government bodies. A prompt administrative response by this headquarters was carried out. Prior to the eruption, on the advice of the Coordinating Committee for the Prediction of Volcanic Eruption and other volcanologists, emergency volcanic information that Usuzan can erupt within a few days was announced and a swift evacuation was carried out. As a result a humanitarian disaster was averted.</p> <p>The pre-eruption evacuation was considerably expedited by the fact that a hazard map had been circulated to the local residents ahead of time, so they understood the nature of the eruption disaster and the need for evacuation, and by the fact that the evacuation area had been delimited and evacuation instructions issued with reference to the hazard map.</p>
Impact of activities	Based on the hazard map drafted and published previously, the evacuation of residents was almost complete by the day before the eruption (March 30), so a humanitarian disaster was averted.
Lessons learned	<p>Because the evacuation was completed before the volcanic eruption, this exercise could be called a success. The lessons learned included the following:</p> <ol style="list-style-type: none"> <li>(1) It is vital to issue evacuation instructions and advice, based on reliable information, to local residents as quickly as possible.</li> <li>(2) The fact that the local residents understood the need for evacuation, thanks to the hazard map previously drafted and published, resulted in a speedy evacuation.</li> </ol>
Challenges remaining	

## 6 Call for Examples of Good Practice in Disaster Risk Management

### Example 2: Earthquake Response and Reconstruction Initiative by a Voluntary Organization Working in Cooperation with Local Residents of the Mikura District of Kobe

An example of good practice in disaster risk management	Earthquake Response and Reconstruction Initiative by a Voluntary Organization Working in Cooperation with Local Residents of the Mikura District of Kobe (Winner of the Award of the Minister of Public Management, Home Affairs, Posts and Telecommunications of the 7 <sup>th</sup> Disaster Reduction Urban Planning Award)
Time frame	1995 to date
Organizations involved	Mikura-dori 5-6 chome Community Development Conference The volunteer group "Machi-Communication"
Overview	<p>In a district of which roughly 80% was destroyed by fire in the Great Hanshin-Awaji Earthquake of January 17, 1995, the Mikura-dori 5-6 chome Community Development Conference was formed by local residents with a view to rebuild the neighborhood.</p> <p>Spearheaded by this Conference, and with the cooperation of the voluntary group Machi-Communication, activities were carried out in order to bring back the dispersed local residents; in accordance with re-zoning, the local residents helped to build a park, carried out a co-housing project, and rebuilt the local community center in a new location. Thanks to the joint efforts of new and previously-established residents, the area was rebuilt.</p>
Impact of activities	The efforts of local residents working in cooperation with a volunteer group succeeded not only in reconstructing a neighborhood which had suffered major earthquake damage, but also played a major role in creating a new community.
Lessons learned	The reconstruction of a quake-stricken neighborhood through the efforts of the local residents themselves played a major role in creating a new community and contributed to the establishment, after re-zoning, of a park, housing and a community center.
Challenges remaining	<p>The ability of local residents to participate directly and prominently in reconstructing their own disaster-stricken neighborhood depends largely on the local authorities' reconstruction plan for the area in question, and in many cases, this model will probably not be applicable.</p> <p>Also, voluntary organizations like Machi-Communication, which participated in this recovery project, are few and far between, so measures will be needed to facilitate liaison with local residents.</p>

## 6 Call for Examples of Good Practice in Disaster Risk Management

### Example 3: Establishment of Evacuation Routes by the Local Community (in the Form of a Voluntary Disaster Management Association)

An Example of good practice in disaster risk management	Establishment of Evacuation Routes by the Local Community (in the Form of a Voluntary Disaster Management Association) (Winner of the Award of the Minister of Public Management, Home Affairs, Posts and Telecommunications of the 8 <sup>th</sup> Disaster Reduction Urban Planning Award)
Time frame	From 1999 to 2001
Organizations involved	Omizusaki Voluntary Disaster Management Association, Kushimoto-cho, Wakayama, and Kushimoto-cho Municipal Government
Overview	<p>In the event of a large-scale tremor such as the expected Nankai Earthquake, people in districts likely to be hit by the tsunami that will follow 5 to 10 minutes later will need to be evacuated to facilities on higher ground.</p> <p>Prior to this initiative, citizens had lobbied the municipal government to use tsunami evacuation maps drawn up by a voluntary disaster-management association to inform residents of the need for evacuation, and to provide enough evacuation facilities to ensure that everyone would be able to reach one in under 15 minutes: this lobbying did not result in municipal government action.</p> <p>However, through the activities of the local voluntary disaster-management association, evacuation routes were established using local government funding. Kushimoto-cho Municipal Government has since provided more evacuation routes leading to higher ground.</p>
Impact of activities	<p>Voluntary disaster-management activities by local residents raised the local community's awareness of disaster management, and led to the provision of necessary evacuation routes. These activities played a major role not only in raising local awareness of the evacuation routes, but also in educating the whole district about earthquake tsunamis.</p>
Lessons learned	<p>Voluntary activities by local residents raised the local community's disaster-management capabilities and even spurred the local government into action. Although the result in this particular case was the provision of evacuation routes, this initiative has highlighted the fact that disaster-management activities within the community are extremely important when things are normal, as well as in times of emergency.</p>
Challenges remaining	<p>Disaster-management activities vary greatly from one local community to another, as do levels of enthusiasm. In the event of a large-scale disaster, the activities of local residents will play a large role in mitigating damage, so it is vital that appropriate activities are carried out with enthusiasm in more local communities.</p>

## 6 Call for Examples of Good Practice in Disaster Risk Management

### Example 4: Mountain District Disaster Management Helper Scheme

An example of good practice in disaster risk management	Mountain District Disaster Management Helper Scheme
Time frame	Fiscal year 1997 to date
Organizations involved	Prefectural governments
Overview	<p>When a disaster occurs, it is vital to collect and relay information swiftly and reliably in order to prevent large-scale loss of life. In mountainous areas, however, collecting disaster information is too time-consuming and manpower-intensive to be handled by afforestation personnel unaided.</p> <p>Japan's prefectural governments have therefore appointed certain individuals with specialist knowledge of disaster management in mountainous areas as "Mountain District Disaster Management Helpers," who patrol "black spots," inspect mountain-district disaster-management facilities, and carry out other activities on a voluntary basis. The prefectural governments also provide the necessary support for the training programs and workshops this scheme requires.</p> <p>Mountain District Disaster Management Helpers now help to identify warning signs of imminent natural disasters, grasp the salient facts in a reliable manner, and relay this information swiftly to the competent authorities.</p>
Impact of activities	"Black spots" are now patrolled on a daily basis, and because local residents are kept informed, local communities now have greater awareness and improved knowledge of disaster management.
Lessons learned	This scheme has highlighted the importance of using volunteers to best advantage in disaster-management activities.
Challenges remaining	This scheme is highly dependent on the goodwill and enthusiasm of individuals, so the greatest challenge will be to ensure continuity.



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