

Assessment of Vulnerability to Large-scale Natural Disasters (Outline)

Vulnerability assessment is like a health checkup of the nation, examining and assessing Japan's vulnerability to large-scale natural disasters, and is an indispensable process for building national resilience in an efficient and effective manner.

Matters contained in the Guidelines for Assessment of Vulnerability to Large-scale Natural Disasters (Decision by the National Resilience Promotion Headquarters in December 2013)

(1) Methodology for Assessment

- Assess each sector of measures concerning national resilience
- Envisage “the worst events that should never happen” and cross-sectorally assess respective countermeasures
- Also assess the required resources to be input, including human resources, that are indispensable for building national resilience
- Conduct quantitative assessment as much as possible in order to monitor the progress of measures

(2) Premises for Assessment

(i) Envisaged risks: Large scale natural disasters

(ii) Sectors of measures: 12 individual sectors and 3 cross-cutting sectors

Individual sectors: Administrative functions/Police and fire services; Housing and cities; Healthcare and welfare; Energy; Finance; Information and communications; Industrial structures; Transportation and logistics; Agriculture, forestry and fisheries; National land conservation; Environment; Land use (national land use)

Cross-cutting sectors: Risk communication; Countermeasures for aging infrastructure; Research and development

(iii) Goals and the worst events that should never happen

Goals to be achieved in advance:

- 1) Protect human lives to the utmost extent; 2) Prompt rescue and first-aid activities and provision of medical care;
- 3) Secure indispensable administrative functions; 4) Secure indispensable information communication functions;
- 5) Prevent functional disturbance in economic activities; 6) Secure minimum networks for electricity, gas, water and sewerage; 7) Prevent secondary disaster; 8) Swift recovery and reconstruction

The worst events that should never happen: 45 events

* Program: A group of measures for avoiding each of the worst events that should never happen (or partially reducing the risks)

Major Points of the Results of the Vulnerability Assessment

1. Prioritization of measures and an appropriate combination of structural and non-structural measures are required

Many of the measures for building national resilience that will contribute to disaster prevention and mitigation are only half done. Having experienced disasters beyond our assumptions and considering the fact that there are limits to the capacity and funds of implementation entities, we need to prioritize certain measures and appropriately combine structural and non-structural measures in order to raise the level of security of Japan as early as possible in light of their goals (protect human lives; minimize the damage, avoid fatal damage to important facilities, and achieve swift recovery and reconstruction).

Representative programs: 1-3), 1-4), 1-5), 7-6) Representative sectors: Housing and cities; National land conservation

2. Ensuring redundancy is necessary

Even if the resistance against earthquakes of each facility is enhanced, that is not enough for responding to all types of disasters that may occur. In such sectors as administration, energy, finance, information and communications, and transportation and logistics, in particular, system shutdown will cause significant damage, exerting significant influence. Therefore, substitutability and redundancy need to be ensured through developing backup facilities and systems.

Representative programs: 3-3), 4-1), 5-5), 6-1) Representative sectors: Administrative functions, Energy, Finance, Information and communications, Transportation and logistics

3. Collaboration with local governments and the public sector is necessary

Each of the measures is to be implemented by various entities, including local governments, private business operators, NPOs, and the general public, not only by the national government. In order to have these entities implement measures efficiently and effectively, it is indispensable for the national government to offer proper assistance to municipalities and strengthen the organization of local governments in efforts for fostering personnel in charge of strengthening resilience and to ensure collaboration among entities for thorough provision and sharing of information.

Representative programs: 1-1), 1-6), 2-1), 3-4), 4-1), 5-1), 5-2), 5-7), 5-8) Sectors: of measures: All sectors