

The Great East Japan Earthquake

Taku ARAMAKI
National Security Policy Division
Foreign Policy Bureau
Ministry of Foreign Affairs

1

1 Overview of the Earthquake and Tsunami and Countermeasures for Them

- 1-1 Overview of the earthquake and tsunami
- 1-2 Overview of the damage

2 Emergency response

- 2-1 Initial response
- 2-2 Acceptance of international rescue teams
- 2-3 Response to infrastructure and lifeline damage
- 2-4 Measures to assist the lives of afflicted people
- 2-5 Disaster waste disposal
- 2-6 Promotion of housing stabilization
- 2-7 Cordial support for disaster-stricken area

3 The next steps

- 3-1 Measures for the normalization of lives in disaster-stricken areas
- 3-2 Toward reconstruction of disaster-stricken areas
- 3-3 Toward future disaster management and disaster risk reduction

4 Overview of the Nuclear Disaster

- Accident at Tokyo Electric Power Company Fukushima Daiichi Nuclear Power Station
- Accident at Tokyo Electric Power Company Fukushima Daini Nuclear Power Station

5 Measures against the nuclear disaster

- 5-1 Establishment of Nuclear Disaster Management Headquarters
- 5-2 Evacuation of afflicted people and the order to designate evacuation zones
- 5-3 Working toward supporting afflicted people at each area

2

1 Overview of the Earthquake and Tsunami and Countermeasures for Them

1-1 Overview of the earthquake and tsunami

- ◆ On 11 March 2011, at 14:46
- ◆ Magnitude 9.0
- ◆ Offshore at Sanriku
- ◆ Largest earthquake in Japan's history

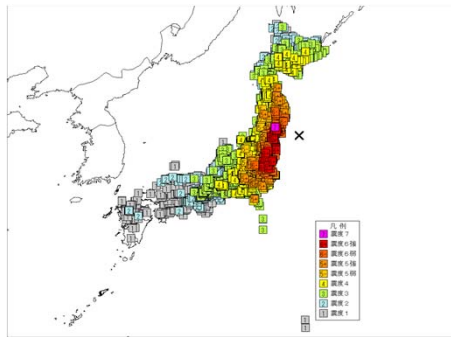


Figure 1. Seismic intensity of the Off the Pacific Coast of Tohoku Earthquake

3

1-2 Overview of the damage

- ◆ 15,270 deaths
- ◆ 8,499 missing
- ◆ Housing :
100,000 demolished,
60,000 partially destroyed
- ◆ Direct damage to the stock
- ◆ Inundation area caused by tsunami was 561 square kilometers through out Japan

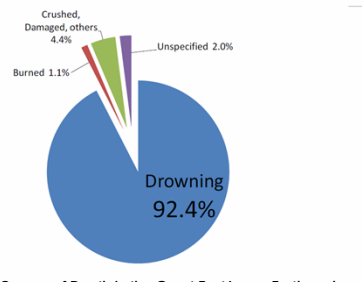


Figure 2. Causes of Death in the Great East Japan Earthquake (Iwate, Miyagi and Fukushima Prefecture)

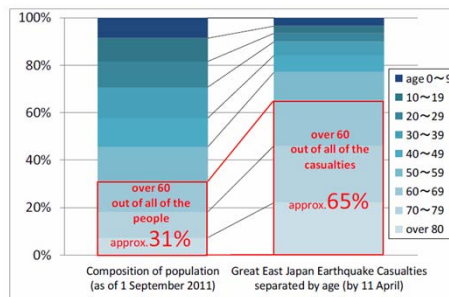


Figure 3. Comparison of the number of casualties and the area population by age

4

2 Emergency response

2-1 Initial response and the establishment of the emergency headquarters

11 March

15:14 Established the Extreme Disaster Management Headquarters

18:42 Dispatched government inspection team

12 March

6:00 Established the Local Headquarters for Extreme Disaster Management

Rescue Operation

- National Police Agency: approx. 307,500 staff
- Fire and Disaster Management Agency:
27,373 teams, approx. 103,600 firefighters
- Japan Coast Guard: total of 4,413 boats,
1,564 airplanes, 1,510 staff
- Ministry of Defense: approx. 107,000 corps
- Total number of rescued people: 26,707



Emergency Fire Response Teams
(Kesenuma City, Miyagi Prefecture)

5

2-2 Acceptance of international rescue teams

- Rescue teams and experts' teams from 28 countries, regions, and organizations
- "Operation Tomodachi (friendship)" by US Forces
- Relief supplies from overseas
(55 countries, regions and organizations)
- More than 16.1 billion yen (from 81 countries, regions and organizations) (overseas)



Cooperation by United States Forces Japan

6

2-3 Response to infrastructure and lifeline damage

Transportation facilities

Great impact : railways, roadways, ports, aviation traffic

Lifelines

Damage : electricity, gas, water, sewage, telecommunications, broadcasting, petroleum refining plants

Public buildings

Damaged approx.6,400 facilities of public schools

7

2-4 Measures to assist the lives of afflicted people

Establishment of the Special Headquarters for Measures to Assist the Lives of Disaster Victims

- Procurement and transporting of essential commodities of life
- Support and information provision for the evacuees
- Securing services of health, medical care, welfare, education
- Toward the reconstruction of lives



Food supply by Japan Self-Defense Force

2-5 Disaster waste disposal

- Total estimated amount of disaster waste :
approx.24.9 million tons
- Countermeasures for submergence, liquefaction

2-6 Promotion of housing stabilization

- Construction of emergency temporary houses

9

2-7 Cordial support for disaster-stricken area (domestic)

- Donations:
approx.236.2 billion yen (domestic)

- Volunteers:
evacuation shelters,
helping preparation of meals,
cleaning up of the muddy houses



Preparation of meal by volunteers

10

3 The next steps

3-1 Measures for the normalization of lives in disaster-stricken areas

1. Improvement of living conditions at evacuation shelters
2. Housing support
3. Securing services
4. Removal of debris
5. Emergency disaster prevention measures
6. Recovery of lifelines, transportation networks, farms, and fishery ports
7. Securing employment

11

3-2 Toward reconstruction of disaster-stricken areas

- ◆ The Reconstruction Design Council (11 April)
- ◆ To discuss various ideas about reconstruction
 - a policy outline for reconstruction
 - “Seven principles of the reconstruction design”

12

3-3 Toward future disaster management and disaster risk reduction

- ◆ Appropriate review of disaster risk assessment
- ◆ Improved tsunami countermeasures including through the Basic Disaster Management Plan
- ◆ Strengthening of the countermeasures for Tokai, Tonankai, and Nankai Earthquakes and Tokyo Inland Earthquakes
- ◆ Response to wide area disasters
- ◆ Support of afflicted people
- ◆ **High-Level International Conference on Large-Scale Natural Disasters (2012/7/3-4)**

13

4 Overview of the Nuclear Disaster

Accident at Tokyo Electric Power Company Fukushima Daiichi Nuclear Power Station

- ◆ Three reactors had automatically stopped (Reactor 1, 2, 3)
- ◆ Complete loss of AC power sources (Reactors 1, 2, 3)
- ◆ Cooling down of the spent fuel pools of Reactors 1-4 became difficult
- ◆ Explosions considered to be hydrogen explosions had occurred (Reactor 1, 3, 4)

To settle the situation,

- Government ordered TEPCO to control the pressure inside the containment vessels and to pour in seawater
- Japan Self-Defense Force and Emergency Fire Response Teams poured in water
- TEPCO conducted recovery operations of cooling down the reactors and spent fuel pools and controlling the pressure of the primary containment vessels.



Fukushima Daiichi Nuclear Power Station

4 Overview of the Nuclear Disaster

Accident at Tokyo Electric Power Company Fukushima Daini Nuclear Power Station

- ◆ All four reactors automatically stopped
- ◆ Leakage of the reactor coolant at Reactors 1 and loss of reactor heat removal function at Reactor 1, 2 and 4
- ◆ Loss of pressure control function at Reactors 1, 2 and 4).



Owing to the recovery operations taken afterward,

- All four reactors were cooled down and stopped, and the situation has been kept stable.



15

5 Measures against the nuclear disaster

5-1 Establishment of Nuclear Disaster Management Headquarters

- ◆ Established the Nuclear Disaster Management Headquarters and Local Headquarters for Nuclear Emergency Response.
(11 March at 19:03)
- ◆ Local coordination office was established (18 March)

16

5-2 Evacuation of afflicted people and the order to designate evacuation zones

- Evacuation Areas (apply to approx. 78,000residents) :
within **20km radius (from Fukushima 1)** and within **8km radius (from Fukushima 2)**
- Restricted Areas (apply to approx. 78,000residents) :
within **20 km radius** (from Fukushima 1)
- Deliberate Evacuation Areas (apply to approx. 10,000residents) :
5 municipalities
- Emergency Evacuation Preparation Areas (apply to approx. 58,500residents):
5 municipalities



Approx. 99,000people in Fukushima Prefecture had evacuated

17

5-3 Working toward supporting afflicted people at each area

- Secondary evacuation places
- Temporary housing

18