LESSONS FROM TOHOKU EARTHQUAKE AND TSUNAMI DISASTER

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Institutional Responses

- Immediate responses of CAO & Ministry of Defense were very good ← Improvements from the Great Hanshin-Awaji EQ.
  1. Disaster Management Headquarter @ CAO → Team gathered @ 4 min after shaking, and Headquarter @ 28 min after.
  2. Disaster Management Headquarter @ Ministry of Defense, and reconnaissance helicopter dispatched →
     Headquarter @ 4 min after shaking, and helicopter @ 15 min after.
  3. Requests for disaster response to MD from Iwate and Miyagi Prefectures @ 6 & 16 min respectively after shaking
  4. Response for Nuclear Disaster @ 19:30

- Thanks to Revision of Disaster Countermeasure Basic Act & Basic Plan in 1995
Has the idea of “Self Help, Mutual Help and Public Help” based on the Great Hanshin Awaji EQ worked?

Too much emphasis on “Mutual Help” has lead to unfortunate loss of healthy individuals trying to help other vulnerable people.

For the tsunami disaster, only “Self Help” should be exercised for escaping to a safer place.

“Public Help” could no function because of heavy damages at local governments.
Casualties due to Tsunami

No. of Drowned

Iwate

Miyagi

Fukushima
Population in total & inundated area

- Total population: 1,045,000
- Population in Inundated area: 342,198
% of Dead Civil Servants in Iwate & Miyagi Prefectures

% in Iwate Pref.

% in Miyagi Pref.
Problems in local government's immediate response

- Very high rate of casualties (e.g. 25%) in some local governments in Iwate & Miyagi, while the highest rate of death over the population in inundated area was less than 10%.

- Lack of information on damage situations has prevented immediate response from Morioka capital to coastal villages in Iwate Pref. and from Sendai to Ishinomaki City in Miyagi.

- Information was available only through self defense communication system in Iwate.

- “Public Help” could not be mobilized in this case

Robust communication system!!, & Alternative operation center?
Recovery & Reconstruction

- No. of volunteers is fewer than the Great Hanshin-Awaji EQ (620,000 during 1 month in GHA while 104,600 in GEJET, and 1.06 million over 4 month in GHA while 0.55 million in GEJET.)
- Lack of local capacity in accepting volunteers
- Difference in culture between Tohoku and outside (somewhat closed but strong community in Tohoku.)
Problem in Temporary Housing

No. of construction started

No. of completed houses

1 Mon.  2 Mon.  3 Mon.  4 Mon.  5 Mon.
Empowerment of People

- Importance of traditional culture and festivities to empower the local people. (Otsuchi Town Festival in September)

- Local initiatives with good collaboration through internet communication.

http://www.tohokukibou.com/katsudohhoukoku/archives/1847
Temporary housing to public supported permanent housing (town rebuilding phase).

Independent planning for tsunami preventive structures and permanent housing (e.g. relocating housing at higher ground while building sea walls by national agency).

Less attention to business recoveries for employment.

Zoning versus mixture of business and residential areas