Coping with Natural Disasters in Japanese Urban Planning: Reconstruction Planning after Great East Japan Disaster

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Special character of East Japan Earthquake: comparison with other great earthquakes

<Great Earthquake in Tokyo= Great Kanto Earthquake 1923>
– Big fire, 100,000 people were dead mainly because of fire
– Quick response of government to make planning for reconstruction
– Implementation of innovative planning, land readjustment in huge built-up area
– Contribution for further development of Tokyo
– Hereafter, prevention of the spread of fire is the main target of disaster prevention planning
Special character of East Japan Earthquake: comparison with other great earthquakes

< Hanshin Great Earthquake 1995 >
- 6,000 people were dead, mainly because of the collapse of houses and buildings
- New type of disaster problems: collapse of infrastructure, weakness & recovery of urban life system
- Difficulty of consensus making for reconstruction making (condominium)
- Importance of voluntary activity: NPO, NGO
Special character of East Japan Earthquake

• Huge damaged area & multiple damage: 500km long damaged coast by Tsunami, 37 local municipalities, 9200 km2 in Iwate, Miyagi & Fukushima were strongly damaged, damaged population: ca. 1.8 million people,

• Aspect of man-made disaster: Fukushima nuclear power plant

• Disaster in shrinking area
Great East Japan Earthquake:
Primary Quake and Quakes Larger than Magnitude 7.0 occurring in March and April

Source: Kahoku Shinpo Publishing Co. 2011.06 “The Great East Japan Earthquake & Tsunami”

Main disaster zone

Source: The Japan Times Special Report, 2011.06 “3.11 A Chronicle of events following the Great East Japan Earthquake”
Flooded Area  62 Cities in 6 Pref.  535km²
Dead  15,856 persons  Missing 3,070 persons
Houses **completely** destroyed  129,404
Houses **partly** destroyed  255,737
Tsunami 15:25 Miyako City in Iwate Pref.
A few Cities were protected by Seawall.

Hudai in Iwate Pref.

Hirono in Iwate Pref.
But Many Seawalls were destroyed.
Everything was lost.
Minami Sanriku Town in Miyagi Pref. After
Even the RC Building fell down.
Even the Train
Only the Foundations were left.
Only Structure Frame
This area was attacked by Tsunami in 1896, 1933 & 1960.
In addition, Accident of Nuclear Power Plant