

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

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Kenjiro Omura

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

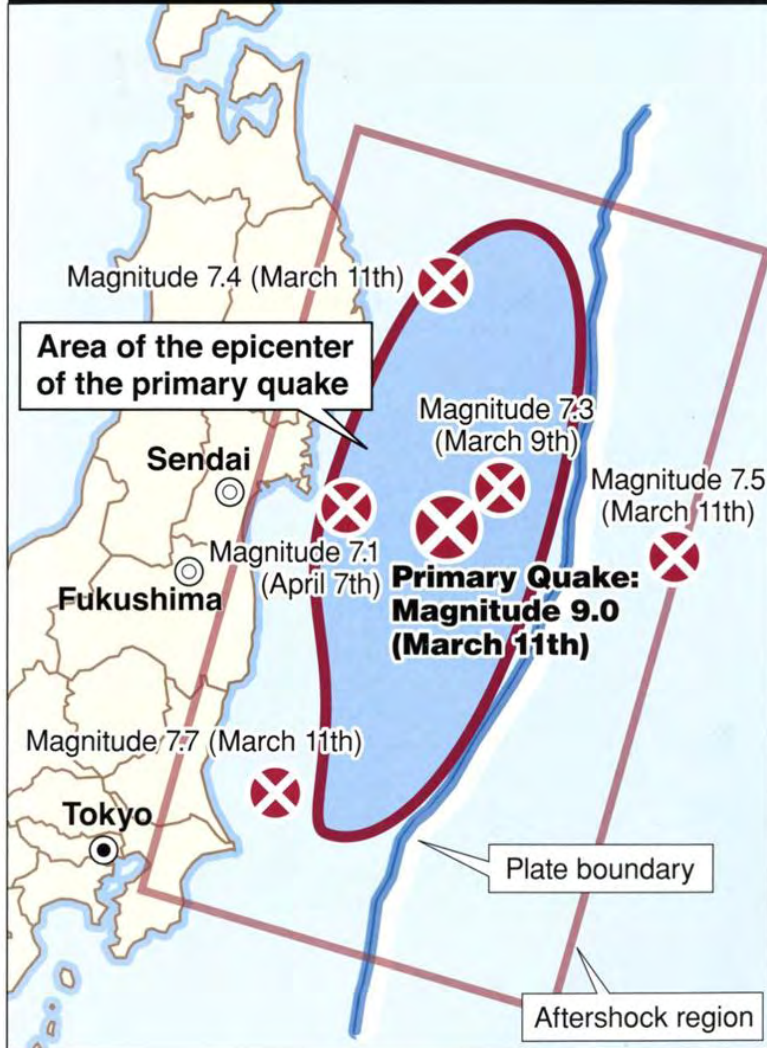
< Hanshin Great Earthquake 1995 >

- 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

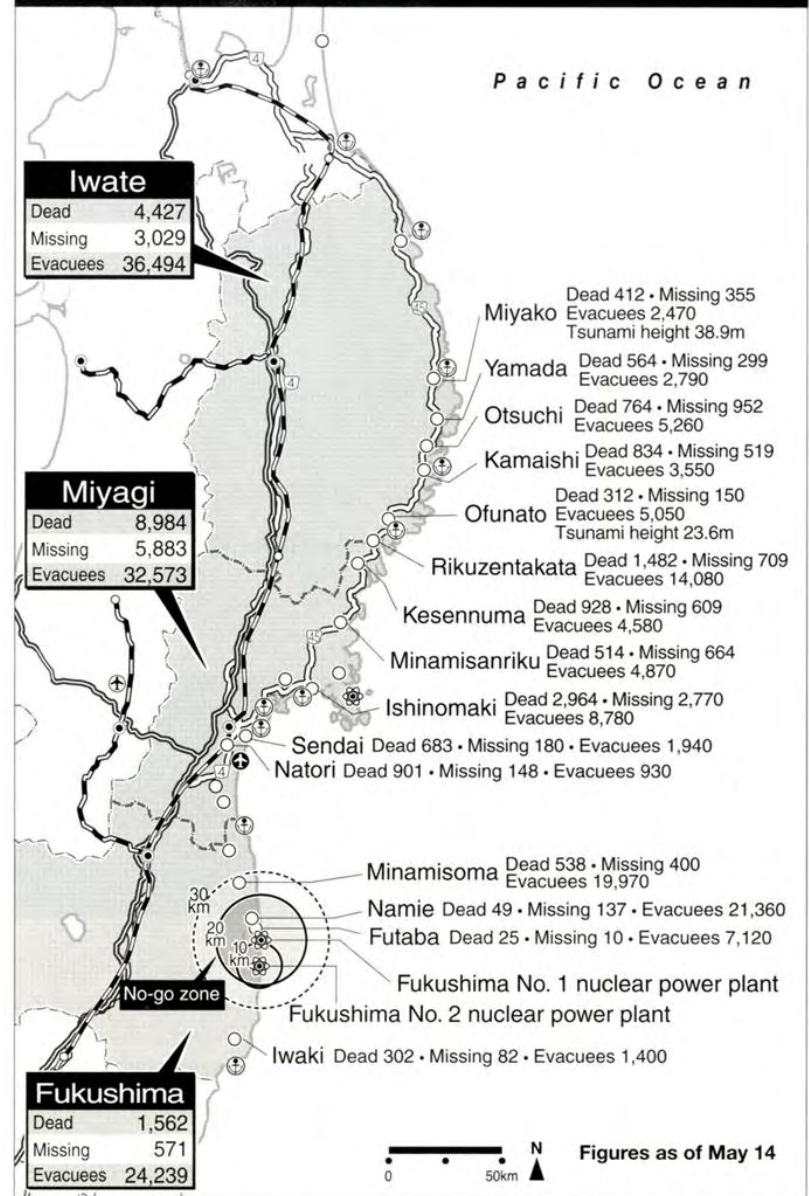
- Huge damaged area & multiple damage: 500km long damaged coast by Tsunami, 37 local municipalities, 9200 km² in Iwate, Miyagi & Fukushima were strongly damaged, damaged population: ca. 1.8 million people,
- Aspect of man-made disaster: Fukushima nuclear power plant
- Disaster in shrinking area

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



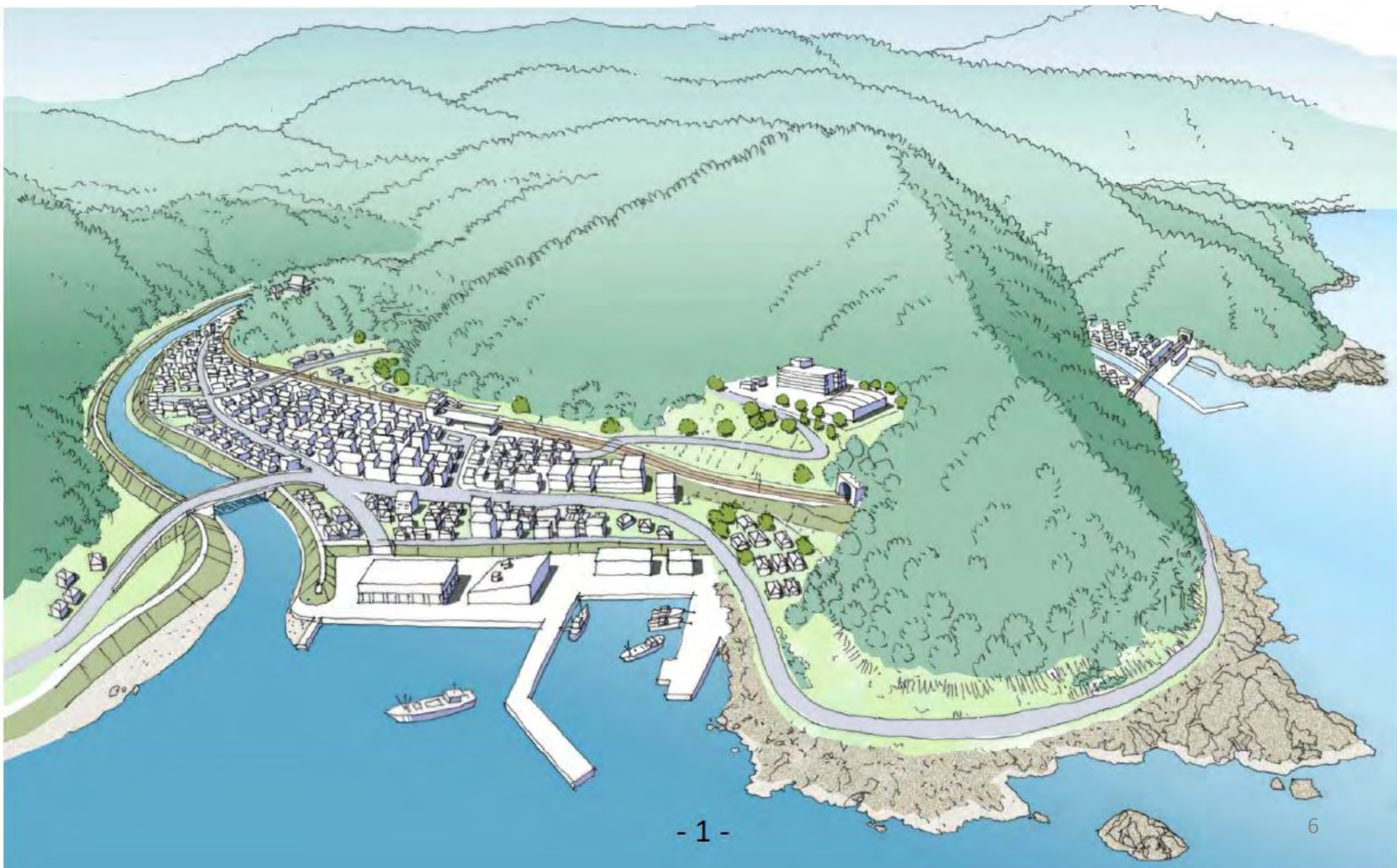
Source: Kahoku Shinpo Publishing Co. 2011.06 "The Great East Japan Earthquake & Tsunami"

Main disaster zone

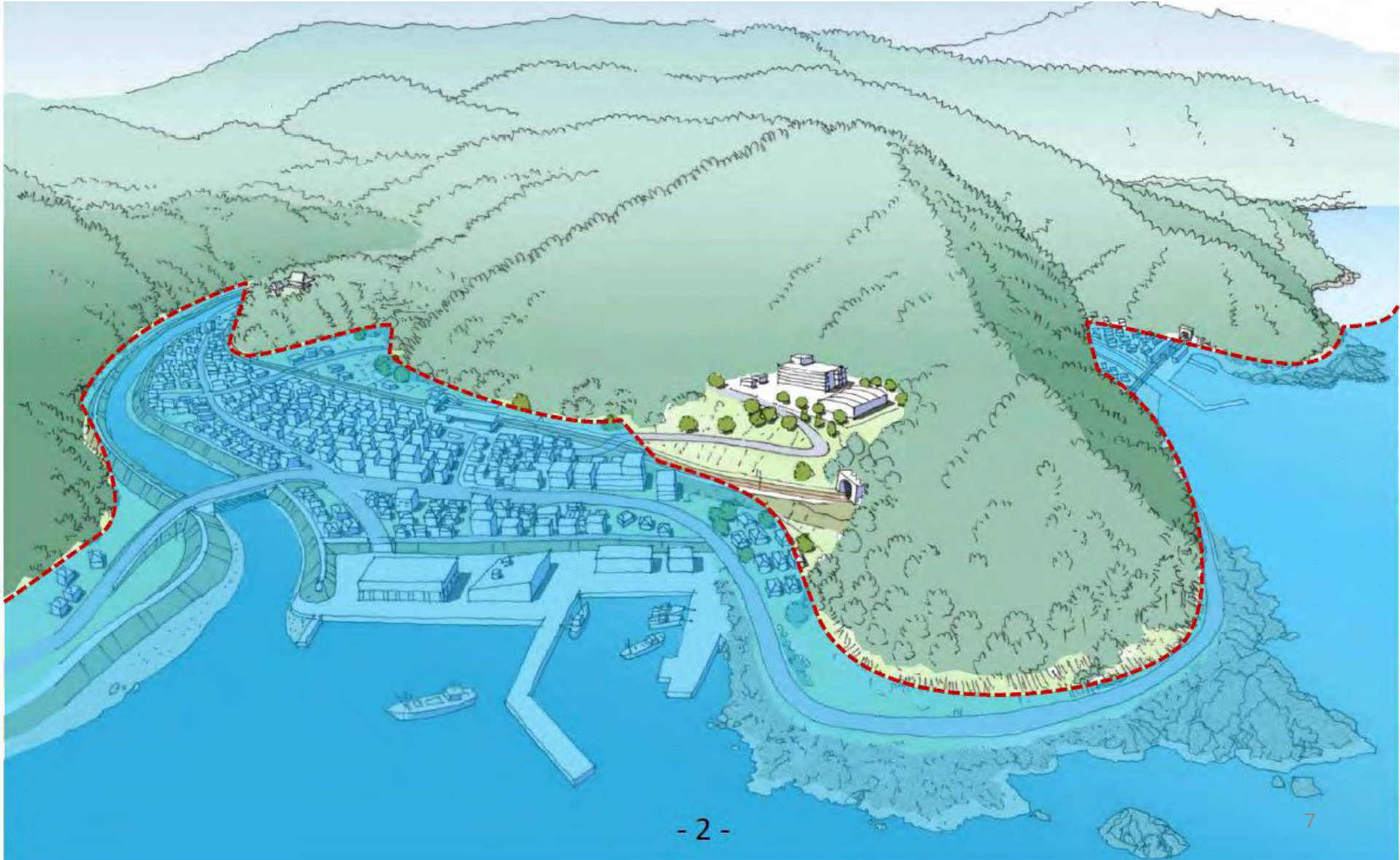


Source: The Japan Times Special Report, 2011.06 "3.11 A Chronicle of events following the Great East Japan Earthquake"

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.

【被災前】



Hudai in Iwate Pref.

【被災前】



Hirono in Iwate P

【被災後】



後背地に大きな被害なし

替代小学校

替代水門

替代川

(岩手県発表資料)

【被災後】



後背地に大きな被害なし

川尻川

川尻水門

後背地に大きな被害なし

But Many Seawalls were destroyed.



Everything was lost.



Minami Sanriku Town

Minami Sanriku Town in Miyagi Pref.

Before



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.



Refuge Sign

In addition, Accident of Nuclear Power Plant

