

# **HOW RESILIENT IS JAPAN?: RESPONSE AND RECOVERY LESSONS FROM THE 1995 KOBE AND 2011 TOHOKU DISASTERS.**

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## **Keywords**

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## **Abstract**

March 11, 2011, North-east Japan suffers from devastating damage by M9 earthquake and induced tsunami. Disaster named the East Japan Earthquake Disaster results in almost 20,000 human deaths and JPY 16T direct economic loss. M9 earthquake results in various impact reflecting characteristics of each area, such as damage from tsunami, life line disruption in Sendai, nuclear power plant accident in Fukushima, impact from long period shaking and millions of homeless for commuting system stop in Tokyo, and economic impacts to all over the world.

Being safer city is a keyword in long term recovery plan. In case of east Japan earthquake disaster, all the local governments try to set up land use regulation not to live near from the sea, and construct resettlement site in higher ground preparing for millennium tsunami with higher sea wall to prevent damage from 100 year interval tsunami. As the theory for decision of height of sea wall and land use regulation, a scientific tsunami simulation result is used. It is very unique in Japan, land use regulation are decided based on hazard simulation results. Long-term recovery plan corresponding to above mentioned impacts are developed in local government.

Japan has many experiences of long term recovery. The 1995 Kobe earthquake, which kills 6,000 people and JPY 10T direct economic loss needs 10 years to complete all the recovery projects. Now “resilience” is the keyword in the field of disaster reduction, and recovery is the critical issues to make resilient community. This paper discusses about the issues on recovery from field survey results on recovery processes about the 1995 Kobe earthquake and the 2011 Tohoku earthquake disaster.