

Disaster Reduction Effort and Reconstruction after the 2011 Great East Japan Tsunami

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The 2011 Great East Japan tsunami caused damage in a wide range and affected to various aspects of tsunami preparedness and mitigation. Some important topics to reduce human damage for such a large event are awareness and evacuation. This paper introduces some lessons learned and presents reconstruction status for such damage reduction.

Field surveys were conducted in tsunami affected areas to observe present reconstruction status around Sendai city. Recently, Sendai city provided new tsunami hazard map adding more evacuation shelter including a coastal adventure park that survived the 2011 tsunami. Disaster memorial was built near Arahama coast. Sendai airport which was reopened since April 2011 provides tsunami inundation mark of 3 m at the 1st floor of the terminal. Sendai airport access line was reopened since October 2011 and also provides some space for a display of tsunami damage pictures. Concrete stairs were built along the Tohoku express way because there were many people survived by climbing it. Namiwake shrine which is famous for their legend of a historical tsunami in 1611 put a sign giving information of the legend due to a large number of visitors after the 2011 event. For other areas, overturned buildings in Onagawa town, shrine in Yuriage village will become a symbol of tsunami disaster. Rikuzen-Takata city has a plan to plant Sakura tree along the tsunami inundation limit of the 2011 tsunami. Iwanuma city has a plan to construct escape hills with 10-15 m height using tsunami debris. All of these afford would help to transfer a story of tsunami disaster to a next generation and promote better evacuation.

Because return period of a great disaster is much longer than human life, the mentioned issues will encourage awareness and evacuation of residence. Many attempts were observed in present reconstruction such as memorial park, hazard map and evacuation route. These will help to reconstruct a disaster prevention town and be ready for the next tsunami.

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