

Tsunami Vulnerability Assessment of the Southern Boso Peninsula Tsunami Vulnerability Assessment of the Southern Boso Peninsula

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The Southern Boso Peninsula has been affected by tsunamis during historic years and during the Holocene. This study attempted to assess the tsunami hazard in the southern Boso Peninsula city of Tateyama, and assess the vulnerability in two of Tateyama's districts of Aihama and Mera. By using GIS it was possible to establish an inundation scenario for Tateyama, as well as to roughly approach some of its potential threat to the locals. Utilizing GIS and the PPATHOMA Tsunami Vulnerability Assessment model allowed for the vulnerability assessment of buildings in the scenario floodzone of Aihama and Mera. Applying a building population estimation model in both the hazard assessment of Tateyama and the vulnerability assessment of Aihama and Mera, allowed the estimation of the population distribution in dangerous zones and buildings in different vulnerability classes. Results show that almost half of the buildings in Tateyama and more than half of its population would be affected by the tsunami of the considered worst-case scenario. For the coast of Aihama and Mera, almost half of the buildings show high or very high vulnerability to tsunamis, with the population in these buildings distributed in similar fashion.

キーワード: Tsunami, Vulnerability, Boso Peninsula, GIS, PTVA Model, Tateyama

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