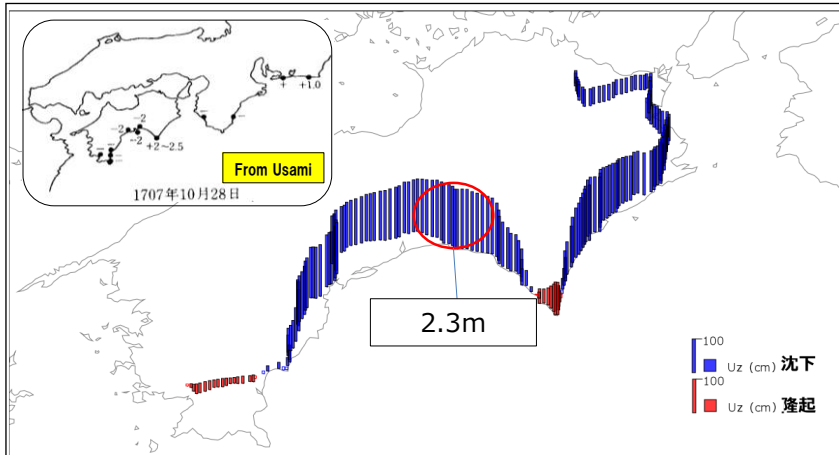
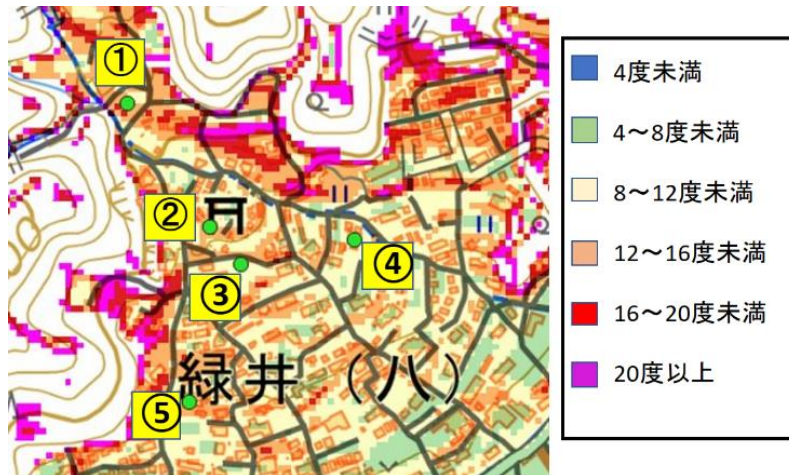


Estimation of Seismic Ground Displacements and Mitigation of Rainfall and Earthquake-induced Geological and Geotechnical Disasters

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Vertical displacements along the Pacific coast of Shikoku for a future Nankai Earthquake



Damaged and undamaged houses in debris flow deposit area (an example in Hiroshima)

※ Estimation of Co-seismic and Post-seismic Ground Displacements

Huge Nankai trough earthquakes have been known to hit the Pacific coast of the west Japan and cause severe damages every 100-150 years. The occurrence of a huge Nankai trough earthquake gives raise to large ground settlements along the Pacific coast areas that enlarge the damage of tsunami. This study estimate/predict both co-seismic and post-seismic vertical displacements of the past and future Nankai trough earthquakes based on a crustal deformation model by considering the multi-layered, viscoelastic material and gravity.

※ DEM-based risk assessment of rainfall and earthquake-induced geological and geotechnical disaster

※ Seismic instability evaluation of large cut soil/rock slopes

※ Investigation of the flood disaster in relatively small-scale river basins.

※ Characteristics of slip surfaces and ground water of landslides in fissure soils

Keywords: heavy rain, earthquake, disaster, risk assessment, mitigation

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