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Risk assessment of the water front region revealed by origin of the sub bottom archaeological sites of Lake Biwa

Toshitaka Kamai^{1*}, Tsuyoshi HARAGUCHI²

¹DPRI, Kyoto University, ²Osaka city University

Archaeological village ruins discovered in the sub bottom of Lake Biwa should be the records of tectonic and non-tectonic movement of coastal ground and its influence on the history and development of coastal towns from the medieval ages. Recent investigations in the Naoe senken (village) and the Shimosakahama senken of the eastern coast of Lake Biwa revealed that liquefaction of coastal ground (soft sand) induced landslides moved into Lake Biwa. The possibility of regional ground subsidence by liquefaction was discussed in the Mitsuya senken of the western coast of Lake Biwa. Modern cities are intensively developed until coastal line on the similar ground condition around large lakes and ponds. The archaeological and geological investigations on sub bottom village ruins in Lake Biwa should point out the hazard risk and provide the assessment for sustainability of the modern water front cities.

Keywords: Sub bottom archaeological sites, Lake Biwa, Liquefaction, Landslides