

## Active faults in and around the Yoshinogari Heritage

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The normal faults are distributed around the boundary line of between Saga Plain and Sefuri Mountains (The Research group for Active tectonics in Kyushu, 1989, etc.). Shimoyama (2010) suggested that this normal fault zone relatively uplift the north side block, based on the displacement of boundary between Aso-4 and Mitagawa Formation. According to the Regional evaluation of the active fault (Kyushu), the Headquarter of Earthquake Research Promotion evaluated that the normal fault zone (Saga Heiya Hokuen Fault Zone) can be traced about 22 km from Ogi City to Yoshinogari Town, based on the feature of gravity anomaly and tectonic geomorphology. However, the distribution and activities of active fault are not understood well. Yoshinogari Heritage, one of the Japan's important heritages, is on a terrace that is formed by Aso-4 pyroclastic flow deposits. Many relics during the Paleolithic era and Early-modern era have been excavated from here. Especially, it is famous for moat-surrounded settlements of the Yayoi period. The prospered moat-surrounded settlements were abandoned in the late third century. In the Nara period, Kando (ancient road) and government agencies which extend to Hizen Province (Saga and Nagasaki Prefecture) from Dazaifu, were established in the northern Saga Plain including the Yoshinogari Heritage. Yoshinogari Heritage and surrounding areas are regions where the civilizations of the many periods remain. Therefore, in this area that records man's activity for a long time, it is expected that influences of fault activities on civilizations can be known. To clarify the time and spatial relationships between active faults and ruins, we described the distribution map on active faults and ruins in and around the Yoshinogari Heritage, based on interpretation of topography using large-scale maps, aerial photograph, 5m DEM and results of field and archaeological surveys, and also conducted several very shallow seismic reflection profiles across clear tectonic scarps.

Keywords: Normal fault zone, Saga Plain, Yoshinogari Heritage, DEM, Very shallow seismic reflection profiling