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The feature of the Tsunami height according to type of the coastal landforms - in the case of the 2011 Tohoku Earthquake

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Along the Sanriku shoreline, a lot of the Thsunami height dates have been measured by the 2011 Tohoku Earthquake Tsunami Joint Survey Group (2012) in the field survey and Tsunami damage area maps were made by interpretation of the aerial photographs taken just after the earthquake (Tsunami Damage Mapping Team, Association of Japanese Geographers, 2011). Also, we can access historical Tsunamis dates (1896, 1933, 1960).

We classified according to the type of coastal landforms and then compared the 2011 Tohoku Earthquake Tsunami to historical tsunamis. In the result, in short wavelength Tsunami case, a tsunami height in bordering open ocean areas is higher than in bordering inner bay. On the other hand, in long wavelength Tsunami case, a tsunami height in bordering open ocean areas is similar as bordering inner bay. In the 2011 Tohoku Earthquake Tsunami case, we can show the tsunami height with features of both the short wave and the long wave in the northern and the southern area, and the middle area has only the long wave feature. The areal distribution correlates with the tectonic geomorphology in sea bed.

This study leads us in understanding of the detail subduction earthquakes in poor observation equipment area and geological period.

Keywords: The 2011 off the Pacific coast of Tohoku Earthquake, coastal landform, Meiji Tsunami, Wavelength of Tsunami, Ocean-Trench Earthquake