

## Characteristic of tsunami deposit left by 2011 Tohoku earthquake, case study of Toni bay

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The recent 2011 Tohoku tsunami strongly affected the coastal area of the Pacific coast of Tohoku. The result of onshore features for tsunami impact is well researched, but offshore is only a few researches.

In this presentation, we will show about characteristic of tsunami deposit left by 2011 Tohoku earthquake, case study of Toni bay. We researched about tsunami deposit using acoustic equipments (Multi beam echo sounder ; MBES, Sub bottom profiler ; SBP) and Vibration core sampler (VCS).

The first of all, as the characteristic of submarine topography was sectionalized to 4 areas from topography profile of the valley axis direction.

Second, SBP data was seen signature reflecting surface (40-100cm down from seabed), and it was able to track at the wide area. Thickness of this reflecting surface and seabed were estimate 25-110cm in this bay. This thickness corresponded with the characteristic of the submarine topography.

Moreover, columnar sample of 13T\_V\_2 (water depth 14 m) could be divided into U1 (sand), U2 (mud), and the U3 (gravel bed). Sand to silt sediments layer with grading (fine sand to gravel) structure observed at the U1. We assume this U1 is 2011 tsunami deposit. The boundary of between U1 and 2 has continuity reflecting surface by SBP data and confirm distribution of this reflecting surface and thickness.

Finally, we were able to estimate tsunami deposit distributed with thickness approximately 25-110cm, and high thickness was distributed to the valley axis.

Keywords: Tsunami deposit, Sanriku Coast