

## Holocene sedimentary succession and crustal movement in the Tsugaruishi plain, central Sanriku coast, northeast Japan

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Along the Sanriku coast, discrepancies in crustal movement ( $10^5$  year scale uplift and  $10^1$ – $10^2$  year scale subsidence) have been reported between long ( $10^4$ – $10^5$  years) and short ( $10^1$ – $10^2$  years) timescales. Well-dated Holocene incised valley sediments provide records of millennial-scale vertical crustal movement, which is a key to understand the tectonic history in this area. Recent study of the age and distribution of early Holocene intertidal deposits in the incised valley suggested that the southern Sanriku coast has subsided during the Holocene with an average rate of about 1 mm/yr. Here we studied three sediment cores collected from the Tsugaruishi plain, on the central Sanriku coast.

A typical Holocene deltaic succession was recognized in both three cores; basal gravel of alluvium, flood plain or estuary sand and mud, inner bay mud with subtidal molluscan shells, deltafront sand layer with upward coarsening successions, and modern fluvial sand, mud, and gravel layer, from lower to upper. In the upperstream site, sand and mud layer with fining upward succession is identified just above deltafront sand layer with coarsening upward succession. This sand mud layer contains in situ intertidal molluscan shell, indicating intertidal deposition. Thus, elevation of this intertidal sediments (ca. -12 m relative to present sea-level) approximates paleo-sea level at the timing of deposition (ca. 7500 cal BP). Along the Pacific coast of northeast Japan. RSL at 8000 to 7000 cal BP is estimated to be higher than -5 m relative to the present sea level (Okuno et al., 2014). Thus, middle Holocene intertidal deposits at ca. -12 m relative to the present sea-level indicates Holocene subsidence trend along the Tsugaruishi plain as estimated along the southern Sanriku coast.

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