

Preservation and disappearance of the 2011 Tohoku-oki tsunami deposit along the Misawa coast, Aomori Prefecture, northern Japan

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We investigate the preservation and disappearance of tsunami deposits that formed by the 2011 Tohoku-oki Tsunami in Misawa Coast, Aomori Prefecture. In September 2016, we revisited 137 sites where the 2011 sandy tsunami deposits were described in April 2011 (Nakamura et al., 2012), and we found that the deposits are preserved at 65 sites (47%) of them. The deposits are well preserved especially in the not-damaged coastal forest, where the deposits are covered with new soil and their thicknesses are not changed significantly. Meanwhile, at the seaside forest where the trees were fallen or heavily damaged by the tsunami, the trees were removed and new plantation started, and there the 2011 tsunami deposits disappeared. Sites where the original deposit thickness are less than 1 cm, they are not detectable in 2016 not only within the residential area but also inside the forest. We can trace the deposits up to the tsunami inundation limit for 2 profiles from the 13 profiles. These information is useful to evaluate the tsunami inundation based on the deposit distribution for historical or prehistorical events. The Misawa Coast is, thus, a valuable place to continuously observe the 2011 tsunami deposits preserved in the soil, including their weathering or successive process in the natural environment. The preserved tsunami deposits are one of the 2011 earthquake disaster archives. We should explore ways of their preservation and utilization that contribute to research, disaster prevention and education for long years.

Nakamura, Y., Nishimura, Y., Putra, P.S., 2012, Local variation of inundation, sedimentary characteristics, and mineral assemblages of the 2011 Tohoku-oki tsunami on the Misawa coast, Aomori, Japan. *Sedimentary Geology*, 282, 216-227.

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