

## Evaluation of tsunami inundation limits from distribution of tsunami event deposits along the Kuril subduction zone

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Large earthquakes along the Kuril subduction zone have caused tsunami damage on the Pacific coast of eastern Hokkaido, between Nemuro and Tokachi. We have reported 10 postulated tsunami deposits (named Ts1-10) in peat layers at the Kiritappu Marsh and 20 postulated tsunami deposits (named Ts2-21) in lacustrine deposits at the Nemuro and Kiritappu Marsh. In this study, we study tsunami deposits 27 sites on the Pacific coast. Four tsunami deposit layers are identified at these sites and we correlate them to Ts1, Ts2, Ts3 and Ts4 based on key tephra layers. However, we could not find Ts1 formed by 1952 Tokachi-oki tsunami (Mt 8.2) or 1960 Chilean tsunami (M 9.5) and Ts2 by 1843 Tokachi-oki tsunami (Mt 8.0) in the Tokachi coast area. We estimated inundation distances of Ts3 (17th century) and Ts4 (13th century) events. Furthermore, we compared inundation distances of Ts1, Ts2, Ts3 and Ts4 events between the Nemuro-Kushiro and Tokachi coasts. We found that the inundation distances of Ts3 and Ts4 events are longer than those of Ts1 and Ts2 events. In addition, the Ts3 distance is longer than Ts4 in the west, while opposite in the east. These suggest that earthquakes which caused Ts3 and Ts4 deposits were larger in size than the causative earthquakes of Ts1 and Ts2, and the tsunami source of Ts3 was located west of the Ts4 source.