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## Preliminary result of field survey on the 2011 Tohoku earthquake tsunami along the Pacific coast of Hokkaido

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The 2011 Tohoku earthquake accompanied huge tsunami that caused severe damage along the Pacific coast of Hokkaido, Tohoku and Kanto districts. To understand the tsunami disaster and behavior, post tsunami field surveys were carried out by the 2011 Tohoku Earthquake Tsunami Joint Survey Group along the comprehensive coastal region in Japan. We worked as a part of the team and measured the tsunami heights at 43 sites in Hokkaido and 36 sites in northern Tohoku. Evidences for the tsunami inundations we traced were water marks on buildings, broken trees and debris on trees, and surface erosion and debris left on land. For most of the sites, we could understand the tsunami behavior on land based on these evidences. Then, the tsunami heights around Erimo Peninsula were 5-6 m, while the other sites along Hokkaido coast were 2-4 m. Tsunami heights along the Misawa coast, Aomori prefecture, were 5-10 m. The tsunami attacked the sawtooth coastline of Sanriku and invaded along the steep coastal valleys. For some sites, the tsunami heights were more than 30 m and the inundation distances were more than 1km from the beach. We also investigated coastal erosion and deposition processes by the tsunami at the Misawa coast and typical sawtooth coasts in Iwate prefecture.

Keywords: Tohoku tsunami, tsunami evidence, tsunami deposit, runup height, flow height