

## Influence of the 2011 Tohoku tsunami to the surface sediments on the Sendai shelf

Ken Ikehara<sup>1\*</sup>

<sup>1</sup>Geological Survey of Japan, AIST

Huge tsunami by the 2011 off the Pacific Coast of Tohoku Earthquake inundated coastal areas of the northeastern Japan. Because friction velocity at sea floor by the tsunami wave became larger at shelf, the tsunami might agitate and resuspend the shelf sediments in the Sendai Bay. However, we have only a little knowledge on characteristics of the shallow marine tsunami-related deposit. To understand the tsunami influence on sea-bottom environments, we conducted two surveys to collect the surface sediments of the Sendai shelf in summer 2012. Comparison with the pre-earthquake surface sediment dataset suggested that bottom sediment changes occurred at least several locations on the shelf. Mud deposition was most characteristic change at the northern and southern mid shelf. Resuspension and redeposition of shelf mud might occur on the shelf. Occurrence of muddy turbidite on the outer shelf suggested that a part of resuspended mud might be transported as turbidity currents toward offshore. Generation of the turbidity currents might play an important role on the long-distance transport from shelf to slope. On the other hand, no clear change on bottom sediment grain size and sedimentary structure found on the sandy shelf located central-southern mid shelf. Although the detailed comparison should be necessary, no large and long-distance transport might occur on the sandy mid shelf.

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