

## A secular variation of sub-bottom environment after the 3.11 Tohoku Earthquake and Tsunami disaster around Hirota-Bay

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On March 11, 2011, Tohoku Earthquake and Tsunami disaster were generated and the Tohoku district Pacific side suffered serious damage over a wide area. It intends that I clarify a change of sub-bottom environment and I predict it in the future at Hirota bay.

The sample which was gathered near the front of Kesen River in September, 2013 change from the gravel sediment to the mud sediment. As for this change, the influence of the typhoon and the heavy rain are thought about. The sediment from the mouth of Kesen River will be changed by the weather condition.

The strong reflector of SSS data which is distributed over the front of Kesen River is a tendency to decrease from 2013 through 2014. On the other hand, outer layer sediments which is distributed over the front of Kesen River change from the fine sediment to the coarse sediment. And, a distribution range of the mud sediment spreads out in the east side of the Osabe fishing port. Thus, it is thought that the mud is carried to the offshore and the bay central part such as river water. Sub-bottom environment of the center part from Hirota bay will change to the mud sediment in the future.

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