Characteristic of storm surge deposits deposited on the sandbar in Horokayanto, Taiki, Hokkaido, Japan

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There are some coastal lagoons that were separated from sea by sandbar in eastern coast of Hokkaido, Japan, and Horokayanto is one of these lagoons. The mean height of the sandbar is c.a. 5.7 m and soil and vegetation cover on the surface of the landward side. We recognized tongue-shaped sandy deposits and rip-up clasts of the soil covered the soil and vegetation in June 2016. The sandy deposits are composed by similar components to seashore sand and showed the tendency of the landward-fining and landward thinning, so this sandy deposits was formed by a storm surge. Moreover, relatively many marine diatoms such as *Thalassiosira* cf. *nanolineata*, *Thalassionema* sp., and few freshwater diatoms such as *Pinnularia borealis* derived from the soil were contained in the sandy deposits and also diatom valves increased from seaward to landward on the sandbar. These tendencies suggest the storm surge eroded and transported a part of the sandbar and soil, coarser particle including the rip-up clast deposited in the seaward side on the sandbar and the finer particle deposited in the landward side by the decreasing flowing speed. According to the previous wave data of NOWPHAS information in Tokachi harbor, it is highly possible that the sandy deposits formed by the storm surge due to the explosive cyclogenesis which developed at Pacific Ocean during 17th-19th of January 2016.

Keywords: Horokayanto, Storm surge deposit, Diatom assemblage

