Correlation between tsunami event deposits and inundation area of the 1993 Hokkaido Nansei-oki earthquake tsunami in Taisei Town

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We examine the correlation between the distribution of tsunami event deposits and inundation area for the 1993 tsunami. We infer the following sedimentary processes. (1)When tsunami reached offshore, sand distributed in shallow marine to beach was eroded. (2)Tsunami destroyed building and vegetation, and eroded soil. (3)When tsunami current lost its power during the inundation process or by an obstacle, it deposited gravel, sand, and mud sediments. Furthermore, the suspended matters such as wood or board were left behind, forming a belt near the inundation limit. (4)Tsunami return flow rearranged these deposits when it drained the water to low ground. In the case of Usubetsu river, the height of tsunami inundation limit was roughly same as the distribution limit of tsunami sand deposits.