

## Relationship between the subsurface structure and the deformation area accompanied with the 2018 Hokkaido Eastern Iburi earthquake in a fill in Atsuma town, Hokkaido

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Accompanied with the 2018 Hokkaido Eastern Iburi earthquake, some residential area suffered from landslides in Atsuma town, Hokkaido. The geology there was artificial fill on the tephra layer which overlay the sedimentary rock. It is important to know how the landslides were generated from the prospective of the subsurface structure for the mitigation of the residential areas with similar geological settings.

We conducted the surface wave exploration in and around the fill. As a result, low velocity zones were estimated, whose bottom shape was parallel to the old terrain. The thickness of the low velocity zones was larger than that of the fill. Kurosawa et al. (2019) showed that the slip surface was situated in the layer of Ta-d for our studied landslide. Comparing with the drill hole information, the low velocity zones that we estimated were corresponding to the moving body of the landslide which included the tephra layer as well as the fill.