

Collapse mechanism of the slope covered by pyroclastics

Ryusuke Imura[1]

[1] Earth and Environmental Sci., Kagoshima Univ.

On February 8, 2005, a slope collapse occurred in Airacho, Kimotsuki, Kagoshima. The thick weathered pumice layer cropped out on the collapse scarp. Pyroclastic deposit is commonly both porous and permeable, providing a large ground water storage reservoir through which water may move easily. Then, the lower part of pyroclastic deposit is easily weathered and alters to clay minerals. Most fallout deposits exhibit mantle bedding. It means that the deposit accumulate on all slopes as 'dip slope', and hence it is easy to slide down. Coarse pyroclastic deposit shows the clast-support; accordingly collapse of one particle causes the whole collapse. Therefore, we should examine potential of slope collapse after having considered such a property in a distribution area of thick pyroclastics.