## Research of groundwater flow mechanism of large-scale landslide

## [Point]

In the case of large-scale landslide, there is a tendency of deep sliding surface and complicated groundwater distribution as well as flow pathway. Groundwater level is one of the necessary research items at the time of conducting stability analysis, and rational groundwater research is required in the case with large-scale landslide. In this research, the impact of specification of groundwater observation hole on groundwater observation result was assessed for studying about accuracy assessment as well as accuracy improvement of the existing research methods, and technique for groundwater logging was improved, in which interpretation of research results was sometimes difficult. As a result, in the case with the observation that used a strainer-processed hole, it was revealed that there was a tendency of delayed reaction time of groundwater level, depending on the opening probability of observation hole. Furthermore, groundwater logging was improved, and logging technique that used dissolved oxygen instead of salt was developed. In addition to the above study, reproducibility of groundwater level change by seepage flow analysis was confirmed for studying groundwater level estimation approach by seepage flow analysis, and the important parameter for the analysis was assessed. As a result, it was revealed that the groundwater level change of landslide sites was generally reproducible by three-dimensional seepage flow analysis, and that the effect of groundwater drainage work could be assessed.

Keywords: landslide, groundwater level observation, groundwater logging, seepage flow analysis, groundwater drainage work