

## The effects of long-term evolution of geological environment on groundwater flow - A case study on Horonobe area

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It is important for safety assessment on geological disposal to study natural events such as erosion and climate changes. Thus as one of the studies to evaluate the effects of groundwater flow due to long-term evolution of the geological environment, analytical study on the effects of changes of sea level and recharge rate on characteristics of groundwater flow in Horonobe area was carried out. As the result, it was understood that decline of sea level induces the drawdown of groundwater level and evolution of the area where saline-water flushed. As the precipitation is considered to have been very small in the glacial periods, the numerical results showed that the groundwater movement as well as saline concentration change was relatively small.