

A long-term evolution of the geological environments in and around the Horonobe area, northern Hokkaido

Tadafumi Niizato[1]; Ken-ichi Yasue[1]; Hiroshi Kurikami[2]

[1] JAEA; [2] NUMO

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In order to assess the long-term stability of the geological environments for over several hundred thousand years, it is important to consider the influence of natural events and processes, such as uplift, subsidence, denudation and climate change, on the geological environments, especially in an active region such as Japan.

This study presents a conceptual model related to the future natural events and processes which have potential impacts on the groundwater flow conditions in the Horonobe area, Hokkaido, northern Japan on the basis of the neotectonics, palaeogeography, palaeoclimate, historical development of landform, and present state of groundwater flow conditions.

We conclude that it is important to consider interactions of natural events and processes on the describing of the best-possible approximation of the time-variation of geological environment.