

# Concept and present status of prediction of geological environments

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It is very important to evaluate the long-term stability of geological environments such as faulting, volcanic activities and regional uplift when the long-term safety of HLW geological disposal is performed. Generally, the extrapolation method is applied to predict the future's activity of geological events. At that time, it is important to investigate the time-space distribution characteristics of geological events from past to present and to identify the mechanism of them. Furthermore, the long-term stability of the geological factor such as plate movement which control the activity of the geological events should be considered. With the advance of earth science in the last several decades, the mechanism of geological events such as earthquake, volcanism and uplift, have been elucidated and the detailed regional data have been collected and compiled. As a result, it become possible to predict the future's events based on the data and logic for prediction in the restricted space and time.