

An approach to systematization of study on fault movement in the Horonobe area

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In order to assess the long-term stability of geological environments, it is important to consider the influence of natural events and processes, such as earthquake and fault movement, volcanism, uplift, subsidence, and erosion, especially in an active region such as Japan. The potential effects of earthquakes and fault movement on geological disposal system include dynamic, hydraulic and geochemical effects (i.e. destruction of waste package and repository, change of groundwater flow and water quality). Thus, understanding the activities, history and occurrence of faults is absolutely imperative for geological disposal system, and it is important to construct survey methods for a better understanding of its.

In this study, we suggest the data flow for understanding of activities, history and occurrence of faults. The data flow mainly consists of data items (geographical data, stratigraphical data, lithological data, geological structure data, dating data, etc) and survey items (literature survey, topographical survey, geological survey, geophysical survey, dating, etc), and shows a correlation among them. As a result of applying the data flow to the Omagari Fault as a case study, it is clarified that dating based on careful study of the relationship between the occurrence of the fault and stratigraphy have not been carried out to discuss the recent activity of the Omagari Fault. This data flow is very informative for extracting insufficient data to understand the activities, history and occurrence of faults.