

## Important geological conditions for a repository of high-level radioactive waste -Current state of the knowledge and future works-

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The geological environment has two main functions for ensuring the safety of geological disposal. One relates to the fundamental long-term stability of the site. The other relates to the properties of the host rock formations and groundwater, which facilitate the emplacement of the engineered barrier system and act as a natural barrier. In terms of the long-term stability, it is important to consider the effects of natural phenomena such as fault movement and volcanic activity. Thermo-mechanical properties of the rock mass and hydrogeology and geochemistry of the groundwater must be investigated to evaluate the suitability of a site to host a repository. The current state of knowledge of these issues and future works will be discussed from the viewpoint of selecting an appropriate site.