

Summary of 2018 JPGU session about the high-level radioactive waste disposal program

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In this poster I revisit and summarize the discussions in the session about Japanese program for high-level radioactive waste disposal, which was held at the 2018 JPGU meeting. Geophysical and geological issues discussed in association with high level radioactive waste management underground were diverse: estimates of strong seismic ground motions intimately linked with capability of forecasting future inland large earthquakes, lack of accurate methods to detect active faults invisible at Earth's surface, need for accurate evaluations of underground geometry and future activity of the faults already recognized, predicting pass ways of ground water, maintaining redox state of underground disposal sites, and so on. The presentations given by the experts of each issue and the following discussions elucidated serious difficulty in making reliable scientific predictions that ensure long-term safety of disposal sites. A consensus appears to be shared on the urgent need for starting some disposal program as soon as possible, however, based on the recognition of the situation our country faces that plenty of nuclear wastes already produced await being disposed somehow and several power plants shut down after the 2011 Tohoku earthquake were recently brought into operation again. This is a conundrum that Japanese society needs to confront and on which public discussions are required in the places where people of many different fields and back grounds are involved. Earth science community at least needs to enhance conversations with engineering people.

Keywords: high-level radioactive waste disposal, public discussions