

Downward erosion near the recent shoreline since Late Pleistocene

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We did the risk analysis of the downward erosion of about future 100,000 years for geological disposal. We have investigated the base of the alluvium in Japan. The depth of alluvium is a good indicator of the downward erosion caused by both river process and sea-level change. On the basis of these data, we showed the relationship between the maximum depth of downward erosion near the recent shoreline since Late Pleistocene (y) and the uplift from Late Pleistocene to the recent (x) in the uplift areas are as follows: $y > -x - 100$. Based on the uniformitarian view, we can estimate the maximum depth of downward erosion of the future in the uplift area using the above relationship. However, evaluation of subsidence areas is a future challenge.

[Reference] Hataya R., Yanagida M., Torigoe Y. and Sato M., Journal of the Japan Society of Engineering Geology, Vol.55, No.1, 2016 (in Japanese with English abstract).

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