

## Dammed-lake sediments caused by the Shichimen-zan landslide in the late Heian period, Southern Japanese Alps

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The Shichimen-zan landslide (SMZ) is a large bedrock slide occurred on the east side of Mount Shichimen-zan in Southern Japanese Alps (35.3704N, 138.3504E, 1983 m ASL). Geology of the SMZ is mainly composed of late Eocene to early Miocene west-dipping sedimentary rocks. A previous study revealed that the SMZ was already present in 1600s by analyzing the local historical documents. However, the timing of onset and landscape evolution of the SMZ have not been exactly known. For better understanding of geomorphological and geological development of large-scale landslide like the SMZ, the author investigated the local geology in and around the SMZ. Consequently, lacustrine sediments composed of fines with standing trunk of trees near the toe area of the SMZ. Three radiocarbon ages of wood fragments in the lacustrine sediments (L1 and L2) and debris flow deposits (D1) which cover the lacustrine sediments indicated cal AD 1057-1075, 1153-1225 and 1231-1245 (L1), cal AD 1034-1164 (L2), and cal AD 1438-1514 and 1598-1618 (D1), respectively. These ages show that a dammed lake had been present around AD 1055-1160 (as the late Heian period in Japanese history). This paleolake would have been formed by channel blocking associated with an ancient large landslide of SMZ. Later, a debris flow event occurred. Although a trigger of the large landslide of SMZ is uncertain at present, the AD1096 mega-earthquake generated from the Suruga-Nankai troughs is possible.

Keywords: Large-scale bedrock landslide, Landslide dam, Plant macro fossils, 14C age, Eicho earthquake