

## The sedimentary process and distribution of tsunami deposits in coastal lakes: a flume experiment

YAMAGUCHI, Naofumi<sup>1\*</sup> ; SEKIGUCHI, Tomohiro<sup>2</sup>

<sup>1</sup>Center for Water Environment Studies, Ibaraki University, <sup>2</sup>Center for Research in Isotopes and Environmental Dynamics, University of Tsukuba

A series of flume experiments were performed to examine the sedimentary process and distribution of tsunami deposits in coastal lakes. In the experimental program, a fixed slope of 1/20 and terrestrial area including a pool as a coastal lake were installed, and tsunami-like solitary wave was generated. The tsunami flow transported sediments from a sand bed placed on the slope, and deposited them on the terrestrial area. When the tsunami flow irrupted into the pool, hydraulic jump was occurred. In the area where the hydraulic jump made turbulence, little sediment deposited. Thus, the distribution of the tsunami deposits in the pool did not always show the thinning-landward trend in the present experimental series. The dependence of the amount of sediments on magnitude of tsunami waves was more pronounced in the pool than the land area.

Keywords: tsunami deposit, flume experiment, coastal lake