

# Identification method of event deposits caused by natural hazards

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Geological survey of event deposits can be a powerful technique for unveiling the history of natural hazards. For example, many unrecorded tsunamis have been investigated by utilizing tsunami deposits. Although the identification criteria for tsunami deposits have been developed, the criteria for other hazards such as high tide, storm, and flood were not fully discussed. The identification method of event deposits for multiple hazards is needed for disaster planning.

We present the identification method of event deposits which can take account of uncertainties of geological information and scale of natural hazards. First, we classified the natural hazards which can make event deposits on land based on their scales and characteristics. Then, we organized sedimentary, geochemical, paleontological survey items by information that we can retrieve from event deposits. We evaluated uncertainties of geological information by assuming the probability distributions for each information. The probabilities of event deposits being made by each natural hazard were presented with the uncertainties. In the presentation, we will show some examples of this identification method and discuss its effectiveness compared with the existing identification methods.

Keywords: Natural hazard, Tsunami deposit, uncertainty