# The Characteristic features of the 2004 tsunami deposits in Thailand

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ABSTRACT

Tsunami causes localized erosion and transport large amounts of sediment in coastal areas. Sediment deposited by tsunamis provides a geologic record of event. By analyzing these sediments, geologists can recognize ancient tsunami events and can contribute to understanding the risk of coastal disaster. Thus, tsunami deposits provide useful information for estimating recurrent intervals and inundation limit.

However, discrimination of tsunami deposits from deposits produced by other processes such as tropical storm surges can be difficult. The difficulty arises, in part, from insufficient observations of modern tsunami deposits and their post depositional processes in the tropical areas. Published information is inadequate to define diagnostic features of tsunami deposits, although key contributions have been made during the last decade.

A magnitude-9.0 earthquake northwest of Sumatra on the morning of December 26, 2004, generated a large tsunami that struck coasts around the Indian Ocean, claiming more than 200.000 lives. We survey the deposits of this tsunami in the Andaman sea, southern Thailand in March 2005 and October 2005. This paper describes 2004 tsunami deposits along the coastal areas of the Andaman sea of Thailand. Specifically, it documents distributions in thickness and grain size landward from the shore, and provides examples of characteristic sedimentary structure such as multiple graded bedding and truncated flame structures. Our objective is to add more information that can be used to infer ancient tsunamis and recurrent intervals from their deposits.

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