

Identifikasi endapan paleotsunami pada Daerah Sukatani, Kabupaten Sukabumi, Provinsi Jawa Barat = Identification of paleotsunami deposits in the Sukatani area, Sukabumi Regency, West Java Province

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Abstrak

Daerah Sukatani berada di Selatan Jawa memiliki potensi terjadi bencana tsunami yang diakibatkan oleh gempa bumi besar dari proses pergerakan di zona subduksi. Catatan sejarah kejadian tsunami di Selatan Jawa masih terbatas, sehingga perlu dilakukan penelitian identifikasi endapan paleotsunami. Daerah Sukatani dipilih sebagai lokasi penelitian karena belum ada penelitian mengenai paleotsunami di daerah ini. Penelitian ini dilakukan untuk mengetahui sejarah kejadian paleotsunami di daerah Sukatani yang masih sangat terbatas. Pengambilan sampel kode KRB 03 sepanjang 193 cm dilakukan di Pantai Karang Bolong, Kecamatan Surade, Kabupaten Sukabumi. Untuk mengetahui lapisan endapan paleotsunami dilakukan beberapa analisis laboratorium seperti analisis ukuran butir (granulometri), loss on Ignition (LOI), geokimia unsur jejak, dan analisis foraminifera. Dari analisis yang telah dilakukan didapatkan satu lapisan endapan paleotsunami di kedalaman 164 hingga 186 cm. Hasil analisis ukuran butir diketahui lapisan endapan paleotsunami memiliki rata-rata ukuran butir antara kerikil halus hingga pasir halus, sortasi sedang hingga sangat buruk, kurtosis tipe very platykurtic hingga very leptokurtic, dan skewness tipe very fine skewed hingga very coarse skewed. Hasil analisis Loss on Ignition (LoI) diketahui lapisan endapan paleotsunami memiliki kandungan material organik yang rendah dan material karbonat yang lebih tinggi. Hasil analisis geokimia unsur jejak diketahui lapisan endapan paleotsunami memiliki kandungan unsur Ca dan Sr yang lebih tinggi. Hasil analisis foraminifera didapatkan foraminifera bentonik dengan lingkungan neritik tengah yang diperkirakan sebagai sumber endapan paleotsunami.

..... The Sukatani area in southern Java has the potential for a tsunami disaster caused by a large earthquake from the movement process in the subduction zone. The historical record of tsunami events in southern Java is still limited, so it is necessary to conduct research on the identification of paleotsunami deposit. The Sukatani area was chosen as the research location because there was no research on paleotsunami in this area. This research was conducted to determine the history of ancient tsunami events in the Sukatani area which is still very limited. Sampling code KRB 03 along 193 cm was carried out at Karang Bolong Beach, Surade District, Sukabumi Regency. To determine the paleotsunami sediment layer, several laboratory analyzes were carried out such as grain size analysis (granulometry), loss on Ignition (LOI), trace element geochemistry and foraminifera analysis. From the analysis that has been carried out, it is found that one paleotsunami deposit layer is at a depth of 164 to 186 cm. The results of grain size analysis show that the paleotsunami sediment layer has an average grain size of fine gravel to fine sand, moderate to very poor sorting, very platykurtic to very leptokurtic types of kurtosis, and very fine skewed to very coarse skewed types of skewness. The results of the loss on Ignition (LOI) analysis show that the paleotsunami sediment layer has a low content of organic material and higher carbonate material. The results of trace element geochemistry analysis show that the paleotsunami sediment layer has higher levels of Ca and Sr. The results of foraminifera analysis obtained bentonic foraminifera with middle neritic environments which are thought to be the source of paleotsunami deposits.