

## **Tsunami Deposit Studied Between Pulicat and Mamallapuram along the East Coast of Tami Nadu**

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The 26<sup>th</sup> December 2004 tsunami deposited sediments along the East Coast. To salvage the December 2004 tsunami deposit and to decipher the paleotsunami record for the probably preserved sediments along the coast sedimentology and mineralogical analyses were studied. Trenches and pits were dug in the field to a depth of nearly one meter to identify the tsunami deposits. The tsunami deposits found at Mamallapuram indicate a reverse in grain size deposition ie fine sediments overlain by coarse grain size subsequently followed by grading in the settling of grain size particles. This is due to the tsunami flood deposit removing coarser components off the beach and the inland shore material, spreading the sediments and also washing in the the detritus during the outflow and recession of the tsunami waters. This process also brings infiltration of the flood waters through the porous sandy interduanl slope causing easy and faster settling of the coarser material over the washed coarser sandy sediments thus forming a coouplet of coarser sediemtns overlain by coarse grains. There is a sharp demarcation between the two coarser components and this is recognised by colour of the overlieing buff coloured sandy grains with high components of dark heavy minerals. The 2004 tsunami deposits are thicker and extensive in the hard-hit southern half of the study area, than in the drier northern portion, wherein some very thin tsunami sand layers behind the coastal dunes remained unaltered since the post- tsunami surveys. It is very difficult to recognize and differentiate paleotsunami sediment record form the storm surges.