

Imprints of Asian Mega Tsunami 2004 along Tamil Nadu – Pondicherry coast, India and its significance

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Abstract

The Asian Mega tsunami (2004), which swallowed the lives of around hundred thousand people and their properties in several territorial nations of South Asia, has also posed a major challenge to the geo scientific community . Because, they have all along been owning the opinion that this region is not prone to disastrous tsunamis like Peru or other major tsunami prone provinces of the world , though significant number of tsunamis occurred between 1797 and 2000 AD including Makran ,1945 . Though many countries have established the tsunami warning systems, and India after the Asian Mega Tsunami (2004),these are capable of giving information only on the the probable coasts to be hit by the Tsunami and not the exact areas that would be inundated, which is the need of the hour . Hence the present study was carried out in parts of Tamilnadu and Pondicherry coasts covering the southern part of the east coast of India. The study involved the reconstruction of the paths of tsunami surge in the coastal land, from the pattern , type and intensity of damages caused by the tsunami(2004); and therefrom bringing out the input of coastal systems over the tsunami movement on to the land , so that these can be incorporated in the Tsunami warning systems for the efficient fore warning ,including the areas prone for inundation . The study revealed that the paths of tsunami surge on the coastal land were dominantly controlled by the coastal zone geometry or the geological structures and the tectonic activities that provided such geometry, the vegetal cover and also the anthropogenic activities in the form of buildings and the pattern of their arrangement.

Keywords: Asian Mega Tsunami (2004) ,pattern of destruction , path retrieval, tectonic control, Indian Coast.