Impact on Nagapattinam Due to Tsunamigenic Earthquake from Car Nicobar Region.

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The CarNicobar earthquake of 31st Dec 1881 of magnitude M_w 7.9 was a tsunamigenis earthquake, which was caused destruction along the west coast of India. This submarine earthquake beneath the Andaman Island generated a tsunami with a maximum crest height of 0.8m, which was recorded by eight tide gauges surrounding the Bay of Bengal. In this study we mainly concentrated on Nagapattinam region which is on East coast of India One of the critical factors that led to massive devastation in the area of Nagapattinam in 2004 tsunami was the bathymetry and topography of the area. The presence of features such as narrow beach, steep gradient of the continental shelf, the absence of sand dunes coupled with near flat-shoreline resulted in enhanced amplitudes of the tsunami. Keeping this in mind we have modeled several possible tsunamigenic earthquakes from the CarNicobar region and quantified the tsunami wave propagation, run- up height and inundation extend along the Nagapattinam region of India .