

## THE 26 DECEMBER TSUNAMI AND THE DISASTER MANAGEMENT : PLATE TECTONIC IMPLICATIONS

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*The 26 December 2004 tsunami, triggered by a megathrust earthquake ( $M = 9.2$ ) off the west coast of northern Sumatra, was among the deadliest natural disaster in the modern times. As advanced by the Plate Tectonics theory the India-Australia plate, while subducting below the Burma plate, broke apart into two separate plates : India plate and Australia plate, leading to further compression at the plate boundary. The rapid increase of stresses resulting from the relative motion of the two plates is the cause of the fracture in the India plate and the megathrust earthquake. The sudden vertical displacement of ocean floor forced an enormous mass of water to rush oceanward to generate the tsunami. Its radiation, propagation and inundation at coasts are controlled by a number of factors; chiefly these are the tsunami source region, configuration of coasts and depth of water. The coasts rimming the Indian Ocean are a positive tsunami risk zone. It is no surprise that tsunami will grow, but would have a less damage, had there been a disaster preparation activity. The early warning system cannot prevent tsunamis, nor it may always be useful for disaster management. For the limited capabilities of the present technology and an incomplete knowledge of the earth processes in complex tectonic setup like Andaman-Sumatra region, educational campaigning of how to recognize natural hazard signs and to respond may still be highly meaningful.*

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