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The Underrated Tsunami in Indian Ocean – possible future hazards.

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It is now well known to the world that a 'tsunami' can be dangerous, destructive and cause extensive damage. Natural hazards are often underestimated. A major earthquake event and a disastrous tsunami struck on December 26, 2004 in the Indian Ocean which led to the death of nearly 250,000 people within a short period of time with a belated recognition that great loss could have been avoided.
In the present study, the past major events in the Indian Ocean are analyzed with a view to explore the possibility of future tsunami hazardous regions. It is observed that although, the tsunami events are more near the Japanese islands and other circum-pacific regions, it is not uncommon in Indian Ocean, although its frequency of occurrence is low. Well known Sunda trench near Indonesia, Andaman and Nicobar islands and its associated seismic activity shows that the region is a seismic hazardous zone. The presence of various ridges such as 90 east ridge, 85 east ridge in the Bay of Bengal and Lakshadweep ridge and Laxmi ridge in the Arabian sea - believed to be formed due to movement of Indian plate over Reunion, Marion, Crozet and Kerguelen hot plumes - indicates plume interaction of the Continental and Oceanic Lithosphere. These ridges with its steep bathymetric variation in Indian Ocean and its related seismic activity show that the region cannot be underestimated from the future tsunami hazard.

Keywords: Tsunami, natural hazard, Indian Ocean, plume interaction