Identification of Earthquake Precursors and Geneses of Earthquake Prediction Algorithms: Success and Failure

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In order to address the issue of understanding earthquake generating mechanism, there is a need to evolve a comprehensive earthquake generating model based on rigorous assessment of multi- seismo-geo-scientific parameters, which are responsible for triggering earthquake at a place in a given time of occurrence through integrated geo-seismological studies, which in turn helps us to identify suitable set of earthquake precursors that may be extended to develop an earthquake warning system at a place to predict genesis of earthquakes, which may be scientifically viable for the benefit of the society. The proposed study will take care of identifying all the plausible precursors, including detection of complex precursors. Arrangements of these precursors in a review based model across space and time for the seismogenic potential zones can shed important light on how the earthquake prediction algorithms evolved in stages by considering various sets of earthquake precursors.

Keywords: Earthquake Precursors; Seismogenesis; Seismo-geoscientific parameters; Seismogenic potential; Earthquake warning system