

SEISMICITY AND TECTONIC: PREVENTION FACTORS

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This research attempts to find a Seismic Prevention Model for movements of tectonic origin occurring in to the peruvian area. It also attempts to determine occurrence of periodicity utilizing as a base an established structural pattern with information dated from 1800 to 1998. Seven faults were selected from the tectonic map of Peru: Huancabamba, Oriente, Incapuquio, Cuzco-Abancay, La Costa, X and Huaytapallana, all obeying a geological and structural criteria. From the analysis of the dispersion diagram it is deducted that the variable of intensity and depth are independent, the intensities are constant at variable depths. Along the faults above mentioned the seismic activity of upper intensity (more than grade 8) occurred at lower depths (between 0 – 50 m.) However in the fault X area the seismic intensities greater than grade 8 occurred at depths more than 70 km. Histograms and boxes diagrams, shows that in the La Costa and Incapuquio faults the earthquakes of major occurrences get up to grade 4. In the Huaytapallana, Huancabamba, X, Oriente and Cuzco-Abancay, they reach an intensity of grade 6. This group can be considered to have a high risk of disasters. The occurrence of earthquakes at major depths are directly linked to the X sector. There exists seismic evidences at lower depths (16 km.) along the Huancabamba fault compared to other sectors were the average depth is between 19 to 37 km. We are trying to apply a time series with a robust variable to find out the relationship between this variable and time.