ABSTRACT

Of the many hazards any urban city faces, earthquakes are the most unpredictable and disastrous. Earthquakes are created when a tectonic plate moves, or slips or strikes another tectonic plate. The higher the intensity, the deadlier the earthquake. In the city of Karachi, there have been many past earthquakes. Of the many earthquakes this metropolis has persevered, is the 8.0 magnitude earthquake in 1945. If we compare the damage done by the earthquake in 1945 or let's say the recent earthquake of 7.6 in 2001 (Gujarat), due to the adaptation of seismic provisions from all the previous earthquakes, has reduced the damage in recent years. This does not eliminate the threat, but it does allow us to introduce new seismic provisions based on recent changes in tectonic motions. Thus, in our study, we will assess the seismic provisions of Karachi based on its nearby faults using the Deterministic Seismic Hazard Assessment (DSHA), and compare the seismic provisions provided and required. We will calculate the maximum Peak Ground Acceleration (PGA) of Karachi, and suggest new seismic provisions based on that particular value.