Seismotectonics of the seven recent felt earthquakes, between 25.13°N - 20.15°N latitude in the Indo-Myanmar Subduction zone from August 2009 to March 2010 with magnitude ranging from 4.9 to 5.9 mb are examined here. The recent seismicity and fault plane solutions of these felt earthquakes suggest that all the events occurred along the known Chindwin River, a major tributary of Irrawaddy River. The part of Chindwin River taken for the study can be geologically mapped as curvilinear structure in the Central Mollase Basin. All the mechanism of the faults are analysed as Thrust mechanism with a small component of Strike-slip mechanism. The compressive P-axis azimuth ranges from NNW-NNE suggesting the northward movement of Indian Plate. Frequent felt earthquakes originating from the Central Mollase Basin need close and continuous monitoring for future large events.