SCOPE OF FUTURE WORKS

The thesis aims to understand the seismic behavior associated with the subsurface geomorphologic features. After addressing the issues like identification of different active faults based on recent and past seismic/aftershock activities, characterization of source processes using fault plane mechanisms, crustal configuration using strong earthquake database, assessment of attenuation parameters, analyzing the deterministic as well as probabilistic hazard of earthquakes in the present thesis for the central India, we now may recommend that the following preliminary works should be taken up in near future.

1. Close monitoring of local earthquakes for its precise locations using broadband seismic network stations.
2. Installation of permanent GPS stations to assess the co-seismic deformation along the CITZ.
3. Understanding the brittle and ductile deformations through stress-strain related studies.
4. Seismic tomography study to delineate velocity-dependent structures as well as estimation of Vp/Vs ratio to isolate the regions of fluid localization at different depth-levels.
5. Study of Receiver Function (RF) to identify the depth of phase reversal vis-à-vis the subsurface discontinuities below the seismic stations using teleseismic events.
6. Seismic microzonation studies for cities located near SONATA zones on priority basis.
7. Seismotectonics of the area should be studied in more detail based on past and ongoing seismicity and other geophysical/geological parameters.
8. As this area falls in the stable continental area, the generation of synthetic earthquakes through block dynamic modeling may be important to complete the earthquake catalogue, thereby, can estimate the largest expected earthquake in the region.
9. A separate PGA/MMI map can be generated at bedrock level for the study area.