

---

# Seismic activity around the capital city of Mongolia

Munkhsaikhan Adiya\*<sup>1</sup>, Ulziibat Munkhuu<sup>1</sup>, Dagzinma Lkhagva<sup>1</sup>, Tuguldur Ganbold<sup>1</sup>,  
and Lkhagvadorj Dalaijargal<sup>1</sup>

<sup>1</sup>Department of Seismology of the IAG – Mongolia

## Abstract

The seismic activity observed in the vicinity of Ulaanbaatar is relatively low compared to the activity observed in western Mongolia. Nevertheless, we observed a high seismic activity in the north of the Emeelt town, about 14 km to the WSW from the urban area of Ulaanbaatar city. Since the beginning of this high seismic activity in middle of 2005, more than 2000 earthquakes with magnitude up to 4.2 have been observed by our network through this area.

Based on the distribution of these earthquakes and the evidence of surface ruptures discovered after field investigations in this area, the question raised of the relation between this seismicity and the fault and the maximum magnitude that occurred in the past on it. We have done several geophysical and paleoseismic studies around Ulaanbaatar and its surrounding areas. Those areas, which could be one of most seismic active zone around Ulaanbaatar, dramatically increases the seismic hazard of the capital of Mongolia where is concentrated about of 1/3 of the Mongolia population and the majority of industries of the country.

In addition to the complexity of the tectonics context, the lack of large magnitude earthquake in this area conjugated with the recent triggered high seismic, which has been well monitored by local digital seismic network, makes the study of this earthquake activity fundamental for the estimation of Ulaanbaatar seismic hazard. In this presentation, we will discuss results of geological survey and analyze this seismic activity, such as the time evolution of the earthquake swarms.

---

\*Speaker