We focus on the main active seismic zones in the area of Ulaanbaatar which can have the main impact on the seismic risk of the Capital of Mongolia. A seismic activity is taking place near and within Ulaanbaatar area since 2005. The seismicity observed by local permanent network has reveals the significant increase of seismic activity in the Ulaanbaatar area. Twice more earthquakes were recorded during the last 6 years than between 1970 and 2004 in the considering area. This seismic activity, related to previously unknown active fault, impacts the seismic hazard assessment of the capital of Mongolia where 1/3 of the Mongolian population lives and the majority of industries of the country is concentrated. Moreover, these swarms consist of more than 1600 events within magnitude range of 0.5 to 4.2. Most of these events are located close to the 2 major active structures that are NS-Emeelt and EW-Hustai striking faults. Despite the relatively low magnitude events and lack of large magnitude earthquakes occurred in the area with combination of the clear active fault morphology of the Hustai and Emeelt structures shows that the recently triggered seismic swarms are fundamental factor for the estimation of Ulaanbaatar seismic hazard. This presentation discusses some preliminary results of the analysis of this high seismic activity recorded by permanent and dedicated mobile networks (tomography method). The spatial and time evolution or their relation with the regional seismo-tectonic context as well as its impact on the seismic hazard assessment of Ulaanbaatar has been evaluated.