

# Activities of the National Seismological Center, Department Of Mines and Geology in Nepal before and after the 2015 Gorkha Earthquake

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The National Seismological Center (NSC) under the Department of Mines and Geology (DMG), Nepal had established in collaboration with Laboratory de Geophysique (LDG) in France since 1978. It is the unique government organization in Nepal responsible to monitor seismic activities and conduct earthquake related research activities with different national and international research institutions. A dedicated network of 21 short period velocimetric stations is responsible for issuing the seismic alert as soon as an earthquake of local magnitude ( $M_L$ ) greater than or equal to 4.0 occurred in Nepalese territory. The 2015 April, Gorkha, earthquake ( $M_L = 7.6$ ) is the largest magnitude event which was well recorded by all the stations of this network. Till date NSC has reported 485 aftershocks of Gorkha earthquake having magnitude greater than or equal to 4.0 and documented the data base of about 30,000 of aftershocks having varying magnitude below this threshold reaching to its detection capability as low as magnitude 2.0.

After the Gorkha earthquake DMG collaborated with different international research institutions to deploy the number of temporary seismic stations to study, for example, the decay pattern of the aftershocks, strong ground motion, Paleoseismological trenching, microtremor exploration etc. for better understanding of this devastating event and also to assess the potential of the next big one.

In the presentation, we will explain some of the results obtained so far after the 2015 Gorkha earthquake and the progress of current national and international projects.

Keywords: Gorkha earthquake, Aftershocks, Temporary observation