

Government of India  
Ministry of Earth Sciences

PRESS RELEASE

**BGRL-MoES drills a 3000 m deep Pilot borehole near Koyna, Maharashtra**

The scientific drilling and associated investigations are being carried out by the Borehole Geophysics Research Laboratory (BGRL), Ministry of Earth Sciences, New Delhi, to comprehend the genesis of artificial waterreservoir triggered earthquakes in the Koyna intra-plate seismic zone.

A 3 km-deep scientific research borehole has been drilled successfully in this zone. The pilot phase drilling has been carried out as a key component of the major programme “Scientific Deep Drilling in the Koyna Intraplate Seismic Zone, Maharashtra” of the Ministry of Earth Sciences (MoES). Passing through 1247 m of Deccan basalt and 1753 m of granitic basement rock, it is the deepest borehole drilled in hard crystalline rock formation anywhere in the country. The drilling was carried out indigenously utilizing the expertise and resources available within the country. A suite of downhole geophysical measurements, including the deepest in-situ stress tests in the country, have been conducted. The borehole has been cased and cemented up to the bottom to facilitate installation of borehole sensors for further scientific studies.

Field studies carried out in the pilot borehole as well as laboratory measurements on the samples collected from depth will provide critical information for the design of a unique, deep borehole observatory proposed to be set up at a depth of ~5 km in the region. Continuous observations in the near-field before, during and after occurrence of earthquakes will generate unprecedented new information to comprehend the genesis of earthquakes in an intra-plate environment and may contribute to the development of predictive models. The work is being carried out by the Borehole Geophysics Research Laboratory (BGRL) of MoES.



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