

## **Duties and Responsibilities of the INGV-Centre for Monitoring Underground Anthropic Activities**

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In 2014, the Italian Ministry of Economic Development published monitoring guidelines (ILG) describing in detail the governmental regulations for geophysical monitoring in areas interested by exploitation of underground potentials. The ILG prescribe the monitoring of microseismicity, ground deformation and pore pressure near the industrial activities, and direct the application of a four-stage traffic light protocol, depending on the magnitude, peak ground velocity and peak ground acceleration. In case the prescribed threshold values are exceeded, different alert levels have been scheduled, up to the limit of reduction or interruption of industrial operations. In a three-years test phase, the ILG will now be applied in a few areas involved in different exploitation activities, such as gas storage, hydrocarbon extraction and waste water reinjection, geothermal energy production. The Istituto Nazionale di Geofisica e Vulcanologia (INGV) has recently been charged to validate the implementation of multi-parametric monitoring systems and analyse monitoring data in at least three of the aforementioned test areas and to provide indications about the applicability of these guidelines. INGV instituted specifically a Centre for monitoring underground anthropic activities, entrusted with the duties and responsibilities to implement the ILG at the test sites. The presentation gives a general overview about the state of the art, trying to emphasize critical situations as e.g. the problems in the magnitude calculation or the significance of the traffic light thresholds, especially in areas with multiple mining rights.