



## **Geophysical observations at natural and exploited hydrothermal systems in West Java, Indonesia**

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We assess geothermal resources from our understanding of the structure and the dynamics of geothermal reservoirs and hydrothermal systems in the south of Bandung. The co-existence of a large variety of intense surface manifestations like geysers, hot-steaming grounds, hot water pools, and active volcanoes suggest an intimate coupling between volcanic, tectonic and hydrothermal processes in this area. We deployed a multidisciplinary geophysical network around geothermal areas in the south of Bandung, West Java, Indonesia. We deployed a network of 30 broadband and 4 short-period (1 Hz) seismic stations with Guralp and Trillium sensors (0.008 - 100 Hz) from October 2012 until December 2013. We extended the network in June 2013 with 16 short-period seismometers. Finally, we deployed a geodetic network including a continuously recording gravity meter, a GPS station, clinometers. We describe the set-up of the seismic and geodetic networks and we discuss first observations and results. As a first estimation of this excellent data set, we performed preliminary location of earthquakes using a non-linear algorithm, which allows us to define at least 3 seismic clusters. We use this first estimate to perform joint inversion tomography of hypocenters and velocity model. We discuss the found seismic pattern within the area.