Japan Geoscience Union Meeting 2010
(May 23-28 2010 at Makuhari, Chiba, Japan)
©2009. Japan Geoscience Union. All Rights Reserved.

SEM031-P11 Room: Convention Hall Time: May 26 17:15-18:45

Elecrtrical Resistivity Tomography at landslide site in Pelabuhan Ratu, Indonesia

Shuhei Yabe[1*], Shota Saito[1], Febty Febriani[1], Hitomi Kono[1], Katsumi Hattori[1], E. Gaffer[2], Y. Sudrajat[2], P. Harijadi[3], Sunarjo[3], M. Husni[3], H.Grandis[4]

[1]Chiba University, [2]LIPI, INdonesia, [3]BMKG, Indonesia, [4]ITB, Indonesia

Recently, rainfall-induced landslides occur frequently. In order to mitigate disasters, early warning of landslides is important.
In this study, self-potential approach has been attempted to develop an early warning system for landslide by our group. The laboratory experiments of landslide under the artificial precipitation control and using a sandbox have been performed. Results from them show the capability to monitor the subsurface water condition using the self-potential method.
However, laboratory experiments have limitations, because laboratory experiments are two dimensional scale and use a homogeneous soil layer. Therefore, it is necessary to verify the obtain results by the field (in-situ) experiment. At the present, landslide site in Pelabuhan Ratu, west side Java, Indonesia is proposed for one of the candidates for self-potential observation. In this paper, in order to assess the adequacy of the place as the field site, electrical resistivity tomography has been performed to estimate the subsurface structure, identify saturation zone, and sliding surface. The results of electrical resistivity tomography show Pelabuhan Ratu is good for the in-situ experiment site.
The details will be presented in my presentation.