

International Conference on

Geosciences and Geophysics

October 06-07, 2016 Orlando, USA

Analysis of changes in soil physical properties as an indicator of pollution in North Jakarta

Fatah Ramdhan, Teguh Fitrah Mahmuda, Twin Aji Kusumagiani and Eleonora Agustine
Padjadjaran University, Indonesia

This research was done in North Jakarta to analyze changes in soil physical properties as indicators of environmental pollution using geophysical methods based on electricity and combined by chemical analysis. 20 samples of soil were taken from two different sites. The first site is along Jalan Yos Sudarso, and the second site is along the banks of Kali Sunter. The length of each site is 1 kilometer, with spacing point of sample as far as 100 meters. Each sample was tested in laboratory to observe the value of total dissolved solid (TDS), electrical conductivity (EC) and pH, by assumed normal condition weather. The results of laboratory tests showed an average value of TDS to be 118.2 ppm, EC amounted to 236.4 $\mu\text{S}/\text{cm}$ and pH was shown to be alkaline, which means that the area has been a polluted environment. Increasing TDS value was followed by increasing EC value and the graph showed a linear relationship between both of them. Environmental pollution was predicted to be caused by the contributions of vehicle exhaust fumes and industrial pollution. Pollution pattern tended to increase towards the north approaching traffic line, harbor and industry.

Biography

Fatah Ramdhan is the student of Padjadjaran University in Geophysics Department. He is in his last semester in Geophysics Department, Universitas Padjadjaran and is going to get his Bachelor of Science in Geophysics. He will get his thesis on Mining. He is active in geophysics organizations such as Society of Exploration Geophysicist (SEG), Himpunan Mahasiswa Geofisika Indonesia (HMGI), HMGF Pedra and Universitas Padjadjaran. He was researching about landslide victims who were heaped by landslide, using resistivity analysis. In another research, he was researching about model of arsenic distribution pattern in Garut, West Java.

fatah.ramdhan@gmail.com

Notes: