Identifikasi Potensi Tanah Longsor Menggunakan Metode Geolistrik Konfigurasi Dipol-Dipol di Dry Dam Ciawi, Kecamatan Megamendung, Kabupaten Bogor, Jawa Barat = Identification of Landslide Potential Using the Dipole-Dipole Configuration Geoelectrical Method at the Ciawi Dry Dam, Megamendung District, Bogor Regency, West Java

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Abstrak

Tanah longsor merupakan dikategorikan menjadi bencana hidrometeorologi paling mematikan yang dapat mengakibatkan korban luka-luka, meninggal dunia, dan kerusakan rumah serta infrastruktur. Faktor penyebab longsor dapat dipengaruhi oleh kemiringan lereng, saturasi air, permeabilitas dan porositas. Parameter ini dianalisis untuk mengidentifikasi sebaran bidang gelincir dan potensi longsor menggunakan metode geolistrik. Peneliatian ini dilakukan di sekitar Dry Dam Ciawi dengan total tiga lintasan geolistrik. Pengukuran menggunakan konfigurasi Dipole-Dipole dan didapatkan hasil sebaran nilai resistivitas yaitu 3 – 23 m pada kedalaman 0 – 5 meter yang diduga sebagai endapan kolluvial atau tuff lapilli terlapukkan sempuran, resistvitas 23 – 43 m pada kedalaman 10 – 40 meter diduga sebagai tuff lapili, dan resistivitas > 60 m diduga sebagai breksi tuff. Pada hasil penampang ketiga lintasan terlihat adanya dugaan bidang gelincir atntara breksi tuff dengan endapan alluvial atau tuff lapilli terlapukkan sempurna. Berdasarkan analisis kemiringan lereng, lokasi penelitian berada pada lereng yang curam dengan kemiringan 25 – 45 derajat dan tidak stabil. Adapun litologi yang diduga akan tergelincir yaitu endapan kolluvial atau endapa tuff lapilli terlapukkan sempurna. Sehingga, melalui penelitian ini area penelitian memiliki potensi terjadi tanah longsor

.....Landslides are categorized as the deadliest hydro-meteorological disaster which can result in injuries, deaths, and damage to houses and infrastructure. Factors causing landslides can be influenced by slope, water saturation, permeability, and porosity. This parameter is analyzed to identify the distribution of slip planes and the potential for landslides using the geoelectric method. This research was carried out around the Ciawi Dry Dam with a total of three geoelectric trajectories. Measurements used the Dipole-Dipole configuration and the results obtained were the distribution of resistivity values, namely 3 – 23 m at a depth of 0 – 5 meters which is suspected to be a colluvial deposit or perfectly weathered lapilli tuff, resistivity of 23 – 43 m at a depth of 10 – 40 meters is suspected to be a lapilli tuff. and resistivity > 60 m is suspected as tuff breccia. In the results of the third section of the track, there is an alleged slip plane between breccia tuff and alluvial deposits or perfectly weathered lapilli tuff. Based on the slope analysis, the research location is on a steep slope with a slope of 25-45 degrees and is unstable. The lithology suspected of slipping is colluvial deposits or perfectly weathered lapilli tuff deposits. So, through this research the research area has the potential for landslides to occur.