

**GEOLOGI DAN STUDI GERAKAN MASSA TANAH
SERTA ZONASI POTENSI LONGSOR DAERAH TEGALREJO,
KECAMATAN GEDANGSARI, KABUPATEN GUNUNGKIDUL,
DAERAH ISTIMEWA YOGYAKARTA**

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ABSTRAK

Bencana geologi memiliki pengaruh yang besar dalam pengembangan dan pembangunan suatu wilayah. Desa Tegalrejo Desember 2017 mengalami bencana gerakan massa tanah, yang mengakibatkan rusaknya permukiman warga, persawahan dan ladang, hingga akses jalan. Kerugian yang dialami tak hanya materiil, namun psikologis warga juga terganggu karena khawatir akan terjadi bencana susulan. Oleh karena itu perlu dilakukan kajian geologi dan analisis gerakan massa tanah, serta pemetaan sebaran potensi gerakan massa di daerah penelitian.

Kajian geologi mencakup geomorfologi, stratigrafi dan struktur geologi. Stratigrafi daerah penelitian terdiri dari Satuan Batupasir Kebo-butak (Oligosen Akhir), Satuan Batulapili Semilir (Miosen Awal), Satuan Tuff Semilir (Miosen Awal), Satuan Breksi Nglanggeran (Miosen Awal), dan Endapan Vulkanik Merapi Muda. Struktur kekar pada daerah penelitian memiliki arah tegasan utama Sigma 1 N015°E dan N231°E. Struktur sesar yang berkembang di daerah penelitian adalah sesar mendatar kiri dan sesar turun. Berdasarkan hasil analisis kestabilan lereng tanah terdapat 6 lereng labil dan berpotensi longsor.

Berdasarkan analisis dengan metode skoring didapatkan 21,1 % berpotensi longsor tinggi, 71,9 % berpotensi sedang dan 7 % berpotensi rendah. Arah penanganan daerah penelitian dengan mengurangi gaya penggerak, mengendalikan air permukaan, mengurangi beban pada lereng, dan pembuatan dinding penahan lereng. Namun rekomendasi tersebut tidak serta merta berjalan optimal tanpa pemberdayaan masyarakat sekitar.

Kata kunci: Gerakan massa tanah, zonasi potensi longsor, studi geologi

**GEOLOGY AND STUDY OF SOIL MASS MOVEMENTS AND ZONING
POTENTIAL FOR LANDSLIDES IN TEGALREJO,
KECAMATAN GEDANGSARI, KABUPATEN GUNUNGGKIDUL,
DAERAH ISTIMEWA YOGYAKARTA**

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ABSTRACT

Geological disasters have a great influence in the development of an area. Tegalrejo in December 2017 experienced a disastrous mass movement of soil, which resulted in damage to residents' settlements, rice fields, to access roads. The losses suffered were not only material, but also psychologically disturbed residents for fear of aftershocks. Therefore it is necessary to conduct geological studies and analysis of soil mass movements, as well as mapping the potential distribution of mass movements in the study area.

Geological studies include geomorphology, stratigraphy and geological structures. The stratigraphy of the study area consisted of the Kebo-butak Sandstone Unit (Late Oligocene), the Semilir Batulapili Unit (Early Miocene), the Semilir Tuff Unit (Early Miocene), the Nglanggeran Breccia Unit (Early Miocene), and the Merapi Volcanic Deposition. Fracture structures in the study area have the main direction of Sigma 1 N015°E and N231°E. The fault structure developed in the study area was left slip fault and normal slip fault. Based on the results of the analysis of the stability of the land slope with Janbu method there are 6 slopes unstable and potentially landslides.

Based on the analysis using scoring method, it was found that 21,1 % had high landslide potential, 71,9 % had medium potential and 7 % had low potential. Mitigation of the study area by reducing the driving force, controlling surface water, reducing the load on the slope, and making the slope retaining wall. However, these recommendations do not necessarily run optimally without empowering the surrounding community.

Keywords: Soil mass movement, zoning potential for landslide, geological studies