

ABSTAK

Secara administratif lokasi penelitian terletak di Desa Sidoharjo dan sekitarnya, Kecamatan Samigaluh Kabupaten Kulonprogo, Daerah Istimewa Yogyakarta. Secara astronomis terletak diantara $07^{\circ} 40' 30''$ LS – $07^{\circ} 42' 00''$ LS dan $110^{\circ} 10' 00''$ BT - $110^{\circ} 11' 30''$ BT, secara fisiografi daerah penelitian termasuk dalam pegunungan serayu selatan. Daerah penelitian secara morfologi merupakan daerah perbukitan dan berpotensi terjadinya gerakan massa. Penelitian ini bertujuan untuk memetakan daerah yang berpotensi terjadinya gerakan massa sebagai salah satu upaya untuk mengurangi korban jiwa dan melakukan mitigasi dengan menggunakan Sistem Informasi Geografis (SIG), *overlay* dengan metode *Frequency Ratio*. Bentuk lahan pada daerah penelitian terdiri dari Perbukitan Vulkanik Terdenudasi (V19), bentuklahan Dataran Fluvial Vulkanik (V8), bentuklahan perbukitan terkikis (D1), bentuklahan dataran nyaris (D5), dan bentuklahan Dataran Fluvial (F1). Kelerengan daerah penelitian 2° - 35° morfologi datar – curam, memiliki elevasi 100 – 650 mdpl, pola pengaliran yang terdapat pada daerah penelitian dendritic (D) dengan indeks kerapatan sungai sedang, hasil (HI) *hypsometric Integral* memiliki bentuklahan stadium dewasa morfologi relief sedang stadia sungai termasuk remaja, Stratigrafi daerah penelitian tersusun oleh satuan Breksi Andesit Kaligesing berumur Oligosen Akhir – Miosen Awal, satuan Lava Andesit Kaligesing berumur Oligosen Akhir – Miosen Awal, dan Endapan Aluvial terendapkan pada lingkungan darat. Hasil Analisa kestabilan lereng dengan *software* Geostudio 2022 dan Rocplan pada 5 lereng tanah dan 1 lereng batuan pada lokasi pengamatan berdasarkan klasifikasi (Ward, 1976) termasuk dalam kelas tinggi dan menengah. Berdasarkan hasil *overlay* parameter morfologi yang digunakan peta kelerengan, elevasi, *drainage density*, *hypsometric integral*, geologi, dan geomorfologi untuk penentuan zona kerentanan gerakan massa di daerah penelitian didapatkan tiga zona kerentanan yaitu zona kerentanan gerakan massa rendah, kerentanan gerakan massa sedang, dan zona kerentanan gerakan massa tinggi.

Kata Kunci : Samigaluh, Kontrol Morfologi, Gerakan Massa.

ABSTRACT

Administratively, the research location is located in Sidoharjo Village and its surroundings, Samigaluh District, Kulonprogo Regency, Special Region of Yogyakarta. Astronomically it is located between 07° 40' 30" LS - 07° 42' 00" SL and 110° 10' 00" E - 110° 11' 30" E, physiographically the study area is included in the South Serayu Mountains. The research area is morphologically a hilly area and has the potential for mass movement. This study aims to map areas that have the potential for mass movements as an effort to reduce casualties and carry out mitigation using the Geographic Information System (GIS), overlay with the Frequency Ratio method. Landforms in the study area consist of Denuded Volcanic Hills (V19), Volcanic Fluvial Plains (V8), eroded hills (D1), nearly plains (D5), and Fluvial Plains (F1). The slope of the study area is 2°-35° flat – steep morphology, has an elevation of 100 – 650 meters above sea level, the drainage pattern found in the study area is dendritic (D) with moderate river density index, hypsometric Integral results (HI) has mature stage landforms moderate relief morphology River stadia including juveniles. The stratigraphy of the study area is composed of Late Oligocene – Early Miocene Kaligesing Andesite Breccia units, Kaligesing Andesite Lava units of Late Oligocene – Early Miocene age, and Alluvial Deposits deposited in the terrestrial environment. The results of slope stability analysis using Geostudio 2022 and Rocplan software on 5 soil slopes and 1 rock slope at the observation location based on classification (Ward, 1976) are included in the high and medium class. Based on the results of overlaying morphological parameters using slope maps, elevation, drainage density, integral hypsometric, geology, and geomorphology to determine the vulnerability zones of mass movement in the study area, three vulnerability zones were obtained, namely low mass movement vulnerability zone, moderate mass movement vulnerability, and vulnerability zone high mass movement.

Keywords : Samigaluh, Morphological Control, Mass Movement.