

BAB V

KESIMPULAN

Dari hasil penelitian yang telah dilakukan, penulis menyimpulkan beberapa hal terkait pengaruh struktur geologi terhadap gerakan tanah di daerah Daena dan sekitarnya, yakni:

1. Struktur geologi meliputi oleh sesar geser mengiri, sesar geser menganan, dan sesar turun. Sistem tegasan termasuk dalam sistem ekstensional dengan nilai $\sigma_1 = 41^\circ\text{E}: \text{N } 239^\circ\text{E}$; $\sigma_2 = 49^\circ\text{E}: \text{N } 71^\circ\text{E}$, dan $\sigma_3 = 6^\circ\text{E}: \text{N } 334^\circ\text{E}$ yang berarah relatif Utara-Selatan.
2. Hasil pembobotan menggunakan Klasifikasi *Rock Mass Rating* (RMR) yang dilakukan pada 4 lereng batuan membagi kelas batuan pada lereng menjadi 2 kelas, yakni *Good Rock* dan *Fair Rock*. Kelas *Good Rock* meliputi lereng SC 1, SC 2, dan SC 3. Kelas *Fair Rock* meliputi lereng SC 4. Analisis Kinematika menunjukkan tipe gerakan tanah termasuk dalam tipe *toppling failure*, lebih khususnya terbagi menjadi *direct toppling* pada lereng SC 1 dan SC 2 dan *oblique toppling* pada lereng SC 3 dan SC 4.
3. Hasil penelitian menunjukkan bahwa potensi gerakan tanah di daerah penelitian dipengaruhi oleh struktur geologi (*structural-related landslide*). Rendahnya nilai RMR pada lereng disebabkan oleh spasi rekahan yang rapat dan kondisi rekahan yang buruk. Kondisi ini diperparah dengan keberadaan daerah Daena yang termasuk dalam zona sesar aktif Gorontalo. Adanya pergerakan sesar-sesar aktif di sekitar kawasan lereng dapat memicu terjadinya gerakan tanah dengan tipe *toppling failure*.

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