

### **Intisari**

Karakteristik sebagian besar perkebunan teh di Indonesia berada pada lahan miring pada daerah pegunungan dengan curah hujan yang tinggi. Tanah Andisol mempunyai potensi tinggi untuk perkebunan teh karena memiliki beberapa sifat tanah yang baik. Kondisi kelerengan yaitu posisi dan kelas lereng yang beragam pada perkebunan teh dikhawatirkan dapat berakibat terkikisnya lapisan permukaan tanah. Penelitian dilakukan bertujuan mengkaji bentanglahan melalui analisis lereng untuk pemetaan karakteristik fisik tanah, memetakan karakteristik fisik tanah melalui pendekatan satuan lereng serta mengkaji potensi erosi berdasarkan kondisi lahan dan karakteristik fisik tanah. Pengumpulan data yang dilakukan berupa kegiatan lapangan, pengujian laboratorium, dan analisis data. Sampel diambil dari dua puluh titik pengamatan. Pengambilan sampel dilakukan seluas daerah tangkapan air sungai Kalitengis dengan pembagian kelerengan berdasarkan posisi dan sudut lereng. Analisis data dilakukan secara deskriptif dengan standar deviasi untuk mengetahui keberagaman karakteristik fisik tanah dan potensi erosi terkait erosi aktual yang terjadi. Hasil penelitian menunjukkan bahwa pola keberagaman karakteristik fisik tanah beragam pada setiap satuan lereng. Memetakan karakteristik fisik tanah dengan pendekatan satuan lereng dimungkinkan untuk dilakukan. Potensi erosi tergolong tinggi, namun erosi aktual tergolong sangat rendah berdasarkan kondisi lahan dan karakteristik fisik tanah.

Kata kunci: karakteristik fisik tanah, posisi lereng, potensi erosi, sudut lereng

### *Abstract*

The characteristics of most of the tea plantations in Indonesia are located on sloping land in mountainous areas with high rainfall. Andisol soil has high potential for tea plantations because it has several good soil properties. It is feared that the slope conditions, namely the positions and different slope classes in tea plantations, could result in the surface layer erosion of the soil. The research was carried out to assess the landscape through slope analysis for mapping the physical characteristics of the soil, mapping the soil physical characteristics through the slope unit approach, and assessing the potential of erosion based on land conditions and soil physical characteristics. Data collection was carried out in the form of field activities, laboratory testing, and data analysis. The samples were taken from twenty observation points. Sampling was carried out in the Kalitengis river catchment area by dividing the slope based on the position and angle of the slope. Data analysis was carried out descriptively using standard deviation to determine the diversity of soil physical characteristics and the potential for erosion related to the actual erosion occurred. The results showed that the diversity pattern of soil physical characteristics varied at each slope unit. It is possible to map the physical characteristics of the soil using the slope unit approach. The potential of erosion is high, but the actual erosion is very low based on land conditions and soil physical characteristics.

**Key words:** soil physical characteristics, slope position, erosion potential, slope angle