

INTISARI

Tujuan dari penelitian ini adalah (1) mengidentifikasi lokasi longsor aktif dan tidak aktif di sub-DAS Bompon; (2) mengidentifikasi karakteristik fisiologis dan kerapatan vegetasi kelapa dan sengon pada lokasi longsor; (3) menganalisis beban massa vegetasi kelapa dan sengon serta stabilitas lereng pada kawasan bekas longsor; dan (4) menyusun rekomendasi pengelolaan vegetasi kelapa dan sengon di sub-DAS Bompon.

Garis besar metode terbagi menjadi 3 bagian utama yaitu interpretasi foto udara, pengukuran beban massa vegetasi kelapa dan sengon, serta analisis stabilitas lereng. Teknik interpretasi dilakukan dengan metode dijital *on screen* menggunakan kunci interpretasi citra/foto. Pengukuran beban massa vegetasi dilakukan menggunakan data alometrik, hasil pengukuran lapangan (jenis dan jumlah pohon, diameter batang, dan tinggi pohon), serta analisis stabilitas lereng menggunakan metode *infinite slope model*.

Luas longsor di sub DAS Bompon adalah 130.11 Ha, terdiri dari longsor aktif seluas 60.26 Ha dan longsor tidak aktif seluas 69.85 Ha. Pada lokasi longsor, vegetasi kelapa tersebar sebanyak 1682 pohon dan vegetasi sengon tersebar sebanyak 26355 pohon, dengan kerapatan vegetasi kelapa adalah 13 pohon/Ha serta vegetasi sengon ialah 282 pohon/Ha. Pengujian pengaruh beban massa terhadap longsor menunjukkan tidak ada keterkaitan antara beban massa dan kejadian longsor di sub DAS Bompon. Hasil penelitian menunjukkan bahwa lereng di sub DAS Bompon memiliki besar sudut kritis yaitu 34° . Lereng dengan sudut $>34^{\circ}$ memiliki nilai $F < 1$, yang berarti lereng tidak stabil dan direkomendasikan untuk penanaman vegetasi musiman. Sedangkan lereng dengan sudut $<34^{\circ}$ memiliki nilai $F > 1$, berarti lereng stabil dan direkomendasikan untuk penanaman vegetasi tahunan/kayu-kayuan.

Kata Kunci: longsor, kelapa, sengon, interpretasi, foto udara

ABSTRACT

The purpose of this study were (1) to identify the location of active and inactive landslides in the Bompon catchment; (2) to identify the physiological characteristics and density of coconut and sengon on the landslides area; (3) to analyzing the biomass of coconut and sengon, and slope stability on the landslide area; and (4) to make the recommendation of crop management of coconuts and sengon.

The method was divided into three main parts: the interpretation of aerial photographs, measurements of biomass of coconuts and sengon vegetation and slope stability analysis. Interpretation technique was done by digitizing on screen using a key interpretation of aerial photograph. Biomass measurement was done using the allometric data and the observation data (type and number of trees, stem diameter, trees height), as well as slope stability analysis using infinite slope method.

The distributions of landslides in Bompon catchment covered about 130.11 ha, consisting of an active landslide covered about 60.26 ha and inactive landslide covered about 69.85 ha. At landslides area scattered coconut about 1682 trees and sengon about 26355 trees, with density of coconut 13 trees/ha and density of sengon 282 trees/ha. The results showed that coconuts and sengons does not have affect to the landslide that occurred in Bompon catchment in term of biomass vegetation. The value of safety factor slopes shows that slopes at an angle of $>34^{\circ}$ had a value of $F < 1$, which means the slopes are unstable and recommended for planting seasonal vegetation. While the slopes at an angle of $<34^{\circ}$ had a value of $F > 1$, then the slope is stable and recommended for planting of annual vegetation/woody trees.

Keywords: Landslide, coconut, sengon, interpretation, aerial photograph