

Tanah longsor dapat menjadi ancaman yang serius dalam upaya pemanfaatan lahan untuk berbagai macam kepentingan khususnya untuk pengembangan lahan pertanian. Kajian konservasi berbasis vegetatif pada lahan longsor aktif tipe rotasional mempunyai manfaat untuk memperbaiki degradasi lahan serta menstabilkan lereng dengan metode yang tepat. Penelitian bertujuan untuk (1) menganalisis karakteristik fisik dan kimia pada mahkota, badan dan kaki tanah longsor aktif tipe rotasional pada Sub-DAS Bompon, (2) mengkaji faktor keberagaman karakteristik tanah pada lahan bekas longsor dan (3) mengkaji rekomendasi jenis dan tata letak vegetasi di lahan longsor aktif sebagai upaya konservasi di Sub-DAS Bompon. Pengumpulan data yang dilakukan meliputi kegiatan pra-lapangan, lapangan, pengujian laboratorium, dan analisis data. Penentuan titik sampel menggunakan metode *stratified random sampling* berdasarkan aktivitas longsor. Tiga longsor dipilih secara acak dan setiap longsor dibedakan menjadi tiga bagian, mahkota, badan, dan kaki longsor. Titik pengambilan sampel berjumlah 9 titik dengan pengambilan sampel tanah pada jeluk 0–50 cm dan 50–100 cm. Analisis data dilakukan secara deskriptif kuantitatif dengan standar deviasi untuk mengetahui variasi karakteristik tanah pada setiap longsor dan secara deskriptif kualitatif untuk mengetahui kondisi morfologi lahan pada setiap longsor. Konservasi tanah berbasis vegetatif diutamakan pada longsor dangkal. Hasil penelitian menunjukkan bahwa 1) longsor mengakibatkan adanya perubahan karakteristik fisik maupun kimia tanah, baik pada mahkota, badan maupun kaki longsor. Perubahan signifikan terjadi pada nilai indeks stabilitas agregat dan laju infiltrasi; 2) keberagaman karakteristik tanah pada tiap bagian longsor disebabkan oleh beberapa faktor diantaranya yaitu pedoturbasi dengan material tanah yang berbeda, waktu terjadinya longsor masing – masing pada tahun 2015, 2019 dan 2020, morfologi lereng hasil longsor semakin curam serta erosi yang berkelanjutan; 3) jenis dan tata letak tanaman direkomendasikan sesuai fungsi ekologis dan memiliki nilai ekonomis bagi masyarakat.

Kata kunci: karakteristik tanah, longsor aktif, bekas, tipe rotasional, vegetasi, konservasi.

ABSTRACT

Landslides could be a serious threat in efforts to use land for various purposes, especially for the development of agricultural land. Study of vegetative-based conservation on rotational-type active landslide areas have the benefit of improving land degradation and stabilizing slopes. The aims of this reaseach were (1) analyze the physical and chemical characteristics of soil of the crown, body and foot of the rotational type of active landslide in the Bompon sub-watershed, (2) to examine the diversity of soil characteristics in the former landslide and (3) recommendations for the type and layout of vegetation on post landslide that are still active as conservation efforts in the Bompon Sub-watershed. The data collection includes pre-field, field, laboratory testing, and data analysis. Determination of sample points using stratified random sampling method based on landslide activity. Three landslides were selected randomly and each landslide was divided into three parts, the crown, body, and foot of the landslide. The sampling points were 9 points with soil sampling at depths of 0–50 cm and 50–100 cm. Data analysis was carried out descriptively quantitatively with a standard deviation to determine the variation of soil characteristics in each landslide and descriptively qualitatively to determine the condition of the morphology of the land in each landslide. Vegetative-based soil conservation is prioritized for shallow landslides. The results showed that 1) landslides resulted in changes in the physical and chemical characteristics of the soil, both on the crown, body and legs of the landslide. Significant changes occurred in the value of the aggregate stability index and infiltration rate; 2) the diversity of soil characteristics in each section of the landslide is caused by several factors including pedoturbation with different soil materials, the time of occurrence of each landslide in 2015, 2019 and 2020, the morphology of the slopes resulting from landslides getting steeper and continuous erosion; 3) the type and layout of the plant is recommended according to the ecological function and has economic value for the community.

Keywords: soil characteristics, active landslide, former, rotational type, vegetation, conservation.