PENDEKATAN MORFOLOGI DAN MORFODINAMIKA BEKAS LONGSOR UNTUK PENILAIAN TINGKAT AKTIVITAS PROSES
LONGSOR DI SUB-DAS BOMPON
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PENDEKATAN MORFOLOGI DAN MORFODINAMIKA BEKAS LONGSOR UNTUK PENILAIAN TINGKAT AKTIVITAS PROSES LONGSOR DI SUB-DAS BOMPON

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ABSTRAK

Longsor merupakan bencana alam yang menimbulkan banyak korban jiwa. Dampak longsor mendorong peneliti melakukan penelitian terkait longsor guna mengurangi dampak yang ditimbulkan. Mayoritas penelitian longsor terfokus pada kerawanan dan bahaya longsor. Penelitian aktivitas longsor masih sangat jarang dilakukan saat ini. Beberapa penelitian aktivitas longsor masih terfokus pada pergerakan material dan menggunakan pendekatan foto udara. Penelitian ini bertujuan (1) Mengidentifikasi tipologi longsor di Sub-DAS Bompon melalui pendekatan morfologi dan morfodinamika, (2) Merumuskan metode sidik cepat aktivitas longsor di Sub-DAS Bompon, (3) Menyusun klasifikasi tingkat aktivitas longsor di Sub-DAS Bompon.

Metode penelitian penentuan aktivitas longsor di Sub-DAS Bompon menerapkan survei dan observasi lapangan dengan menerapkan teknik sidik cepat. Informasi morfologi dan morfodinamika pada mikro DAS dapat diperoleh secara efisien dan akurat melalui teknik sidik cepat. Tahapan sidik cepat dimulai dengan (1) Pembuatan peta traverse dan *checklist*, (2) Pengumpulan informasi morfologi dan morfodinamika longsor menggunakan teknik traverse dan Pemotretan UAV, (3) Visualisasi informasi morfologi dan morfodinamika longsor (4) Penentuan klasifikasi aktivitas longsor.

Hasil penelitian menujukan bahwa tipologi longsor di Sub-DAS Bompon merupakan dominasi aktivitas proses longsor di Segmen Selatan. Dominasi tersebut disebabkan oleh dominasi penggunaan lahan berupa permukiman dan posisi Segmen Selatan pada hilir Sub-DAS Bompon memiliki penampang sungai yang lebih luas dan aliran air yang lebih besar. Klasifikasi aktivitas longsor ditentukan berdasarkan hasil teknik sidik cepat variable morfologi dan morfodinamika longsor. Variabel morfodinamika permukaan dan bawah permukaan pemicu longsor yaitu gully, sungai, rumah, pemotongan lereng, erosi pipa dan mataair. Sementara morfodinamika indikator aktivitas longsor yaitu longsor baru, rekahan dan vegetasi miring. Variabel tersebut hanya dapat diperoleh melalui observasi lapangan karena variabel tersebut tidak dapat diidentifikasi melalui foto udara. Variabel kunci menghasilkan Klasifikasi Aktivitas Longsor di Sub-DAS Bompon yaitu 6 *active landslide*, 4 *suspended landslide*, 7 *re-active landslide*, 6 *inactive landslide*, 5 *dormant landslide* dan 1 *relict landslide*. 4 dari 7 *re-active landslide* dan 3 dari 6 *active* landslide dijumpai pada Segmen Selatan.

Kata Kunci: Morfologi dan morfodinamika, Sidik cepat, aktivitas longsor

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LANDSLIDE MORPHOLOGICAL AND MORPHODYNAMIC APPROACHES FOR LANDSLIDE ACTIVITY PROCESS LEVEL ASSESSMENT IN BOMPON CATCHMENT

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ABSTRACT

Landslide is natural disaster with high occurrence intensity and it is phenomenon leading to fatalities. Landslide impact motivates researchers doing landslide researches to reduce its impact. Most of the landslide researches were focused on landslide vulnerability and landslide hazard. Landslide activity research is extremely scarcely done. Some landslide activity researches still were focused on material movement and the researches utilized aerial photograph. The aim of this study were (1) to identify landslide typology in the Bompon catchment through morphological and morphodynamic approaches, (2) to formulate landslide activity fast-survey method in the Bompon catchment, (3) to arrange landslide activity classification in the Bompon catchment.

Landslide activity research method in in the Bompon catchment were field survey and observation. Field survey and observation were done by applying morphological and morphodynamic fast-survey technique. Fast Besides the traverse technique, aerial photography (UAV) was used in order to obtain landslide shape information in the Bompon catchment. Morphological and morphodynamic information were visualized. The visualization result became morphological and morphodynamic map. Morphological and morphodynamic map were analyzed. The analysis aim for resulting landslide activity analysis-key variables. The key variables were used for determining landslide activity and landslides detailed morphological and morphodynamic information.

The result of study indicated landslide typology in Bompon catchment is domination of process activity in Segmen Selatan. The dimination is caused by landuse impact (Settelment) and Segmen Selatan posision (downstream) which has heavy streamflow. Landslide activity classification is determined base on fast-survey result of landslide morphology ang morphodynamics. The surface and subsurface morpodynamic variables as terrigering factors are gully, river, house, slope cutting, spring and pipe erosion. The morphodynamic variables as indicatos are landslide, fracture and vegetation anomaly. The variables are key variable and are only able to be obtained by field observation (Traverse). The key variables generate landslide activity classification in Bompon catchment. The classification are 6 active, 4 suspended, 7 re-active, 6 inactive, 5 dormant and 1 relict landslide. 4 out of 7 re-active landslide and 3 out of 6 active landslide is occurred in Segmen Selatan.

***Keywords**: Morphology and Morphodynamic, Fast-Survey Technique, Landslide Activity*