KAJIAN RESTORASI HUTAN DAN PENGENDALIAN DEBIT AIR SUNGAI DI SUB-DAS PAHU KABUPATEN KUTAI BARAT

Disertasi

Untuk memenuhi sebagian persyaratan
mencapai gelar Doktor pada
Program Studi Doktor Ilmu Kehutanan

Diajukan oleh :

SUPARJO
1304017016

Kepada

Program Studi Doktor Ilmu Kehutanan
Fakultas Kehutanan
Universitas Mulawarman
Samarinda
2019

DISERTASI

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Dipersiapkan dan disusun oleh:

Suparjo
1304017016

Telah dipertahankan di depan Dewan Penguji
Pada Tanggal : 17 OCT 2018
dan dinyatakan telah memenuhi syarat

Susunan Dewan Penguji:

Promotor Utama	Anggota Dewan Penguji I
Prof. Dr. Ir. Marjenah, MP. NIP. 19620801 199103 2 002	Prof. Dr. Ir. Wawan Kustiawan, M. Agr. NIP.19510131 197802 1 002
Promotor Pendamping I	Anggota Dewan Penguji II
Prof. Dr. Ir. Sigit Hardwinarto, M. Agr. NIP. 19610202 198603 1003	Prof. Dr. Ir. Afif Ruchaemi, M. Agr. NIP.19500418 197302 1 001
Promotor Pendamping II	Anggota Dewan Penguji III
Dr. Ir. Muhammad Sumaryono, M.Sc. NIP. 19550802 198302 1 003	Ali Suhardiman, S. Hut., MP. Ph.D. NIP.19760626 200501 1 001

Mengetahui:

Dekan Fakultas Kehutanan	Ketua Program Studi Doktor Ilmu Kehutanan
Dr. Rudianto Amirta, S.Hut. MP. NIP. 19721025 199702 1 001	Dr. Wiwin Suwinarti, S.Hut. MP. NIP.19690215 199403 2 003

Lulus Ujian Disertasi: 26 MAR 2019
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DAFTAR ISI

ABSTRACT

Suparjo, 2018. Study of Forest Restoration and Control of Discharge in Pahu Sub-Watershed West Kutai (Supervised By Marjenah, Sigit Hardwinarto and Muhammad Sumaryono).

Pahu River is one of Mahakam River branch located in the upstream region. The frequency of flooding in the Pahu Sub DAS is increasing from year to year and lasts longer. The aims of this study to obtain information of the existing condition of environmental components of the Pahu Basin Sub district, to examine the factors causing the decrease of water resources quality and to formulate the handling direction of the Pahu River Basin as a problem-solving step related to the control of river flow discharge.

Based on the results of spatial analysis on bio-geophysics, physical and chemical characteristics of water river and socioeconomic community obtained the result that 52.63% of the study area consists of organosol soil, 13.18% oxisols soil and 2.89% of cambisol soil. All the three are sensitive to erosion. The morphology of sub-watershed consists of 68.71% of land with flat slopes and ramps that are at risk of flooding. Average rainfall at the study area was 2.568.2 mm / year, in January was the highest peak of rainfall. The type of land cover consisted of 76.69% of secondary natural forest and plantation forest, 6.61% in the form of plantation land with 0.97 vegetation cover index. The Coefficient of Regime 2,341 is in the medium category. The areas with very high erosion hazard levels cover 16.06% of the sub-watershed area and are spread evenly throughout the area.

Based on watershed indicator, it's concluded that the performance of Pahu Sub-Watershed is in the medium category. From the research, it is advisable to be prudent in land clearing activities and restoration measures are needed, especially in forest plantation, plantation areas and areas with high erosion hazard.

Keyword : Forest Restoration, Pahu River, Sub-Watershed, West Kutai