

OPTIMASI LUASAN PETAK TEBANG DI HUTAN TANAMAN RAWA GAMBUT BERDASARKAN PRODUKTIVITAS DAN BIAYA (*Optimizing of the Felling-Plot Area at the Peat-Swamp Plantation Forest Based on the Felling Productivity and Cost*)

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ABSTRACT

*As of this occasion, the management of timber harvesting at the peat-swamp plantation-forest in practice still has not yet reached the optimal tree felling plot area. Consequently, this necessitates exploring a representative model to determine meticulously such optimal plot area, thereby ensuring the forest management to proceed in a sustainable way. In relevant, the related study was carried out consecutively in May 2012 at the PT Wira Karya Sakti's concession area in Jambi; and in June 2012 at the PT Riau Andalan Pulp & Paper's concession area in Riau. For such, the necessary data were taken descriptively and purposively, which comprised the felling-plot areas (X) and the costs (Y) for skidding, maintenance, and canal erection. Further, the obtained X-Y data couples were analyzed for possible quadratic regression models. Results revealed that in Jambi the X-Y model came-up in the regression equation as $Y = 254.82 - 10.98 X + 0.21 X^2$ ($R^2 = 0.43^{**}$), with the optimum felling area (X) equal to 26.69 ha and the minimum cost for skidding, maintenance, and canal erection (Y) reaching 105.32 (in Rp 1,000,000,000). Correspondingly, in Riau, the X-Y appeared as $Y = 299.47 - 14.85 X + 0.26 X^2$ ($R^2 = 0.59^{**}$), with the optimum felling area (X) reaching 28.60 ha and the minimum cost (Y) as much as 87.14 (in Rp 1.000.000.000).*

Keywords: Peat-swamp plantation forest, optimum felling plot area, minimum cost for skidding-maintenance-canal erection, representative model, quadratic regression equation

ABSTRAK

Sampai saat ini pengelolaan pemanenan kayu di Hutan Tanaman Industri (HTI) rawa gambut belum optimal. Oleh karena itu diperlukan model untuk menentukan optimalisasi petak tebang di areal HTI rawa gambut agar dapat terwujud pengelolaan hutan lestari. Penelitian dilaksanakan pada bulan Mei 2012 di PT Wira Karya Sakti, Jambi dan bulan Juni 2012 di PT Riau Andalan Pulp & Paper, Riau. Data diambil secara deskriptif dan purposif serta dianalisis dengan regresi kuadrat. Hasil penelitian menunjukkan bahwa model petak tebang optimal yang ada di Jambi yaitu $Y = 254,82 - 10,98 X + 0,21 X^2$ ($R^2 = 0,43$) dengan luas petak tebang optimal = 26,69 ha dan biaya penyaradan dan pemeliharaan/pembuatan kanal minimum 105,32 (x Rp 1.000.000.000), sedang di Riau $Y = 299,47 - 14,85 X + 0,26 X^2$ ($R^2 = 0,60$) dengan luas petak tebang optimal = 28,60 ha dan biaya penyaradan dan pemeliharaan/pembuatan kanal minimum 87,14 (x Rp 1.000.000.000).

Kata kunci : HTI rawa gambut perkebunan, penebangan area plot yang optimal, biaya minimum untuk ereksi penyaradan-pemeliharaan-kanal, model representatif, persamaan regresi kuadrat