POTENSI BIOMASSA DAN DAMPAK SOSIAL EKONOMI PEMBANGUNAN HUTAN TANAMAN ENERGI GAMAL DI RPH TEPUSAN BKPH KEDUNGJATI KPH SEMARANG

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INTISARI

Uji coba penanaman tanaman biomassa di RPH Tepusan BKPH Kedungjati KPH Semarang dilakukan untuk pengembangan sumber energi baru terbarukan (EBT). Uji coba penanaman tanaman biomassa ini perlu mempertimbangkan beberapa aspek terutama aspek sosial dan ekonomi. Aspek tersebut berupa konsumsi kayu bakar masyarakat, tingkat pendapatan, mata pencaharian hingga partisipasi masyarakat. Tujuan dari penelitian ini adalah mengetahui estimasi potensi biomassa tanaman gamal, tingkat konsumsi kayu bakar masyarakat, pendapatan masyarakat sebelum dan sesudah pembangunan hutan tanaman energi.

Penelitian ini menggunakan pendekatan kuantitatif dengan pengambilan data menggunakan metode survei dengan instrumen kuisioner dan *tally sheet* inventarisasi tegakan gamal. Sasaran penelitian ini adalah tegakan gamal dan petani penggarap lahan *cluster* 30% di RPH Tepusan. Penentuan responden dilakukan dengan metode *accidental sampling* dikarenakan tidak ada data tertulis mengenai siapa saja yang menggarap lahan *cluster* 30% sehingga ditemukan 25 responden yang menggarap lahan di petak 114H. Data kemudian dianalisis secara deskriptif.

Hasil penelitian menunjukkan bahwa (1) estimasi potensi biomassa tanaman gamal (Gliricidia sepium) di RPH Tepusan dengan luasan gamal 526,22 ha yaitu sekitar 47.002,78 Ton atau setara 58.095,43 m^3. (2) Pembangunan Hutan Tanaman energi membawa dampak negatif terhadap pendapatan pesanggem lama sehingga harus mencari alternatif pekerjaan lain. Kontribusi lahan andil terhadap pendapatan pesanggem lama yaitu sebesar 67,73% Sedangkan kontribusi lahan andil terhadap pendapatan setelahnya yaitu 56,69%. Namun, pembangunan hutan tanaman energi membawa dampak positif terhadap mata pencaharian bagi masyarakat yang dulu tidak menggarap lahan menjadi menggarap lahan sehingga dapat menambah total pendapatan. (3) Konsumsi kayu bakar masyarakat desa hutan mencapai 17.278,06 Kg/tahun atau setara dengan 61,68 m^3/tahun dengan intensitas penggunaan 2 kali sehari hingga 1 bulan sekali serta pemenuhan kebutuhan dari hutan sebesar 70% dan tegalan 30%.

Kata Kunci: Hutan Tanaman Energi, RPH Tepusan, *Gliricidia sepium*, dampak sosial ekonomi, kayu bakar

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BIOMASS POTENTIAL AND SOCIO-ECONOMIC IMPACT OF GAMAL ENERGY PLANT FOREST DEVELOPMENT IN RPH TEPUSAN BKPH KEDUNGJATI KPH SEMARANG

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ABSTRACT

The trial of planting biomass plants at the RPH Tepusan BKPH Kedungjati KPH Semarang was carried out for the development of new renewable energy sources (EBT). This trial of planting biomass plants needs to consider several aspects, especially social and economic aspects. These aspects include community firewood consumption, income levels, livelihoods and community participation. The purpose of this study was to determine the potential estimation of gamal plant biomass, the level of community consumption of firewood, community income before and after the development of energy plantation forests.

This study used a quantitative approach with data collection using a survey method with questionnaire instruments and tally sheets for gamal stand inventory. The target of this research were gamal stands and cultivators of 30% cluster land at Tepusan RPH. Respondents were determined using the accidental sampling method because there was no written data on who worked on the 30% cluster land so that 25 respondents worked on plot 114H. The data were then analyzed descriptively.

The results showed that (1) the estimated biomass potential of the gamal plant (Gliricidia sepium) at the Tepusan RPH with an area of 526.22 ha is approximately 47,002.78 tons or the equivalent of 58,095.43 m3. (2) The development of energy plantation forests has a negative impact on the income of the old pesanggem, so they have to find other alternative jobs. The land share contribution to the income of the old pesanggem was 67.73%, while the land share contribution to the income thereafter was 56.69%. However, the development of energy plantation forests has had a positive impact on the livelihoods of people who previously did not cultivate the land to cultivate the land so that they can increase their total income. (3) The consumption of firewood by the forest village community reaches 17,278.06 kg/year or the equivalent of 61.68 m3/year with an intensity of use 2 times a day to once a month and the fulfillment of needs from the forest is 70% and 30% dry fields.

Keyword: Energy Plantation Forest, RPH Tepusan, Gliricidia sepium, socio-economic impact, firewood

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