

ANALISIS DEBIT SUSPENSI PADA DAERAH TANGKAPAN AIR (DTA) PETAK 13 HUTAN PENDIDIKAN WANAGAMA I, KABUPATEN GUNUNGKIDUL, YOGYAKARTA

Oleh:

Musthofa Ali Saifudin
12/327857/SV/00033

INTISARI

Daerah Tangkapan Air (DTA) Petak 13 Hutan Pendidikan Wanagama I, Kabupaten Gunungkidul, Yogyakarta memiliki berbagai jenis penggunaan lahan, yaitu sawah, tegalan, tegakan jati lokal, dan tegakan jati mega, selain itu terdapat aktivitas pengolahan lahan yang dilakukan yaitu pemanenan tanaman kacang, pemupukan, penyiangan, pembuatan lubang tanam, pengambilan rumput, dan pemeliharaan pematang sawah. Hasil penelitian serupa di DTA Gajah Mungkur menunjukkan adanya perubahan nilai rata-rata muatan suspensi yang keluar per bulan karena adanya faktor pengolahan lahan untuk berbagai tanaman pertanian (Ridwan, 2005; Rasyid, 2008). Oleh karena itu penelitian ini perlu dilakukan untuk mengetahui jumlah debit suspensi pada lokasi penelitian.

Penelitian ini dilakukan pada Stasiun Pengamat Arus Sungai (SPAS) tipe *V-Notch Weir* 90⁰ DTA Petak 13. Pengambilan sampel muatan tersuspensi dilakukan menggunakan *suspended sampler* yang terdapat di mulut *weir*. Adapun data pendukung lainnya seperti data tebal hujan, kenampakan tutupan lahan, tumbuhan bawah, dan pengolahan lahan. Perhitungan debit suspensi dengan menggunakan bantuan *Software Microsoft Excel* dan *Sigmaplot*.

Dari hasil penelitian diperoleh data jumlah debit suspensi pada DTA Petak 13 selama waktu penelitian sebesar 0,736 ton/ha, dengan persamaan kurva lengkung suspensi (*suspended rating curve*) $Q_s = 0,1481(Q)^{1,3739}$ dengan koefisien determinasi (R^2) = 0,7756, dan nilai koefisien *runoff* rata-rata 50,264%.

Kata kunci: Wanagama, Daerah Tangkapan Air, Pengolahan Lahan, Penutupan Lahan, Debit Suspensi Aliran.

**ANALYSIS OF SUSPENDED LOAD IN PETAK 13 CATCHMENT AREA
EDUCATIONAL FOREST WANAGAMA I, GUNUNGKIDUL DISTRICT,
YOGYAKARTA**

By:

Musthofa Ali Saifudin
12/327857/SV/00033

ABSTRACT

Catchment Area at Petak 13 Wanagama I Educational Forest, Gunungkidul District, Yogyakarta has many variation of land use, there are rice field, moor, local teak stand, and mega teak stand, beside of that, there are some of land management activities like nut crop harvesting, fertilizing, weeding, making holes for planting, grazing, and the maintenance of the rice field. The result of the same research in Gadjah Mungkur Water Catchment Area showed the average changing value of suspended rating which has result per month because the factor of land management activities for many agricultural crops (Ridwan, 2005; Rasyid, 2008). Therefore this research needs to be done to know the volume of suspended load in research location.

This research was conducted at *V-Notch Weir 90°* river flow observer station in Petak 13 Wanagama I catchment area. The suspended load sampling was obtained by using suspended sampler on weir mouth. The other supporting data were rainfall data, the visual of land cover, cover crops, and description of land management. Suspended load analysis using Microsoft Excel and Sigmaplot software.

The result of the research shows the volume of suspended load at water catchment area petak 13 during research time was 0,736 tons ha⁻¹ with the equation of suspended rating curve $Q_s = 0,1481(Q)^{1,3739}$ which determination coefficient value (R^2) = 0,7756, and the average value of runoff coefficient is 50,264%.

Keywords: Wanagama, Water Catchment Area, Land Management, Land Cover, Suspended Rating.