ANALISIS NERACA AIR PADA DAERAH IRIGASI SAPON KABUPATEN KULONPROGO

ABSTRAK

Oleh:
Hergissa Gusferiadana
15/385451/TP/11320

Informasi mengenai potensi air baik air permukaan maupun air tanah dibutuhkan untuk meminimalisasi potensi bahaya seperti banjir ataupun longsor. Penelitian ini berfokus pada neraca air irigasi pada Daerah Irigasi Sapon. Dalam analisis kebutuhan air irigasi di lahan sawah terdapat beberapa komponen antara lain penyiapan lahan, kebutuhan konsumtif, perkolasi, pergantian lapisan air, dan curah hujan efektif. Berdasarkan analisis kebutuhan air irigasi di *intake* Bendung Sapon diperoleh nilai tertinggi antara lain: pada musim tanam pertama di September II sebesar 1,94 m^3/detik, musim tanam kedua di Januari II sebesar 1,53 m^3/detik, dan musim tanam ketiga di Juli II sebesar 0,55 m^3/detik. Hasil analisis kebutuhan air irigasi dibandingkan dengan rerata ketersediaan air 10 tahun terakhir, sehingga diperoleh neraca air irigasi pada daerah irigasi Sapon. Hasil neraca air menunjukkan bahwa secara umum ketersediaan air di bendung mencukupi kebutuhan air irigasi pada daerah irigasi Sapon. Akan tetapi khusus pada awal musim tanam I, tepatnya pada periode Agustus I dan II, besarnya ketersediaan air cukup kritis dibandingkan dengan kebutuhan air irigasi. Kebutuhan air irigasi pada periode Agustus I sebesar 1,86 m^3/detik dan Agustus II sebesar 1,86 m^3/detik, sedangkan ketersediaan air pada periode Agutus I sebesar 3,75 m^3/detik dan Agustus II sebesar 4,16 m^3/detik. Oleh karena itu, direkomendasikan untuk dilakukan penggeseran awal musim tanam menjadi September agar kebutuhan air irigasi terpenuhi dengan baik sepanjang musim tanam I sampai dengan musim tanam III.

Kata kunci: bendung sapon, kebutuhan air, ketersediaan air, musim tanam.

ANALYSIS OF WATER BALANCE IN SAPON IRRIGATION SCHEME KULONPROGO DISTRICT

ABSTRACT

By:

Hergissa Gusferiadana
15/385451/TP/11320

Information about potential of surface water and ground water is needed to minimize potential hazards such as floods or landslides. This research focuses on the irrigation water balance for Sapon Irrigation Scheme. In the analysis of irrigation water requirements in paddy fields there are several components including evapotranspiration, plant coefficient, land preparation, consumptive needs, percolation, water layer requirement and effective rainfall. Based on the analysis of irrigation water requirements at the Bendung Sapon intake, the highest value was in September II by value of 1.94 m^3 / second, the second planting season in January II by value of 1.53 m^3 / second, and the third planting season was July II by value of 0.55 m^3 / second. The results of the analysis of irrigation water requirements compared with the average water availability in the last 10 years in Sapon weir. The results of the water balance showed that in general the availability of water in the weir is sufficient for irrigation water requirements in the Sapon Irrigation Scheme. However, especially at the beginning of the first planting season, the amount of water availability was quite critical compared to irrigation water requirement. The value in the period of August I and August II for water needs is in the period of August I of 1.86 m^3 / second and August II of 1.86 m^3 / second While for the availability of water in the August I period is 3.75 m^3 / second and August II of 4.16 m^3 / second. Therefore, it is recommended to shift the beginning of the planting season to September so that irrigation water requirement are fullfilled well throughout the I-III planting season.

Keywords: sapon weir, water requirement, water availability, planting season.