

ANALYSIS OF DOMESTIC WATER AVAILABILITY AND DEMAND IN GLAGAHARJO VILLAGE, CANGKRINGAN, SLEMAN, D.I. YOGYAKARTA

Dita Cahya Anjani¹, Hatma Suryatmojo²

ABSTRACT

Glagaharjo Village is one of the villages located in Cangkringan District, Sleman Regency, Special Region of Yogyakarta. The people of Glagaharjo Village use Bebeng Springs as the main water resource to meet their daily water needs. However, the eruption of Mount Merapi in 2010 made the springs covered with eruption material which caused a decrease in the quantity of the springs. In addition, eruption material found in the river path around the Mount Merapi area has the potential to cause flooding. Based on the Decree of the Regent of Sleman No. 284/Kep.KDH/A/2011 about concerning Normalization of River Flow After the Eruption of Merapi Volcano, mining activities were carried out to accelerate normalization, including Kali Gendol which is located in Glagaharjo Village. Sand mining activities have the potential to cause a reduction in the discharge of water resources. The purpose of this study was to determine how much potential water availability, community water needs, water distribution patterns, and predict water in Glagaharjo Village.

Measurement of water discharge is carried out at water sources and water reservoirs using the volumetric method. The measurement of community water needs is carried out by interviewing combined with questionnaires. The pattern of water distribution is carried out by direct observation from water sources to community water reservoirs. Prediction of water is indicated by the water balance.

Based on the results of the study, there are 5 water sources used by the people of Glagaharjo Village with a potential water availability of 13.26 liters/second. The needs of domestic water each individual Glagaharjo Village community is 154.5 liters/day. The water system distribution in Glagaharjo Village is carried out manually and with a PAM meter using a pipe that comes from a water reservoir. The prediction of water in Glagaharjo Village for the next 10 years is always a surplus.

Keywords: Water Availability, Domestic Water Demand, Water Distribution, Water Prediction, Glagaharjo Village Desa

¹Student of Faculty of Forestry UGM

²Lecturer of Faculty of Forestry UGM

ANALISIS KETERSEDIAAN DAN KEBUTUHAN AIR DOMESTIK DI DESA GLAGAHARJO, KECAMATAN CANGKRINGAN, KABUPATEN SLEMAN, D.I. YOGYAKARTA

Dita Cahya Anjani¹, Hatma Suryatmojo²

INTISARI

Desa Glagaharjo merupakan salah satu desa yang terletak di Kecamatan Cangkringan, Kabupaten Sleman, Daerah Istimewa Yogyakarta. Masyarakat Desa Glagaharjo menggunakan Mata Air Bebeng sebagai sumber daya air utama untuk memenuhi kebutuhan air sehari-hari. Namun, adanya erupsi Gunung Merapi tahun 2010 membuat mata air tersebut tertutupi oleh material erupsi yang menyebabkan penurunan kuantitas mata air. Selain itu, material erupsi yang terdapat pada jalur sungai di sekitar kawasan Gunung Merapi berpotensi menyebabkan banjir. Berdasarkan Surat Keputusan Bupati Sleman Nomor 284/Kep.KDH/A/2011 tentang Normalisasi Aliran Sungai Pasca Erupsi Gunungapi Merapi, dilakukan kegiatan penambangan yang bertujuan untuk mempercepat normalisasi termasuk Kali Gendol yang terletak di Desa Glagaharjo. Kegiatan penambangan pasir berpotensi menyebabkan berkurangnya debit pada sumber daya air. Tujuan dari penelitian ini adalah untuk mengetahui seberapa besar potensi ketersediaan air, kebutuhan air masyarakat, pola distribusi air, dan memprediksi air di Desa Glagaharjo.

Pengukuran debit air dilakukan di sumber air dan bak penampungan air dengan menggunakan metode volumetrik. Pengukuran kebutuhan air masyarakat dilakukan dengan wawancara dikombinasi dengan kuisioner. Pola distribusi air dilakukan dengan cara pengamatan langsung dari sumber air hingga ke bak penampungan air masyarakat. Prediksi air ditunjukkan dengan neraca air.

Berdasarkan hasil penelitian, terdapat 5 sumber air yang digunakan oleh masyarakat Desa Glagaharjo dengan potensi ketersediaan air sebesar 13,26 liter/detik. Kebutuhan air domestik setiap individu masyarakat Desa Glagaharjo sebesar 154,5 liter/hari. Sistem pendistribusian air di Desa Glagaharjo dilakukan dengan cara manual dan dengan PAM meteran dengan menggunakan pipa yang berasal dari bak penampungan air. Prediksi air di Desa Glagaharjo selama 10 tahun mendatang selalu surplus.

Kata Kunci: Ketersediaan Air, Kebutuhan Air Domestik, Distribusi Air, Prediksi Air, Desa Glagaharjo

¹Mahasiswa Fakultas Kehutanan UGM

²Staff Pengajar Fakultas Kehutanan UGM