

KONSERVASI MATAAIR UNTUK MEMENUHI KEBUTUHAN AIR DOMESTIK PADA MUSIM PENGHUJAN DI SUB DAS BOMPON, KABUPATEN MAGELANG, PROVINSI JAWA TENGAH

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INTISARI

Air bersih menjadi suatu kebutuhan vital bagi masyarakat. Sub DAS Bompon merupakan kawasan yang terletak di lereng kaki Gunungapi Sumbing, dengan karakteristik lereng yang bergelombang hingga berbukit. Karena daerahnya yang berbukit, sumber air yang banyak dimanfaatkan masyarakat berasal dari mataair. Beberapa mataair yang digunakan memiliki kualitas air yang tidak memenuhi standar bakumutu. Fluktuasi debit mataair di sub DAS Bompon juga cukup besar dan beberapa mataair di sub DAS Bompon belum terlindungi.

Metode yang digunakan dalam penelitian ini adalah metode survey, laboratorium, wawancara, matematis dan evaluasi. Karakteristik yang dikaji meliputi tipe mataair berdasarkan debit, sifat pengaliran, dan tenaga gravitasi. Potensi mataair diketahui dari debit (kuantitas) dan kualitas air mataair. Kualitas air dari mataair diketahui menggunakan analisis laboratorium. Parameter yang digunakan untuk analisis laboratorium yaitu sifat fisik (kekeruhan, TDS, TSS), sifat kimia (pH, Besi), dan sifat biologi (Total Coliform) dengan acuan Peraturan Menteri Kesehatan No.32 Tahun 2017 Tentang Standar Baku Mutu Kesehatan Lingkungan Dan Persyaratan Kesehatan Air Untuk Keperluan Higiene Sanitasi, Kolam Renang, *Solus Per Aqua*, Dan Pemandian Umum dan Peraturan Pemerintah RI Nomor 82 tahun 2001 tentang *Pengelolaan Kualitas Air Dan Pengendalian Pencemaran Air*.

Kelima mataair yaitu mataair Kalisari 1, mataair Kalisari 2, mataair Kalisari 3, mataair Kalinongko, dan mataair Bompon termasuk mataair musiman (*Intermitent Springs*). Tipe mataair berdasarkan kelas debit untuk mataair Bompon masuk dalam kelas sedang, mataair Kalisari 1, Kalisari 2 dan Kalinongko masuk dalam kelas rendah dan mataair Kaliasari 3 masuk dalam kelas sangat rendah. Tipe kalima mataair termasuk mataair depresi. Kualitas air dari kelima mataair tergolong buruk, karena tergolong asam dan pada mataair Kalisari 3 dan kalinongko menghasilkan total koliform yang tinggi. Berdasarkan perbandingan debit mataair dan kebutuhan air, Kuantitas dari kelima mataair masih cukup untuk memenuhi kebutuhan air domestik masyarakat yang menggunakannya, karena pengukuran debit dilakukan pada musim penghujan sedangkan pada musim kemarau menurut keterangan warga, beberapa mataair mengalami kekeringan dan tidak dapat memenuhi kebutuhan air masyarakat. Konservasi mataair dilakukan secara vegetatif (Penanaman pohon bambu, pohon beringin dan sukun), secara mekanik (pembuatan teras gulud, pembuatan sarana perlindungan mataair, pembuatan lubang resapan biopori dan *treatment* dengan penaburan kapur untuk menurunkan pH pada mataair), konservasi berbasis masyarakat dan dengan pendekatan pemerintah.

Kata Kunci : Mataair, Karakteristik Mataair, Potensi Mataair, Konservasi, Daerah Imbuhan, Teras Gulud

SPRING CONSERVATION TO FULFILL DOMESTIC NEEDS OF WATER IN THE RAINY SEASON IN SUB DAS BOMPON, DISTRICT OF MAGELANG, PROVINCE OF CENTRAL JAWA

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ABSTRACT

Clean water becomes a vital need for people. Sub DAS Bompon is an area that located in the hillside of Sumbing's Mountain, with the characteristics of the slope that bumpy until hilly. Because of its hilly area, the source of water that many people often use are come from springs. Some springs that people used were not meet the requirements of standards water quality. The fluctuate discharge of the springs in Bompon sub-basin is high and some springs in Bompon sub-basin have not been protected for long period of time.

The method that used in this research was survey method, laboratory, interview, mathematical, and evaluation method. The study examined the characteristics of spring types based on its discharge, stream characteristics, and gravitational forces. Potential of spring is known from the discharge (quantity) and the water quality of spring. The water quality of spring is known from laboratory analytical with parameter that used were physical characteristics (turbidity, TDS, TSS), chemical characteristics (pH, Fe), and biological characteristics (Total Coliform) based on Regulation of Minister of Health No.32 Year of 2017 on Environmental Health Quality Standard and Health Water Requirements For Sanitation Hygiene, Swimming Pool, Solus Per Aqua, And Public Baths also Government Regulation No. 82 Year of 2001 on Water Quality Management and Water Pollution Control.

There were five springs named Kalisari 1, Kalisari 2, Kalisari 3, Kalinongko, and Bompon spring that classified as intermitent spring. Based on its discharge, spring type of Bompon spring were in medium class while Kalisari 1, Kalisari 2, and Kalinongko spring included in low class, and Kalisari 3 included in very low class. All of them were depression springs. The water quality of the five spring was bad because they are classified into acid, moreover Kalisari 3 and Kalinongko spring had high total coliform levels. Based on the comparison between discharge of spring and water demand, the water quantity of the springs are still sufficient to supply the domestic water needs for society who used it, because the measurement of spring discharge was done in the rainy season while in the dry season some springs were drought and could not fulfill the water needs, according to the residents informations. Spring conservation can be done vegetatively (by planting banyan tree and breadfruit), mechanically (making ridge terrace, spring protection and making spring treatment with the CaCO_3), with comunity-based conversation and with some government approach.

Keywords: Spring, Spring Characteristic, Spring Potential, Conservation, Recharge Area, Ridge Terrace