

ABSTRAK

Penggunaan air tanah yang tinggi dijumpai di Kecamatan Narmada Kabupaten Lombok Barat Provinsi Nusa Tenggara Barat. Pesatnya pertumbuhan Kecamatan Narmada menuju ke perkotaan serta suplai air tanah bagi Kota Mataram, keperluan irigasi pertanian di Kabupaten Lombok Barat dan Lombok Timur serta suplai bagi operasional Bendungan Meninting memperlihatkan potensi kerentanan kuantitas air tanah di Kecamatan Narmada. Terlebih Kemulandana et al (2021) menyatakan bahwa proyeksi kebutuhan air sampai 5 tahun mendatang adalah sebesar 138,21 lt/dt atau 11.941.344 liter/hari. Berpijak pada data bahwa ketersediaan air di Kecamatan Narmada adalah sebesar 252 liter/detik atau 21.772.800 liter/hari air baku dengan perhitungan kebutuhan air saat ini adalah sebesar 98 liter/detik atau 8.467.200 liter/hari, maka saat riset dilakukan terdapat selisih ketersediaan air dengan penggunaan air sebesar surplus 154 liter/detik = 13.305.600 liter/hari. Proyeksi pada tahun ke 5 setelah riset yakni tahun 2025 surplus air menurun menjadi sebesar 113,79 liter/detik, menjelaskan bahwa kondisi surplus air di Kecamatan Narmada akan terus mengalami penurunan.

Tujuan penelitian Analisis Analisis Faktor Penting Ketersediaan Air Tanah di Kecamatan Narmada Kabupaten Lombok Barat Provinsi NTB adalah (1) mengidentifikasi variabel-variabel yang berperan dalam ketersediaan air tanah di Kecamatan Narmada; (2) menganalisis hubungan antar variabel ketersediaan air tanah di Kecamatan Narmada.

Hasil olah data MICMAC menunjukkan bahwa faktor penting sistem ketersediaan air tanah di Kecamatan Narmada diketahui adanya empat Dimensi utama yakni INPUT, OUTPUT DOMESTIK, OUTPUT NON DOMESTIK, dan KEBIJAKAN. Faktor penting sistem ketersediaan air tanah di Kecamatan Narmada adalah 7 variabel kunci yang terletak di Kuadran I (*Influence variables*) yakni variabel Hujan (HUI), Iklim (IK), Peraturan Pemerintah Pusat (PPP), Peraturan Pemerintah Daerah (PPD), Cekungan Air Tanah (CAT), Hutan (HUT), dan Jumlah Penduduk (JP). Variabel regulator dalam sistem ketersediaan air tanah di Kecamatan Narmada adalah variabel Geologi.

Terjadi hubungan antara Peraturan terhadap suplai air tanah, Peraturan terhadap penggunaan air, dan hubungan penggunaan air terhadap suplai air. Peraturan memiliki pengaruh kuat untuk mendorong suplai air tanah secara terintegrasi dan terstruktur sehingga proses suplai air tanah dapat terselenggara dengan baik. Peraturan juga merupakan penentu terhadap ketersediaan air tanah dalam perannya mengendalikan penggunaan air baik domestik maupun non domestik. Di sisi lain penggunaan air memiliki pengaruh kuat memanfaatkan sumber daya air yang melampaui kemampuan suplai air tanah.

ABSTRACT

High groundwater use is found in Narmada District, West Lombok Regency, West Nusa Tenggara Province. The rapid growth of Narmada Regency towards urban areas and the provision of groundwater for Mataram City, agricultural irrigation needs in West Lombok Regency and East Lombok Districts Regency as well as augmentation flow for Meninting Dam operations may trigger the potential vulnerability of groundwater quantity in Narmada Regency. In addition, Kemulandana et al. (2021) stated that the projected water demand for the next five years is 138.21 lt/s or 11,941,344 liters/day. When study of Kemulandana et al. (2021) was conducted, the available discharge of groundwater of Narmada District is 252 liters/second or 21,772,800 liters/day-whereas the calculated water needs is 98 liters/second or 8,467,200 liters/day. Therefore, there was a surplus of 154 liters / second = 13,305,600 liters/day. It is projected that 5th year after that study, namely in 2026, the surplus water will decrease to 113.79 liters/second, showing the declining of groundwater surplus in Narmada Regency will continue to decline.

The objectives of the study Analysis of Important Factors of Groundwater Security in Narmada District, West Lombok Regency, NTB Province are (1) to identify variables that play a role in groundwater availability in Narmada District; (2) to analyze the relationship between variables of groundwater availability in Narmada District.

The results showed that the Important factors of the groundwater availability system in Narmada District are known to be four main dimensions, namely INPUT, DOMESTIC OUTPUT, NON-DOMESTIC OUTPUT, and POLICY. Important factors of groundwater availability system in Narmada District are 7 key variables located in Quadrant I (Influence variables), namely Rain (HUI), Climate (IK), Central Government Regulations (PPP), Local Government Regulations (PPD), Groundwater Basins (CAT), Forests (HUT), and Number of Population (JP). The regulatory variable in the groundwater availability system in Narmada District is the geological variable.

There exists a systematic relationship between the regulations on groundwater supply, regulations on water use, and the relationship between water use and water supply. Regulations have a strong influence to encourage groundwater supply in an integrated and structured manner so that the groundwater supply process can be carried out properly. Regulation is also a determinant of groundwater availability in its role to control water use both domestic and non-domestic. On the other hand, water use has a strong influence on utilizing water resources that exceed the ability of groundwater supply.