

ABSTRAK

ANALISIS KEBERLANJUTAN SISTEM PENYEDIAAN AIR MINUM KOTA BANDAR LAMPUNG

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Keberlanjutan Sistem Penyediaan Air Minum (SPAM) sangat penting bagi masyarakat karena air minum merupakan kebutuhan dasar yang harus terpenuhi terutama bagi Masyarakat perkotaan. Kebutuhan dasar Masyarakat Kota Bandar Lampung dipenuhi melalui SPAM dengan jenis sambungan Eksisting dan SPAM KPBU yang dikelola oleh PERUMDA-AM Way Rilau Kota Bandar Lampung. Tujuan dari penelitian ini adalah untuk menganalisis (1) kinerja SPAM Kota Bandar Lampung (2) keberlanjutan SPAM Kota Bandar Lampung dan (3) strategi keberlanjutan SPAM Kota Bandar Lampung. Penelitian ini menggunakan metode survei yang melibatkan 100 responden keluarga penerima SPAM di Kecamatan Kemiling dan Rajabasa tahun 2025. Tujuan 1 dianalisis dengan metode deskriptif kuantitatif dengan melihat kinerja yang ada pada PERUMDA-AM. Tujuan 2 dianalisis dengan metode *Multiaspect Sustainability Analysis* (MSA) menggunakan 5 aspek keberlanjutan yaitu: (1) teknis, (2) kelembagaan, (3) ekonomi, (4) sosial dan (5) aspek lingkungan. Tujuan 3 dianalisis menggunakan SWOT QSPM. Penelitian ini menunjukkan bahwa kehilangan air/NRW SPAM Eksisting 60% dan kehilangan air/NRW SPAM KPBU 64,68% dan hasil uji kualitas SPAM KPBU lebih baik dibanding SPAM eksisting dengan NTU 0,8. Berdasarkan hasil analisis nilai keberlanjutan SPAM KPBU 78.45 dengan kategori sangat berkelanjutan, nilai keberlanjutan SPAM Eksisting 61.23 dengan kategori cukup berkelanjutan dan nilai keberlanjutan SPAM KPBU dan Eksisting 69.75 dengan kategori cukup berkelanjutan. Strategi yang dapat diberikan yaitu: 1. perluasan jaringan SPAM KPBU, 2. peremajaan jaringan perpipaan dan 3. menggunakan alat pendeteksi kebocoran untuk mengatasi kehilangan air. Hasil penelitian menyimpulkan bahwa pemasangan SPAM dengan jenis sambungan KPBU lebih berkelanjutan.

Kata kunci: SPAM, keberlanjutan, SWOT, QSPM.

ABSTRACT

Sustainability Analysis Of The Bandar Lampung City Drinking Water Supply System

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Sustainability of Drinking Water Supply Systems (SPAM) is critical for communities, as access to drinking water is a fundamental human need, especially in urban areas. In Bandar Lampung City, this essential need is met through two types of SPAM connections: the existing SPAM and the Public-Private Partnership (PPP)-based SPAM, both managed by the Regional Public Water Utility (PERUMDA-AM) Way Rilau. This study aims to analyze: (1) the performance of SPAM in Bandar Lampung City, (2) the sustainability of SPAM in Bandar Lampung City, and (3) the appropriate sustainability strategies for SPAM in Bandar Lampung City. The research employed a survey method involving 100 households receiving SPAM services in the subdistricts of Kemiling and Rajabasa, in 2025. The first objective was analyzed using a quantitative descriptive method to assess the operational performance of PERUMDA-AM. The second objective applied the Multi-Aspect Sustainability Analysis (MSA) method, encompassing five sustainability dimensions: (1) technical, (2) institutional, (3) economic, (4) social, and (5) environmental aspects. The third objective was addressed using SWOT and the Quantitative Strategic Planning Matrix (QSPM). The results indicate that non-revenue water (NRW) in the existing SPAM reached 60%, while the PPP-based SPAM had an NRW of 64.68%. However, water quality tests revealed that the PPP-based SPAM exhibited better quality with an NTU (Nephelometric Turbidity Unit) value of 0.8. The sustainability score of the PPP-based SPAM was 78.45, categorized as highly sustainable, whereas the existing SPAM scored 61.23, classified as moderately sustainable. The combined sustainability score of both systems was 69.75, also falling under the moderately sustainable category. Recommended strategies include: (1) expanding the PPP-based SPAM network, (2) renewing aging pipeline infrastructure, and (3) utilizing leak detection technology to reduce water losses. The study concludes that the PPP-based SPAM connection type demonstrates higher sustainability performance compared to the existing system.

Keywords: Drinking Water Supply System, Sustainability, SWOT, QSPM.