

INTISARI

SHAN LIDO TARUWARDANI, 2022, *Evaluasi Kinerja Pengolahan Sampah Dalam Rangka Pengelolaan dan Pemeliharaan Infrastruktur Sipil dan Lingkungan Studi Kasus: Tempat Pengolahan Sampah Terpadu (TPST) 3R Tri Guyub Rukun Trirejo, Kabupaten Purworejo*. (dibimbing oleh Dr.Ir. Sindu Nuranto, MS.)

Mengapa pengolahan sampah penting? Sejatinya pengelolaan ini bertujuan dalam rangka mengatasi pencemaran baik pada sector air maupun lahan. Sebagaimana tujuannya, bentuk kegiatan pengolahan diciptakan dalam rangka mengurangi sampah mulai dari sumber terciptanya sampah itu sendiri. Bentuk pengolahan yang ideal dan selalu didorong adalah pelaksanaan 3R. 3R sendiri adalah akronim dari *Reduce-Reuse-Recycle* yaitu cara pengolahan sampah dengan pengurangan volume sampah. Demi tercapainya harapan tersebut Pengelolaan Sampah telah didukung oleh Peraturan Daerah Kabupaten Purworejo nomor 5 tahun 2012 tentang Pengelolaan Sampah dan Peraturan Daerah nomor 7 tahun 2011 tentang Retribusi Pelayanan Persampahan/Kebersihan. Sehingga warga masyarakat Kabupaten Purworejo terutama penduduk Kecamatan Loano yang menjadi rumah induk TPST 3R harus siap membantu program pemerintah demi terciptanya dan terjaganya lingkungan sehat dan bersih serta menjadikan percontohan bagi daerah-daerah lain, maka dari itu perlu adanya penelitian dan kajian pengelolaan sampah di TPST 3R Tri Guyub Rukun dengan penelitian ini diharapkan suatu sistem yang baik secara teknis maupun secara pengelolaan yang berdampak positif bagi lingkungan dan masyarakat untuk meningkatkan kelayakan area layanan bangunan di masa yang akan datang

Dalam penelitian ini dilakukan analisis menggunakan data seperti hasil pengukuran komposisi dan kuantitas sampah, tahap- tahap pengolahan sampah. Adapun data sekunder seperti jumlah penduduk daerah pelayanan, kuantitas sampah selama setahun terakhir, serta peraturan daerah. Perhitungan kuantitas sampah menggunakan metode *load-count* dan *weight- volume analysis*, sementara perhitungan komposisi sampah menggunakan metode perempatan. Kesetimbangan massa sampah dianalisis menggunakan nilai *recovery factor*.

Hasil dari seluruh analisis ini disimpulkan bahwa volume sampah yang diolah setiap hari di TPST 3R Tri Guyub Rukun adalah 2,47 m³/Hari dengan berat sampah sebesar 886 Kg/Hari Komposisi sampah antara lain PET 12%; PP 10%; EMBRAN 6%; KERASAN 4%; KARDUS 19%;. Sampah kering yang masuk ke TPST 3R Tri Guyub Rukun sebesar 886 kg/Hari. Pengolahan sampah menghasilkan produk bernilai jual PET 101 kg/hari dan residu 9 kg/hari; PP 78,5 kg/hari dan residu 7,5 kg/hari; EMEBRAN 43 kg/hari dan residu 10 kg/hari; KERASAN 30 kg/hari dan residu 6 kg/hari; KARDUS 131 kg/hari dan residu 37 kg/hari

Kata kunci : Analisis Teknis, TPST 3R, Purworejo, Tri Guyub Rukun

ABSTRACT

SHAN LIDO TARUWARDANI, 2022, *Performance Evaluation of Waste Management dor Civil Infrastructure Management and Maintenance Engineering and Environment*

Case Study: Tri Guyub Rukun Trirejo, Purworejo District Waste Recycling Technology. (supervised by Dr.Ir. Sindu Nuranto, MS.)

Why is waste management important? In fact, this management aims to overcome pollution in both the water and land sectors. As the goal, the form of processing activities is created in order to reduce waste starting from the source of the creation of the waste itself. The ideal form of processing and always encouraged is the implementation of 3R. 3R itself is an acronym for Reduce-Reuse-Recycle, which is a way of processing waste by reducing the volume of waste. In order to achieve this expectation, Waste Management has been supported by Purworejo Regency Regulation number 5 of 2012 concerning Waste Management and Regional Regulation number 7 of 2011 concerning Waste/Cleaning Service Fees. So that the residents of Purworejo Regency, especially residents of Loano Subdistrict, which is the main house of TPST 3R, must be ready to help government programs for the creation and maintenance of a healthy and clean environment and serve as a model for other areas, therefore there is a need for research and study of waste management in TPST 3R. Tri Guyub Rukun, with this research, it is hoped that a system that is both technical and management will have a positive impact on the environment and society to improve the feasibility of building service areas in the future.

In this study, analysis was carried out using data such as the results of measuring the composition and quantity of waste, the stages of waste processing. The secondary data such as the population of the service area, the quantity of waste during the last year, as well as local regulations. The calculation of the quantity of waste uses the load-count method and weight-volume analysis, while the calculation of the composition of the waste uses the intersection method. The waste mass balance was analyzed using the recovery factor value.

The results of all these analyzes concluded that the volume of waste that is processed every day at the TPST 3R Tri Guyub Rukun is 2.47 m³/day with a waste weight of 886 Kg/Day. The composition of waste includes 12% PET; PP 10%; EMBRAN 6%; HARD 4%; CARDBOARD 19%;. The dry waste that enters the TPST 3R Tri Guyub Rukun is 886 kg/day. Waste processing produces products with a selling value of 101 kg/day of PET and 9 kg/day of residue; PP 78.5 kg/day and residue 7.5 kg/day; EMEBRAN 43 kg/day and residue 10 kg/day; Hardness 30 kg/day and residue 6 kg/day; CARDBOARD 131 kg/day and residue 37 kg/day.

Keywords: Purworejo, waste recycling technology, technical analysis, Tri Guyub Rukun