

PENINGKATAN TEKNIS OPERASIONAL PENGELOLAAN SAMPAH DI KOTA MALANG

TESIS

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ABSTRACT

The economic growth of Malang Municipality has improved its community's welfare. The improvement of its income is also indicated by the growth of production and consumption activities. In a developing city, waste is one of the most important problems that have to deal with. The increased population and developed capacity of producing goods and services has significantly contributed to the increased amount of waste. This problem has also been depraved by the lack of quality of waste management system organized by the government, the private sector, or the community as well.

Malang, with its 756,982 of population, produces 3,200 m³ waste per day and only 40%-50% of its volume can be carried away. This research focused on the problems of the high rate of waste stacks, inadequate waste operational infrastructure, and inappropriate waste management in service coverage area. Therefore, the city waste management needs to be re-evaluated in many aspects, particularly for technical-operational which includes containing, collecting, and carrying away the waste. Institutional, financial, and social aspects were considered as supporting aspects in this research.

The analysis of the opportunity for improving operational-technical aspect in waste management needs the waste stacks volume forecasting in the year 2003, 2004, and 2005 by using multiplicative decomposition method based on trend and seasonal factors of the gathered data. This research is conducted by descriptive method for assessing the site condition of technical-operational aspect of waste management in Malang Municipality, which includes containing, collecting, and carrying away. Qualitative analysis is carried out for evaluating the gathered data from the site based on the theoretical requirements and criteria. The result is used as initial point for analyzing the opportunity to improve the technical aspect of waste management.

The result of this research showed that for improving the operational-technical aspect, it needs to improve containing process by providing easy-to-move waste containers, separating the organic and inorganic waste and enhancing the waste compartments through the main street sidewalk and city center. It also needs to enhance the number of waste cart from 186 in the year 2003, to 289 in 2004, and 391 in 2005. The Armroll Truck type for carrying away the waste should be enhanced from 40 in the year 2003, to 54 in 2004, and 69 in 2005.

For reducing the waste stacks, it needs separation between organic and inorganic waste at the source and is processed by a composting method. It also needs to encourage the partnership between the government and the private sectors for improving the waste management, recycling processes, and composting methods. Further more, it needs to clarify each institutional responsibility for managing the waste and to socialize the importance of waste management system through the community.