

## Intisari

Sampah Bahan Berbahaya Beracun Rumahtangga (SB3-RT) merupakan sisa produk-produk keperluan rumahtangga yang mengandung bahan-bahan yang bersifat mudah meledak, mudah menyala, korosif, infeksius, reaktif dan atau beracun. Sampai saat ini belum ada sistem pengelolaan SB3-RT di Indonesia termasuk Kabupaten Sleman. SB3-RT masih diperlakukan sama seperti sampah domestik seperti dibakar, ditimbun, dibuang ke sungai, pekarangan, lahan kosong lainnya, dan atau dibuang ke TPA Piyungan. Penelitian ini bertujuan untuk mengkaji: timbulan SB3-RT dikaitkan dengan kategori wilayah, tingkat pendapatan dan pengetahuan Kepala Keluarga (KK); jenis SB3-RT dikaitkan dengan wilayah dan potensi dampak kesehatan; pengaruh pola penanganan sampah terhadap pengurangan potensi dampak lingkungan; kelayakan alternatif-alternatif pengelolaan SB3-RT dan menemukan yang paling optimal untuk diterapkan di Kabupaten Sleman.

Sampah B3 rumahtangga yang dikaji berasal dari 120 sampel rumahtangga yang diambil dengan cara *simple random sampling* pada 4 Kelompok Pengelola Sampah Mandiri (KPSM). SB3-RT yang terkumpul selama 30 hari, dihitung, ditimbang dan dianalisis kandungan B3 serta potensi dampak kesehatan dan lingkungan. Alternatif-alternatif pengelolaan SB3-RT dirumuskan dengan pendekatan *backcasting*, sedangkan untuk memilih alternatif paling optimal digunakan *Multi Criteria Decision Analysis* (MCDA) dengan metode *Simple Additive Weighting* (SAW).

Rata-rata timbulan SB3-RT Kabupaten Sleman sebesar 2,438 gram/orang/hari atau sekitar 2,81 ton/hari. Rata-rata kuantitas timbulan SB3-RT yang dihasilkan di wilayah perdesaan tidak berbeda secara bermakna dengan wilayah perkotaan. Tingkat pendapatan keluarga berhubungan positif dengan timbulan sampah B3-RT pada kekuatan “sedang”. Tingkat pengetahuan KK berkorelasi positif dengan timbulan SB3-RT pada kekuatan “rendah.” Jenis-jenis SB3-RT di wilayah perdesaan tidak berbeda secara bermakna dengan wilayah perkotaan dan sama-sama memiliki semua karakteristik sebagai limbah B3 yang berpotensi menimbulkan keracunan akut dan/atau kronis, kerusakan dan kelainan organ tubuh, gangguan sistem di dalam tubuh, penyakit degeneratif, penularan penyakit menular, kecelakaan, kecacatan, dan kematian. Pola-pola pengelolaan sampah yang dijalankan di Kabupaten Sleman berpengaruh terhadap pengurangan potensi dampak lingkungan: sistem mandiri dapat mengurangi SB3-RT paling besar yaitu 85,71%, diikuti sistem perkotaan (80,30%) dan sistem perdesaan (47,55%). Berdasarkan hasil kajian terhadap aspek peraturan, kelembagaan, teknis operasional, pembiayaan, penerimaan masyarakat dan dampak lingkungan menunjukkan bahwa alternatif-alternatif pengelolaan SB3-RT yang disusun memiliki tingkat kelayakan yang berbeda-beda. Pengelolaan SB3-RT berbasis masyarakat memiliki tingkat kecocokan terhadap kriteria-kriteria dengan nilai total tertinggi, sehingga terpilih menjadi alternatif paling optimal untuk diterapkan di Kabupaten Sleman.

**Kata kunci** : rumahtangga, sampah B3, timbulan, perencanaan, pengelolaan

## Abstract

Household Hazardous Solis Waste (HHSW) is residual products of household that contains materials that are explosive, flammable, corrosive, infectious, reactive or toxic. Until now there is no system of the HHSW management in Indonesia including the Sleman regency. HHSW is just treated the same as domestic waste, i.e. burned, buried, thrown into the river, the yard, the other empty lands, or the landfill. This study aims to assess: HHSW generation associated with location, income level and the knowledge of the head of the family; types of HHSW associated with the category of the region and the potential health impacts; influence the pattern of waste management toward reducing potential environmental impacts; feasibility of HHSW management alternatives and find the most optimal to be applied in Sleman regency.

This research studied the HHSW collected from 120 household samples taken by simple random sampling in four independent waste management groups in Sleman regency. HHSW is collected for 30 days, counted, weighed and analyzed the content of the materials as well as the health and environmental impacts. Alternative HHSW management system formulated with backcasting approach, whereas the selection of the most optimal alternative by Multi Criteria Decision Analysis (MCDA) with Simple Additive weighting method (SAW).

The average HHSW generation Sleman regency of 2.438 gram/person/day or approximately 2.81 tons/day. The amount of waste generated in rural areas is not significantly different with urban areas. Family income level is positively associated with HHSW generation at the power level "medium." Meanwhile, knowledge level of the head of the family is positively correlated with HHSW generation at the power level "low." Types of HHSW in rural areas are not significantly different with urban areas as well as having characteristics that can potentially cause acute poisoning or chronic; organ damage and disorders; disruption in the body system; degenerative diseases; transmission of infectious diseases; accident; disability; death. Patterns of waste management in Sleman regency affect the reduction potential environmental impact, which is the community-based waste management scheme can reduce the biggest HHSW that is 85.71%, followed by the urban pattern (80.30%) and patterns of rural areas (47.55%). Based on the results of the study on regulatory aspects, institution, operational technique, finance, community acceptance and environmental impact showed that the feasibility of alternatives is different. The community-based HHSW management system has a high rating on the criteria of institution, operational technique, finance (economic benefits) and social (public acceptance), and was elected as the most optimal alternative to be applied in Sleman regency in the future.

**Keywords:** household, hazardous solid waste, generation, planning, management.