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Pengelolaan Sampah Kampus untuk Mewujudkan Kampus Berkelanjutan (Sustainability Campus)

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ABSTRAK

Untuk mewujudkan kampus berkelanjutan di Universitas Surabaya langkah awal yang memungkinkan dilakukan adalah menurunkan produksi sampah. Sehingga perlu dilakukan penelitian terkait pengelolaan sampah yang ada di Ubaya. Tujuan dari penelitian adalah 1. Mengetahui komposisi sampah organik ekonomis di fakultas teknik 2. Menentukan jumlah timbulan sampah organik ekonomis di fakultas teknik 3. Menghitung gas rumah kaca yang bisa diturunkan jika sampah organik ekonomis tersebut dikelola. Lingkup perhitungan adalah gas CH_4 yang terbentuk. Metode penelitian yang dilakukan adalah survei timbulan sampah. Survei dilakukan di lingkungan Fakultas Teknik Universitas Surabaya pada gedung TA sampai TS ditambah Gazebo Fakultas Teknik. Pengukuran terhadap sampah organik ekonomis dilakukan selama 8 (delapan hari). Survei dilakukan selama bulan September 2016. Untuk menghitung emisi karbon dari jenis sampah yang disurvei digunakan pendekatan Pedoman Intergovernmental Panel on Climate Change (IPCC). Hasil penelitian menunjukkan bahwa komposisi sampah organik ekonomis di fakultas teknik adalah kertas putih, kertas coklat, kardus, dan kotak minuman. Jumlah timbulan sampah organik ekonomis di fakultas teknik rata-rata per hari sebagai berikut: kertas putih: 5,44 kg, kertas coklat 1,055 kg, kardus 2,51 kg, dan kotak minuman 0,765 kg. Gas rumah kaca (CH_4) yang bisa diturunkan jika sampah organik ekonomis dikelola sekitar 1,14 kg/hari.

Kata kunci: berkelanjutan, IPCC, kampus, sampah organik

ABSTRACT

The first step that possible for Surabaya University (Ubaya) to realize a sustainability campus was waste production reduction. A research related to solid waste management in Ubaya need to be conducted. The aims of the research were 1. To determinate the economical organic solid waste composition in faculty of engineering 2. Estimating the quantity of economical organic solid waste in faculty of engineering 3. Calculating the greenhouse gas that can be reduced by managing the economical organic solid waste. The scope of calculation was CH_4 generation. Research is done by survey of solid waste generation. Survey was conducted at faculty of engineering Ubaya, in TA building until TS building plus faculty of engineering gazebo. The estimation of economical organic solid waste was taken for eight days in September 2016. The calculation of green house emission from solid waste was referred to Intergovernmental Panel on Climate Change (IPCC) 2006 guidelines. The results of the research indicated that the composition of economical organic solid in the faculty of engineering was white paper, brown paper, cardboard, and juice and tea packaging. The average quantity of economical organic waste generated in the faculty of engineering per day were white paper: 5.44 kg, 1.055 kg of brown paper, cardboard 2.51 kg and 0,765 kg of tea and juice packaging. Greenhouse gas (CH4), which could be lowered if the economical organic waste is managed was around 1.14 kg / day.

Keywords: sustainability, IPCC, campus, organic solid waste

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