Studi jejak karbon dari aktivitas di kampus Fakultas Teknik Universitas Indonesia = Carbon footprint study of campus activities at the Faculty of Engineering, Universitas Indonesia

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Abstrak

Walaupun pembakaran hutan menjadi masalah utama tingginya emisi gas rumah kaca (GRK) di Indonesia, terdapat beberapa aktivitas lain yang secara signifikan juga menyumbangkan emisi GRK salah satunya dari kegiatan di lembaga pendidikan tinggi. Belum diketahuinya besarnya emisi GRK dari aktivitas kampus Fakultas Teknik Universitas Indonesia (FTUI), persebaran emisi GRK dari tiap departemen, dan proyeksi emisi GRK hingga tahun 2020 mendorong untuk dilakukan penelitian ini. Emisi GRK dihitung dari tiga aspek, yaitu energi, transportasi, serta barang dan jasa serta proyeksi emisi GRK dihitung dengan tiga metode (linier, eksponensial, dan logaritmik). Hasil analisa menunjukkan bahwa total emisi GRK kampus FTUI terus meningkat dari tahun 2010 sampai tahun 2012 yang secara berurutan memiliki nilai 4.936,90 tCO2eq, 5.370,01 tCO2eq, dan 5.759,86 tCO2eq. Departemen Teknik Sipil menjadi penyumbang emisi GRK terbesar dari hasil proses normalisasi terhadap jumlah mahasiswa dan staf dan emisi GRK pada tahun 2020 diproyeksikan memiliki nilai sebesar 8.934,46 tCO2eq.
<hr>Although forets fires become the main problem of the high greenhouse gas (GHG) emissions in Indonesia, there are several other activities which also contribute significantly, such as activities in the higher education institution. The unknown information of the GHG emissions from activities in the Faculty of Engineering, Universitas Indonesia, the distribution of GHG emissions from each department, and projected GHG emissions in 2020 encourage this research to be conducted. GHG emissions was calculated from three aspects, namely energy, transport, as well as goods and services also emission projection was calculated using three methods (linear, exponential, and logarithmic). The result showed that total GHG emissions of the Faculty of Engineering, University of Indonesia continued to be increased from 2010 to 2012 which subsequently has value of 4.936,90 tCO2eq, 5.370,01, tCO2eq, and 5.759,86 tCO2eq. Department of Civil Engineering contributes the largest GHG emissions based the normalization process of the students and staff and GHG emissions is projected to have a value of 8.934,46 tCO2eq by 2020.