

The purpose of solid waste management in university basing on carbon footprint analysis :
case study in Mae Fah Laung University

Abstract

Inefficient Solid Waste Management (SWM) is an environmental problem that affect to health of citizen and environmental ecology. Appropriate solid waste management involves control of the atmospheric emissions which can improve and increase the efficiency of solid waste management base on environmental friendly idea. This work aims to investigate the existing methods of solid waste management, waste generation and its characteristics within Mae Fah Luang University (MFU), Thailand by surveys. Also GHG emission or carbon emission was calculated. The total carbon footprint of the university's SWM was 246.89 kg CO₂e /day and it was found that unsanitary waste disposal, hardly degradable waste generation and no waste utilization and inefficient waste collection and transportation resulted in the higher carbon emission namely 142.34 kg CO₂e /day, 70.22 kg CO₂e/day and 27.16 kg CO₂e/day, respectively. In order to reduce the carbon emission from the SWM, waste separation, waste utilization and improvement of collection point and transportation routes were proposed and it was estimated that 79% of carbon emission would be reduced after implementation.