

Thesis Title	Development of Carbon Footprint Organization Calculator: Case Study of King Mongkut's University of Technology Thonburi
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Abstract

This study aims to calculate GHG emission and removal from the related activities in King Mongkut's University of Technology Thonburi (KMUTT) during 2011-201 and developed a calculation tool for carbon footprint of KMUTT. The calculation methods were followed the guideline of carbon footprint for organization provided by Thailand Greenhouse Gas Management Organization (Public Organization) or TGO. The activities were divides into 3 scopes: Scope 1 direct GHG emissions from transportation of KMUTT's vehicles, Scope 2 indirect GHG emissions from purchased electricity and Scope 3 other indirect GHG emissions from water supply, office supplies and wastes. The result showed that an average net GHG emission of KMUTT in 2011-2013 was 0.58 tonnes CO₂e/student and staff/year. The major GHG emission came from Scope 2, accounting for 87.65% of the total emissions, followed by Scope 3 (10.50%), and Scope 1 (1.85%). The carbon footprint calculator was then developed as a web application. The results of program testing by survey indicated that the program processed correctly and the satisfaction results were classified as good level. This program can be used to support greenhouse gas emission reduction of KMUTT.

Keywords : calculation tool/Carbon Footprint for Organization/King Mongkut's University of Technology Thonburi (KMUTT)/web application