

KEYNOTE PAPER

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Establishing the Carbon Baseline for University of Malaya Campus for Sustainability Reporting and Monitoring

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ABSTRACT

Sustainability in higher education is trendy nowadays as universities around the world strive to lessen the impact of expanding university activities and operations on the environment. Reporting, assessment and ranking play their part in sustainable campus initiatives in the long term as they measure and record progress for future references, decision making, and investment. Quantitative assessment of activities based on improvements from a baseline condition is particularly needed to aid universities in formulating strategies for carbon reduction measures. University of Malaya (UM), Malaysia's eminent university which is located in the capital city of Kuala Lumpur embarked on a project to establish a carbon emission baseline for its campus in 2012 and 2013. This voluntary reporting programme for carbon information was also in line with the government's commitment to mitigate Green House Gas (GHG) emissions. The application of Low Carbon City Framework and Assessment System (LCCF) methodology in this context was deemed suitable given the university's location, size, heterogeneity of activities and governance which very much resemble a small city. The framework provides carbon equivalent as a result of human activities in a bounded area. University of Malaya opted for the city based approach where assessments were made for four elements within the system which were urban environment, urban infrastructure, urban transport and buildings. This paper inventories the activities in UM Campus in the base year and the potential impact where the assessment is applied. The main objective is to establish the carbon footprint baseline ...

Keywords: Sustainable Campus; Carbon Assessment; Carbon Reporting; Sustainability Reporting; University Malaya; Malaysia

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ESTABLISHING THE CARBON BASELINE FOR UNIVERSITY OF MALAYA CAMPUS FOR SUSTAINABILITY REPORTING AND MONITORING

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Abstract

Sustainability in higher education is trendy nowadays as universities around the world strive to lessen the impact of expanding university activities and operations on the environment. Reporting, assessment and ranking play their part in sustainable campus initiatives in the long term as they measure and record progress for future references, decision making, and investment. Quantitative assessment of activities based on improvements from a baseline condition is particularly needed to aid universities in formulating strategies for carbon reduction measures. University of Malaya (UM), Malaysia's eminent university which is located in the capital city of Kuala Lumpur embarked on a project to establish a carbon emission baseline for its campus in 2012 and 2013. This voluntary reporting programme for carbon information was also in line with the government's commitment to mitigate Green House Gas (GHG) emissions. The application of Low Carbon City Framework and Assessment System (LCCF) methodology in this context was deemed suitable given the university's location, size, heterogeneity of activities and governance which very much resemble a small city. The framework provides carbon equivalent as a result of human activities in a bounded area. University of Malaya opted for the city based approach where assessments were made for four elements within the system which were urban environment, urban infrastructure, urban transport and buildings. This paper inventories the activities in UM Campus in the base year and the potential impact where the assessment is applied. The main objective is to establish the carbon footprint baseline which can be referenced as a comparative, and the abatement target to be achieved (which can be referenced to measure goals). It was estimated that the carbon baseline for UM campus was 10,069.95 metric tons of CO₂ equivalents in 2013. This amount was actually higher than the business as usual (BAU) scenario projected from 2012 figures. The larger proportion of this emission was attributed to traffic and energy and hence their significant contribution in carbon reduction when mitigated.

Keyword: Sustainable Campus, Carbon Assessment, Carbon Reporting, Sustainability Reporting, University Malaya, Malaysia.