UNIVERSITI TEKNOLOGI MARA

URBAN METABOLISM AND THE ENVIRONMENTAL FACTORS AT KUALA LUMPUR, AMPANG JAYA AND SELAYANG

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Project paper submitted in partial fulfilment of the requirements
for the degree of
Bachelor in Environmental Health and Safety (Hons.)

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Declaration by Student

Project entitled **"Urban Metabolism and Environmental Factors at Kuala Lumpur, Ampang Jaya and Selayang"** is a presentation of my original research work. Wherever contributions of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions. The project was done under the guidance of **Miss Farah Ayuni binti Shafie** as Project Supervisor and **Dr. Subramaniam A/L Karuppannan** as Co-supervisor. It has been submitted to the Faculty of Health Sciences in partial fulfilment of the requirement for the Degree of Bachelor in Environmental Health and Safety (Hons).

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Abstract

Urban Metabolism and the Environmental Factors at Kuala Lumpur, Ampang Jaya and Selayang

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Introduction: Urbanization causes the environment of urban areas to be impacted and damaged. From the study of urban metabolism, it emphasizes on the sources and consumption of input resources, and the process within the system together with the production, treatment, and recycling of wastes. The objective of the study is to assess urban metabolism in Kuala Lumpur, Ampang Jaya and Selayang by using Material Flow Analysis (MFA).

Methodology: Through Material Flow Analysis (MFA), the flow of electricity inputs, water inputs, rice, eggs and sugar inputs, carbon dioxide outputs, wastewater outputs and solid waste outputs were examined. Primary data through questionnaire and secondary data from related agencies and bodies were obtained. Any national data obtained were downscaled to smaller regional data.

Results: The study found that electricity bills are not significantly differed between the three areas because residents from the three areas are using home electrical appliances and gadgets despite the difference in urban development. However, water bills and food budgets are significantly differed, due to number of households and city living standard respectively. The difference in total inputs and outputs in the three areas were due to the urban population density.

Conclusion: The electrical consumption of 0.188 kilogram of oil equivalent per capita per day in Klang Valley contribute to CO_2 of 0.455 kilogram per capita per day, 95.32 % of water consumption will be the share of wastewater production and the consumption of 0.38 kilogram per capita per day of rice, eggs and sugar will contribute in the production of 4.5 kilogram per capita per day of solid wastes.

Keywords: *Urban metabolism, material flow analysis, inputs & outputs*