



UNIVERSITI PUTRA MALAYSIA

**EVALUATION OF MUNICIPAL SOLID WASTE GENERATION IN SELECTED
SABAH WATER VILLAGES**

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**EVALUATION OF MUNICIPAL SOLID WASTE GENERATION IN
SELECTED SABAH WATER VILLAGES**

By

FATMA SABARIAH ALIAS

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia,
in Fulfilment of the Requirements for the Degree of Master of Science**

February 2014

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DEDICATION

**Dedicated to those who have contributed to this study
directly or indirectly.**

Thank you.



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the Master of Science

**EVALUATION OF MUNICIPAL SOLID WASTE GENERATION IN
SELECTED SABAH WATER VILLAGES**

By

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February 2014

Chair : Assoc. Prof. Latifah Abd Manaf, PhD

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Life in the estuary and the beach is a unique settlement patterns in the history of Malaysia. Sabah is well known for its water village settlement that built on very high wooden pillars in estuarine and coastal water area. However, nowadays solid waste has become a serious problem especially in water village where the solid waste has stranded at the surrounding of the village area. Thus, the aim of this study is to evaluate municipal solid waste generation in the selected water villages in Sabah. The solid waste evaluation conducted at three different water villages which are Kampung Tanjung Batu Laut, Tawau; Kampung Tanjung Aru, Kota Kinabalu and Kampung Sim-Sim, Sandakan. There are about 150 households involved in solid waste generation and composition study while total of 242 respondents were involves in the survey study. Total solid waste generation was 1519.30 kg which the solid waste generation rate per household was 0.29 kg/person/day respectively. Almost 48% of respondents have discharge directly their waste into the sea. This is because by using a severity index the average of respondent knowledge is 77% but only 48% of respondent aware on the proper way in handling the solid waste. Furthermore, the results from the linear model revealed that attitude have significant relationship which influence the solid waste generation. Hence, the water villages should have an effective solid waste management in order to reduce bad impact to the environment and public health.

Keyword: water village, solid waste, waste generation, solid waste management, attitude

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk Ijazah Sarjana Sains

**PENILAIAN PENJANAAN SISA PEPEJAL DI KAMPUNG AIR SABAH
YANG TERPILIH**

Oleh

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Kehidupan di muara dan pantai adalah pola penempatan yang unik dalam sejarah Malaysia. Sabah terkenal dengan penempatan kampung air yang dibina di atas tiang kayu yang sangat tinggi di muara dan kawasan pesisir pantai. Walau bagaimanapun, pada masa ini sisa pepejal telah menjadi satu masalah yang serius di mana sisa pepejal telah terapung di sekitar kawasan kampung air. Oleh itu, tujuan kajian ini adalah untuk menilai tahap penjanaaan sisa pepejal di kampung-kampung air yang terpilih di Sabah. Penilaian sisa pepejal telah dijalankan di tiga buah kampung air yang berbeza iaitu Kampung Tanjung Batu Laut, Tawau; Kampung Tanjung Aru; Kota Kinabalu dan Kampung Sim- Sim; Sandakan. Terdapat kira-kira 150 isi rumah terlibat dalam kajian penjanaaan sisa pepejal dan komposisi manakala sejumlah 242 responden terlibat dalam kajian soal selidik. Jumlah penjanaaan sisa pepejal adalah 1519,30 kg di mana kadar penjanaaan sisa pepejal bagi setiap isi rumah adalah 0.29 kg/orang/hari masing-masing. Hampir 48% daripada responden telah membuang sisa mereka ke dalam laut. Berdasarkan indeks severiti, purata pengetahuan responden adalah 77% tetapi hanya 48% responden yang tahu mengenai cara pengendalian sisa pepejal yang betul. Tambahan pula, keputusan daripada model linear mendedahkan bahawa tingkah laku mempunyai hubung kait yang signifikan dengan penjanaaan sisa pepejal. Oleh itu, kampung-kampung air perlu mempunyai pengurusan sisa pepejal yang efektif untuk mengurangkan kesan buruk kepada alam sekitar dan kesihatan awam.

Kata Kunci: kampung air, sisa pepejal, penjanaaan sisa, pengurusan sisa pepejal, sikap

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Thank You.



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This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the Master of Science. The members of the Supervisory Committee were as follows:

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