

Multiple Criteria Decision Aid: Municipal Solid Waste Management in Malaysia

Santha CHENAYAH

VCC - 10317

Lecturer,
CHENAYAH, Santha, University of Malaya, Department of Economics,
Faculty of Economics and Administration

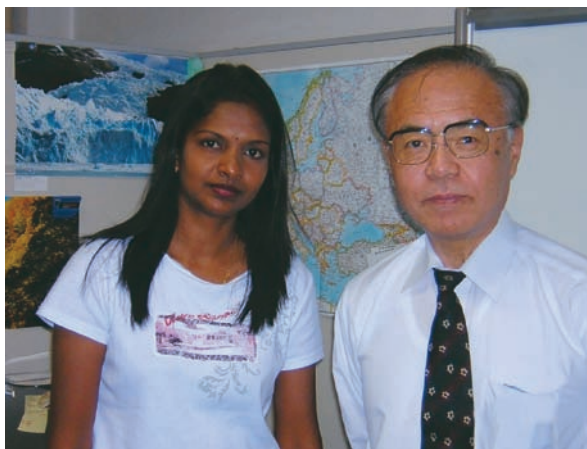
Japanese Advisor : Eiji TAKEDA
Professor, Osaka University

Recycling is a relatively new exercise in Malaysia. Even though recycling has been introduced years back, lack of public awareness caused a slowdown in the progress of recycling exercise. Lack of sufficient recycling facilities or inappropriateness of the facilities' location contributed further to the slowdown. Presently, about 19,000 tonnes (approaching 20,000 tonnes) of solid waste are being discarded daily. The Ministry of Housing and Local Government set a recycling goal to be 22% by 2020. In Malaysia, research is being done vastly on recycling but very few related to multicriteria.



At Work in the office : Graduate School of Economics, Osaka University

This thesis is concerned with a new multiple criteria preference model based on eigenvector in the case where the decision maker's underlying preference structure is a pseudo-order and its application to the evaluation of various municipal solid waste (MSW) recycling strategies in Subang Jaya, Malaysia. The latter attempts to gain an insight into the successfulness of recycling exercise among residents of Subang Jaya in line with the government recycling target. Since the evaluation of various strategies (consisting of awareness creation and increasing the recycling facilities) involves inherently qualitative criteria and imprecise data, the preference structure of the decision maker is assumed to be a pseudo-order. Therefore, this new multiple criteria preference model is used to evaluate the overall performance of recycling activities in the case of Subang Jaya.



With Professor Dr. Eiji Takeda, Japanese Supervisor : Graduate School of Economics, Osaka University

From the outranking analysis

using eigenvector, it clearly states that in order to increase recycling rate to 22% by 2020, Subang Jaya Municipal Council (MPSJ) should focus not only on increasing the facilities but on awareness creation too. In fact awareness creation should be given utmost attention in order to create the civic-mindedness among the residents. From our study, it can be seen that awareness creation on itself can increase the recycling rate of MPSJ. However, awareness without accessibility to the facilities is not a rational thought. Rational is to increase both facilities and awareness simultaneously.