

Solid waste management: Analytical Hierarchy Process (AHP) application of selecting treatment technology in Sepang Municipal Council, Malaysia.

ABSTRACT

The main issues with solid waste management today are to identify and select the most appropriate solid waste treatment technologies as well as disposal method in selected areas. However the decision making process is getting more complicated especially dealing with its cost efficiency. Thus, the Analytical Hierarchy Process (AHP) was chosen to use as tools to facilitate the decision making task. It is a method developed to support multi-criteria decisions, effective and practical approach that consider complex and unstructured decision. One model was developed as General Hierarchy Structure Model (GHSM) for selecting an appropriate solid waste treatment technology. The models was structured into hierarchy consists of goal, criteria subcriteria and alternatives. Based on political support, technical expertise, environmental impact, market potential, community involvement and cost criteria, GHSM will give priority to recycling, composting, incineration or combination of technologies. The case study in Sepang Municipal Council, have shown that the combination of recycling and composting technology is the best alternative and suitable in Sepang area.

Keyword: Solid waste management; Analytical hierarchy process; General hierarchy structure model.