

Jitratee Maneesai 2011: Analysis of Quantity and Composition of Solid Waste for Solid Waste Management in Chet Sao Noi National Park, Saraburi Province. Master of Science (Environmental Technology and Management), Major Field: Environmental Technology and Management, Department of Environmental Science. Thesis Advisor: Associate Professor Patana Anurakpongsatorn, D.Tech.Sc. 168 pages.

The objective of this study was to analyse the quantity and composition of solid waste for solid waste management in Chet Sao Noi National Park, Saraburi Province. Data collections were carried out for 6 months: low season (July-September 2010) and high season (November 2010-January 2011). The study aimed to investigate the amount of solid waste, average generic rate of solid waste, physical and chemical characteristics. Descriptive statistical analysis was applied. It was found that the amount of solid waste generated during low and high seasons were 445.00 – 809.10 and 310.61 – 1,255.93 kg/day. The average generic rate of solid waste was 0.20 kg/person/day. Moisture content was 22.07%. Recycleable solid waste generated during high season was 768.29 kg (16.37% of total solid waste). The major composition of solid waste was food waste (53.77%). Plastics, glasses, and papers were 29.49, 7.23, and 3.71%, respectively. Bulk density was 0.14 kg/L. The chemical characteristics indicated that incineration were suitable for solid waste disposal due to high volatile solids (84.13-88.73%) and low ash content (11.27-15.87%). Having low C : N ratio (10.54-11.15), if composting food waste is one option, addition of carbon portion is also needed. The result from this study suggests that solid waste management should be done at the collective site by national park staff and visitors by separating solid waste into 3 types: decomposable solid waste, recycleable solid waste, and general solid waste. Food waste could be composted with tree leaves, branches, or dry grasses and used as fertilizer. This would reduce the amount of solid waste up to 70.14%.

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