

An economic assessment of urban solid waste recycling programmes (composting): A case study

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Abstract

In the entire area of waste recycling, composting emerge as the most widely applicable process for handling diverse wastes. Hambantota and Weligama urban councils have started two compost plants in 2006, as a solution of environmental pollution caused by open dumpsites. On the other hand, composting and organic farming were good examples for the projects which yields positive externality. The main objectives of this study were to carryout the economic assessment of recycling projects including monetary value of three identified externality effects, (Positive externality of improved garbage collection system, positive externality of reduction of health hazardous due to avoidance of synthetic chemicals, positive externality of reduction of environmental and health hazardous of the open dumpsite) and to suggest appropriate techniques to improve the current standard.

Data were collected from eighty households surround both recycling project sites and fifteen pupils from the school just opposite the composting project - Weligama. To measure the effectiveness of the two composting projects in solving environmental and health problems, Wilcoxon sign rank test was applied. Results of the study revealed statistically significant associations between number of family members and amount of waste generated per day, and participation for the awareness programme and waste sorting practices related to both sites. There was no association between level of education and waste sorting practices, in either of sites. Bad odour, spreading of flies, spreading of digestive diseases and difficulties due to large animals (elephants) were the main problems created by the open dumpsites. There was a significant reduction in bad odor, spreading of digestive diseases and spreading of flies except difficulties caused by large animals. Results of the conventional B/C indicated that both projects have generated net losses per month. But, the net social return was considerably higher than the normal economic return (Rs 765,913/month in Weligama and Rs 657,900./month in Hambantota). Based on this study it was concluded that Urban composting projects yield more benefit to the society than visible economic return. It is recommended to promote such activities islandwide, through subsidizing.

Keywords: Economic Assessment, Urban Solid Waste, Recycling, Composting