

Environmental and socio- economic impacts of solid waste disposal practices: A case study from Gohagoda dumping site

Extended Abstract

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Background

Waste has been a major environmental issue everywhere since the industrial revolution. Along with the waste from home, school and other public places, there are waste from hospitals, industries, farms and other sources. Disposal of solid waste is a major environmental problem in Sri Lanka at present and has become a national issue (Bandara and Hettiaratchi, 2010). Municipal solid waste management has brought out a severe attention due to the problems caused to health and environment. Growth of industries, urbanization, and increase in population has added solid waste problems to the country over the past few years (Herath *et al*, 2015). Kandy is the capital of central province in Sri Lanka. But the daily solid waste collection within the city limits is around 100 tons. Basically it belongs to the Wet Zone (Wijerathna *et al*, 2012). Gohagoda dump site is one of the municipal solid waste disposal sites. It has decades of waste collected from Kandy district. Open dumping of Municipal Solid Waste is one of the most important environmental problems in Sri Lanka. This study examines the Environmental and socio- economic impacts.

Objectives

The general objective of this research was to study of the environmental and socio economic impacts of waste disposal practices in Gohagoda dumping site. Also the specific objectives of this study were to study the waste disposal practices in Gohagoda dump site, to identify the types of waste in Gohagoda dump site, to analyze the people's perceptions about the Gohagoda dump site and propose the waste management strategies for Gohagoda dump site.

Methodology

30 families in Gohagoda GN division were selected randomly for questionnaire survey as the sample.

Questionnaire, Field observation, Informal and Formal interviews were used to obtain primary data and books, reports, maps, research papers used to collect secondary data and used graph, charts and maps as data presentation method.

Results

Kandy does not have a proper solid waste disposal system thus collected solid wastes are dumped on to the Gohagoda dumping ground. The Gohagoda solid waste dump Site adjoins 'Mahaweli Ganga'. There is no good leachate treatment process that leachate directly going down to Mahaweli River. Landfill leachate generation is a serious environmental problem associated with open dumpsite. Landfill leachate is highly contaminated with different types of toxins. Another issue is waste transportation. Waste fall of open vehicles and not enough workers direct waste contact can cause health issues to workers. They should be provided with uniforms and protective clothing. There are several types of waste such as polythene, plastics, paper, glasses etc. The polythene and empty tins become the feeding ground of mosquitoes and Dengue like diseases are the result of that. Some animals eat polythene and can die and the bad smell of their carcass has made the environment spiny. Also it badly affects the scenic beauty of the area.

Conclusion and recommendation

In Gohagoda landfill site, there is no proper waste management system. It has no good waste management process implemented successfully. According to the survey, government should promote good waste management process and good waste water purification plants. Various types of awareness programs, resettlement program can be implemented for affected people in the area. Finally, waste management process of Kandy Municipal Council and public awareness programs must be improved successfully. Thus it'll help to create beautiful and healthy city and also can rehabilitate Gohagoda landfill site as good and healthy site.

Key Words: Solid, Waste Management, Pollution, Open Dumping, leachate

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