

Environmental health issues associated with disposal of municipal solid waste in Kurunegala

“Municipal Solid Wastes (MSW)”, is one of the serious environmental issues in the Kurunegala urban area and is a result of rapid urbanization, economic and infrastructure development activities and population growth. Currently, unplanned and improper ways of dumping of solid waste have become the most significant environmental issue. The absence of a proper management of waste has a severe impact on the environment and human health. The most common practice in handling municipal waste is open dumping without any precautionary measures, which is a great threat to the environmental health. A significant variance could be seen between diseases, distance and directions around the garbage dumping site.

The Kurunegala MC dumps 75 tons of solid wastes per day (MoE, 2005), collected twice from its territory and transported to the dumping yard at Sundarapola (2 km from Kurunegala City). The area of the dumping site is 12 acres. The site is high with rock type ground and it is slightly sloping towards the western direction. The northern part of the site consists of forest land. The open dumping and open burning of solid wastes are the present disposal methods which are not acceptable from an environmental point of view. These methods create a very serious health hazard to the area. The residents close to the dumping site (0-500 m) are the most affected and they are compelled to breathe polluted air with a nauseating smell of decomposed carcasses of animals.

Considering the above, this study is designed with the prime objectives of identifying the environmental and health effects of the Municipal Solid Waste dumping site and to recommend effective managerial measures to safeguard its environmental health in a sustainable manner.

The data were collected through a questionnaire survey, observations, formal interviews and discussions with individuals and officials of the area. The study area was divided into three strata, based on the distance from the solid waste dumping site. The samples of households were selected randomly from each strata. The stratified random sampling technique was used to collect household information. Secondary data also were used for the study. The SPSS statistical package was used to analyze the data and the two-way ANOVA technique was applied to obtain the required information to analyze the raw data and to evaluate the results.

The results obtained from the study indicated that the different types of health issues and its effects vary based on distance, direction and geographical factors. Accordingly, 58.2% of the people in the first strata, 30.1% in the second and 11.7% in the third strata are affected by various types of diseases. This shows a negative relationship between human health effects and distance from the site and the first strata (0-500 m) is most vulnerable for human lives.

Key words: Municipal solid waste, Open dumps, Environmental effects, Human health, Municipal solid waste management