

## **A Case Study of Rapid Urbanization and Urban Environmental Problems in Weligama: Solid Waste Problem**

**Munfika Muhammed**

Department of Geography, University of Colombo

As a result of rapid urbanization and population growth, the Weligama Urban Council is experiencing an increasing spread of unrecognized waste dumps. Nearly 74% of people are facing negative consequences of this problem. The main objective of this study is to identify the main dimension of solid waste problem in order to provide a suitable solution to improper waste disposal. Questionnaire survey, interviews and observations were carried out to collect primary data, using simple random sampling method. In addition, secondary data were also used. Data were analyzed by SPSS and MS-Excel. According to the spatial distribution, Sagananda, Kohunugamuwa, New Street, Pelana, and Kapporathota were identified, where this problem was prevalent. According to the data, 21% of residents of New Street, are suffering from this problem whereas 19% of residents in Sangananda share a similar fate. In Kohunugamuwa the percentage is 17 and Pelana, it is 16%. For 20% of residents of Kapporathota the situation is similar. Scattered or dumped garbage often ends up in drainage channels and other waterways, where it may cause pollution and can disrupt the water-flow. This may cause flooding during periods of rainfall, and cause stagnant pools to be formed afterwards, which again form a perfect habitat for various disease-vectors. The number of Dengue patients increased from 16 in 2001 to 56 in 2011. Rainwater percolating through the dump (leachate) ends up polluting surface waters and the groundwater table. Water wells are contaminated due to the pollution of the ground water in this study area. The leachate has a high Biological Oxygen Demand (BOD), and its release into the environment will lead to eutrophication. The leachate may also contain significant amounts of heavy metals, PAH's and other toxic chemical residues normally present in dumped waste. Finding lasting solutions to this issue has become a difficult task due to improper waste disposal habits, lack of awareness on the part of the public and the government, and negative attitudes towards waste management strategies. The research suggests that a collaboration effort on the part of the government and the public is required to successfully overcome this issue. Solutions such as using waste to make compost, recycling waste, sustainability organizing and implementing the waste collection and disposal process are recommended.

**Keywords:** Population growth, Solid waste problem, Rapid urbanization, Spatial distribution