

A Geographical Perspective of the Health Issues Related to the Disposal of Urban Solid Waste in Sri Lanka

Fareena Ruzaik

Department of Geography, University of Colombo

Solid waste disposal is a major threat to the global environment, especially in urban areas of developing countries. Open dumping and burning were common practices, followed by most of the developing nations to dispose solid waste. Therefore, this has also become an acute issue in Sri Lanka, especially for urban inhabitants. The major reasons for this are population density, high volume of waste generation and lack of bare land in urban areas. The waste related issues directly affect the land, water and air, causing multifarious human health risks. This study was designed with the objective of identification and comparison of health issues, caused by the urban solid waste disposal methods, according to the geographical variations of urban areas in Sri Lanka. The prominent urban areas (Colombo, Kandy, Kurunegala and Badulla) from wet and intermediate agro-ecological zones have been incorporated into this study, based on their geographical features. Each study area was segregated into three rings, according to the distance from the dumpsite. 867 sample households were selected, using a stratified random sampling technique. The results revealed that the following total health related issues of all four study areas; Colombo site represented 45.6%, Kandy-21.4%, Badulla-17.6% and Kurunegala-15.4%. The study identified 23 types of common diseases in all selected sample areas, but its volume and the risk level are varied, based on its geographical and socio-economic factors of each study area. This study found that 56.7% of female population has been victimized with different types of health issues, than the males (43.3%). Similarly, 65.5% of children, 75% of waste pickers and 70% of waste collectors/vehicle drivers have also been affected by multiple health problems. The high prevalence of health issues (53.8%) in all four study areas have been recorded in the first ring (0-500m), displaying a decreasing trend from its first to the last ring from the dump site (1000-1500m-14.1%). Considering the above results, this study recommends central point for managing, monitoring and controlling process of all environmental related activities. Further, this study strongly believes on institutional corporations, delegation of authorities, micro/macro level approaches, stakeholders' participation, sufficient financial requirements for efficient solid waste management. Further strengthening of existing institutional, legal and policies/plans with regard to solid waste management, proper site selection process and waste minimization at sources are recommended. This can be more effective, through an integrated solid waste management system, consolidating all related factors of waste management hierarchy into a center point.

Keywords: Agro-ecological zone, Urban solid waste, Geographical variations, Topographical features, Stakeholders' participation