

# **Challenges of Plastic Waste Disposal in Ghana: A Case Study of Solid Waste Disposal**

**Sites in Accra**

**Ackah, Ruth**

**2010**

## **ABSTRACT**

Municipal solid waste collection, transportation, treatment and disposal have been a major challenge faced by authorities involved in waste management. The concern here is how to sustainably manage the waste generated, as the population increases. The plastic waste in the Municipal waste stream is increasing, since, it is the most preferred, affordable, very easy to carry, durable and less expensive as compared to glass and metals in the daily household use. These plastics are indiscriminately discarded with the exception of hard plastics that are been removed by scavengers and the rest find themselves in gutters, drainages, water bodies, littering the whole environment. The plastics that end up at the final disposal site, take a longer period of time to degrade. This study takes a look at the environmental, health and socio-economic challenges of plastic waste at the Mallam and Oblogo waste disposal sites of the Ga district of Accra- Ghana. Attempt by the Metropolitan Assembly to solve the problems has failed due to among others inadequate machinery, education, weak legislation and insufficient data on waste stream and degradation. Data on waste composition indicates values of 39% organic waste, 21% plastic waste, 8% paper, 7% metals, 7% textile waste, 6% glass, 10% inert materials and 2% other waste carried out at the ongoing Mallam waste disposal site. The old waste disposal site had no organic waste in the waste composition due to decomposition. There was increase in concentration values of elements in soil and lechate samples such as Al, K, Fe, Mg, Mn and Cd, Cr, Co Pb and Hg indicate values below the detection of limit. Indeed, increasing percentage of plastic waste in the waste stream is a major management problem that can be addressed by the strong enforcement of rules and regulations, education and awareness creation, encouragement of source separation, reduction, re-use, energy recovery and recycling of plastics.

## **SUPERVISORS**

**Professor Carboo, Derick**

**Dr. Nyame, Frank K.**

**Professor Abdul, Brimah**