

Title of Article Vehicular Pollution of Soils in Southwest Nigeria: A Case Study

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Abstract: Rapid increase in the use of vehicles for daily transportation coupled with lack of emission standards has raised serious concerns about vehicular pollution in developing nations. The contribution of this vehicular emission has been found to constitute one of the major sources of soil pollution which are responsible for certain diseases that have lethal effects due to their accumulation and longtime retention by plants, animals and human beings. The objective of this study was to investigate the influence of vehicular emission accumulation of heavy metal such as copper, cadmium, lead, manganese, nickel, chromium, zinc, iron and sulphate, and determine their impact in the soils of selected locations in Lagos and Ogun States, Southwest Nigeria. Locations considered were motor parks, garages, roadsides and unrestricted parking lawns. These locations were selected due to the high concentration of traffic with other selected locations to act as control sites. Samples were collected in all the locations over a period of 3 months. The concentrations of heavy metals in the samples were determined by Perkins Elmer 3300 atomic absorption spectrometer. The concentrations of the heavy metals in all the locations were within safe limits and below that of the European Union (EU) regulatory standard with the exception of nickel and chromium, 51.39mg/kg and 347mg/kg which were higher than 50mg/kg and 100mg/kg respectively, stipulated in the EU standard for nickel and chromium concentration in safe soil. The implication of the study is that soils along the roads which over time are washed by erosion into the local areas, if used for farming or preservation of agricultural produce may pose serious health hazards. It is therefore suggested that enhancement of fuel quality and the placement of emission standards to mitigate the impact of vehicle emissions on human health be adopted.