### conferenceseries.com

12<sup>th</sup> International Conference on

# **ENVIRONMENTAL TOXICOLOGY AND ECOLOGICAL RISK ASSESSMENT**

October 19-20, 2017 | Atlanta, USA



## Olurominiyi O Ibitayo

Texas Southern University, USA

#### Agricultural Pesticide Use in Developing Countries: Bane or Blessing?

The need to boost agricultural productivity has prompted developing countries to aggressively pursue through subsidies, tax discounts, and exemption from import tax, the use of agriculture inputs such as fertilizers and pesticides. Pesticides are designed as "poisons" to destroy pests but the capacity to "destroy" often extends to adverse human health and environmental effects. Sources of pesticide poisoning include occupational, whereby vendors repackage pesticides in small sachets and sell in open markets. Also, pesticide poisoning may be accidental through drifts from sprayed fields, early reentry to sprayed fields, and unknowingly eating animals or crops that contain pesticide residue. Documentation include the hospitalization of a cocoa farmer's family after eating vegetable undergrowth of coca trees sprayed with lindane, and the reported cases of vomiting due to the consumption of noodles that contains residues of carbofuran in Nigeria. Some of the factors that have been identified as contributors to pesticide poisoning in developing countries include; lack of the use of Personal Protective Equipment (PPE) such as gloves, nose and face masks, overalls and shoes, or the use of ineffective items such as covering the face with paper masks, the use of leaking equipment or domestic utensils for mixing pesticides, and the use of empty pesticide containers to store water for humans and domestic animals. Others include the extensive lack of knowledge about the adverse effects of pesticides, and lack of regulations regarding the importation, labelling, use and disposal of pesticides, and the lack of enforcement of any existing regulations. Regarding the latter, pesticides that have banned or placed on restricted use in industrialized countries due to the pesticides' toxicities are often imported into developing countries. Recommendations include establishing public education programs emphasizing the adverse impacts of these pesticides, training and certification of pesticide applicators, and the provision of PPE free or at subsidized rates. The contention in the literature that PPE are "completely unrealistic for the hot tropical climate" especially of sub-Sahara Africa is unfounded and misleading. Sub-Sahara Africa is not monolithic both as a region or as individual countries. The temperature ranges within the region are applicable to many industrialized countries that use PPE. Finally, it is necessary to establish and implement appropriate policies for importation, labelling, use and disposal of pesticides.

#### Biography

Olurominiyi O Ibitayo is working as a Professor in Barbara Jordan-Mickey Leland School of Public Affairs, Texas Southern University, Houston, Texas. He received his PhD in Public Administration at Arizona State University. His research interests are in the areas of environmental and occupational risk assessment/analysis, environmental justice, neighborhood-level research and emergency management. His publications have appeared in reputable journals such as *Risk Analysis, Journal of Hazardous Materials, Journal of Emergency Management and HortScience*.

ibitayo\_oo@tsu.edu

#### Notes: