The history of electronic waste at Agbogbloshie, Accra, Ghana.

Kwarteng, L. (Dr)[1,2] Arko-Mensah, J. (Dr)[1], Amoabeng Nti, A. A. (Dr)[1,5], Takyi, S. A (Dr)[1], Acquah, A. A. (Dr.)[1,6], Botwe, P. K. (Dr)[1] Tettey, P. (Dr)[1] Dwomoh D. (Dr)[1] Basu N. (Prof)[4], Batterman, S. (Prof)[3], Robins T. (Prof)[3], Fobil J. N. (Prof)[1]

1. Department of Biological, Environmental & Occupational Health Sciences, School of Public Health, University of Ghana
2. Biomedical and Public Health Research Unit, CSIR-WRI
3. Environmental Health Sciences, School of Public Health, University of Michigan, USA.
4. Faculty of Agricultural and Environmental Sciences, McGill University, Montreal, Canada
5. University Hospital - Legon, University of Ghana
6. Department of Physiotherapy, School of Biomedical and Allied Health Sciences, University of Ghana

Email address of Presenter: lawkwarps@yahoo.com

Abstract

Agbogloshie e-waste site has existed for nearly 27 years with a current workforce of ~4,500-6,000 workers, often untrained individuals often learning the trade on the job. This site started as a scrap market where various services such as vehicle repair, spare parts trading, welding, auto mechanics, and tire servicing were rendered to support operations of trucks supplying foodstuffs to the yam market on the edge of the korle lagoon. This scrap market expanded over time and readily transitioned into an informal e-waste recycling hub as many young males from the northern sector of Ghana, escaping the intertribal conflicts and unfavorable agricultural conditions as well as seeking better livelihoods in Accra, enrolled on this job.

Rapid growth in informal electronic waste recycling activities (delivery and receipt, sorting, manual dismantling and open burning) at Agbogbloshie, Ghana, has been propelled by a lack of stringent enforcement policies and cost-effective technologies to properly manage e-waste recovery/ recycling. Usage of rudimentary techniques in recovering valuable materials and associated pollutant emissions have not changed much even after the passage of the Hazardous and electronic waste control and management bill in 2016. Pollutants emitted, especially from the black plume observed from the open e-waste burning, are destructive to the environment and resources. Worker exposures to these hazardous working conditions and pollutants in various environmental media at the site predisposes workers to several health effects. Exposures among e-waste workers over the years have been assessed mainly through cross-sectional studies estimating trace metals and organic pollutants concentrations in environmental (soil, air, fish, sediment, water) and biological (blood, serum, urine, hair samples) samples. Worker health studies have reported increased risk of respiratory symptoms and lung function decline among workers.

Findings from these studies have been useful in implementing health promotion campaigns and has also encouraged stakeholders to build a wire stripping workshop, a clinic post and a technical training support centre for the e-waste workers.