Contribution ID: 7

Air Pollution and Health Impacts

Tuesday 7 November 2023 16:15 (15 minutes)

Air Pollution and Health Impacts

The onset of Covid-19 lock-downs support the fact that man-made activities greatly contribute to air pollution (Hammer et al. 2021). Exposure to major air pollutants such as particulate matter, ground-level ozone, NO2, SO2, CO, etc, is estimated to cause millions of deaths annually (Neira and Prüss-Ustün 2016; WHO 2023), and the burden is more pronounced in low- and middle-income countries. A few studies have been conducted on the quality of air in Uganda (Kirenga et al. 2015; Onyango et al. 2019), mostly concentrated on urban areas and measurements done in a short period of time due to limited resources. Our project aims at comparing some of these in situ measurements with satellite-derived measurements and identify possible trends in the data. This will enable us model and make predictions as well as engage policy-makers, create public awareness, based on our research findings.

References:

Hammer, Melanie S. et al. 2021. "Effects of COVID-19 Lockdowns on Fine Particulate Matter Concentrations." Science Advances 7(26): 1–11.

Kirenga, Bruce J. et al. 2015. "The State of Ambient Air Quality in Two Ugandan Cities: A Pilot Cross-Sectional Spatial Assessment."IJER&PH 12(7)

Neira, M., and A. Prüss-Ustün. 2016. "Preventing Disease through Healthy Environments: A Global Assessment of the Environmental Burden of Disease." Toxicology Letters 259: S1.

Onyango, Silver, Beth Parks, Simon Anguma, and Qingyu Meng. 2019. "Spatio-Temporal Variation in the Concentration of Inhalable Particulate Matter (PM10) in Uganda." IJER&PH 16(10).

WHO. 2023. World Health Statistics 2023: Monitoring Health for the SDGs.

Author: Dr MUTABAZI, Tom (Mbarara University of Science and Technology)

Presenter: Dr MUTABAZI, Tom (Mbarara University of Science and Technology)

Session Classification: Air Sensors and Air Quality Monitoring

Track Classification: Air Pollution & Health Effects