

1.188 Using citizen science approach to assess personal exposure to air pollution in a low income neighborhood: The case of Nairobi..

Early Career Scientist

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Abstract:

Air pollution is a major environmental and health challenge globally. The primary pollutant of concern for human health is fine particulate matter (PM). It is estimated that PM pollution is associated with 670,000 premature deaths annually in Africa, divided roughly equally between indoor and outdoor exposures (Forouzanfar et al., 2015). Scientific studies on environment in general and air pollution in particular rarely inform policy in developing countries, especially in Africa. Similarly, many studies on air pollution do not engage with local communities, both of which are necessary for research to inform policy action and promote citizen awareness. Our study was designed to deal with both of these challenges by creating a research-policy platform.

This study presents findings from a personal exposure assessment campaign conducted for a period eight weeks in a low income settlement in Nairobi. We use a citizen science approach working with trained local members of the community to collect data on PM pollution from indoor and outdoor sources using portable particle counter (The Dylos DC1700) while at the same time keeping a detailed journal of daily activity diary. We also present how our study engaged local communities to create awareness on the challenges of pollution, and how we have engaged with policy makers at the city and national level to inform policy actions and decisions.

Key Words

Air Pollution, Health, Particulate Matter, Citizen Science, Kenya,