Improving the quantitative evidence base for air quality management in a data scarce region: perspectives from South Africa

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Global assessments estimate large impacts from exposure to poor air quality in many countries in Africa. However, these estimates have large uncertainties due to insufficient information, which often stems from the lack of ground-based measurements, as well as the lack of integration of local knowledge. The combined effect of insufficient data and uncertainties impacts not only the understanding and quantification of air pollution levels and impacts, but also affects the understanding of the climate. Many air pollutants have an impact on the climate as short-lived climate forcing pollutants (SCLPs; e.g. particulate matter, ozone).

Available monitoring data across South Africa show that ambient air pollutant concentrations often exceed South Africa's National Ambient Air Quality Standards (NAAQS), especially for PM and ozone, and have not been improving. A spatially and temporally heterogeneous mix of pollutants with varying concentrations is present, especially in the large urban areas, which makes effective air quality management a difficult task. This presentation will highlight our work that has focused on improving the evidence base for effective air quality management in South Africa despite the scarcity of available data.d.