



Impacts of black carbon and co-pollutant emissions from transportation sector in Mexico City

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Black carbon is one of the most important short-lived climate-forcing agents, which is harmful to human health and also contributes significantly to climate change. Transportation is one of the largest sources of black carbon emissions in many megacities and urban complexes, with diesel vehicles leading the way. Both on-road and off-road vehicles can emit substantial amounts of harmful BC-containing particulate matter (PM) and are also responsible for large emissions of carbon dioxide (CO₂), carbon monoxide (CO), nitrogen oxides (NO_x), and many other co-emitted volatile organic compounds (VOCs). Regionally, black carbon emissions contributions from mobile sources may vary widely depending on the technical characteristics of the vehicle fleet, the quality and chemical properties of the fuels consumed, and the degree of local development and economic activities that foster wider and more frequent or intensive use of vehicles. This presentation will review and assess the emissions of black carbon from the on-road and off-road transportation sector in the Mexico City Metropolitan Area. Viable mitigation strategies, including innovative technological alternatives to reduce black carbon and co-pollutants in diesel vehicles and their impacts on climate, human health and ecosystems will be described.