

1.144 Impact of Air Pollution on School Children in Dhaka city, Bangladesh.

Early Career Scientist

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Abstract:

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Air pollution contributes a significant threat to health in worldwide. Atmospheric aerosol particulate Matters (smaller than PM 2.5) play an important role in air quality. Inhalation of fine particulate matter (PM 2.5) is associated with lung injury as they can enter into the human system. The aim of the present study is to investigate the mass contribution of particulate matter in different sizes (PM 1.0 to PM 10) and also gases (NO_x , SO_x , CO, TVOC) in schools campus and correlating with children health especially lung function. Sampling locations (Mughda bisso road, Kakrail, Fuller road, Jatrabari, Ahmadhbagh, Motijheel, Gulshan, Mirpur, Nilkhet and Khilgaon) were selected by covering the whole Dhaka City. In each school we have selected 20 children aged between 8-10 years. The lungs function of each student will be recorded using Peak expiratory flow meter . Other health conditions will also be recorded for understanding the total impact of air pollution. Real time PM 1.0 , PM 2.5 PM 4.0 , PM 10 and TSP concentrations will be measured using Aerocet 531S, and NO_x , SO_x , CO_x , TVOC concentrations will measured using Aeroqual 500 series. After collection of particulate matters and health related information, we will analyzed data for concluding relation between the average peak flow rate and particulate matters in the school children. We can also suggest Government and school authority for the control measures.