Development of control strategies for reduction of ambient PM2.5 levels: case study of Pune City, Maharashtra State, India

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Air pollution is recognized as a serious public health hazard and it is widely accepted that particulate matter is the major pollutant of concern in developing country like India. Various regulatory impact studies also show that among the criteria air pollutants, PM2.5 has the most harmful impacts on human health. Although India was one of the first countries in Asia to enact a PM2.5 standards for ambient air (NAAQS of Govt. of India, 2009), the achievements on the compliance of this and other particulates related standards are poor in urban areas due to rapid urbanization, growth in population, industrialization and transportation. The air quality is further aggrivated during winter due to the seasonal operations of the many thousand brick kilns. Also, temperature inversions during the winter hinder vertical mixing and dilution of the pollutants. With the intention to control air pollution, Government of India has promulgated regulations both in terms of emission and air quality standards. But formation of standards alone cannot improve the air quality unless it is supported with the cost effective and techno feasible air pollution control plan. For this reason, the control strategies to improve air quality in local areas need to include control measures that are mandated and implemented on a state, region wise in combination with local control measures. This paper describes a methodology for developing and evaluating an air pollution control action plan for PM 2.5 emissions.

Biography

Ramesh D Dod is presently working as a Professor of Environmental Engineering, Department of Civil Engineering, at Maharashtra Institute of Technology, Pune, India. He completed PhD from Indian Institute of Technology (BHU) Varanasi, India. He published more than 20 papers in reputed journals and has been serving as an Editorial Board Member.

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