Urbanization and Airborne Fine Particulate Matter in Major Urban Regions of Tamilnadu, India
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Abstract
The linkage between airborne fine Particulates and regional climate forcing is an important concern in South Asia. South Asian aerosols are suspected to have potential role in global cooling of Indian subcontinent. Lack of data on aerosols and their chemical constituents in urban regions of India is a major constraint. In recent years, there has been unprecedented increase in fine particulate concentrations in urban regions of Tamilnadu, Southern India. According to our studies, in Coimbatore city, a rapidly growing industrial region ranking 13th among the principal urban agglomerations of India, annual concentrations of PM 10 ranged up 150 μg/m3 aerosols exceeded USEPA and Indian standards in many locations. This paper attempts to focus an on-going study on urban growth and atmospheric fine particulate emissions in three major urban regions (Chennai, Coimbatore and Tiruchirappalli) of Tamilnadu, India. The study also concentrates on important chemical constituents that has potential role in health and climatic implications.