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# Study of air pollution in Bucharest area for three years

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An important component of the air quality management and health risk assessment is improved by understanding of spatial and temporal variability of pollutant concentrations. Therefore, the aim of this paper is to assess the concentration levels of Particulate Matter (PM), NOx, SO2, CO and O3 in five urban sites in Bucharest, Romania. The key influences on the causes of high concentrations of pollutants include traffic characteristics and meteorology which affects the dispersion of pollutants. Our analysis of the measured pollutant concentrations, for the three years, 2005, 2006 and 2007 was related to traffic and meteorological conditions. The direct contribution of the traffic relative to the contribution from urban background was studied. The study has been performed for the all four seasons. The measurements shown that the highest NOx, SO2 and particulate matter (PM10) concentrations occur in the winter and summer periods, due to unfavorable meteorological dispersion conditions. Generally, the results show that the road traffic is the main contributor when the NOx and CO values exceed the limit value. For the PM10, both the traffic and resuspension of road dust are important, too. This type of study of spatial and temporal variability of pollutant concentrations allows evaluating the requirements of air quality models to represent the key effects.