

WEEKDAY/WEEKEND DIFFERENCES IN AIR QUALITY

PARAMETERS IN DELHI, INDIA

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ABSTRACT

A comprehensive database for pollution levels from the year 2006 to 2010 was analyzed for a main traffic intersection at ITO, Delhi. The study had come out to assert that pollution levels on weekend i.e. Saturday and Sunday relate to significantly lower concentration of pollutants as compared to that on weekdays i.e. from Monday to Friday by almost 2 to 6 times. On an average increase on only Sundays with respect to weekdays is CO by 3 times, PM_{2.5} by 1.18 times, NO by 1.62 times, NO₂ by 5.76 times, SO₂ by 1.27 times and O₃ by 1.15 times. The pollution levels on Saturdays have been found intermediate. Pollution can hence be related to the weekly cycle of human activities. Emissions from vehicles serve as major sources of pollution. Hence viably possible solutions for pollution control can also be achieved by controlling the magnitude of traffic flow on roads. Similarly holiday effect is observed during public holiday, where the pollution levels reduce by at least 4% for O₃ and PM and up to 11 to 14 % for NO, CO and NO₂ from the pollution levels in the same week.

KEYWORDS: Weekday/Weekend, Holiday Effect, Air Pollution, Delhi