



Title: Comparative Assessment of Ambient Air Quality in Rabia Area for Years 2001 and 2004 in the State of Kuwait

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Abstract: The hourly air pollutants concentrations were measured continuously by fixed ambient air stations located over the polyclinics in Rabia area in Capital Governorate in the State of Kuwait. The focus of this investigation is to determine the pollution levels of SO₂, NO₂ and O₃ in year 2001 and 2004 to assess the pollution trends. The recorded data are used in identification of the most probable sources of these pollutants. The pollutants levels were compared to evaluate exceedances of Kuwait Environmental Authority Standards. The diurnal patterns were also analyzed for different seasons for two years 2001 and 2004. Weekdays and weekend variation on Ozone pollution has been thoroughly investigated. It is observed that SO₂, NO₂ and O₃ levels were higher in year 2001 as compare to year 2004 due to the application of various mitigation strategies such as relocation of car auction market and transport depot, which were located in the northwestern side of Rabia area with distance of 2 km. The traffic volume all over the country has increased by substantial amount increasing NO_x and ozone precursor emissions, which showed the complex balance of NO_x and O₃. The O₃ levels of the daytime hours from April to September period has shown high buildup on weekend as compare to weekdays due to the least traffic density on the roads.