

Investigating the temporal, spatial, and changing trend of distribution of atmospheric air pollution emissions using GIS in Tehran

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ABSTRACT:

One way to understand the air pollution phenomenon is by spatial and environmental analysis. Accurate knowledge and temporal of spatial investigation indicates the situation of the region in each month and seasonal pollutants. Analyzing this method also showed the changing trends and situations of air pollution emissions that changes spatially. This article investigates four types of pollutants (NO₂, SO₂, CO, PM 2.5) at the year 2014 and tries to find the changes in spatial and temporal dimensions by spatial and environmental analysis. In this study, the emissions are examined and classified based on the AQI index and situation of the region. The results of changes in all four pollutants are separately shown in figures, tables, and maps. Among the four pollutants studied, PM 2.5 is known to be the dangerous pollutant at Tehran city and is now in unhealthy situation based on AQI index significantly. The purpose is to show the direction and trend of spatial changes in the amount of the pollutants mentioned above, which are discussed generally and in each season.

Keywords:

Air pollution, AQI, Tehran Metropolis, Spatial and environmental analysis.