



Examination of Air Quality Indexes (AQI) role in urban air quality assessment

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Air pollution is a major environmental problem that started when humans began to use fossil fuels as a source of energy. It has a range of negative impacts including human health, damage to ecosystems, food crops and the built environment. Public awareness of air pollution dangers has raised noticeably the need for a concept like air quality index (AQI) as a timely information about the potential changes in air quality. The study area was Veszprém city, one of the oldest urban areas in the East of Hungary, lies approximately 15 km of Balaton Lake. The aim of this work was to highlight the importance of air quality indexes (AQIs) in air quality assessment. Three different long-term AQIs - Long-term Air Quality Index (LAQx), Aggregated Air Quality Index (AAQI), Oak Ridge Air Quality Index (ORAQI) - were calculated and compared, using data between 2007 and 2016. The calculations proved that air quality in the city can be classified from satisfying to good, with a slight fluctuation in the emissions caused by the meteorological conditions, the demographic growth, the industrial transition, and the public awareness. AQI constitutes an effective method that gives an overview about air pollution levels, but more considerations should be taken such as the long-term exposure and external parameters that can influence the dispersion from the source.

Keywords: Air quality index, Air quality assessment, Long-term AQIs