

Air pollutant index calendar-based graphics for visualizing trends profiling and analysis

ABSTRACT

Detection of air quality abnormality is important as an early warning system for air quality control and management. The information can raise citizens' awareness towards current air quality status. By using time series plot, the data pattern can be identified but not able to exactly determine the abnormality due to overcrowded plot. Therefore, visualization data profiling was presented in this study by using seven years Malaysia daily air pollutant index to improve the detection. Result shown, the developed approach can simply identify the poor air quality across the month and year. Malaysia air quality was good and consistent between November and May. However, upward trend existed between June and October due to the forest fire happened in Sumatra. This visualization approach improved air pollution detection profiling and it is useful for related agencies to guide the control actions to be taken. This approach can be applied to any countries and data set to give more competent information.

Keyword: Air pollutant index; Calendar; Data visualization; Profiling