

Ozone pollution and historical trends of surface background ozone level: a review

ABSTRACT

A literature survey was conducted to review the historical ozone data from background stations around the world to characterize background ozone levels and trends while also determining the reasons underlying such trends. Ozone pollution is regarded as a great concern nowadays because of its potential effects on human health and the environment especially vegetation. Historical increasing of ozone trends as reported ranged between 0.06 and 2.6% year with some of the largest increasing trend were observed at stations in Europe and Japan. For most stations, the trends were not consistent during the reporting period, but from the year 1970s until the mid 1980s, the trends are generally larger and steeper compared to the year 1990s. Sensitivity studies using chemical transport model were conducted to explain the rising trends in background ozone levels over the past decades.

Keyword: Background ozone; Ozone trends; Tropospheric ozone; Ozone pollution