

## 5.139 An overview of global ozone metrics relevant to human health calculated for the Tropospheric Ozone Assessment Report.

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Abstract:

High levels of ozone (caused by anthropogenic emissions of NO<sub>x</sub> and VOCs) in the lower atmosphere is known to be detrimental to human health. The global Tropospheric Ozone Assessment Report (TOAR) initiative was recently initiated by the International Global Atmospheric Chemistry Project (IGAC) to provide the research community with an up-to-date scientific assessment of tropospheric ozone's global distribution and trends from the surface to the tropopause. TOAR has assembled the world's largest database of surface ozone observations and is generating ozone exposure and dose metrics at thousands of measurement sites around the world.

There are a variety of existing metrics aimed at assessing ozone concentrations and its potential effect on human health, most related to threshold levels or daily maximums. The TOAR project has assessed and compared the various ozone metrics and the 3 that are deemed most relevant to human health across the world have been applied to the

entire TOAR global database. Present day ozone as well as recent trends in ozone are presented and assessed according to rural or urban designations and related to local population levels.