

Simulation of Ozone changes in Taiwan

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Like many urban areas over the world, major cities in Taiwan are facing the problem of increasing ozone level while the precursors are decreasing. This study intends to find out possible mechanisms of such a phenomenon with a modeling approach. We apply the Taiwan Air Quality Model using three level of nesting, with the coarse domain covering the whole East Asia and the finest domain covering just the Taiwan area under the horizontal resolution of $9 \times 9 \text{ km}^2$. Simulations with emission inventories for 1993 and 2000 are performed for a whole year while the meteorological conditions are kept the same. Model performance is evaluated by comparing with observations from urban and background stations. Sensitivity tests on emission scenarios are also conducted to check the effect of long-range transport versus local productions.