



## Effects of Chinese Urban Development on the Fog

Z.H. Li (1), J. Yang (1), C.E. Shi (2), M.J. Pu (3), and D.Y. Liu (1)

(1) School of Atmospheric Physics, Nanjing University of Information Science & Technology, Nanjing, China  
(liuduanyang2001@163.com), (2) Anhui Institute of Meteorological Science, Hefei, 230061, China, (3) Meteorological Bureau of Jiangsu Province, Nanjing, 210009, China

Since China adopted the reform and opening-up policy in late 1978, the national economy as well as urbanization have developed rapidly, causing urban growth and population growth. In consequence, the urban heat islands strengthen and air pollution increase but the vegetation cover decreases, leading to the relative humidity decreases. These changes led directly to the city's foggy day reduction, fog liquid water content (LWC) and droplet-scale decreases, droplet number concentration increases, visibility degradation sharply in fog, fog-ion concentration and acidity larger, which increase the traffic hazard and endanger human health seriously. In this paper, a large number of observations and numerical simulations have been done to demonstrate these conclusions. Suggestions that air pollution controlling, virescence and improving the urban ecological environment was given at the end of the particle.