

AIR POLLUTION MANAGEMENT IN GROWING URBAN AREAS**G. Fumarola, F. Fumarola***Department of Chemistry, Chemical Engineering and Materials, University of L'Aquila, L'Aquila, Italy*

In growing urban areas, mainly in large cities, the results achieved in terms of air quality in the last couple of decades do not seem consistent with the accomplished high reduction of emissions, at least for some pollutants. This means that some important aspects have been missed or underestimated, related to growth of population, expanding urban areas, mobility demand, increasing energy consumption or whatever. The current trend is to work on mobility and urban planning through measures (access restriction areas, circulation banned to non-catalytic cars, circulation allowed to alternate plate numbers, non-driving day, etc) which often do not lead to an effective improvement in air quality. Through a Gaussian model for area sources, the weight of some variables (emission density, urban area size, population density, meteorology), which are mainly responsible of air quality, is evaluated rather than the actual concentrations. Indeed the last are scarcely predictable without a reliable emission inventory which, on its turn, is a very difficult and insidious task. The same mathematical approach has been used to gain some considerations on the efficacy of the measures which are currently taken to tackle air pollution and on the future scenario coming from possible growth factors of some mentioned variables.