

AIR QUALITY MANAGEMENT AT THE RURAL/URBAN INTERFACE OF AN EXPANDING METROPOLIS

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Many Asian and Australasian cities are expanding so rapidly that, taken together with the change in emission technology and inter-annual climatic variability, it is often difficult to establish robust trends in air quality or to produce long-lived air quality management programmes. The outer suburbs are often those that experience higher ozone levels due to traffic, industry and biogenic emissions. Intensive animal production in response to population growth is often caught at the interface between semi-urban and rural areas. Major industries previously cited in forested rural areas near resource mines may unintentionally become influential in regional photochemistry. Decision makers rarely have the extensive monitoring or long history of validated airshed models on which to base considerations of air quality in holistic planning approaches. This paper investigates the alternative avenues in which urban air quality may be analysed and managed in Australia. Techniques such as cluster analysis and principle component analysis will be used to link emission information, climatic variability and observed ambient air quality to assess the causal factors of photochemistry in an urban airshed.