

How can vegetation impact air pollution control in the central valley of Mexico?

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Summary: For cost effective air pollution control measures in the Central Valley of Mexico the vegetation as an important player in the complex system of production and removal of air toxics has to be considered. Vegetation effectively improves air quality by removal of air pollutants e.g. particles, ozone etc., by lowering air temperatures, providing shade etc. and thus improving the quality of life of people in conurbations. But certain plants also can be a significant source of pollutant precursors leading to secondary particle and ozone formation, thus worsening air quality. Therefore, it is of paramount importance for a sustainable improvement of the air quality in the Central Valley of Mexico also to quantify the deposition of air pollutants to vegetation as well as to characterise and to quantify the emission of biogenic air pollution precursors in this area in addition to anthropogenic precursors. This includes process studies on possible feedback effects of air pollutants likely modifying sink as well as source properties in the vegetation.