

1.134 Mexico City Regional Carbon Impacts.

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Abstract:

Despite the lower concentrations of several air pollutants registered during the last few years in relation to the early nineties, air quality remains a challenging problem in the Mexico Megacity. In particular, CO₂ emissions, estimated in 44 Mt per year according to the 2014 emissions inventory, are densely distributed within the Mexico City Metropolitan Area and are known to have a fast growing-rate. Precise information about the emissions and their temporal evolution is important in order to understand how effective the adopted mitigation policies can be and how to plan, design and implement more effective actions to reduce greenhouse gas emissions. We present more than 4 years of continuous in situ and column-integrated CO₂ and CO measurements in and outside Mexico City in order to identify their seasonal and daily variability, as well as the trends detected at the regional and local scales. The data has been compared and complemented with the available observations from satellites. Details about a newly approved international project named "Mexico City Carbon Impacts" (MERCICO2), a collaboration between Mexico's National Autonomous University (UNAM), the French Laboratoire des Sciences du Climat et de l'Environnement (LSCE) and the Mexico City's Ministry of the Environment (SEDEMA), will be described. This initiative aims to adequately use all the information available in terms of bottom-up emissions, measurements and modelling to

derive a more refined and precise emission product with higher temporal and spatial resolution.