

## Abstract

### **Emissions inventory Development for critical regions in Mexico**

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This work presents the 2013 model ready emissions inventory for five critical regions in México; by using the Spatial Temporal and Speciation Distribution model (STSP2013). The methodology and information used to perform the temporal, geographical and chemical distribution of the emissions is described.

The EI 2013 considers ten pollutants: ammonia (NH<sub>3</sub>), carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), nitrogen oxide (NO<sub>x</sub>), black carbon (BC), methane (CH<sub>4</sub>), particles (PM<sub>10</sub> and PM<sub>2.5</sub>), sulfur dioxide (SO<sub>2</sub>) and volatile organic compounds (VOC). Emissions are from fixed, area and mobile sources. They are further subdivided into different categories. A source classification code (SCC), from EPA, is used to identify each one. Temporal and chemical profiles are based on the SCC.

The STSP2013 system can generate files for RADM2, RACM, CBM5 and SAPRC99, these can be used by WRF-chem and CMAQ models (CBM5). With this work air quality studies, policy evaluation, air quality forecast and decision making are possible to evaluate.