



- Title:** Estimation of Vehicle Flows and Emissions for Various Scenarios of Street Network Modifications in Mexico City
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- Abstract:** We estimate flows and emissions (NO_x, HC, CO) generated by vehicles circulating on the main streets of the Mexico City Metropolitan Area. The estimation is made for various scenarios, which include a set of changes to the street network for current and future horizons. These changes encompass the construction of new arcs or improvement of existing arcs. Network flows are estimated by means of a Traffic Assignment Model using a Base Origin-Destination Matrix, generated by sampling and traffic counts. In addition to flows, we obtain speeds and calculate the estimated-flow/capacity ratio for each arc of the network. Emissions for each pollutant are estimated using speed and emission factors obtained from MOBILE Mexico City. Estimated emissions and the estimated-flow/capacity ratio (which is related to congestion) are displayed using a Geographic Information System (GIS). Finally, sets of alternative scenarios are compared and the "best" series of street changes (scenarios) are identified. At this time, one of best scenarios is under construction by the Mexico City Government.