

# Emissions of land and air transport generated in an intermediate-sized city. The case of Cordoba, Argentina

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**Abstract**— The growth of urban centers has resulted in the deterioration of air quality representing a threat to health, not only due to direct exposure but also indirectly due to climate change. There are several sources of this deterioration among which are transport, industry and agriculture, all also influenced by population growth. However, in urban areas, transport is primarily responsible for the deterioration of air quality and the increase in greenhouse gas emissions. Argentina is the South American country with the highest urbanization rate in the region, with more than 92% of the population residing in urban areas and almost 50% concentrated in only 8 cities. This has resulted in an increasingly intensive use of motorized transport, not only because of the large distances that must be traveled, but also influenced by the ease of purchase of private vehicles (installment payments, “self-saving” plans, etc.), low air ticket costs, but also due to the inefficiency of public land transport. It is then necessary to know the magnitudes of the emissions generated and thus be able to develop public policies. That is why this work aims to present an inventory that simultaneously includes emissions from land transport and air transport in the city of Córdoba (Argentina), considering greenhouse gases (GHG) (CO<sub>2</sub>, N<sub>2</sub>O and CH<sub>4</sub>) and air pollutants (PM, NO<sub>x</sub>, VOCs, SO<sub>x</sub> and CO). The results indicate that land transport contributes 3.7x 10<sup>6</sup> tons per year of CO<sub>2e</sub>, while air transport 2.5 x10<sup>4</sup> tons of CO<sub>2e</sub>. As for the particulate material, air transport emits 0.49 tons / year while land transport issues 4.40 x 10<sup>3</sup> tons / year

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