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# The Carbon Footprint Model as a Plea for Cities towards Energy Transition: The Case of Algiers Algeria

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**Abstract :** Environmental sustainability rather than a trans-disciplinary and a scientific issue, is the main problem that characterizes all modern cities nowadays. In developing countries, this concern is expressed in a plethora of critical urban ills: traffic congestion, air pollution, noise, urban decay, increase in energy consumption and CO<sub>2</sub> emissions which blemish cities’ landscape and might threaten citizens’ health and welfare. As in the same manner as developing world cities, the rapid growth of Algiers’ human population and increasing in city scale phenomena lead eventually to increase in daily trips, energy consumption and CO<sub>2</sub> emissions. In addition, the lack of proper and sustainable planning of the city’s infrastructure is one of the most relevant issues from which Algiers suffers. The aim of this contribution is to estimate the carbon deficit of the City of Algiers, Algeria, using the Ecological Footprint Model (carbon footprint). In order to achieve this goal, the amount of CO<sub>2</sub> from fuel combustion has been calculated and aggregated into five sectors (agriculture, industry, residential, tertiary and transportation); as well, Algiers’ biocapacity (CO<sub>2</sub> uptake land) has been calculated to determine the ecological overshoot. This study shows that Algiers’ transport system is not sustainable and is generating more than 50% of Algiers total carbon footprint which cannot be sequestered by the local forest land. The aim of this research is to show that the Carbon Footprint Assessment might be a relevant indicator to design sustainable strategies/policies striving to reduce CO<sub>2</sub> by setting in motion the energy consumption in the transportation sector and reducing the use of fossil fuels as the main energy input.

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