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Impact of the Transport on the Urban Heat Island

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Abstract : The development of transport systems has negative impacts on the environment although it has beneficial effects on society.. The car policy caused many problems such as: - the spectacular growth of fuel consumption hence the very vast increase in urban pollution, traffic congestion in certain places and at certain times, the increase in the number of accidents. The exhaust emissions from cars and weather conditions are the main factors that determine the level of pollution in urban atmosphere. These conditions lead to the phenomenon of heat transfer and radiation occurring between the air and the soil surface of any town. These exchanges give rise, in urban areas, to the effects of heat islands that correspond to the appearance of excess air temperature between the city and its surrounding space. In this object, we perform a numerical simulation of the plume generated by the cars exhaust gases and show that these gases form a screening effect above the urban city which cause the heat island in the presence of wind flow. This study allows us: i. To understand the different mechanisms of interactions between these phenomena. ii. To consider appropriate technical solutions to mitigate the effects of the heat island.

Keywords : atmospheric pollution, impact on the health, urban transport, heat island
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