

ENVIRONMENTAL EVALUATION OF TRAFFIC SCENARIOS IN A CONGESTED CENTRAL CITY AREA

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ABSTRACT

A congested central city area: Dimokratias Square, the most important crossroads of Thessaloniki is examined using traffic data and pollutant emissions and concentrations. Eight street links are included in the study area. Traffic data refer to traffic volumes, composition and vehicle speed. Emissions have been calculated for the pollutants: CO, NO_x, SO₂, VOC and TSP. Air quality data concern the pollutants: CO, NO₂, SO₂, and TSP. The evolution of the relationship traffic - emissions – air quality during the decade 1988-98 is examined in a first step. Furthermore, the relationship traffic – emissions is examined for 4 traffic scenarios: a) 1998, b) 2004, c) 2014 and d) 2014+ and a qualitative and semi-quantitative prediction is made for the expected air quality levels.