

1.34 CITYDELTA: A EUROPEAN MODEL-INTERCOMPARISON STUDY IN SUPPORT TO THE CAFE PROGRAMME ON EU ENVIRONMENTAL LEGISLATION

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In collaboration with IIASA, EMEP and EUROTRAC (TNO-MEP), the JRC-IES has launched in February 2002 a contribution to the CAFE programme of the DG_Environment in the area of air quality modelling. One of the objectives is to explore the present (1999) and future (2010) urban air quality predicted by different atmospheric chemistry-transport dispersion models. The activity is health-driven and the focus of the project is restricted to the long-term exposure to O₃, and PM (fine coarse). An other objective of CityDelta is to investigate the impact of various types of emission-reductions (CLE and MFR scenarios for VOC, NO_x, PM_{2.5}, PM_{coarse}) on levels of ozone and PM for 8 European cities (Berlin, Copenhagen, Marseille, Milan, London, Paris, Milan and Prague).

For these cities monitoring data has been made available by the city authorities and high-resolution emission inventories were set up. After pre-processing by the JRC-IES all input data has been made available to the 15 participating modelling groups, who produced a large number of results on various spatial resolutions ranging from 5 km up to 50 km.

A general methodology was developed by JRC-IES to allow all modelling participants to visualize and analyse not only their own results but also to make intercomparisons with the results provided by other groups. The graphical visualisation tool allows the intercomparison of results for the base year (1999) and the intercomparison of the differences (deltas) among the model results in terms of spatial resolutions, model formulations, cities, and emission-reductions for the year 2010. An analysis of the main results of this project will be presented during this conference.