

Formation of Ozone in South European Cities (FOSEC)

Contribution to subproject SATURN

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FOSEC is SATURN's contribution towards a better understanding of photochemical pollution in the Mediterranean areas, a topic that needs special attention due to its potential impact on human health in these regions. This action aims at summarising recent findings on urban photochemistry in southern Europe as reflected in the scientific results of various groups as well as raising questions for further investigation of this topic.

Within FOSEC the inter-related thematic areas that have been identified as the most important topics directly linked with the formation of ozone are:

- The meteorological conditions favouring high photochemical pollution in South European cities
- The scale interactions and ozone formation
- The regional and local emissions of ozone precursors
- The indicators of photochemical pollution
- The NO_x and VOC sensitivity
- The role of aerosols

For each of these thematic areas different issues for further research have been identified namely the development of a synoptic classification for indicating the occurrence probability of photochemical pollution and the most severe episodes, the provision of experimental/numerical studies showing the importance of scale interactions regarding ozone formation and its influencing by the background concentration of precursors in North and Central Europe, the contribution and relation of regional and local emissions to the photochemical pollution in South European cities, the importance of biogenic VOCs as ozone precursors, the main indicator compounds used so far, the identification of the dominant sensitivity regimes in particular South European cities, and the role of secondary and sea-salt aerosols, Saharan dust as well as the importance of nitrous acid emissions.

FOSEC is organised in a way that ensures maximum possible interaction among various groups within SATURN as well as within other European projects. For this reason, a main element of the organisation of FOSEC is the use of an Internet application, a virtual forum (<http://aix.meng.auth.gr/saturn/forum/index.htm>), that allows the development of its contents and knowledge by people who interact with it. The virtual forum for this action enables the use of electronic tools for exchanging information and summarising the current understanding on urban photochemistry in southern Europe.