

---

## **Preface**

---

### **Andreas Nikolaos Skouloudis**

European Commission, Joint Research Centre,  
Institute for Environment and Sustainability,  
Environment and Health Task Force  
E-mail: andreas.skouloudis@jrc.ec.europa.eu

**Biographical notes:** Andreas N. Skouloudis holds a Doctorate in Mechanical Engineering from Imperial College, London, and a Degree in Physics. He currently works for the Environment and Health task force of the Joint Research Centre of European Commission for the assessment of policies in association with transport, climate change, telematics, and related emerging technologies. As head of Urban Impact Assessments he coordinated the scientific work of the first and second AutoOil programmes. He developed tools for the scientific setting of several European Commission communications, established the modelling methodology for the daughter directives of the European Commission on air-quality, assessed the synergy of economic and technological scenarios at EU, for the abatement of air pollution, advised the Japanese and French automobile and refinery industries for the validation of future air-pollutions forecasts, evaluated health effects of air pollution in children due to transport, and used satellite data for the assessment of transportation near cities and coast lines.

---

Dispersion modelling has been an effective tool for assessing the environmental impact of human activities on air quality already at early planning stages. Environmental assessments during planning are required by the several legislative directives all over the world. Models can give harmonised information on the distribution of pollutants with high spatial and temporal resolution, while they allow decision-makers to devise a range of scenarios, in which the various processes determining the environmental impact can be easily simulated and changed.

Furthermore, the implementation of strategies for the abatement of atmospheric pollution requires an extensive assessment and apportionment of air pollution to sources and geographical areas. One of the required tools is air-quality models for assessing regional and urban air quality. There is a fundamental need for all countries to build upon the experiences of each other according to requirements of relevant framework directive, and to harmonise the development and use of models in several respects.

In June 1991, at an international meeting taking place at the Joint Research Centre of the European Commission, an initiative was launched on the sharing of information and possible harmonisation of new approaches to atmospheric dispersion modelling and model evaluation. This initiative has fostered a series of conferences that have been concerned with improvement of 'modelling culture' in Europe. The 10th International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes at Sissi, Crete, Greece continues the efforts of the previous conferences. The conference has a role as a forum where users and decision-makers can bring their

requirements to the attention of scientists. It is also a natural forum for discussing environmental issues related to the European Union enlargement process.

This conference thematically covered: Environmental impact assessment with emphasis on air pollution management and decision support systems; Country reviews for Regulatory models; Experiences using models when implementing national or international directives; Short distance dispersion modelling; Meso-scale meteorology and air quality modelling; Urban scale and street canyon modelling for meteorology and air quality; Validation and inter-comparison of models. In addition, and due to the importance of Environment and Health Action plan in Europe and elsewhere, the Steering and Scientific Committees also introduced two sessions for human exposure modelling and a session on the interaction of indoor and outdoor air and modelling.

On behalf of the local Organisation Committee, we would like to thank the Steering and Scientific Committees for the effort in reviewing the technical contents, Ms Elisabeth Dilger for assisting in all aspects of the organisation of the Conference and all participants for their valuable effort in making this publication possible. In this special issue are presented selected manuscripts after successfully passing the peer review process according to the IJEP standards. The manuscripts reflect the state-of-the-art and the current understanding on the various topics at the time of this conference. We hope that you will find these useful and we look forward to seeing you also in future events on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes.