

# Introduction to the contributors

---

## I AIR POLLUTION

*Professor Panos Papagiannakopoulos* is the head of the Photochemistry and Kinetics Laboratory at the Department of Chemistry of the University of Crete in Greece. He has 20 years' experience in the field of atmospheric chemistry. His field of expertise covers indoor and ambient air quality monitoring techniques, quality assurance in monitoring, development of new spectroscopic measurements and detection techniques, kinetics of fast reactions in the gas phase and photochemical processes in the atmosphere. He is the author of six books and of more than 30 publications in internationally refereed journals with over 100 citations.

*Bjarne Sivertsen* graduated from the University of Oslo in 1969. He has more than 30 years' experience as an air pollution meteorologist, specializing in boundary layer meteorology, turbulence and dispersion modelling and power plant and industrial siting. Mr Sivertsen has been responsible for several air quality investigations worldwide. He has carried out a number of environmental impact assessment studies and has been responsible for Nordic research on power production and air pollution impact. He has participated in the development of air quality surveillance and optimal abatement strategies in several countries and has performed regional emission inventories. He has given lectures on air pollution problems, air quality modelling and impact assessment in several countries. As an Associate Research Director at the Norwegian Institute for Air Research (NILU), he has been involved in air quality planning, optimal abatement strategies, impact assessment analyses and air pollution screening. He has long experience in work within and with developing countries, and is an expert in coordinating and handling interdisciplinary projects. Finally, he has also developed training programmes on air quality in Europe and in Asia.

*Dr David Guinnup* received his B.Sc. and M.Sc. degrees in Chemical Engineering from Purdue University and subsequently earned a Ph.D. in Chemical Engineering from the University of Michigan in 1981. After teaching Chemical Engineering at North Carolina State University for six years, he started work-

ing for the United States Environmental Protection Agency as an environmental engineer in the Office of Air Quality Planning and Standards (OAQPS). His initial area of expertise at OAQPS was in the modelling of the impacts of sources of toxic air pollution, including accidental releases to the atmosphere. He has since worked as a manager in the air toxics programme area, specializing in risk assessment and technical support. Since 1994, he has been a group leader for the Air Quality Trends and Analysis Group, a technical support group specializing primarily in statistical analysis and interpretation of air quality data. Most recently, the group has begun working on several projects aimed at better quantifying air toxics problems and tracking efforts to solve them through the analysis of air quality and emissions data.

*Christine Sansevero* is a policy analysis and communication specialist with the United States Environmental Protection Agency's Office of Air and Radiation. Ms Sansevero serves as a primary communications contact in the Office of Air Quality Planning and Standards, where she is responsible for preparing communication materials for all regulatory actions (including national air quality standards and emissions standards for toxic air pollutants). She is a magna cum laude graduate of the University of Connecticut in Civil Engineering, where she concentrated on environmental engineering and public policy. Since joining EPA in August 1995, she has been involved in developing environmental indicators, preparing air quality trends analyses, communicating regulatory activities, as well as organizing a variety of public outreach efforts.

## II CLIMATE CHANGE

*John Sweeney* (Department of Geography, National University of Ireland, Maynooth) is the secretary of the Irish National Committee for the International Geosphere–Biosphere Programme.

*Sir John Houghton* CBE FRS is co-chair of the Intergovernmental Panel on Climate Change (IPCC) Working Group 1. This IPCC Working Group has been established to assess the available information on the science of climate change, in particular on the effects of human activities on climate.

*Hartmut Grassl* is currently managing the Max-Planck-Institute for Meteorology, in Hamburg. From 1994 to 1999 he was Director of the World Climate Research Programme based at WMO in Geneva. He is the chair of the Global Advisory Board to the German government, and a member of the IPCC, and the Inquiry Commission of the German Parliament 'Protection of Earth's Atmosphere'.

### III LOSS OF BIODIVERSITY

*Pierre Devillers* is currently head of the Conservation Biology Department of the Belgian Royal Institute of Natural Sciences, where he has worked since 1972. He gained a Ph.D. (Sciences) in 1971 at the University of California, San Diego, and a further Ph.D. (Applied Science) in 1975 at the Université Libre de Bruxelles, Belgium. His areas of specialization are conservation biology, ecology, habitats systematics and typology, eco-ethology and systematics, database conception and use, and protected area planning and management. He has extensive international experience in projects across Europe, South America and North Africa.

*Marianne Lefort* was the Director of the Board of Genetic Resources (BRG) from 1994 to 1999. BRG is a French national organization for coordinating activities relating to animal, plant and micro-organism genetic resources. She has also recently been involved in the National Programme for Biological Diversity (PNDB) in France. She is a quantitative geneticist who has worked for 13 years at the Plant Breeding Department of INRA (National Institute for Agronomical Research), particularly with rapeseed and maize. Dr Lefort is presently the head of this department.

### IV MARINE ENVIRONMENT AND COASTAL ZONES

*Professor Harry Coccossis* teaches environmental planning at the Department of Environmental Studies of the University of the Aegean in Greece. He has extensive research and professional experience in coastal management, sustainable development for islands, environmental planning, sustainable tourist development planning and regional planning as consultant for various national and international agencies and organizations (EU, UNEP, FAO, OECD, the World Bank, UNESCO and so on) in the Mediterranean and East Africa regions.

*Margarida Cardoso da Silva* is an expert on coastal zone management currently at the Estuaries Division of the National Laboratory for Civil Engineering in Lisbon, Portugal. Her publications include papers on sustainable management and integrated environmental assessment of coastal zones.

### V OZONE LAYER DEPLETION

*Professor Guido Visconti* is Professor of Geophysics at the Department of Physics, University of L'Aquila (Italy). His main subjects of research are

numerical modelling of the stratosphere and climate, lidar measurements of aerosol and ozone, and meteorology. He has worked extensively on models to simulate stratospheric ozone transport and participated in the Scientific Assessments of Ozone Depletion of the World Meteorological Organization. He is a member of the International Ozone Commission.

*Professor Ivar S.A. Isaksen* is Professor at the Department of Geophysics, University of Oslo (Norway), and Science Director at the Center for International Climate and Environmental Research (CICERO), Oslo. He is the vice-chair of the Committee for the European Programme on Stratospheric Research. Further, he is a member of the NATO Science Committee on Global Environmental Change, the International Ozone Commission, and the Scientific Steering Group of the project Stratospheric Processes and their Role in Climate (SPARC) of the World Climate Research Programme (WCRP).

*Dr Marie-Lise Chanin* has carried out extensive studies on the influence of solar radiation, and on anthropogenic effects on the atmosphere. She has served in several international committees dealing with global change issues and is currently chairing the project Stratospheric Processes and their Role in Climate (SPARC) of the World Climate Research Programme (WCRP). She is a corresponding member of the French Académie des Sciences, Chevalier de la Légion d'Honneur and Commandeur de l'Ordre du Mérite.

## VI RESOURCE DEPLETION

*Øyvind Lone*, M.A. (Geography), University of Oslo, 1977, has worked in the Norwegian Institute for Urban and Regional Research, Statistics Norway, the OECD Environment Directorate, and is now Deputy General Director in the Norwegian Ministry of Environment.

*Professor David Pearce*, OBE, MA (Oxon) is Professor of Environmental Economics at UCL (University College London) and Associate Director of CSERGE (Centre for Social and Economic Research on the Global Environment).

*Jean-Louis Weber*, DES of Economy, University of Paris, 1970, has worked as a national accountant at INSEE (the French statistical institute), was Secretary General of the Interministerial Committee for Natural Patrimony Accounting and was head of the Unit of Statistics and Economic Studies of the French Ministry of Environment. Since 1992 he has been Director of International Affairs of IFEN (the French Institute of Environment).

## VII DISPERSION OF TOXIC SUBSTANCES

*Professor Aristeo Renzoni* was born in Siena, Italy, some seventy years ago, and has a life-long experience as a researcher in the field of environmental biology. Starting his career as a specialist with a degree in Veterinary Medicine in the early 1950s, he has also earned a reputation as a generalist in environmental issues. After working as a researcher in Italy, Holland, Germany, Wales and the USA, he held full professorships in Hydrobiology (1973–89), Ecology (1989–92), and currently in Conservation of Natural Resources, at the University of Siena.

A very large international contact network has led Professor Renzoni to research and teach in a great many parts of the world. He has also been responsible for and/or coordinator of projects within the frameworks of UNEP, ERASMUS, TEMPUS, NATO, INTAS, as well as the Socrates programme. Professor Renzoni has also been president and/or member of a large number of scientific committees of different laboratories and institutes. His list of national and international publications is extensive.

*Dr Heidelore Fiedler* obtained a master's degree in Chemistry and a Ph.D. at the University of Saarland in Saarbrücken, Germany. She has been a senior scientist in environmental chemistry at the University of Bayreuth since 1985. Her research focuses on sources, fate, and environmental exposures of organic chemicals, and risk assessment.

*Professor Otto Hutzinger* was born in Vienna, studied chemistry in Canada and held post-doctorate positions at the University of California. He was the Director of the Environmental Chemistry Laboratory in Amsterdam from 1974 to 1983. Since 1983, he has been a Professor and Chair of Ecological Chemistry and Geochemistry of the University of Bayreuth, Germany.

## VIII URBAN ENVIRONMENTAL PROBLEMS

*Professor Colin Fudge* is Dean of the Faculty of the Built Environment, University of the West of England, Bristol; he is also Urban Environment Adviser to the European Commission, Adviser on Research (DG XII), European Commission, chair of the EU Urban Environment Committee; chair of OECD Urban Indicators International Panel, and Director of the WHO Collaborative Research Centre on Healthy Cities and Urban Policy. He formerly held the post of Director of Environmental Services, Bath City Council, and was Honorary Professor in the Department of City and Regional Planning, University of Cardiff (UK). He was Deputy Permanent Secretary, Ministry for Planning and Environment, State of Victoria, Australia from 1983 to

1986; and was Senior Lecturer in Public Policy and Management at the School for Advanced Urban Studies, University of Bristol, for 13 years. He has extensive experience of working internationally, for various countries and organizations. He has written several books on public policy, government and planning.

## IX WASTE

*Dr Donald Huisingh* has been Professor of Environmental Sciences at Lund University, Sweden since 1997. From 1989 to 1997 he was Professor of Environmental Sciences, Cleaner Production and Sustainability at the Erasmus University in Rotterdam, The Netherlands. He has published more than 140 articles and has worked with many national and international organizations and companies. His main field of interest is cleaner production, environmental management and progress towards sustainability.

*Karin Jordan* has worked with the Berlin-based consultancy ARGUS since 1993 and has extensive experience on a series of studies on waste management and waste statistics for the EC Environment DG and for Eurostat. For the City of Berlin, Karin Jordan has undertaken a research study to formulate the specific requirements for a comprehensive soil protection strategy, including aspects of land-use as well as pollution of soil. In Germany she has carried out several investigations on the amount and composition of various waste types and prepared guidelines for waste prevention and recycling.

*Peter Gössele* has been Director for the statistical institute ARGUS at the Technical University of Berlin since 1987. He has been project manager for many studies concerning waste analysis, landfill monitoring and waste statistics, such as the LIFE-REMCOM project concerning development of a network for monitoring the quality of household refuse with a view to strengthening environmental legislation. He has been a member of the Board of Directors of the German Society of Waste Management since 1993 and leader of the Society Working Group Europe.

*Professor Franco Cecchi* is full professor of Biochemical Plants and of Biotechnological Environmental Processes at the University of Verona (Italy), Faculty of Sciences, Science and Technology Department. He is referee for several international scientific journals and member of the scientific committees of the Environmental Ministry and of the National Environmental Agency. He is author of more than 200 scientific papers including international reviews, books and conference reports. Main research topics include: energy and material recovery from organic waste through biological stabilization;

monitoring methodologies for sanitary landfills; biodegradation of aromatic compounds; mathematical models for simulation of chemical and biological processes; control of biological processes; fluid dynamic parameters in biological reactors; flue-gas cleaning; treatment processes for industrial and urban wastewater; and production reduction techniques for waste activated sludge.

*Dr Paolo Pavan* is a researcher at the University of Venice (Italy), Faculty of Sciences, Environmental Sciences Department. He is author of more than 120 publications, including articles for international scientific reviews, books and conference papers. His research is mainly concerned with advanced waste and wastewater treatment, in particular, the anaerobic digestion process applied to the organic fraction of solid waste, the anaerobic fermentation of putrescible wastes to produce light alcohols and volatile fatty acids (VFA), and the biological nutrient removal from wastewater considering also the integration with the organic waste treatment cycle.

## X WATER POLLUTION AND WATER RESOURCES

*Dr Joan S. Davis* is an aquatic chemist and until 1999 held posts as a researcher and directorial staff member at the Swiss Federal Institute of Environmental Science and Technology (EAWAG) in Zürich, and as lecturer at the Swiss Federal Institute of Technology and the University of Basel. As emerita, she now cooperates with the EAWAG on evaluation of Swiss river studies. She formerly had held posts also at the Technical University of Berlin, Gesamthochschule Kassel and University of Zürich. Her main research areas are the anthropogenic impacts (chemical and physical) on Swiss surface waters, and the technical and societal changes required for sustainable water management. She is a board member of a number of committees, research institutes, organizations and foundations associated with environmental issues, and has published papers on subjects including river water studies; correlation between resource consumption, economic growth and quality of life; sustainable use of resources; and technologies and risks.

*Dr Klaus Lanz* is an aquatic chemist and was involved in water research at the University of Minnesota (1986–87) and the Swiss Federal Institute of Environmental Science and Technology (EAWAG, 1987–88). He was a water campaigner for Greenpeace Germany (1988–92) and is author of the Greenpeace Book of Water (Newton Abbot, 1995). He is director of International Water Affairs, an independent institute focusing on interdisciplinary water research and is based in Hamburg, Germany. Current research topics

include the potential environmental and social effects of European Union water legislation and the ongoing privatisation of water services.

*Josefina Maestu* is an economist and obtained a master's degree in Planning in the UK. She carried out studies for a Ph.D. degree in the Massachusetts Institute of Technology, and has worked for the Water Quality Directorate of the Spanish Ministry of Environment. She is currently the Director of the Spanish Office of ECOTEC Research and Consulting, and Associate Professor of Environmental Economics at the University of Alcalá de Henares. She specializes in the economic and institutional aspects of water management and has co-authored chapters in several books.

*Jose Maria Gasco* is a Doctor in Agricultural Engineering and a Professor of Edaphology in the School of Agricultural Engineering of the Madrid Technical University. He has extensive experience in field work related to salinization of land and water resources and the effect of pesticides and fertilizers on water-related habitats and agricultural production. He has recently carried out the Water Accounts for Spain using a revised OECD methodology.

*Jose Manuel Naredo* has a Ph.D. in Economic Science and is a member of the statistical profession. He has broad experience in macroeconomic studies combining concrete analysis of agrarian systems with more general reflections on economic science in relation to natural resources. He has written books on economic thought and on agriculture in Spain. He is currently the Director of the Argentaria Foundation Programme on Economics and Nature.

*Federico Aguilera* is an economist and Professor in Applied Economics in the University of la Laguna in Tenerife, where he has been teaching the economics of natural resources for the past ten years. He did postgraduate studies in agricultural economics in Montpellier (France) and has been visiting researcher at the University of Arizona. He has written books and articles on water economics and the economics of natural resources.

