FIRST WHO GLOBAL CONFERENCE ON AIR POLLUTION AND HEALTH

IMPROVING AIR QUALITY, COMBATTING CLIMATE CHANGE – SAVING LIVES

Organized in collaboration with UN Environment, World Meteorological Organization (WMO), the Climate and Clean Air Coalition (CCAC), the secretariat of the UN Framework Convention on Climate Change (UNFCCC), United Nations Economic Commission for Europe (UNECE) and the World Bank

30 October – 1 November 2018

WHO headquarters, Geneva, Switzerland

SCIENTIFIC ADVISERS

Providing advice and input on the scientific content of the conference upon request and considering priorities and goals outlined in the WHO Road Map for an enhanced global response to the adverse health effects of air pollution
Chair, Scientific Advisers to the Conference

Francesco Forastiere, MD, PhD, Senior Scientist at the Department of Epidemiology, Lazio Region Health Service, Rome, and at the National Research Council (CNR), Palermo, Italy. Visiting Professor King’s College, London. Consultant for WHO/Geneva and World Bank/PMHE. Medical background in respiratory physiopathology and in occupational medicine, MSc in Epidemiology (LSHTM) and PhD in Epidemiology (Linkoping, Sweden). I have been conducting studies on the health effects of outdoor air pollution in the last three decades and I have been the Principal Investigator (PI) in several EC-funded projects. Author or co-author of more than 500 full papers in the peer-reviewed scientific literature. Temporary Adviser for WHO/EURO and IARC on several occasions. Chief Editor of the Italian Journal of Epidemiology (Epidemiologia & Prevenzione) and Associate Editor of Environmental Health. I have focused on the application of scientific research findings to a wide range of public health issues, including air pollution, radon, waste disposal, occupational exposure to silica and asbestos, and environmental tobacco smoke.

Special Adviser

Carlos Dora, MD, PhD, has a career in global public health and environment. He is visiting Professor at the Mailman School of Public Health, Columbia University. Until recently he coordinated the WHO work on health impacts of sector policies (energy, transport, housing, extractive industry) and to prevent diseases due to air pollution. He recently led the development of an Urban Health Initiative to strengthen health systems capacity to achieve health, climate and air quality benefits from urban policies. He helped create a framework for health to contribute to Habitat III New Urban Agenda. Previously he led analyses of health benefits from climate mitigation policies and for health indicators in post-2015 SDGs. He worked to include health into Strategic Environment Assessments and into Development Banks Safeguards. He helped initiate the European Transport Health and Environment process. Previously he worked at the London School of Hygiene and Tropical medicine, the World Bank and developing new primary health care models in Brazil. He served in many science/policy committees and global partnerships. His MSc and PhD are from the London School of Hygiene and Tropical Medicine and his research includes HIA, perceptions and communication of science and health risks, by scientists, media and politicians.
Scientific Advisers

Lujain Alqodmani is a medical physician by profession specialized in global health policy. She acts as Co-Chair of World Medical Association Environment Caucus focusing on the link between environment and health and International Officer of Kuwait Medical Association. Dr Alqodmani is the Special Adviser for the Executive Chair of EAT Foundation. She serves in the Health Adaptation Committee of Environment Public Authority in preparation of Kuwait's Second National Determined Contributions Report to United Nations Framework Convention on Climate Change (UNFCCC). She is also the Membership Director of Women in Global Health. Lujain graduated from Kuwait University and earned a Master's in International Healthcare Management, Policy and Economics specialized in global health from Bocconi University in Milan.

Markus Amann is Director of the ‘Air Quality and Greenhouse Gases’ program at the International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria. He is coordinating the policy analyses on cost-effective emission control strategies for the clean air and climate policy proposals of the European Commission and heads the ‘EMEP Centre for Integrated Assessment Modeling’ of the Convention on Long-range Transboundary Air Pollution. He serves at the Science Advisory Panel of the Climate and Clean Air Coalition (CCAC), the Science Panel of the Asian-Pacific Clean Air Partnership (APCAP) and the Climate and Clean Air Commission of the Austrian Academy of Sciences. With a background in Economics and Electrical Engineering, he received his PhD from the University of Karlsruhe, Germany.

Yewande Awe, PhD, is a Senior Environmental Engineer at the World Bank in Washington DC. Dr Awe has worked on projects and analytical activities that address pollution management and environmental health in various countries including Guatemala, Colombia, Mexico, Peru, India, El Salvador, Argentina and Qatar. Most recently she has been engaged in regionally-focused analytical work on air quality management in Poland, and in Western Balkan countries including Kosovo, Bosnia and Herzegovina and Macedonia. Her current work programme centres on improving air quality monitoring and health estimation of health risks and impacts of air pollution in low- and middle-income countries. This work focuses on harmonization of air quality monitoring methods and procedures in low-and middle-income countries; investigating the potential for application of satellite technology to air quality monitoring in low- and middle-income countries; and estimating health and economic burdens of ambient air pollution. Dr Awe co-led the start-up of the World Bank-administered Pollution Management and Environmental Health multi-donor trust fund and currently works on the air quality management window of the fund. She has co-authored and co-edited several publications on air pollution and health, and environmental management. Dr Awe earned her PhD degree in Environmental Engineering from Imperial College London.
Kalpana Balakrishnan is a leading environmental health researcher in India serving as the lead investigator in numerous national and international research projects with a focus on air pollution in the ambient, household and occupational environment. She has contributed to several national and international technical assessments concerned with air quality including the Global Burden of Disease and Comparative Risk Assessments (GBD 2000, GBD 2010, GBD 2013), the IARC Monographs for household (2006) and ambient air pollution (2013), the Global Energy Assessment (2009), the World Health Organization Air Quality Guidelines for ambient (2006) and household air pollution (2014). She continues to serve as a WHO expert group member for the Air Quality Guidelines Update and the Global Air Quality Observatory. She currently serves as member of the National Steering Committee on Air Pollution Related Issues for Health Effects for the Ministry of Health Government of India and as Chair for the Environmental Risk Factors Expert Group for the India State level Burden of Disease Initiative. Amongst her notable recognitions include being elected as a fellow of National Academy of Medical Sciences, India and being the recipient of the Public Health Foundation of India award for Outstanding Scientist in Public Health, the Hari Om Ashram Trust Award for Outstanding Scientist administered by the University Grants Commission, Government of India.

Michael Brauer is a Professor in the School of Population and Public Health at The University of British Columbia (UBC). He is an Affiliate Professor at the Institute for Health Metrics and Evaluation at the University of Washington. His research focuses on transportation-related and biomass air pollution, the global health impacts of air pollution and the relationships between multiple exposures mediated by urban form and population health. He has participated in monitoring and epidemiological studies throughout the world and served on guidelines development and advisory committees to the World Health Organization, the Climate and Clean Air Coalition, the US National Academies, the Royal Society of Canada, the International Joint Commission and governments in North America and Asia. He is an Associate Editor of *Environmental Health Perspectives* and a member of the Core Analytic Team for the Global Burden of Disease. His contributions to environmental health have been acknowledged by a number of awards including awards including the Wesolowski Award from the International Society of Exposure Science, WH Thurlbeck Prize for Research in Lung Disease, the Bastable-Potts Asthma Research Prize, the Distinguished Achievement Award for Overall Excellence from the UBC Faculty of Medicine and several publication awards.
Bert Brunekreef is a Professor of Environmental Epidemiology at the Institute for Risk Assessment Sciences, Utrecht University. Since early 1990s he has coordinated five EU funded studies (PEACE, TRAPCA, AIRALLERG, AIRNET, ESCAPE) in the field of air pollution, allergy and health. He is a partner in many other international collaborative studies. A PI on three studies funded by the US Health Effects Institute. On several occasions, Bert Brunekreef served as adviser on national and international panels in the field of environmental health, including the Dutch National Health Council, of which he is a member, WHO and the US EPA. Bert Brunekreef is co-author of more than 500 peer reviewed journal articles in the field of environmental epidemiology and exposure assessment. In recent years, he received the ISEE John Goldsmith award (2007), the European Lung Foundation Award (2007), an honorary doctorate of the Catholic University of Leuven, Belgium (2008), the Heineken Prize for Environmental Sciences (2008), and an Academy Professorship of the Dutch Royal Academy of Sciences (2009) to which he also was elected to become a member in 2009.

Valentin Foltescu has been active in the field of atmospheric environment since the early 1990s, carrying out atmospheric monitoring; atmospheric modelling (from global to local scales); assessments; air policy development and air policy implementation. He was involved in the projects leading to the development of the Copernicus Atmosphere Monitoring Service for air quality, atmospheric composition and climate. Valentin Foltescu is Senior Programme and Science Officer in the Climate and Clean Air Coalition Secretariat. He joined UN Environment in 2015. Prior to that he worked in European Union Institutions (European Environment Agency and European Commission – Joint Research Centre) and Swedish governmental institutions and universities.

Michael James Gatari Gichuru is a faculty employee of the University of Nairobi, Kenya, holding a position of an Associate Professor. He has a PhD in Environmental Science with specialization in physics, a Licentiate in environmental physics, a Higher Diploma in electrical and electronic engineering, and diplomas/certificates in nuclear and scientific instrumentation, European research course on atmospheres, and 20 pre-conference tutorials in aerosol science since 1998. He chaired the working group that drafted the ABC-Africa whitepaper and was appointed a co-chairman of ABC-Africa by the UNEP ABC Science Committee. He has published over 25 journal papers, related to air quality and air pollution in general, besides over 110 conference contributions. He was invited by the Transport Section at UNEP to train Kenya motor transport inspectors and attracted grant to carryout research in air pollution. He is a member of the Association for Aerosol Research (GAeF), American Association for Aerosol Research, European Physical Society and European X-Ray Spectroscopy. His is widely experienced in nuclear science applications, and aerosol science, technology and measurement. He has established a rich aerosol/air quality research and collaboration network institutions in China, Italy, Sweden, Taiwan, UK and USA.
Sarath Guttikunda is the founder/director of UrbanEmissions.Info (UEinfo, India). His main research interest is air quality analysis at urban, regional, and global scales and finding ways to bridge the gap between science, policy, and public awareness. He is the developer of the SIM-air (Simple Interactive Models for Better Air Quality) family of tools, with applications in Asian, African, and Latin American cities, capable of assessing short- and long-term air pollution scenarios in a multi-pollutant environment. In 2016, UEinfo launched IndiaAirQuality.Info, an open portal disseminating modelled forecasts of air quality and source contributions for the next three days; and other policy relevant information for all 640 districts in India. In 2017, as part of the APnA city programme, UEinfo released high resolution emissions and pollution databases for 20 Indian cities, which will be expanded to 30 more Indian cities and some African cities in 2018. Dr Guttikunda received his PhD from the University of Iowa (2002); Bachelors in Chemical Engineering from the Indian Institute of Technology, Kharagpur (1997); is a NASA Earth and Space Science Fellow; and a TED fellow.

Andy Haines is Professor of Environmental Change and Public Health at the London School of Hygiene and Tropical Medicine. He was Director of the London School of Hygiene and Tropical Medicine from 2001 to October 2010. He has worked internationally, including in Nepal and the USA and chaired the Scientific Advisory Panel for the 2013 WHO World Health Report. He was a member of the UN Intergovernmental Panel on Climate Change for the 2nd and 3rd assessment exercises and was review editor for the health chapter in the 5th assessment. He was chair of the Rockefeller/Lancet Commission on Planetary Health which published its report in 2015. He has led a number of Lancet series and is a member of several international bodies including the Rockefeller Economic Council on Planetary Health. He has published many papers in high impact journals on topics such as the effects of environmental change on health and the health co-benefits of low carbon policies. He is currently co-investigator on a number of research projects which focus on sustainable healthy food systems, complex urban systems for sustainability and health and the effects of climate change on health.

Barbara Hoffmann graduated from the Medical School of Aachen, Germany, in 1993, where she also received a doctoral degree in Lung Physiology in 1996. She worked in pulmonary and internal medicine before she received an MPH from the School of Public Health in Bielefeld, Germany. From 2001 to 2011, she worked at the Institute of Medical Informatics, Biometry and Epidemiology, Medical School of the University of Duisburg-Essen, Germany, where she founded and developed the Unit of Environmental Epidemiology and Clinical Epidemiology. Since 2011 she is Professor of Environmental Epidemiology at the University of Düsseldorf, Germany. Her research focuses on the investigation of acute and chronic cardiopulmonary, metabolic and neurological health effects of air pollution and noise. She specifically examines potential biological pathways of action and investigates the role of multiple exposures and their interactions in causing acute and chronic disease, using epidemiological methods.
Marc Jeuland is an Associate Professor with a joint appointment in the Sanford School of Public Policy and the Duke Global Health Institute at Duke University. An environmental economist by training, his research focuses on nonmarket valuation, water and sanitation, environmental health, energy poverty and transitions, trans-boundary water resource planning and management, and the impacts and economics of climate change. In the energy, air quality, and development domain, he is currently working on projects related to evaluation of cleaner cooking interventions, measuring energy access and reliability as well as their impacts on health and other measures of human well-being, and on reviews of the drivers and impacts literature related to energy. He has conducted impact evaluation and survey work in many lower- and middle-income countries located in the Middle East, South and South-East Asia, and sub-Saharan Africa, sponsored by organizations such as the International Vaccine Institute, 3ie, MCC, USAID, and the World Bank.

As a Health Scientist with US EPA, Ali Kamal quantifies the health and economic benefits of air quality policies using the Environmental Benefits Mapping and Analysis Program (BenMAP). He serves as the BenMAP technical expert in which he leads training sessions, helps our domestic and international partners perform their analyses, and continues to be a technical lead on the development of the programme. Prior to his work with BenMAP, his research focused on air quality exposure and source characterization studies where he served as a field team leader both at US EPA and at the University of Michigan in the School of Public Health. Given his technical background, he continues to follow the advancements of sensor technology and the impact it will have on EPA’s work, especially as it pertains to wildfires. Dr Kamal also serves as an Air Resources Advisor forecasting smoke during wildfire events to mitigate health impacts on individuals and communities.

Narges Khanjani is an Environmental Epidemiologist working at the Department of Epidemiology and Biostatistics and the Department of Environmental Health, at the School of Public Health, Kerman University of Medical Sciences (KMU), Kerman, Iran. She is also a member of the Iranian Epidemiology Association (http://www.irea.ir/) and a member of the Iranian Association for Environmental Health (www.iaeh.org). Dr Khanjani has conducted extensive research about air pollution, climate and health in different Iranian cities. She is also an Adjunct Research Fellow at the Monash Centre for Occupational and Environmental Health, School of Public Health and Preventive Medicine, Monash University, Melbourne, Australia; a member of the International Society for Environmental Epidemiology (ISEE) http://www.iseeepi.org/ and a member of the International Epidemiological Association (IEA) http://www.ieaweb.org/. Dr Khanjani is currently serving as the Co-Chair of the Eastern Mediterranean Chapter of the International Society for Environmental Epidemiology (ISEE).
Patrick Kinney has a broad background in environmental health sciences, with specific training and expertise in air pollution exposure assessment, epidemiology, and climate change. He completed his doctoral studies in Environmental Science and Physiology at the Harvard School of Public Health in 1986. As a junior faculty member at New York University, he developed and led epidemiologic research on lung function and inflammatory biomarker changes in relation to chronic exposures to ozone and other air pollutants. Moving to Columbia in 1994, he expanded his research to include community-based studies of traffic pollutant exposures and health outcomes in underprivileged neighbourhoods in New York City, leading and contributing to several large-scale studies over the following 22 years. He has contributed to the periodic reviews of the National Ambient Air Quality Standards for ozone and particulate matter, and served on the EPA Clean Air Scientific Advisory Committee for reviews of the Nitrogen Dioxide and Sulfur Dioxide standards. He developed and directed the Climate and Health Program at Columbia, which trains students and postdocs in research on the health dimensions of climate variability and change. He also directed research on indoor and outdoor air quality and health in Africa, including a randomized stove trial in Ghana funded by NIEHS. Current funding sources include the National Oceanic and Atmospheric Administration, the National Aeronautics and Space Administration. In January 2017, Dr Kinney was named the inaugural Beverly A. Brown Professor of Urban Health at Boston University.

Michal Krzyzanowski is an environmental epidemiologist, holding the honorary position of a Visiting Professor at the Environment Research Group of the King’s College London. Until his retirement in August 2012, he was a Head of the WHO European Centre for Environment and Health in Bonn. Before joining WHO in 1991, Dr Krzyzanowski conducted epidemiologic research on health effects of air pollution and other environmental factors in Poland (at the National Institute of Hygiene in Warsaw), in the United States and in France. He is an author of more than 200 scientific publications and a recipient of the 2013 John R. Goldsmith Award for his contributions to the knowledge and practice of environmental epidemiology. He holds a MSc in Physics from Warsaw University and ScD and PhD (Dr.hab) in Epidemiology from National Institute of Hygiene, Warsaw, Poland.
Nino Künzli is Deputy Director Swiss Tropical and Public Health Institute (Swiss TPH), Basel, and Dean of the Swiss School of Public Health (SSPH+), Switzerland. Professor for Public Health University of Basel. With a MD from the University of Basel and both a MPH and a PhD from University of California Berkeley (USA), Nino Künzli has a 27-year record of research in environmental epidemiology, reflected in some 400 peer reviewed articles, cited >15 000 times. The main focus is on ambient air pollution and its cardiorespiratory health effects. His air pollution research includes exposure science, epidemiologic research and the integration of both into health impact assessment to serve policy-makers. After the PhD he returned to Basel to continue research. Appointed as Associate Professor to the University of Southern California he worked with the Southern California Children’s Health Study (2002–2005). He received an ICREA Professor position in Barcelona to join the Centre for Research in Environmental Epidemiology (2006–2009), now ISGlobal. He regularly serves on policy-relevant committees such as in the WHO Guideline Development Group for the update of the Air Quality Guidelines or as President of the Swiss Federal Commission on Air Hygiene – the advisory board of the Swiss Government. Dr Künzli is Co-Editor-in-Chief of the International Journal of Public Health, owned by SSPH+ www.ssphplus.ch. Künzli leads SSPH+ – a foundation of eight Swiss Universities.

Johan Kuylenstierna is Policy Director at Stockholm Environment Institute (SEI) and member of the Executive Team of SEI. He is a member of the Scientific Advisory Panel of the Climate and Clean Air Coalition (CCAC). Key areas of interest relate to atmospheric issues, including air pollution and climate change. His main focus at the moment is in the linkages between climate and air quality, in particular associated with strategies to reduce Short-Lived Climate Pollutants (SLCPs). He is leading the development of an SLCP strategy support tool – LEAP-IBC – an application of the SEI LEAP tool for use by countries and research organizations to understand implications of air pollution and SLCP strategy implementation, by incorporating an ‘Integrated Benefits Calculator’ which includes the ability to calculate health impacts of air pollution. He is a leader to the CCAC SNAP initiative, ‘Supporting National Action and Planning on SLCPs’ and the Regional Assessment Initiative. He coordinated a UNEP/WMO assessment on Black Carbon and Tropospheric Ozone, which helped to spark interest leading to the formation of the CCAC. He has also been Coordinating Lead Author of the atmosphere chapters in GEO4 and GEO5. Johan has advised governments and policy processes on atmospheric issues.
Nanoot Mathurapote has been working at Thailand’s National Health Commission Office (NHCO) since 2008. As head of the Global Collaboration Unit, she is in charge of creating and expanding collaboration with international partners to advocate public participation in the policy process and health in all policies approach from Thailand’s experience, namely the process of health assembly, health impact assessment and health charter. In addition to working in the health area, she has a Master’s degree in social anthropology from the University of Kent, United Kingdom and a Bachelor’s degree in mass communication from Chulalongkorn University, Thailand. During her work at NHCO, she obtained certificates of participation in the global health diplomacy workshop in 2012 and health in all policies training for trainers in 2015. Before joining NHCO, she worked as the project coordinator for the 3rd Gross National Happiness Conference in Thailand in 2006–2007 and as programme assistant at United Nations Development Programme at the Thailand country office from 2004 to 2006.

Gina McCarthy’s 35-year career in public service has been dedicated to environmental protection and public health. As Administrator of the US Environmental Protection Agency under President Barack Obama, she was the nation’s leading advocate for common-sense strategies to protect public health and the environment, including efforts to address the challenge of climate change and ensure the protection of the country’s water resources. Her leadership led to significant federal, state, and local actions on critical issues related to the environment, economic growth, energy, and transportation. Since leaving Washington, McCarthy has been a fellow at Harvard’s Kennedy School of Government’s Institute of Politics and the Menschel Senior Leadership Fellow at Harvard’s T.H. Chan School of Public Health and joined Pegasus Capital Advisors, a private equity firm, as an operating advisor focused on sustainability and wellness investments. McCarthy now also serves as Professor of the Practice of Public Health in the Department of Environmental Health at Harvard’s T.H. Chan School of Public Health and Director of Harvard Chan’s Center for Climate, Health and the Global Environment, leading the development of the School’s strategy in climate science, health, and sustainability.

Ana Maria Mora is an Associate Professor at the Central American Institute for Studies on Toxic Substances (IRET) at Universidad Nacional in Costa Rica, and an Assistant Researcher at the Center for Environmental Research and Children’s Health (CERCH) at UC Berkeley. She completed her Medical Doctor degree from University of Costa Rica in 2005, her PhD degree in Epidemiology at UC Berkeley in 2014, and her postdoctoral training at Boston University in 2017. Her research focuses on the health effects of exposures to environmental toxicants, including pesticides, heavy metals, and per-and polyfluoroalkyl substances, in vulnerable populations, such as pregnant women, children, and farmworkers.
Lidia Morawska is a Professor in the School of Chemistry, Physics and Mechanical Engineering, Faculty of Science and Engineering, Queensland University of Technology (QUT) in Brisbane, Australia, the Director of the International Laboratory for Air Quality and Health (ILAQH) at QUT, which is a WHO Collaborating Centre, and the Director in Australia for the Australia–China Centre for Air Quality Science and Management (ACC–AQSM). She conducts fundamental and applied research in the interdisciplinary field of air quality and its impact on human health and the environment, with a specific focus on science of airborne particulate matter. Professor Morawska is a physicist and received her doctorate at the Jagiellonian University, Krakow, Poland for research on radon and its progeny. Professor Morawska is an author of over 700 journal papers, book chapters and conference papers. She has also been involved at the executive level with a number of relevant national and international professional bodies and has been acting as an adviser to the World Health Organization. She is a past President of the International Society of Indoor Air Quality and Climate.

Mark J. Nieuwenhuijsen is a world leading expert in environmental exposure assessment, epidemiology, and health risk/impact assessment with a strong focus and interest on healthy urban living. He has experience and expertise in areas of all cause mortality, respiratory and cardiovascular disease, mental health and cognitive function, cancer and reproductive health, and exposure measurement and modelling of indoor and outdoor air pollution, green space, UV exposure, noise, temperature and physical activity, using new technology such as GIS, smartphones, personal sensors and remote sensing. He leads the international TAPAS study (http://www.tapas-program.org/), examining the health impacts of active transport in six European cities and the EC funded PHENOTYPE (www.phenotype.eu) study, examining the relations between green space and health, and the ISGlobal funded SUMA HIA project on health impact assessment in low and medium income countries. He is a co-investigator in ICEPURE (www.icepure.eu), that examines exposure to and health effects of solar UV exposure, ESCAPE (www.escapeproject.eu) (and related (VE3SPA), that examines the long term health effects of air pollution, NIH funded CAVA which aims to validate smartphone based data collection methods, EC funded CITISENSE (http://citi-sense.eu/) that aims to empower citizens using smartphone technology, EC funded HELIX (http://www.projecthelix.eu/), that examines the early life expose and childhood diseases, EC funded EXPOsOMICs (http://www.exposomicsproject.eu/) that examines the air pollution and water exposome and health, the EC funded PASTA study (http://www.pastaproject.eu), which promotes active transportation through sustainable transport, the EC funded BlueHealth project evaluating the relationship between blue space and Health and the EC funded LifeCycle project on birth cohort coordination in Europe.
Krzysztof Olendrzynski is an applied mathematician and atmospheric physicist. He specializes in air pollution and climate change issues. He has been working in Austria (International Institute for Applied Systems Analysis – IIASA), Norway and Poland (Meteorological and Environmental Protection Institutes) as a scientist focusing on air pollutant and greenhouse gases emission inventories and atmospheric transport modelling. He is an author and co-author of more than 50 peer-reviewed publications as well as a number of policy-related documents. He joined the United Nations Economic Commission in Europe in Geneva in 2010. In the secretariat of the Long-range Transboundary Air Pollution Convention (LRTAP) he is a senior manager responsible for scientific, technical, capacity building and outreach issues.

Tolu Oni is a Public Health Physician Scientist and urban epidemiologist at the University of Cambridge Medical Research Council Epidemiology Unit, UK. She was, until recently, Associate Professor in Public Health at the University of Cape Town. Her transdisciplinary urban health research aims to provide evidence to support development and implementation of healthy public policies in Africa. Research activities include systems for health projects: investigating how urban systems and exposures can be harnessed for health; and health systems projects: integrated health systems responses to changing patterns of disease and multimorbidity in the context of urbanization. She has published over 40 manuscripts in international journals, and has given presentations at international academic (urban health, HIV, TB) and non-academic meetings including the United Nations High Level Political Forum for Sustainable Development, New York; and the World Economic Forum (WEF) annual meeting, Davos 2018. She serves on several advisory boards including Future Earth and the African Academy of Science Open Research Platform; and is an editorial board member of Lancet Planetary Health, Cities and Health, and the Journal of Urban Health. Profiled in the Lancet journal in 2016, she is a 2015 Next Einstein Forum Fellow, and is co-Chair of the Global Young Academy.

 Arnico Panday was born in Switzerland to a Swiss mother and a Nepali father and grew up mostly in Nepal. He pursued higher education in the United States, receiving a Bachelor’s in Environmental Science and Public Policy from Harvard, a Master’s in Land Resources from the University of Wisconsin-Madison, and a Doctor of Science in Atmospheric Science from the Massachusetts Institute of Technology (MIT). He conducted postdoctoral research at MIT and at Princeton University’s Geophysical Fluid Dynamics Laboratory, and served on the faculty at the University of Virginia before returning to Nepal to build up the Atmosphere Programme at the International Centre for Integrated Mountain Development (ICIMOD). The Atmosphere Programme addresses air pollution in the Hindukush Himalaya region: it studies emissions, atmospheric processes and change, as well as air pollution impacts (on climate, cryosphere, water resources, agriculture, tourism, health and livelihoods). It pilots and upscales mitigation solutions in a range of sectors. It works with policy makers from municipal to global levels. It carries out training courses for students, government officials and journalists. It facilitates cross-border collaborations and cooperation. Arnico Panday has also served as adviser or board member for organizations and projects in Rwanda, Philippines, Hong Kong, Japan and Nepal.
Annette Peters directs the Institute of Epidemiology at the Helmholtz Zentrum München – German Research Center for Environmental Health and is full Professor of Epidemiology at the Ludwig Maximilian’s Universität München, Germany. She studied biology and mathematics in Germany and epidemiology at the Harvard School of Public Health, Boston, USA. She was among the first examining the role of ultrafine particles in epidemiological studies and pioneered work identifying the link between ambient particulate matter and cardiovascular disease. She was the president of the ISEE in 2012 and 2013. Today, she heads the population-based KORA cohort initiated in the mid-eighties in Augsburg, Germany and is a principle investigator of the German National Cohort, responsible for building its central biorepository. Her research interest is the integrate the assessment of environmental exposures with chronic disease epidemiology and biomedical approaches utilizing high throughput technologies such as genome-wide methylation or metabolomics. She has served on numerous scientific panels including the group drafting the global guidelines on air pollution published in 2005 by the World Health Organization, a panel advising the International Olympic Committee during the Beijing Olympics in 2008 and chaired a grant panel of the European Research Council.

Pippa Powell has headed up European Lung Foundation (ELF) since 2005 and has worked together with the Chairs to develop and grow the organisation. In addition to her background and PhD in biomedical science, Pippa has more than 15 years’ experience working in healthcare communications – as a journal editor and a medical writer. More recently, Pippa has focused on information for patients, working with the press and media to ensuring accurate reporting of respiratory science and awareness campaigns for the general public. This has included communication into the risk factors around lung disease – including smoking and air quality. Pippa has championed the role of the patient within science and has been working with professionals to find best practice for patient and public input into healthcare.

Xavier Querol is a research professor at IDAEA-CSIC in Barcelona, Spain. Research focusing on atmospheric sciences and environmental issues associated to power generation (mainly emissions of pollutants and recycling of wastes). He has important contributions on atmospheric aerosols chemistry, especially in urban areas, and source apportionment, as well as on devising action plans and on the scientific evaluation of their effectiveness. He is leading or participating in numerous national and international research projects and has produced around 560 SCI papers on environmental issues and supervised 27 PhD theses. In 2014, 2015, 2016 he was included in the list of Highly Cited Researchers (1% most cited for subject fields and year of publication, http://highlycited.com/). He leads a team of around 25 staff working on the above topics. He acted as advisor for air quality of several important city councils, regional governments, the Spanish Ministry of Environment (leading author of the Scientific Basis for the National Air Quality Plan) and DG Environment of the EC (II Position Paper on PM, contributor to different EC Guidance Documents, member of working groups on PM) as well as UNECE (vice-chairman of EMEP Scientific Bureau) and WHO (member of SAC of REVIHAAP and HRAPIE projects).
Ramanathan discovered the greenhouse effect of CFCs (chlorofluorocarbons) in 1975 which established the fact that non-CO₂ gases are a major contributor to global warming and also enabled the Montreal protocol to become the first successful climate mitigation policy. In 1980, Madden and Ramanathan were the first to make a statistical prediction that global warming will be detected above the background noise by 2000, verified by the IPCC in 2001. He led international field campaigns and developed unmanned aircraft platforms for tracking brown clouds pollution worldwide. His work has led to the formation of the Climate and Clean Air Coalition by the United Nations. He founded and leads Project Surya with daughters Nithya Ramanathan and Tara Ramanathan; an extended effort to characterize and mitigate climate and health impacts of cooking with solid biomass. He is now leading a University of California climate solutions course that is expected to reach a million students or more. With WHO, he organized a meeting at the Vatican on the health impacts of climate change. He was honored as the science adviser to Pope Francis’ delegation to the 2015 Paris Climate Summit. He was named the UN Climate Champion in 2013.

Beate Ritz is a Professor of Epidemiology at the UCLA Fielding School of Public Health with co-appointments in Environmental Health Sciences and Neurology at the UCLA, SOM; a member of the Center for Occupational and Environmental Health and the California Population Research Center. Her primary research interests are the effects of occupational and environmental exposures focusing on air pollution and pesticides on pregnancy and adverse birth outcomes and childhood diseases (autism and asthma) as well as neurodegeneration (Parkinson’s and Alzheimer’s) and cancers. She has developed geographic information system (GIS) based exposure assessment tools to study health effects of air pollution and of long-term pesticide exposures. She is the 2007 recipient of the Robert M. Zweig M.D. Memorial Award (“Clean Air Award”) from the California South Coast Air Quality Management District, and served on multiple IOM committees evaluating Gulf War Illness, the US EPA CASAC panel (Carbon Monoxide National Ambient Air Quality Standards); she has been a member of the Scientific Review Panel on Toxic Air Contaminants for the State of California for five years and recently served on the IOM panel on “21st Century Risk Assessment”.

Horacio Riojas Rodriguez is a physician by the National Autonomous University of Mexico. He has a Master’s degree Environmental Health Sciences and a PhD degree in Epidemiology, graduated with honours, by the School of Public Health of Mexico. He is a researcher in Medical Sciences of the National Health Institutes and Third-level of High Specialty Hospitals and member of the National System of Researchers in Mexico. He started working in environmental health at the Health Environment and Work Institute (a private consulting and research firm), to later transfer to the National Institute for Public Health in Mexico, where he is the head of the Environmental Health Office. He has been involved in air pollution exposure and epidemiology for the last 18 years. He participated in the working group of the National Ambient Air Quality Standard updated in 2014 and the National Air Quality Index under review with the Federal Commission for Sanitary Risk Protection. He is coordinator of the Environmental Health Sciences Doctorate the National Institute of Public Health, member of International Society of Environmental Epidemiology (ISEE) and member of the Executive Editorial Committee of International Journal ECOHEALTH.
Paolo Saldiva, pathologist, full professor of Pathology at the Faculty of Medicine, University of São Paulo, Brazil. Member of the National Academy of Sciences and National Academy of Medicine in Brazil. Director of the Institute of Advanced Studies of the University of São Paulo. Member of Scientific Advisory Committee of the World Meteorological Organization. Member of the panel of specialists of the IARC/WHO for topics related to air pollution and cancer. Research interests: Pulmonary Pathology, Autopsy Pathology (including minimally invasive autopsies), Verbal Autopsy, Environmental Pathology. Authored 656 papers referenced in the Web of Science Database. Completed the supervision of 56 PhD students.

Jonathan Samet, a pulmonary physician and epidemiologist, is Dean and Professor of Epidemiology at the Colorado School of Public Health and holds a secondary appointment as Professor of Environmental and Occupational Health. His career has centered on epidemiologic research on threats to public health and using research findings to support policies that protect population health. His research has addressed indoor and outdoor air pollution, smoking, radiation risks, cancer etiology and outcomes, and sleep-disordered breathing. He has been involved with numerous committees related to use of scientific evidence in characterizing risks and decision-making, including chairing the Clean Air Scientific Advisory Committee (CASAC) of the US EPA and the FDA’s Tobacco Products Scientific Advisory Committee (TPSAC). For three decades he has authored and edited the reports of the Surgeon General on smoking and health, including serving as Senior Scientific Editor for the 50th Anniversary 2014 report. Dr Samet received the 2004 Prince Mahidol Award for Global Health awarded by the King of Thailand, the Surgeon General’s Medallion in 1990 and 2006, the Edward Livingston Trudeau Medal from the American Thoracic Society/American Lung Association, the Fries Prize for Improving Health, and the Luther L. Terry Award for Distinguished Career from the American Cancer Society. He is a member of the National Academy of Medicine.
Joel Schwartz is a Professor in the departments of Environmental Health and Epidemiology at the Harvard School of Public Health, on the steering committee of the Harvard University Center for the Environment, and Director of the Harvard Center for Risk Analysis. His major research interests include health effects of air pollution, of heavy metals, climate change, and drinking water, epidemiological methods, risk assessment and cost benefit analyses. He has examined these questions using a variety of methods including time series, case-crossover, and case-only analyses of administrative data, survival and repeated measures analyses of cohorts, repeated measures analyses of panel studies, etc. These have included a range of outcomes including cognitive function, lung function, asthma, heart attacks, strokes, deaths, blood pressure, lipid levels, biomarkers of inflammation and oxidative stress, markers of biological ageing, and epigenetic changes. In addition, he has been involved in exposure modelling, including both land use regression approaches as well as use of remote sensing data and chemical transport models, and in methodological issues, including dose-response modelling, causal modelling, and data fusion. Dr Schwartz’ benefit-cost analysis on lead in gasoline was responsible for its elimination in the United States, and his methodology for valuing the benefits of reducing toxins that have cognitive effects is widely used. Professor Schwartz was a recipient of a John D. and Catherine T. MacArthur Fellowship.

Xiaoming Shi is an epidemiologist and public health expert in China. He obtained a PhD in epidemiology from the Chinese Center for Disease Control and Prevention (China CDC) in 2005. Currently, he is Professor and Director of the National Institute of Environmental Health (NIEH), China CDC and is responsible for investigating, monitoring and evaluating health effects of environmental exposures nationally. His major research interests include environmental hazards and health effects, healthy aging, and the control and prevention of noncommunicable diseases (NCDs). He has received a number of grants from the Ministry of Science and Technology of China, National Natural Science Foundation of China (NSFC), and international agencies and organizations to conduct this research. He has also contributed to establishing the National Human Bio-Monitoring Project, which has been set up and implemented in China since 2016. Meanwhile, Prof. Shi is leading a large-scale project systematically assessing the acute health risks of air pollution in China, and is in the process of developing a national environmental public health tracking project. He has extensive experience working with numerous NCDs and aging studies in Chinese populations. He has authored or co-authored over 160 peer-reviewed journal articles, book chapters and books.
Drew Shindell is Nicholas Professor of Earth Science at Duke University. From 1995 to 2014 he was at the NASA Goddard Institute for Space Studies in New York City and taught at Columbia University. He earned his Bachelor’s at UC Berkeley and PhD at Stony Brook University, both in Physics. He studies climate change, air quality, and links between science and policy. He has been an author on >200 peer-reviewed publications, received awards from Scientific American, NASA, the NSF and the EPA, and is a fellow of AGU and AAAS. He has testified on climate issues before both houses of the US Congress (at the request of both parties), the UNFCCC and the World Bank, developed a climate change course with the American Museum of Natural History, and made numerous media appearances as part of his outreach efforts. He chaired the 2011 UNEP/WMO Integrated Assessment of Black Carbon and Tropospheric Ozone, was a Coordinating Lead Author on the 2013 Fifth Assessment Report of the IPCC and is again a Coordinating Lead Author on the forthcoming IPCC Special Report on 1.5°C. He also chairs the Scientific Advisory Panel to the Climate and Clean Air Coalition of nations and organizations.

Oksana Tarasova is the Chief of the Global Atmosphere Watch (GAW) Programme of the World Meteorological Organization (WMO) since 2014. The GAW Programme provides an international framework for global observations and analysis of the atmospheric chemical composition changes in support of environmental conventions and services. Before joining WMO, she worked at Max-Plank Institute for Chemistry in Mainz and in the Lomonosov Moscow State University, where she graduated with excellence in 1996. From 2009 to 2014 she worked as a scientific officer within GAW with the major focus on greenhouse gases and traditional air pollutants. Since 2010 she is a co-chair of the Task Force for Measurements and Modelling in the Convention on Long-Range Transboundary Air Pollution. From 2011 to 2015 she served as the President of Atmospheric Sciences Division of the European Geoscience Union. Dr Tarasova is a member of the International Commission on Atmospheric Chemistry and Global Pollution (iCACGP) since 2015. Dr Tarasova is a co-editor of several book chapters and an author of more than 30 peer reviewed papers.
Katherine Walker is a principal scientist at the Health Effects Institute, an independent research organization in Boston, USA. She is currently responsible for HEI’s global programmes which include the annual State of Global Air report and website and the global burden of disease from major air pollution sources. Regional applications include analyses of air quality and health impacts of shipping in the Shanghai/Yangtze River Delta, China estimation of the contribution of household air pollution to ambient air quality in Africa, among other projects. She managed two major HEI expert panel reviews: (1) of the Diesel Exhaust in Miners study and its suitability for use in quantitative risk assessment and (2) of the scientific literature on ultrafine particles. She has also served as the staff scientist for numerous HEI research studies – multi-centre, multi-city time series study of air pollution and health in Europe and North America (APHENA) and in South America (ESCALA), on a multi-centre US study of the effects on health of PM composition and gaseous co-pollutants (NPACT), and on the development of statistical methods for multi-pollutant analysis, accountability studies, and causal inference, among others. Prior to joining HEI, Dr Walker spent 20 years in the conduct and application of public health risk assessment, including characterization of uncertainty, to support decisions. Dr Walker holds a M.S. and Sc.D. from the Harvard TH Chan School of Public Health.

Yun-Chul Hong’s main interest is in environmental health issues, particularly environmental and genetic effects on chronic disease such as diabetes mellitus, hypertension and cancer. He has much experience in the epidemiological research for evaluating effects by exposure to air pollution, endocrine disrupting agents and heavy metals. He also has expertise in the area of gene-environmental interaction showing that not only genetic polymorphisms but also environmental exposures affect health outcomes or indicators by the way of interaction. Currently he is the chair of the Department of Preventive Medicine and the director of the Institute of Environmental Medicine, Seoul National University College of Medicine in Korea. He also serves as chair of Thematic Working Group for Air Quality of the Asia-Pacific Regional Forum on Environment and Health. He works as an editor and reviewer for many international journals on epidemiology and environmental health. As of 2018, he has published more than 250 articles in the peer-reviewed international journals.