



Welcome to the

'Joining Forces to Improve Air Quality and Health' Workshop



DAY 1

'Joining Forces to Improve Air Quality and Health'
Workshop

Welcome

Matt Hort

Joining Forces to Improve Air Quality and Health Workshop

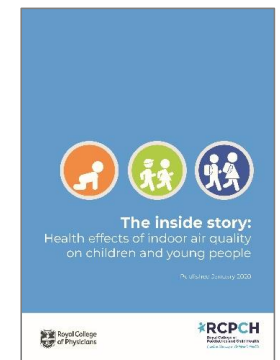
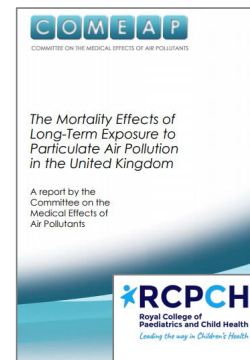
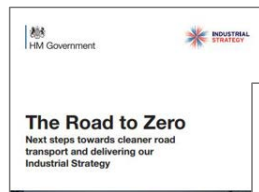
SPF Clean Air Joint UKRI and PSRE Event

Motivation for a Clean Air Programme

Atmospheric pollution in the UK is responsible for approximately 40,000 early deaths and has a cost of around £20 billion to health services and business, per year.

The UK is entering a transformative period in air quality, as transport, heating, energy, solvent use and agricultural emissions change. Most 'easy wins' to reduce particulate matter, volatile organic compounds, ammonia and nitrogen oxides have been or are being implemented.

Future improvements will require innovative solutions underpinned by new research and collaboration to protect the health of society, whilst pursuing clean growth.



Clean Air – the challenges

- Still a long way to go
- Air pollution linked to increasing range of health impacts (cardio-respiratory, low birth weights, diabetes, cognitive function)
- Ambition to cut public exposure to PM in line with WHO by 2030
- Lots of time spent inside (homes, schools, workplaces, travelling)
- Changing exposures e.g. fine secondary PM and VOCs growing in significance
- No longer effective to manage public health impacts solely through controlling outdoor sources?



SPF Clean Air

Aim

To bring together the UK's world class air quality research base and support high quality multi- and interdisciplinary research and innovation to develop practical solutions to today's air quality issues and equip the UK to proactively tackle future air quality issues, in order to protect health and support clean growth.



Partners





Clean Air Champions

The Champions will bring together the UK's world-class air quality research base to develop practical solutions for air quality issues.

“The Clean Air projects will create the foundation for interdisciplinary research to understand and tackle air quality issues, drawing on the existing strengths of the UK's world-class research base. This is a timely programme that will enhance our capability to respond to current and future threats to public health and build a more resilient, cleaner economy”



Professor Stephen Holgate



Professor Martin Williams



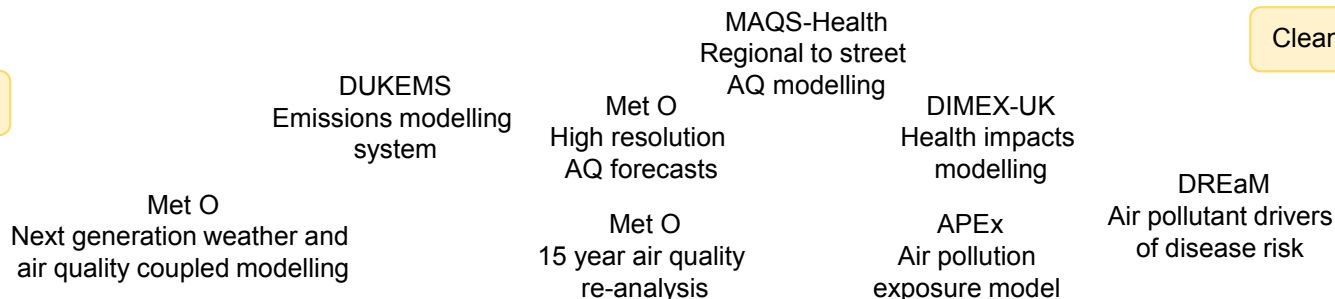
Dr Jenny Baverstock

Clean Air website: <https://www.ukcleanair.org/>

SPF Clean Air Activities

7 Clean Air Networks

Clean Air Champions



Global to Local Weather

- Weather forecast
- Multi year weather analysis
- Nested finer scale local weather models
- Climate change

Emissions

- Anthropogenic and biogenic
- Temporal and spatial variation
- Street, local, national, regional, global
- Observations

Air Quality

- Street to global
- Hourly to climatic variation
- Gas and aerosol chemistry, deposition, etc
- Weather and climate feedbacks
- Observations

Impacts

- Hazard x Vulnerability x Exposure
- Economic cost/benefit
- Health and Environmental
- Measurement of impact/mitigated impact

Action

- Long term policy e.g. energy mix, vehicle, clean air zones, international
- Tactical e.g. health advice, industrial and traffic management, individual choice

ANTICIPATE
Air quality implications of public policies

Verification & validation. Understanding and quantification of uncertainty

Future consortia calls

Met O Airborne measurement campaign QUANT Utility of monitoring networks OSCA Integrated observation system

Met O: Cloud based data sharing and analysis framework

Workshop Purpose

To enhance understanding and break down barriers across air quality communities

- Provide a forum to enable discourse between the health outcomes and air quality communities
- To examine relevant questions and issues that lie at the heart of continued progress in this area
- To identify areas of potential synergies between the health and air quality communities to formulate continued collaborative work
- To develop a post-event documents to contribute to scientific and wider community understanding



I hope you enjoy the
workshop