



**National Centre for
Atmospheric Science**
NATURAL ENVIRONMENT RESEARCH COUNCIL



Part of UK Research and Innovation

Making the Invisible Visible

Perspectives on engaging the public with air pollution



Overview

- About NCAS - what, where, why and how
- Air quality engagement activities - range of examples
- Effective engagement - our perspectives (top tips!)




Leading and Supporting Research


We are funded by the Natural Environment Research Council to provide the UK with **advice, leadership** and **national capability** in atmospheric science.

- We coordinate long-term research into **air pollution**, climate and high impact weather, and long-term global change



Our Organisation

 Main Locations
90% of Staff

 Secondary Locations

200+ staff embedded across UK
universities and research institutes

30+ staff and PhD students focus on
air pollution

We provide access to:

- Ground-based and airborne observational facilities
- Data analysis and archival services
- Computational modelling services
- Expert independent advice and training



Leeds
York
Manchester
Birmingham
Cranfield
Oxford
RAL
Reading
UEA
Cambridge
Hertfordshire
Surrey

Air Pollution

Science Theme Leader: Dr Sarah Moller (University of York)



Human and ecosystem exposure to air pollution is a significant global environmental burden. Managing air quality and reducing impacts on quality of life and economic development relies on making better estimates of emissions.

Key Activities

- Improve quantification of emissions using observations and modelling, and urban-scale models using new sensor technologies.
- Contribute science to emerging biomedical research.
- Evaluate interactions and feedbacks between air pollution, climate change and weather events.

Why is public engagement important?



Inspire and **educate** members of the public, and **enable** them to act as informed citizens.

Actively **listen** to views, concerns and insights of members of the public (and use these in research).

Solve research problems together, and **improve** the quality and impact of our work.

*Public Engagement is a key strand of the NCAS Communications Strategy

Engagement activities

Highlights to share:

- National awareness raising campaigns
- Public lectures and festivals
- Science with schools
- Local drop-in events



Clean Air Day: a collective voice to show that clean air matters



UK's largest air quality campaign

- Boost understanding and prompt action
- Informative website, range of toolkits, central marketing
- Individuals, councils, schools, businesses, healthcare organisations, housing providers, universities, charities and community groups
- In 2018, 1.2 million people reached via 500+ events and 1700+ press items

Thursday 20 June 2019
#cleanairday

Clean Air Day: activities and reflections



- Public information stands, school sessions, radio/tv interviews etc
- Relationship building between councils and scientists based at local research centres
- Shared contacts and knowledge, build capacity and capability
- Spokespeople to promote messages and provide trusted independent evidence
- Limited resources and aims/outcomes need clear communication

The Air We Share: capture opinions and inform citizens



Regional roadshow

- January - March 2017 in York, Leeds and Bradford
- Survey of 780 local residents and their attitudes to air quality:
 - Current behaviours/activities
 - Do you feel affected, concerned, informed?
 - Effective ways to take action
 - Evaluation shared with local councils
- 350 visitors to daytime and evening drop-in events
- Live monitoring, information booklets, pledge postcards, scientists to explain emissions and impacts
- Leading to national plans

Lectures and festivals



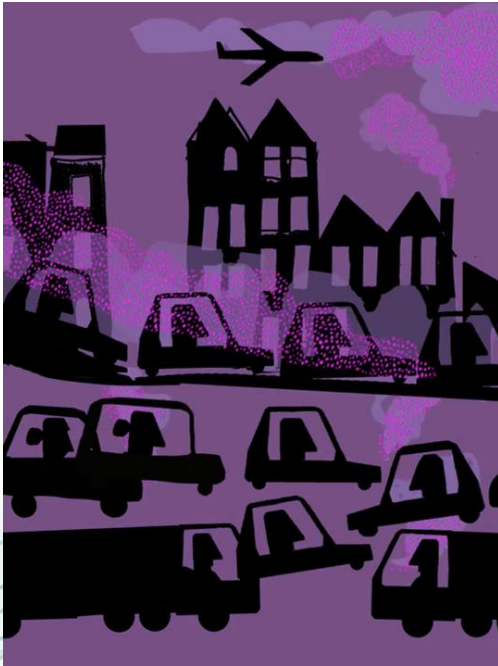
Pint of Science, Cafe Scientifique, public lectures

- Tailor to your surroundings and audience
- Educate and inspire, offer a space/time for listening
- Focus on hope rather than fear or despair
- Highlight actions people can take

British Science Festival, NERC Into the blue, Hay Festival

- Hands-on activities, eye-catching, approachable
- Provide a space for quick or more in-depth conversations

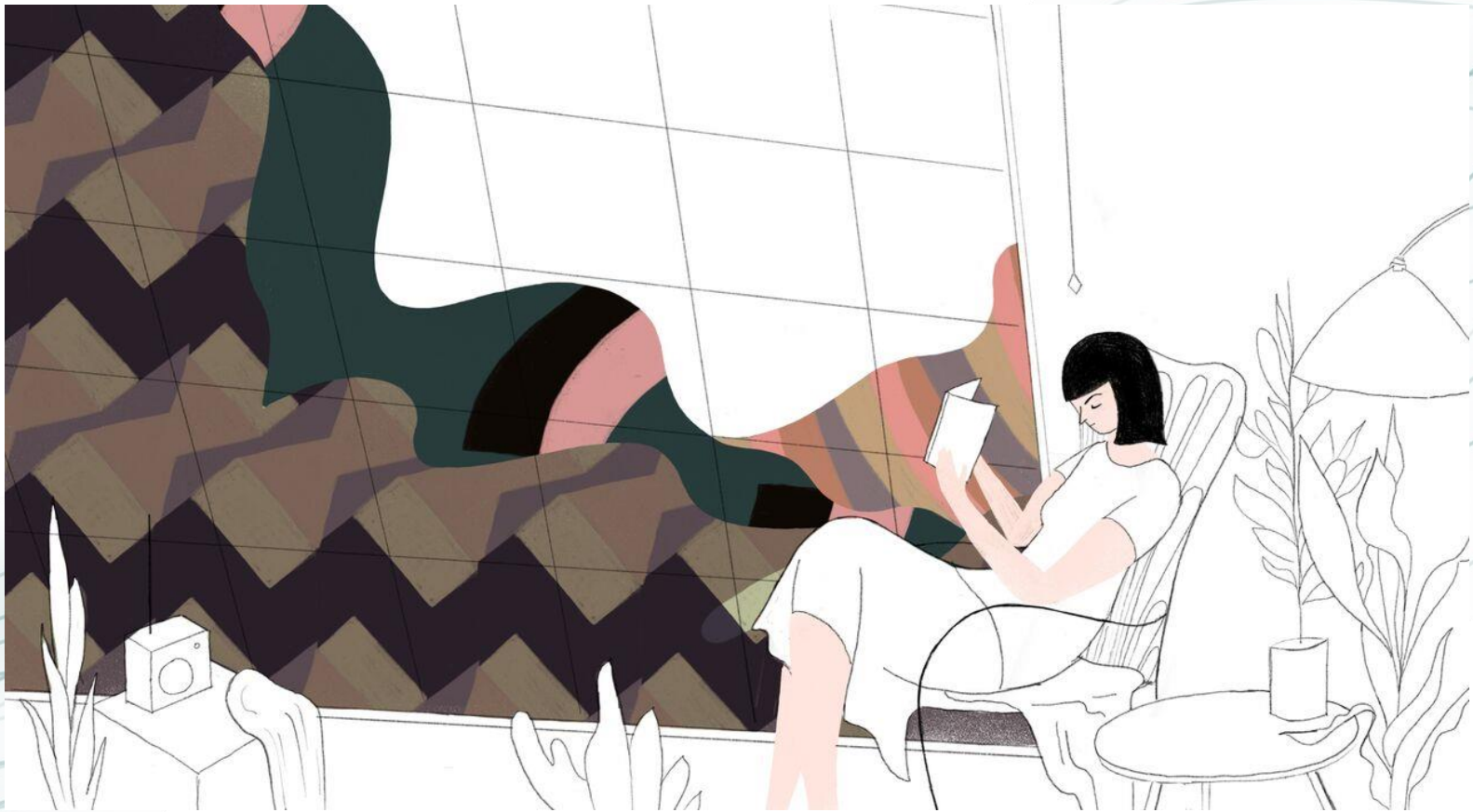
Art meets science for 'Clean Air Starts At Home' film production



Striking short films to communicate cutting-edge environmental science

- Collaboration between Hay Festival and NERC - reach new audiences with new topics
- Aardman Animation Studios director Dan Binns and atmospheric chemist Ally Lewis (NCAS, University of York) (voiced by Marcus Brigstocke)
- Explores the impacts of air pollution beyond cars and exhaust pipes - a surprising amount of air pollution is emitted by the home

Clean Air Starts At Home



Science in schools



Science week, workshops and interactive lectures

- Mythbusting - who, what, where
- Personal insights - interests, career path
- Different approach for primary and secondary schools
- Demonstrations and hands-on experiments are key
 - Teabag rockets, smog in a jar, catching air
- Make the issue of air pollution real

Summer School



“As a family it was great to see the children's end presentations, experiments and tour around the lab.”

3 day work experience event

- Interaction between students from different schools, and their families
- STEM - Science, Technology, Engineering & Maths
 - Inspiring young people (in and out of the classroom) and offering support to teachers, schools, colleges, community groups
- People Like Me
 - Campaign to promote women in STEM
 - Family recognised as an important influencer
 - Demonstrate the value for their future

Community consultation events



Fracking drop-in events

- Advertised to community groups, local residents and industry
- To explain environmental baseline monitoring activities and the publicly available data
- Independent experts, avoiding conflict through transparency
- Afternoon and evening - time and space to chat
- Videos from recent events and interviews with scientists available online

Our perspectives on public engagement

There may be no 'magic words' that resonate with everyone, but there are **more** (and less) **effective ways to start a conversation** about air pollution.



Listening and framing

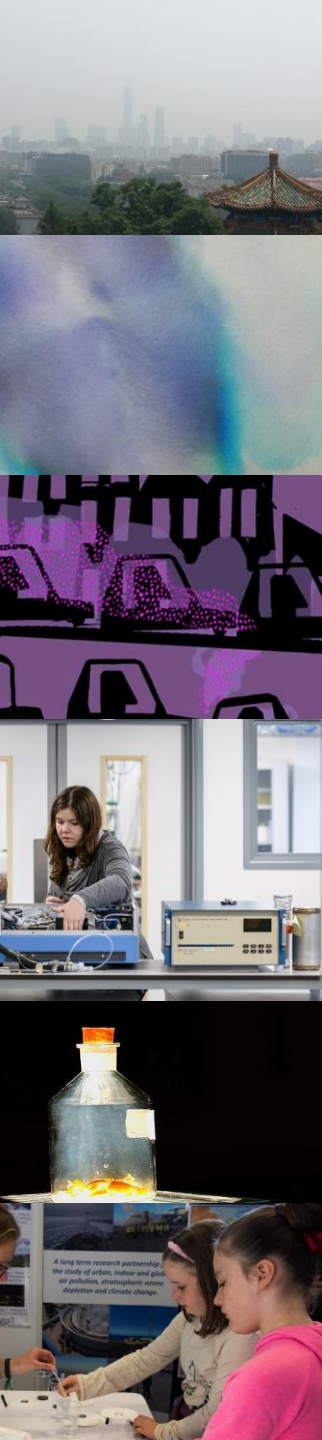
Listen

Make time to understand your audience and be aware of public opinion. What matters to them? How will poor air quality affect the things they care about? People's views and values have a bigger influence on their attitudes about air pollution than their level of scientific knowledge.

Start on common ground

Think about framing the conversation on points of 'local interest or importance' - this will make it easier for people to engage, rather than creating a 'psychological distance' (air pollution is a problem for someone else to suffer or deal with)..





Real people, real world

Point to positive social norms

Most people care about the quality of the air they breathe, and are concerned about pollution/polluting activities, but often this isn't widely recognised.

Be visual

Show images of 'real people' doing 'real things', new or less familiar stories, air pollution impacts (local and elsewhere) and solutions to air pollution.

Be an authentic and confident communicator

Draw upon personal experiences and perspectives, talk about the real world (not abstract ideas), 'tell a story' and point to positive social norms.

What we know, what can we do

Don't get lost in uncertainty

Focus on the 'knowns' before the 'unknowns'. Scientific literacy amongst the public is quite low, and most adults' experience of science is from school and is viewed as a series of facts/figures rather than a way of understanding the world (filled with uncertainties).

So what should I do?

Don't shy away from talking about the things that matter and have an impact e.g. walk instead of driving, burn smokeless fuel, turn engines off in traffic, check air pollution forecasts, ventilate your home, use low or zero VOC products etc.

Encourage people to have conversations - make air pollution a normal topic of conversation.



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ENVIRONMENT**

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