

# AIR QUALITY INFORMATION SYSTEM REVIEW STEERING GROUP

## MEETING THREE: MINUTES

Friday 29<sup>TH</sup> April 2022  
14:00 – 16:30

### VIRTUAL MEETING via Microsoft Teams

<b><u>ATTENDANCE</u></b>		
<b><u>Chair:</u></b>	Bill Parish	<i>Department for Environment, Food and Rural Affairs (Defra)</i>
<b><u>Members:</u></b>	Ally Lewis Rob Day Anna Hansell  John Newington Matthew Clarke Andrew Grieve Gillian Mawdsley Jo Feary Karen Exley Kirsty Smallbone	<i>Air Quality Expert Group (AQEG) Asthma + Lung UK Committee on the Medical Effects of Air Pollutants (COMEAP) Defra Hertfordshire County Council Imperial College London Lay Representative Respiratory Consultant UK Health Security Agency (UKHSA) University of Brighton</i>
<b><u>Guest Attendance:</u></b>	Taryn Ferguson Katie Hunter Sarah Morris Elliot Treharne	<i>Greater London Authority (GLA) GLA GLA GLA</i>
<b><u>Secretariat:</u></b>	Sarah Haley Stuart Aldridge Lisa Zhang	<i>Defra UKHSA UKHSA</i>
<b><u>Observers:</u></b>	Mollie Blackburn Ilana Conn Sarah Peters Matthew Hort Sarah Robertson	<i>Defra Defra Department for Health and Social Care Met Office UKHSA</i>

## ABRIDGED MINUTES

### ITEM 1: Welcome and Introductions:

- 1.1. Members, observers, and the secretariat were welcomed to the meeting.
- 1.2. All actions from the last meeting are progressing:
  - The Office for Health Improvement and Disparities (OHID) are drafting the final report from their qualitative research examining public perceptions of air quality. Findings will be presented at the next AQIS steering group meeting.
  - Global Action Plan (GAP)'s project with health care professionals has been extended over the summer. GAP will be invited to present findings at a future AQIS steering group meeting.
  - An AQIS review page will be added to UK-Air in June to coincide with Clean Air Day.

### ITEM 2: Intelligence Update:

- 2.1. Members shared relevant updates:
- 2.2. The AQIS Secretariat presented document *AQIS\_SG03\_05\_COMEAP Briefing* at the Committee on the Medical Effects of Air Pollutants (COMEAP) meeting of March 30<sup>th</sup>:
  - COMEAP members were broadly happy with the long list of questions posed.
  - There was some discussion of physiological effects of exercising during air pollution episodes – this was flagged as a possible area for further research.
  - COMEAP had a brief discussion about WHO guidelines – it was noted that the current version of the Daily Air Quality Index (DAQI) had used WHO's previous short-term air quality guidelines as a starting point. This approach had been considered appropriate as these guidelines were largely based on effects of short-term exposures. However, most of the new short-term air quality guidelines had their basis in ensuring that long-term guidelines would be achieved and may therefore be less appropriate to inform a DAQI.
- 2.3. Air Quality Expert Group (AQEG) members continue to be engaged with the review. AQEG is about to launch a review of measurement of a wide range of air pollutants, including PM2.5, which may be of interest to steering group members.
- 2.4. The UK Research and Innovation (UKRI) Clean Air Programme Annual Conference took place 5<sup>th</sup> – 7<sup>th</sup> April and involved a great deal of discussion around communicating air quality information, community engagement and encouraging behaviour change. It was noted that the conference may be a chance to engage with the wider community and building a longer-term legacy from the UKRI funding.

### ITEM 3: Presentation from Greater London Authority (GLA):

- 3.1. Elliot Treharne (GLA) presented slide pack *AQIS\_SG03\_03\_GLA Alerts Summary\_Slides\_(GLA)* detailing the Mayor of London's Air Quality Alert System:
  - London's air quality alert system is disseminated through a number of channels including text alerts; social media; information cascades (alerts issued to 3300 schools in London and via the London Resilience Forum); press statements and on-street communications infrastructure including the London Underground, road signs, and messages on bus stop countdown boards.
  - Forecasts are based on three models – Defra (run by Met Office), airText (CERC), and LondonAir (Imperial). Imperial gives their forecast for next 3 days, monitor the data in real-time across the London Air Quality Network (LAQN) and then make a recommendation in terms of issuing an alert. This includes a confidence level.
  - The Alerts system aims to encourage Londoners to adopt protective behaviour on days of high air pollution, working with the health system to reach vulnerable groups.

- GLA is reviewing the need to include messaging encouraging people to reduce pollution.
- 3.2. GLA has conducted research to understand the reach and impact of the current alert system:
- The top two sources of air quality information that Londoners had seen were 1) a weather forecast website/app and 2) other news articles (e.g., BBC, Metro) but around 1 in 3 were not aware that any air quality information is made available – indicating the lack of a single one size fits all solution.
  - Research found some demographic differences with working class, white Londoners less likely to see alerts or take action - middle-class responders were found to be more receptive to messages.
  - In terms of behaviour change, GLA identified the need for a consistent and simple message.
  - Additional research conducted in schools revealed that teachers are unsure what to do when alerts are issued and may benefit from more practical and authoritative advice.
  - Campaigns which detail clear actions to take have had some effect on behaviour change. Idling Action London programme ([Idling Action London — Reducing engine idling to help clear London's air](#)) has had success with parents.
- 3.3. Comments and questions were taken from the steering group.
- 3.4. Members questioned the role of GPs and other healthcare professionals in disseminating information. It was noted that the GLA Health Summit in February brought together the Chief Medical Officer (CMO) and representatives from national, regional and local government and the health system to consider actions required to strengthen the public and health communities' awareness of air pollution. The chair flagged that GAP are continuing to work in this space and that consideration may be given to how to engage with the medical community and Royal Colleges.
- 3.5. Members discussed the benefits and limitations on having different approaches to forecasting. It was agreed that while having a range of models adds value and reflects the lack of a single "true" forecast, contradictions will create confusion and undermine public confidence in the alerts. The steering group agreed that an improved alert system should seek consensus and present a single message from an authoritative source. It was suggested that more localised forecasts may be useful if able to complement rather than contradict this.
- 3.6. As part of the SPF Clean Air programme, the Met Office is developing a kilometre-scale air quality model for the UK.
- 3.7. Considering clarity and consistency of message, some members suggested it may be relevant to review DAQI limits. It was pointed out that a Daily Air Quality Health Index would offer a different message to a Daily Air Quality Index. It was agreed that the steering group would look at other indexes around the world as a starting point for considering what improving the DAQI might involve.
- 3.8. There was a short discussion about evaluation. Members considered it important to embed evaluation in any changes made to information system. Members were informed that GLA were developing an evaluation report for the London Alert work which would be shared with them in due course.
- 3.9. The secretariat agreed to continue engagement with the GLA.

#### **ITEM 4: Discussion on Proposed AQIS Work Plan:**

- 4.1. Members were surveyed on three questions prior to the steering group meeting:
- *What are the main issues in air quality communication that you think this review should prioritise?*

- *What outcomes do you think improvements to the air quality information system should be seeking to achieve?*
- *How do you see this review process supporting the outcomes you have specified?*

- 4.2. Members considered the following the main issues that the review should priorities:
- Understanding who the target audiences for air quality information are, their various information needs and how best to reach them.
  - Improving the communication of air quality risks: considering how best to communicate short term risks and longer-term risks and updating the DAQI to reflect the best available evidence.
  - Developing a clear and consistent message.
  - Identifying trusted messengers.
  - Considering how to evaluate impact and future proof any changes.

- 4.3. Members thought improvements to the air quality information system should be seeking to achieve:
- A risk communication system that is fit for purpose, and accessible to all.
  - More widespread awareness-raising. This may include national campaigns and/or more local support in communicating air quality; e.g., toolkits for local authorities or health care professionals.

These improvements should support the following outcomes:

- Increased public awareness of the sources of air pollution and the day-to-day actions people can take to reduce air pollution.
- Increased public awareness of the health harms from air pollution and the activities people can take to reduce exposure.
- Greater awareness of where to access real time air quality information and forecasts.
- Public trust in the information provided.
- Provision of advice and information that audiences find engaging.
- Provision of advice and information that audiences have both the agency and motivation to action.

With the ultimate impact of reducing adverse health effects from air pollution and addressing inequalities.

- 4.4. Members felt that the AQIS review could help to achieve these outcomes by:
- Reviewing the current provision of information and understanding what is provided in other comparable countries.
  - Commissioning evidence to ensure alerts, advice and information reflect the most up to date research developments.
  - Setting the groundwork for developing messages and campaigns.
  - Raising the profile of the review amongst advisory networks and developing wide reaching relationships to support dissemination of a co-ordinated message.

- 4.5. The steering group were presented with slide pack *AQIS\_SG03\_04\_Proposed Work Plan* detailing a proposed five workstream programme of work, drafted based on points of interest raised in steering group meetings. The workstreams are designed to gather or generate evidence under the following themes:

- **Workstream 1:** Who and what:
  - Understanding what information needs to be targeted at whom during air pollution episodes.
  - Understanding which behaviours information should be aiming to influence to maximise health and wellbeing outcomes.
- **Workstream 2:** Data quality:
  - Understanding how accurate and precise the data that underpins “real-time” and forecast air quality information.
- **Workstream 3:** Communicating risk:
  - Understanding when (under what conditions) target audiences need to be provided with air quality information.

- Understanding how to present data so it is interpreted as intended.
  - **Workstream 4:** Influencing behaviour:
    - Understanding how messaging content and framing affects impact.
  - **Workstream 5:** Expanding reach:
    - Understanding how best to reach different audience.
- 4.6. Members were broadly content with the five workstream approach. It was noted that workstreams may need to be conducted in parallel where possible. The following comments were captured for each workstream:
- 4.7. Workstream 1:
- Members considered it important to understand how the health evidence has evolved since current DAQI advice was developed.
  - It is important to understand which groups are most vulnerable to health effects from air pollution and what this means for targeting alerts and advice.
  - Advice provided should be clear, actionable and carefully worded, both to avoid causing distress and to avoid unintended health consequences (e.g., people avoiding exercising).
  - Some members were concerned that the health literature base may lack evidence on alternative behaviours that can reduce personal exposure.
  - The secretariat were tasked with drafting questions for a possible rapid evidence review to identify groups at increased risk from air pollution.
- 4.8. Members conducted a hands-up vote, and it was agreed that advice provided to the public during air pollution episodes should both allow the public to take action to reduce their exposure, but also provide advice on ways the public can reduce their contribution to air pollution.
- 4.9. Workstream 2:
- Members suggested that highly localised emissions data was underexploited at present.
  - It was noted that the Met Office is looking at utilising the emissions inventory in local modelling, which may be relevant in communicating longer-term risk.
- 4.10. Workstream 3:
- It was suggested that “alerts” be referred to as “risk communication” to capture both short-term episodes and longer-term hazards.
  - Members discussed relevance of alert thresholds when communicating risk. It was suggested that when considering any sort of alert threshold, the intended outcome should be considered – a threshold designed to protect the most vulnerable may result in alert fatigue amongst the general population.
  - It was noted that the WHO have recently published new guidelines for air quality, but that these limits may not fully align to a daily index. There may be merit in considering the effect that different threshold could have both on health and behaviour.
- 4.11. Workstream 4:
- The steering group were enthusiastic about learning from other campaigns and communication strategies that have been effective in encouraging behaviour change including Covid 19 messaging in the UK and abroad and other public health campaigns (egg ‘Change4Life’).
  - It was suggested that the UKHSA Behavioural Science and Insight Unit and OHID colleagues may be able to advise on influencing behaviour.
  - Members noted that a consistent approach with collaboration across relevant government departments may increase effectiveness of messages.
- 4.12. Workstream 5:
- The steering group considered health care professionals as having a key role in disseminating information.

- Community engagement will need to be considered, language and communication style will be important in expanding reach.
- Members were interested in possibility of engaging with google or other information technology leaders to integrate air quality data into wide reaching consumer applications.

4.13. There was support for a suggestion to consider issuing a call for evidence aligned to the workstreams.

4.14. Members agreed to volunteer to workstream sub-groups to drive forward programme of work.

**ITEM 5: Next Steps and AOB:**

5.1. The chair briefly summarised the actions to be completed ahead of the next steering group meeting.

5.2. No items of AOB raised.

**Air Quality Information Systems (AQIS) Steering Group Secretariat  
April 2022**