

Use of 2020 and 2021 Monitoring Datasets

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The IAQM issues Position Statements on matters that could affect the way in which Members carry out their professional tasks and on air quality topics and issues where the IAQM can provide a unique perspective from which to give a professional opinion.



Overview

Ambient monitoring data is used routinely for model verification and validation. The coronavirus (SARS-CoV-2) pandemic has disrupted activity from 'business-as-usual' and therefore care is needed in selecting appropriate monitoring data.

The issue

COVID-19 has dominated our lives since March of 2020 and the pandemic has impacted activity, notably traffic levels, and hence ambient air quality.

Air quality professionals use ambient monitoring data in their work routinely, for instance for model verification and validation. In using ambient data there are two main points to consider:

1. The pandemic may have meant that monitors were not maintained or diffusion tubes changed according to planned schedule. The percentage of missing data may therefore be higher than usual, and diffusion tubes may have been exposed for different periods, and
2. Activity (traffic, industrial, commercial, domestic) and hence emissions during 2020 and for a significant part of 2021 has been interrupted by lockdowns and restrictions. This means that – even if monitoring data is present – the monitored levels are atypical compared with previous years and the business-as-usual assumption.

It will take some time until the impact of the pandemic on air quality is fully understood and to know to what extent we will return to our former pattern of activity and emissions. Furthermore, the social and economic impact of the pandemic may affect the previously trend in future emissions and background concentrations.

Remember that in carrying out validation it is important that the monitoring data and meteorological data used are for the same year and that the activity/emissions data, for instance, traffic volume, is appropriate for that year.

IAQM's position on this issue

Until the picture is more fully understood, the IAQM's advice is:

- If you are carrying out an air quality study that includes validation against monitoring data, use 2019 monitoring data as the last typical year, and

- If you use 2020 or 2021 monitoring data you must state clearly that the monitored levels are atypical and justify your use of data from these years.

This advice will be kept under review so that it can take into account evidence emerging from studies into the impact of the pandemic on activity, emissions and ambient concentration during 2020 and 2021, and the future implications of the pandemic.

Advice on the impacts on 2020 monitoring data with respect to LAQM reporting, can be found in guidance from Defra and the Greater London Authority.¹

References

¹ Department for Environment, Food & Rural Affairs and Greater London Authority (2021) COVID-19 Supplementary Guidance for LAQM Reporting in 2021, version 1.0, April 2021, Available at: <https://iaqm.defra.gov.uk/supporting-guidance.html> [Accessed 22/06/2021]

About the Institute of Air Quality Management (IAQM)

The IAQM aims to be the authoritative voice for air quality by maintaining, enhancing and promoting the highest standards of working practices in the field and for the professional development of those who undertake this work. Membership of the IAQM is mainly drawn from practising air quality professionals working within the fields of air quality science, air quality assessment and air quality management.

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