

Joining Forces to Improve Air Quality and Health

Sector Involvement

Air Quality: A Consultancy Perspective

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What do you see as the current problems in your sector and what future research/innovation is required to address them?

- Considering only the modelling aspects these issues need to be addressed or are clear shortcomings in our current modelling approach
 - Consistent underprediction seen in models used to assess (generally NO₂) in more complex urban areas – this issue is “hidden” by the common approach of using “model verification” – is this a model issue, a processing issue or an input data issue?
 - Huge increase in interest in ultrafine particles (UFPs) – no useful modelling tools or input data available at a consultancy level – at present we cannot directly assess the air quality impacts in terms of UFPs for proposed development.
 - Increasing interest in the impacts of air pollutants on natural habitats, potential importance of pollutants such as ammonia from motor vehicles.
 - Our modelling tools are quite old – so called “new generation” models are now more than 25 years old in their basic formulation – is there a second wave of new generation models?

What do you see as the current problems in your sector and what future research/innovation is required to address them?

- Future research and innovation required:
 - Assuming at least part of the underprediction comes from the modelling tools there appears to be a need to improve the performance of models in urban areas where dispersion is affected by buildings.
 - Development of an approach for modelling UFPs – maybe with current modelling tools but likely to require some further enhancements.
 - Non exhaust emissions – more information required on their contribution.
 - Step back and review whether our current modelling tools are adequate.

What is the next significant development that you expect to make a difference in your work in this area?

- Possible implementation of new standards for PM_{2.5} by UK Government – related interest in UFPs.
- Many assessment scopes are driven by public interest which itself is influenced by pressure groups – watch for emerging topics from environmental pressure groups.
- The possible diminishing importance of NO₂ may allow focus on new pollutants.

Which organisation or sector would you most like to collaborate with and why?

- Consultants are not generally model developers – more model users – therefore our collaboration will be to inform on user needs – not on actual model development.
- Input into those developing models for consultancy use.
- Discussions with those developing more research based models to see how their capabilities may be used in assessment type models.