The Forum for Air quality Modeling (FAIRMODE) brings together air quality modelers and users in order to promote and support the harmonized use of models by EU Member States, with emphasis on model application under the European Air Quality Directives. The yearly plenary meetings are devoted to national, regional and local policy makers.

NOTE: The below is a partial meeting summary only, focussing especially on bilateral exchanges, and will be completed by a fuller set of meeting notes and minutes. Please let me know if you would like us to follow-up on anything / with anyone specific while we are here. The meeting can be follow online here: https://youtube.com/live/jKXKfY -F4c

Participants

A total of 130 participants, 80 of which at the venue, including:

• [Name] (JRC)
• [Name] (Swedish EPA)
• [Name] (Concawe)
• [Name] (Germany)
• [Name] (EEA)
• [Name] (Met Norway)
• [Name] (NILU)
• [Name] (INERIS)
• [Name] (Ricardo)
• [Name] (VITO)
• [Name] (Univ. Aveiro)
• [Name] (RIVM)
• [Name] (ENV.C3)

Main Points

• The keynote session focussed on the proposal for a revised ambient air quality directive:
  
  o [Name] (ENV.C3) provided an overview of the proposal for a revised ambient air quality directive (using the standard slides), and the policy process ahead. I alerted to the increasing prominence of modelling applications in the monitoring and assessment regimes. I noted that this was a testament to the work done by the air quality modelling community, but also results in a significant new responsibility. I alerted also to the work we are initiating on a
technical guidance document on the use of modelling. I stressed that if they had concerns about the proposal (or want to see some elements kept) they should liaise with their national authorities.

- (JRC) gave a very informative analysis on how FAIRMODE recommendations made their way into the proposal for a revised ambient air quality directive. He (and the room) was/were very pleased that many of the FAIRMODE recommendations had been considered. Having said this he also underlined that the legislative frame itself would only be one step: it would be important for the modelling community to contribute to the development of technical guidance documents.

- (Swedish EPA) offered insight into the approach of the Swedish EU Presidency to the negotiations in the Working Party Environment of the Council. He confirmed having had two meetings to date (November and January), and that a third meeting on 9 March would specifically focus on monitoring and modelling. He alluded to a further 7 meetings being planned under the Swedish Presidency, and a policy debate on 20 June. He encouraged FAIRMODE contact points to liaise with the national authorities.

- Colleagues from Slovakia asked how confident are we about the 2020 maps presented in the Impact Assessment? For Slovakia it seems overly optimistic, which implies that the air quality standards suggested may not be attainable in more regions in Europe than the assessment implies. >> I explained that the 2020 data is modelled data (based on data calibrated for 2015), and that while for the percentage of stations in exceedance we have a bias adjustment applied, but not for the maps. In a coffee break follow-up I explained how we came to the numbers, and referred them to (Met Norway) who also was at this meeting. Their concern after our chat was that the calibration for 2015 used only 5 (or so) monitoring stations, but for 2020 they have many more stations (19).

- (Germany) noted that the proposal is not very clear about the requirements for modelling applications, and overall the ambition level for modelling seems above what is possible for now in Germany (especially if this modelling has to be done in many new locations). Also they questioned whether modelling is still needed on an annual basis if a detailed spatial representativeness is available (as the only real changing input parameter is meteorology)? One idea they floated is to limit modelling to urban environments. >> I made reference to the need for Technical Guidance Documents, as the needed level of detail cannot be in the Directive, and that we would welcome input to this. I noted that a model, that simply uses spatial representativeness, but meets the model quality objectives fully, would probably also be a model (if not, please tell us).

- (NILU): Would the modelling requirements apply to (a) heavy metals, (b) UFP and other emerging pollutants? She appreciated the introduction of the NUTS-1 constraints for air quality zones (I clarified that this is not an accurate reading of the text)? >> I agreed that the requirement applies to all pollutants referenced in Article 7 (so all pollutants including heavy metals – but not to UFP and other emerging pollutants.

- (EEA) updated on the EEA’s capacity to receive air quality data derived from modelling: in short, the system is ready, and can distinguish between objective estimation data and modelling data (which, confusingly, are reported in the same data flows). All of this is not straightforward, as the modelling applications use very different scales and often different data formats. This system includes new viewers that allow also to combine modelled data and monitored data (we are aware of these, but it us useful to see FAIRMODE more structurally informed about this link). also showed the ongoing work on a machine learning based air quality map, which is an EEA internal pilot project to use monitored and modelled data to develop a European wide map of air pollution
that can be updated hourly. First tests show surprisingly good validation – this is good news for the AQ Index.

- **NAMES** (Concawe), in a bilateral exchange, informed about their study (by TNO) related to the role of maritime contributions and ports to air pollution. This study is now finalised, and they would like to present this to us, and alert us to the increasing role of these sources, and asked for a one hour meeting in March. At such meetings they would also be willing to discuss their own assessment of air pollution: they very informally indicated that they had come to similar conclusions as presented in our impact assessment. Furthermore, they would like to invite us to present at the CONCAWE general assembly on 16 or 17 October 2023. They indicated that generally CONCAWE members don’t agree with all aspects of the proposal but regard it as a balanced proposal (and certainly compared to the draft EP report). I also alerted them to the upcoming Clean Air Forum in Rotterdam in November.

- **[Name] (Germany)** elaborated further about the gaps they see in the formulations on modelling and spatial representativeness. They very appreciated that the proposal elevated both concepts and that this triggers a requirement to get modelling approaches to be solid by 2030 (NB: I did not refute nor confirm the year by when modelling would need to be done). They inform their own ministry that it would be preferable to move the notion of spatial representativeness from Article 8 to Article 7 (and thus make it relevant for all zones), and that then this guides how to augment this information depending on the pollution levels as a function of this in Article 8. In practice this would mean that detailed modelling would not necessarily need to be done every year if the confidence in the spatial representativeness is high. They will send an email with details.

- Further details on the discussions in the respective session will follow with the official minutes. The **sessions focussed** on:
  - FAIRMODE roadmap 2023-2025
  - Air Quality e-Reporting - processing of data from models at the EEA, status and perspectives
  - Source apportionment to support AQ management (WG1)
  - Quality control indicators for AQ forecasts (WG3)
  - Compilation of high resolution emission inventories (WG7)
  - QA/QC and fitness for purpose of assessment applications (WG2)
  - Microscale assessment (WG4)
  - Efficient and robust AQ measures (WG5)
  - Sensors and Data fusion (WG6)
  - Monitoring design, spat. repres. and exceed. indicators (WG8)
  - QA/QC and fitness for purpose of planning applications (WG9)