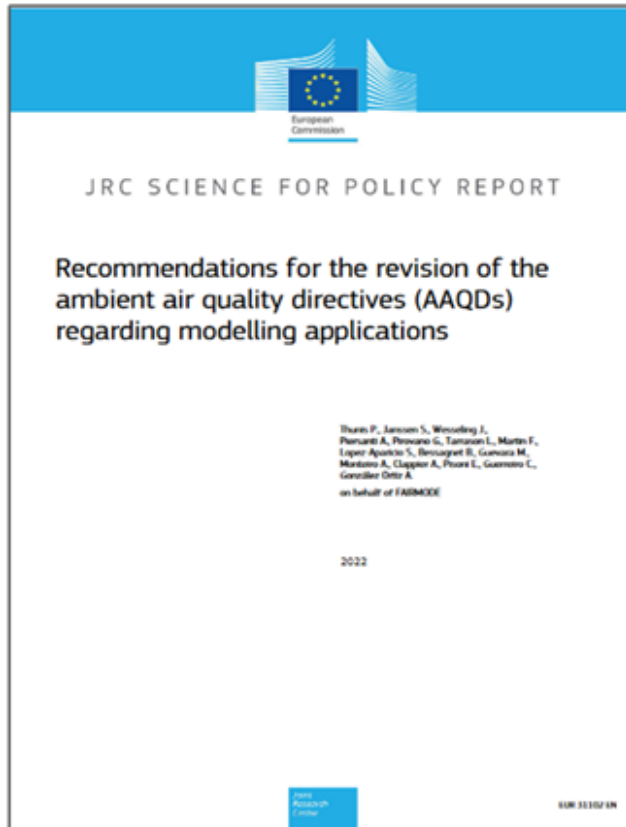




FAIRMODE recommendations

How they look like in the AAQD proposal (2022)

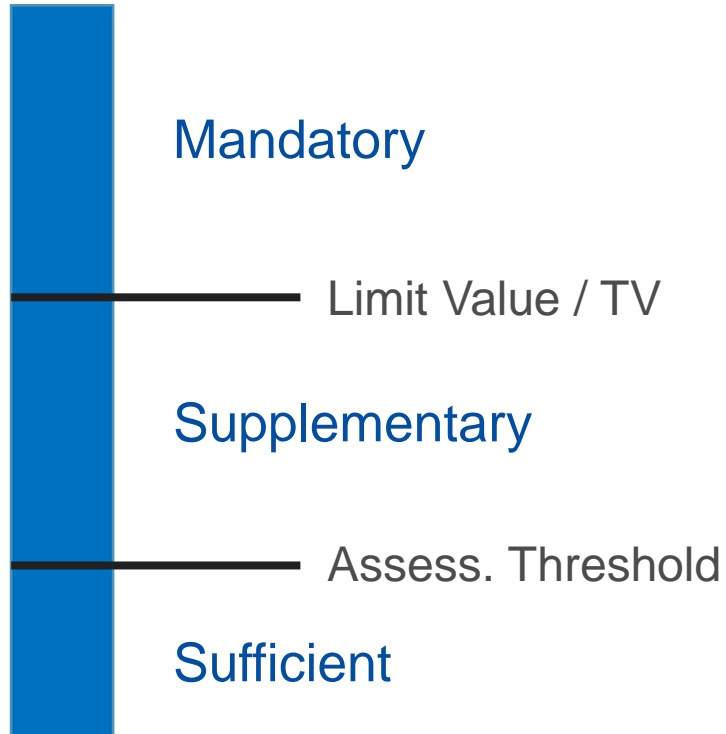
FAIRMODE recommendations



FAIRMODE RECOMMENDATIONS			
	Related changes in Legal provisions	Related Guidance needs	Links to other directives
MODELLING APPLICATIONS	6 recommendations		
ASSESSMENT PURPOSES	2 recommendations		
SOURCE APPORT.	2 recommendations		
AQ PLANNING	2 recommendations		
HIGH-RES EMISSIONS	2 recommendations		

On Modelling applications (general)

1. Clarify and extend the range of possible use of modelling methods, regardless of the upper or lower assessment thresholds (Art 6.2, 6.3 and 6.4 in AAQD08)



Modelling purposes (Art. 8, AAQD22)

- Inform on geographical distribution of concentration
- Help detecting breaches of air quality standards
- Inform air quality plans
- Inform on the placement of sampling points.

* Strong link to spatial representativeness of monitoring points

On Modelling applications (general)

2. Use of FAIRMODEs Model Quality Indicators (MQI) as basis for a Model Quality Objective (MQO) to provide a transparent and comparable quality assurance framework, like the one already defined for measurements (Annex I, AAQD08)

The MQI/MQO formulation in AAQD22 follows the principle of FAIRMODE's formulation but adapted to account for specific constraints (annex V, AAQD22):

- The modelling uncertainty appears explicitly in the formulation to allow a ratio between modelling and measurement uncertainties to be set
- Modelling uncertainty is expressed in terms of the 2022 DQO for measurements rather than in terms of the FAIRMODE measurement uncertainties. This explains why the ratio of the maximum modelling uncertainty is pollutant/time average specific and why the concentration dependency of the uncertainty differs from FAIRMODE's one.

The stringency of the MQO is similar in both formulations. More details in WG2 session.

On Modelling applications (general)

3. Support the use of modelling in the establishment of zones and agglomerations (Art 4, AAQD08)

Art 6 (AAQD22) remains unchanged. It does not explicitly refer to either measurement or modelling

4. Support the use of modelling in the review of monitoring site selection and monitoring network design (Annex III.D, AAQD08)

Annex IV D.1 (AAQD22): The design of the monitoring network shall be supported at least by either modelling or indicative measurements. Its review (Annex IV D.9) shall be performed at least every 5 years

On Modelling applications (general)

5. Model validation purposes should be considered when determining the minimum number of monitoring sampling points (Art 7.3, 10.3, 14.2, AAQD08)

Art 9.3 (AAQD22) states that the number of sampling points may be reduced by up to 50% provided that (9.3 [b]) the number of sampling points ... is sufficient for the concentration of the relevant pollutant to be established in accordance with the DQO specified in points A and B of Annex V...

6. Prescribe the use of modelling as mandatory for forecasting activities (Annex XVI, AAQD08)
No specific mention either to modelling or measurements approaches

On assessment purposes

1. Enhanced use of models to facilitate the assessment of exceedance and exposure indicators (IPR)
2. Use a tiered approach to determine the spatial rep. of monitoring points (no change needed).

On source apportionment

1. Enhance the use of modelling in source apportionment applications, with respect to identification of natural sources, winter salting and sanding and long-range transport transboundary contributions (Art. 20, 21 and 25 AAQD08 & IPR)

Art 16, 17 and 21 (AAQD22) do not specifically refer to either measurement or modelling

2. Provide guidance on the use and limitations of source apportionment methods and use of benchmarking tools (no change needed).

No change needed but note that source apportionment is now explicitly referred to in Annex VIII (information for AQ plans)

On planning purposes

1. Prescribe the use of modelling as mandatory for the elaboration of air quality plans for both long-term and short-term planning (Art 23 and 24, AAQD08)

No explicit mention to mandatory modelling but Art 19.5 (AAQD22) lists the information to be reported for air quality plans. Note that this information (Annex XIII) includes elements that can only be obtained through modelling (e.g. quantified concentration reduction, modelling information)

2. Provide harmonised guidance on how to report air quality plans (Annex XV AAQD20028 & IPR).

On emissions

1. Provide guidance on high resolution emission compilation (no change needed)
2. Introduce requirement for reporting high resolution emission metadata to document the emission data used in modelling applications under the AAQDs (IPR).

On the role of FAIRMODE

Need to recognize FAIRMODE network activities in parallel to AQUILA network to facilitate the implementation of modelling activities across Europe

Annex V: Set-up of a European network of air quality modelling to ensure:

1. that best practices in AQ modelling are adopted;
2. to check the quality of relevant modelling applications and
3. to periodically review modelling uncertainties and proposal of any necessary changes.

Thank-you