

Update on MQO guidance

Stijn Janssen & Philippe Thunis

Madrid, October 2019

Updated version of the MQO guidance

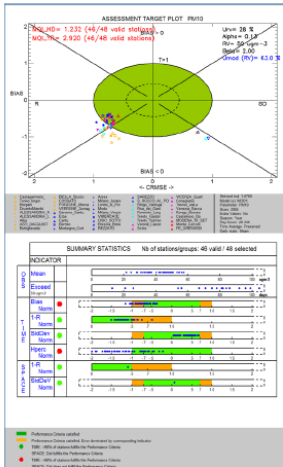


Guidance Document on Modelling Quality Objectives and Benchmarking

Stijn Janssen, Philippe Thunis

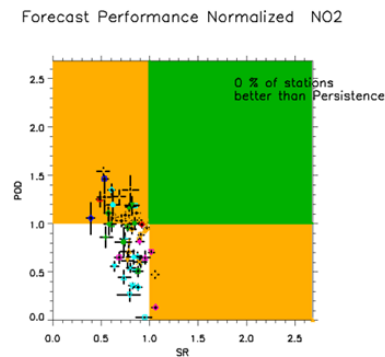
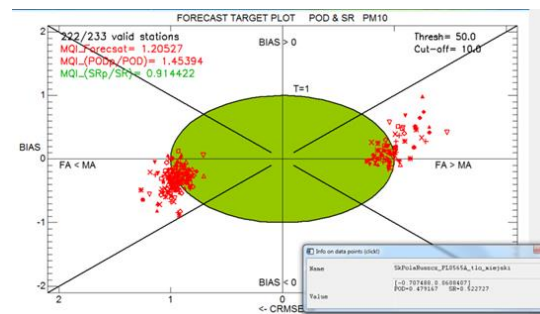
with contributions from: Joost Wesseling, Peter Viaene, Emilia Georgieva, Kees Cuvelier, Elke Trimpeneers, Cristina Guerreiro, Alexandra Montero, Ana Miranda, Jenny Stocker, Helge Rørdam Olesen, Gabriela Sousa Santos, Keith Vincent, Claudio Carnevale, Michele Stortini, Giovanni Bonafè, Enrico Minguzzi, Laure Malherbe, Frederik Meleux, Amy Stidworthy, Bino Maiheu and Marco Deserti

Version 3.1 – October 2019



Main changes

- Re-structuring of the chapters (e.g. uncertainty moved to Annex)
- Updated definitions, notations and reformatting of some tables
- Update of the Forecast chapter based on outcome of the September 2019 hackathon
→ More details in the Forecast session on Tuesday



Updated version of the MQO guidance

- Following the FAIRMODE recommendations and latest discussions in CEN WG43, “upgrade” of some open issues to the main text:
 - Station representativeness → **all measurements** within the scope of the application should be taken into account
 - Hourly/daily vs annual MQO → both the **hourly/daily and annual MQO** should be fulfilled for models with hourly output
 - Data availability → requested percentage of available data is set to **75%** as a pragmatic choice.

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- Following the FAIRMODE recommendations and latest discussions in CEN WG43, “upgrade” of some open issues to the main text:
 - Data assimilation → **leaving-one-out** as recommended cross validation for off-line DA. For on-line DA a priori selection of validation stations.
 - Zones with limited stations → Minimum number of **5 stations**. If not available:
 1. **Expansion of the modelling domain** with contiguous zones and/or agglomerations
 2. **Combination of non-contiguous zones** and agglomerations that are expected to have similar characteristics
 3. **Expansion of the monitoring network** by (a) increasing reference or

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The screenshot shows the FAIRMODE website homepage. At the top, there is a navigation bar with the European Commission logo and the text "JOINT RESEARCH CENTRE FAIRMODE". Below this, a dark blue header contains "FAIRMODE Forum for air quality modelling in Europe". The main content area is divided into several sections: "News and events" with a "more updates..." link; a featured article from 09/2019 about "Environmental Management: Supporting the"; a "07/09 OCTOBER 2019" announcement for the "FAIRMODE TECHNICAL MEETING" in Madrid, Spain, with links for "Agenda", "Logistics", and "Registration"; "Working groups" including "Assessment", "Emissions", "Source Apportionment", and "Planning"; and a "Pilot Exercise" section. On the right side, there is a vertical menu with links for "Recent Activities & Revised Approaches", "FAIRMODE recommendations", "About FAIRMODE", "Terms of Reference", "Steering Committee", "National Experts", "Roadmap", "Strategy", "Tools", "Δ - Benchmarking Tool", "SHERPA", "EU Composite Maps", and "Join FAIRMODE".

Timing

- Available on the FAIRMODE website from October 15
- Feedback welcome!