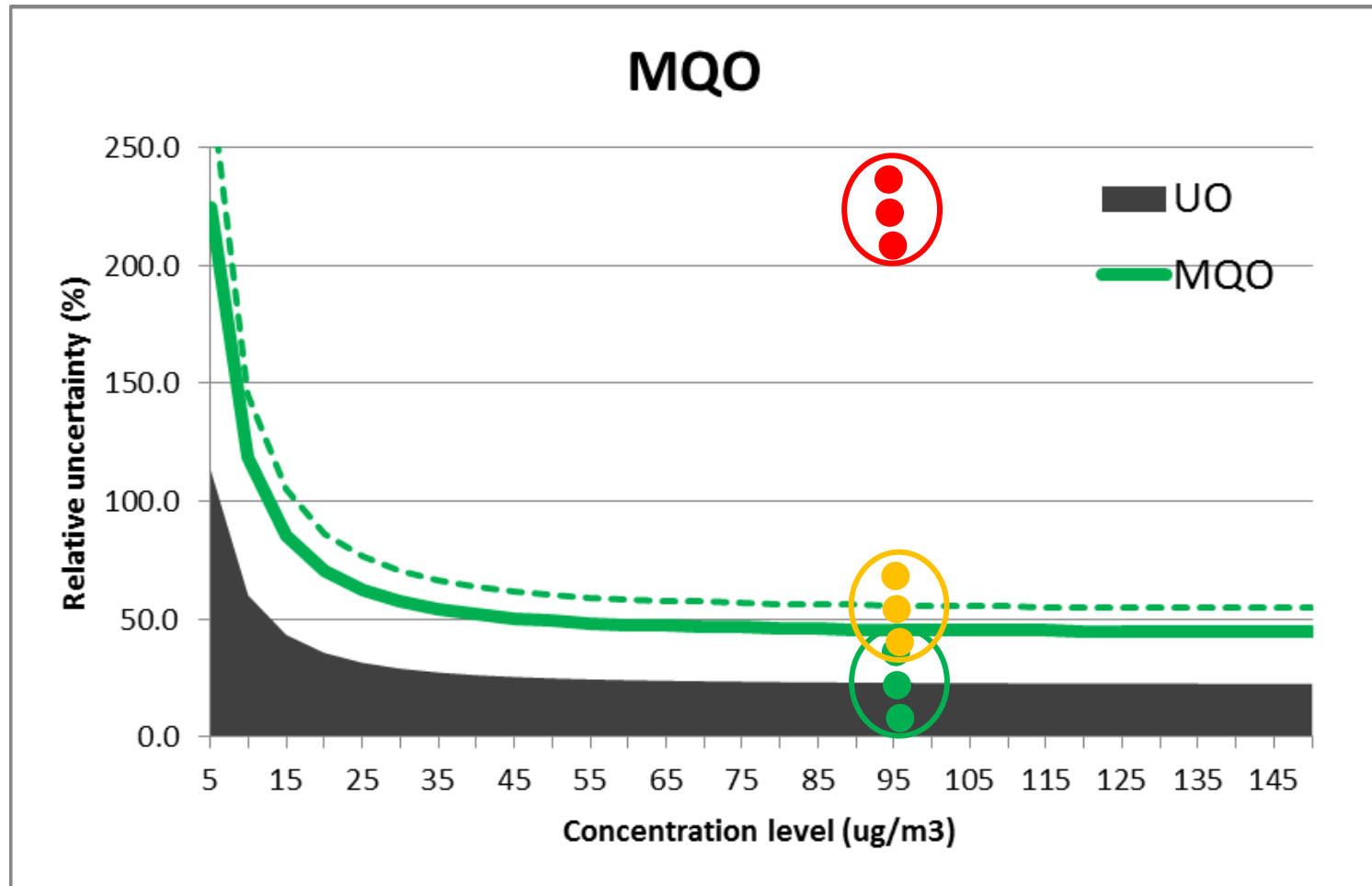


Model Quality Objectives

Baveno, 16-17 Feb 2016

Main issue: what level of stringency for the MQO?



Current issues and challenges



- ❖ The formulation of the MQO has been reviewed and updated, especially its statistical interpretation in terms of model and observation uncertainty. Motivations: consistency with monitoring approach to uncertainty (AQUILA) and exchanges on open issues (FAIRMODE).
 - Main change: the measurement uncertainty is now proportional to the measurement uncertainty (not equal as previously). The level of stringency of the MQO is “tunable” through this proportionality coefficient.
 - Links with some open issues (e.g. 90% of available stations) are proposed.
 - The stringency of the MQO remains unchanged

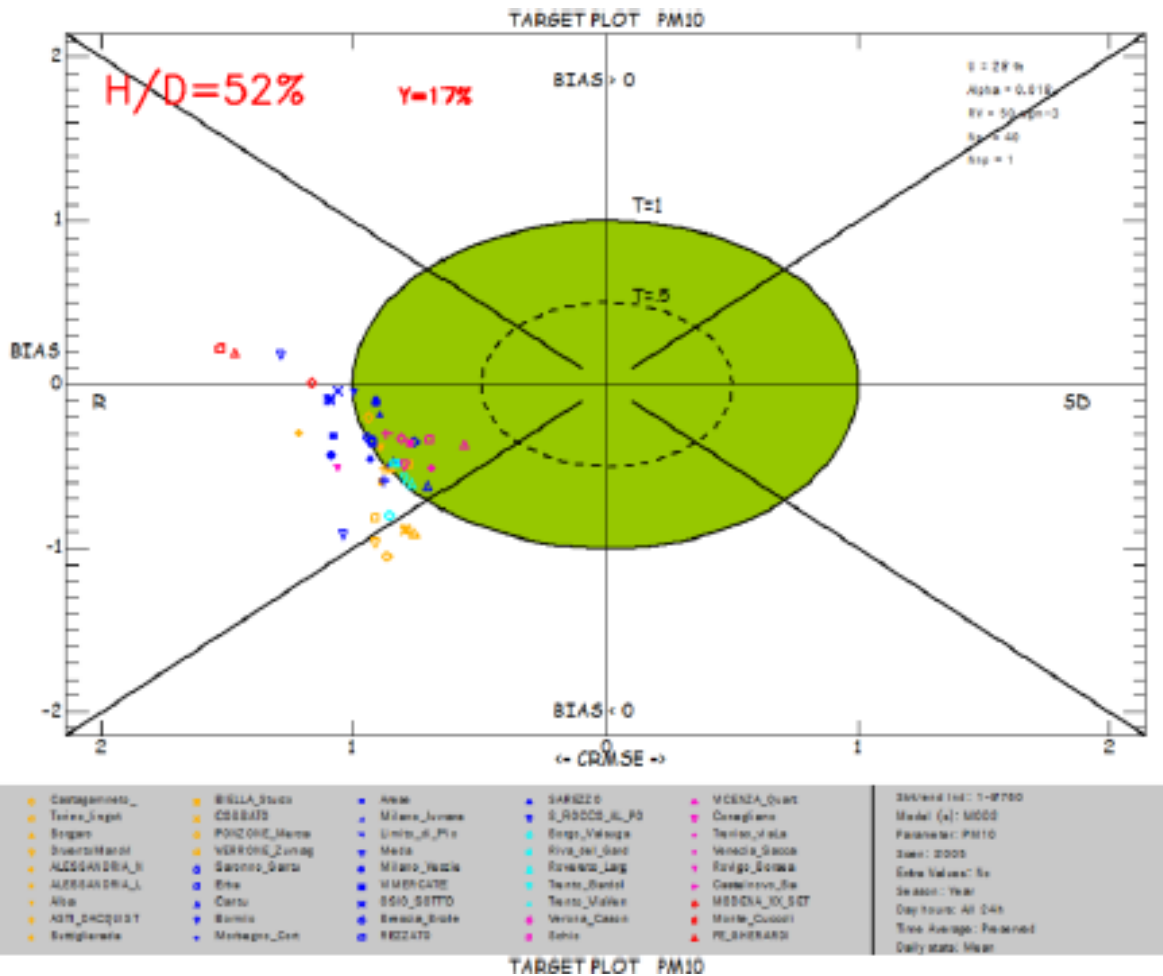
http://fairmode.jrc.ec.europa.eu/document/fairmode/WG1/Guidance_MQO_Bench_vs2.0.pdf

Availability: end February (need for review team)

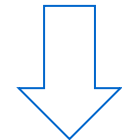
Current issues and challenges



- ❖ MQO are proposed for both hourly/daily and yearly output models. Yearly MQO are more stringent because they account for the possible compensation of uncertainties. Question: should hourly/daily models fulfill the yearly MQO if data are averaged to produce assessment maps?
 - A beta-target is proposed to test both MQO simultaneously
http://aqm.jrc.ec.europa.eu/assessment/data/Long_vs_Short_termMQOv2.pdf



Tests are needed



Feedback at technical

Current issues and challenges



- ❖ Given the sensitivity of the yearly MQO parameters to the methodology and data used, parameters have been reviewed and a range of values is proposed for these parameters → testing.
http://aqm.jrc.ec.europa.eu/assessment/data/Long_vs_Short_termMQOv2.pdf
- ❖ MQO for forecast applications are discussed in the frame of the CCA. An overview of the current formulation is available at the following link → tests are expected to be discussed at the technical meeting.
<http://aqm.jrc.ec.europa.eu/assessment/data/Forecast%20Target%20indicatorV6.pdf>
- ❖ In the same document, a model performance criteria is proposed to assess the quality of model performances regarding exceedances.

Available documents

- ❖ Guidance on MQO & Benchmarking (working document)
http://fairmode.jrc.ec.europa.eu/document/fairmode/WG1/Guidance_MQO_Bench_vs2.0.pdf
- ❖ Note on yearly vs. hourly/daily MQO → a test target diagram
http://aqm.jrc.ec.europa.eu/assessment/data/Long_vs_Short_termMQOv2.pdf
- ❖ Note on forecast MQO (Including a proposed indicator for exceedances)
<http://aqm.jrc.ec.europa.eu/assessment/data/Forecast%20Target%20indicatorV6.pdf>
- ❖ DELTA tool user's guide Version 5.2 (not up to date yet! – but only slight changes foreseen)
http://fairmode.jrc.ec.europa.eu/document/fairmode/WG1/DELTA_UserGuide_V5_2.pdf