

FAIRMODE WG1

Summary and Work Plan

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Content

- » Benchmarking with the DELTA tool
- » Review of the updated Model Quality Objective
- » Cross cutting activities
 - » Modelling & Monitoring
 - » Spatial Representativeness
 - » Forecasting
- » Data base, Guidance and a CEN Standard

Benchmarking

- » Number of benchmarking applications demonstrate that there is more and more confidence in the methodology
 - » Model applications which pass the threshold (= “good enough”) in a classical evaluation approach in general also pass the DELTA criteria
- » DELTA tool is still evolving (current version 3.6)
 - » Minor modifications and bug fixing in recent months
 - » Number of *Need-to-Have* and *Nice-to-Have* items were reported
 - » Bug fixing
 - » User friendliness of DELTA tool
 - » Summary report (still some open issues → e.g. green/red dots)
 - » User Guide
 - » In the coming days → make a consolidated list (Joost, Helge, Keith, Elke, Alexandra, Maria-Teresa...)
 - » Input for version 4.0

SUMMARY Yearly STATIST

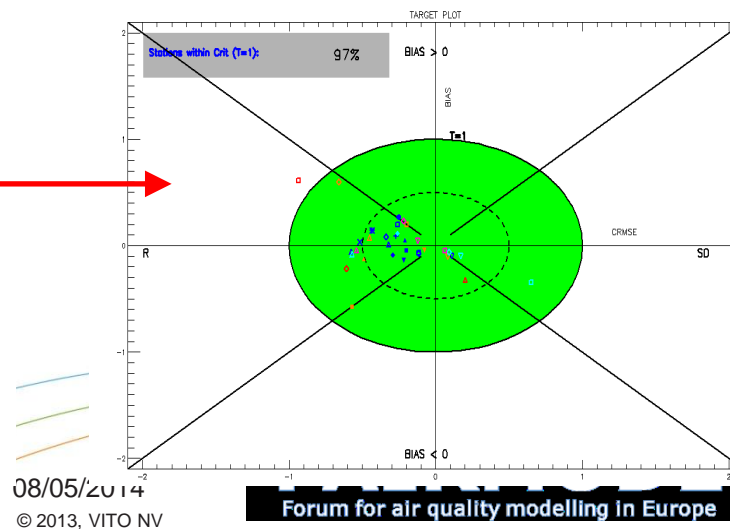
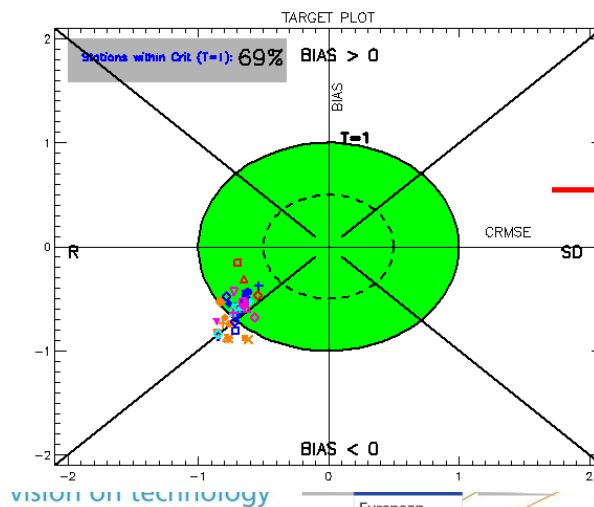
	INDICATOR	
OBS	Mean	
	Bias Norm	
TIME	Corr Norm	
	StdDev Norm	
SPACE	RDE	

Updated MQO

- » MQO is reviewed and updated for additional species and parameters
 - » PM2.5, PM components, meteo parameters (TEMP, Wind Speed)
- » Detailed feedback by number of MS
 - » Overall agreement on the new MQO formulation
 - » Number of issues:
 - » Calculation of measurement uncertainty
 - » simple approach gives a good first order estimate
 - » How to deal with U_{meas} for PM10 TEOM and beta monitors?
 - » Threshold indicators (e.g. exceedances of daily limit value) are not included yet → are imported quality indicators for AQD
 - » ...
- » In coming days, make a consolidated list → Keith, Joost, Elke, Jenny

CCA Modelling & Monitoring

- » **Q1:** What are best practices for evaluating of re-analysed maps
- » **A1:** Best practices:
 - » Leaving-one-out / Selection of sub-set for fusion and validation
 - » Quality of evaluation depends on subset → Monte Carlo approach
- » **Q2:** Do we need a more stringent MQO for re-analysed maps?
- » **A2:** No (for the time being). However, you make use of additional (measurement) information → so you should do better than the free model run



CCA Spatial Representativeness

- » **Q1:** What kind of methodology do you use to assess the spatial representativeness of your monitoring stations?
- » **A1:** Various techniques: passive sampling campaigns, modelling approaches, time series analysis (PCA and other) → methodology depends on the purpose of the assessment
- » **Q2:** How do you take into account this information in your model evaluation?
- » **A2:** No clear answer → use existing classification scheme in relation with model resolution → not very “mature” approach yet
- » **Q3:** How do you define outliers in your monitoring network / measurement data set and how do you deal with this information in your model evaluation?
- » **A2:** Different approaches → no clear strategy yet for model evaluation.

CCA Forecasting

- » **Q1:** Can we use the DELTA in forecast model → Threshold (Crit-1) is the persistence model
- » **A1:** Unclear if forecast mode in DELTA is relevant indicator → further review and analysis is needed.
- » **Q2:** Do we need to add other indicators/diagrams (e.g. threshold exceedances) ? If so which ones?
- » **A2:** Correct forecast of “bands/index” and threshold exceedance are (most) relevant for policy makers. Should be somehow included in evaluation.

Data base, Guidance

- » A central data base with DELTA input/output files will be setup at JRC → can be used by other FAIRMODE members for testing, exploration...
 - » Interest within WG1
 - » Will increase transparency
 - » Meta data required (but keep it simple)
- » New User Guide will consolidated information which is scatter today in various documents → contribution from FAIRMODE needed for writing, reviewing...
 - » Small working group will be established → participants from WG1

CEN standard for model evaluation

- » Towards a CEN standard for evaluation of air quality modelling: the FAIRMODE Model Quality Objective?
- » High interest on the FAIRMODE topics received from a number of countries in the CEN voting bulletin (April 4, 2014)
- » Agreement within WG1 to further explore options for launching a CEN working group on MQO standardization
 - » Ask for a formal agreement by FAIRMODEs Competent Authorities
 - » Mail will be send out next week:
 - » Agreement to go for a CEN working ground and a CEN standard?
 - » Clearly identify topic → MQO
 - » Establish working group → clear connection with FAIRMODE needed

Actions and Work plan

- » Benchmarking and updated MQO
 - » Consolidated list with feedback on MQO and DELTA tool **(MAY 2014)** → Input for DELTA vs4.0 **(NOV 2014)**
 - » CEN working group
 - » Ask formal agreement to Competent Authorities **(MAY 2014)**
 - » If yes → Next steps for launching a new working group **(MAY 22-23, 2014)**
- » CCA-M&M
 - » Further testing DELTA for re-analysed fields **(NOV 2014)**
- » CCA-Forecasting
 - » Further testing of DELTA in forecast model **(NOV 2014)**
- » CCA-Spatial Rep.
 - » Investigate how info on spatial rep. can be used in model evaluation **(summer 2015)**