

Institute for Environment and Sustainability



Update on SG4 Fairmode activities

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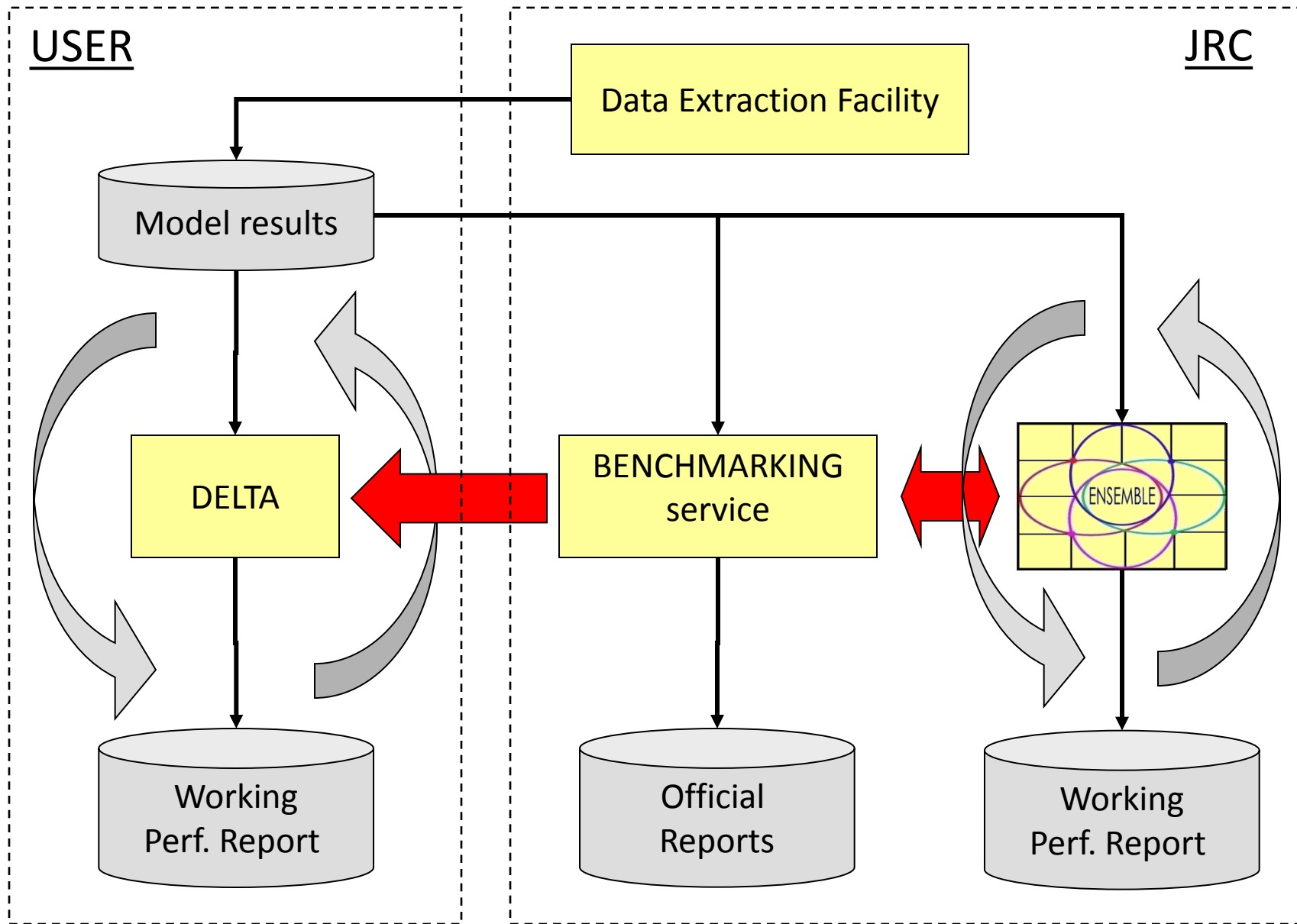
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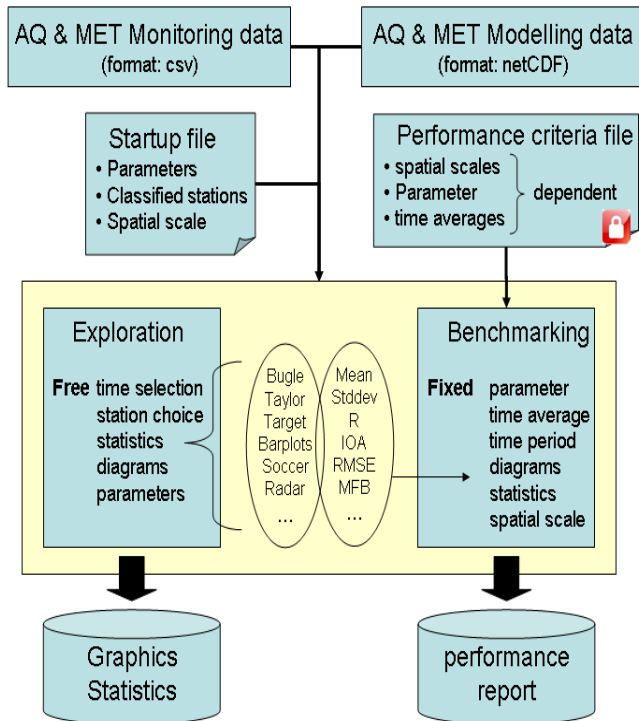
- To provide a **permanent European forum** for AQ modellers and model users
- To produce guidance on the use of air quality models for the purposes of implementation of the AQ Directive and in preparation for its revision
- To study and set-up a system (protocols and tools) for **quality assurance** and continuous improvements of AQ models
- To make **recommendations** and promote further research in the field of AQ modelling

- WG1: Guidance on use of models (EEA)
- WG2: Quality assurance of models (JRC)
 - SG1: Combined use of monitoring and modelling
 - SG2: Contribution of natural sources and source apportionment
 - SG3: Urban emissions and projections
 - SG4: Tools for benchmarking of air quality models

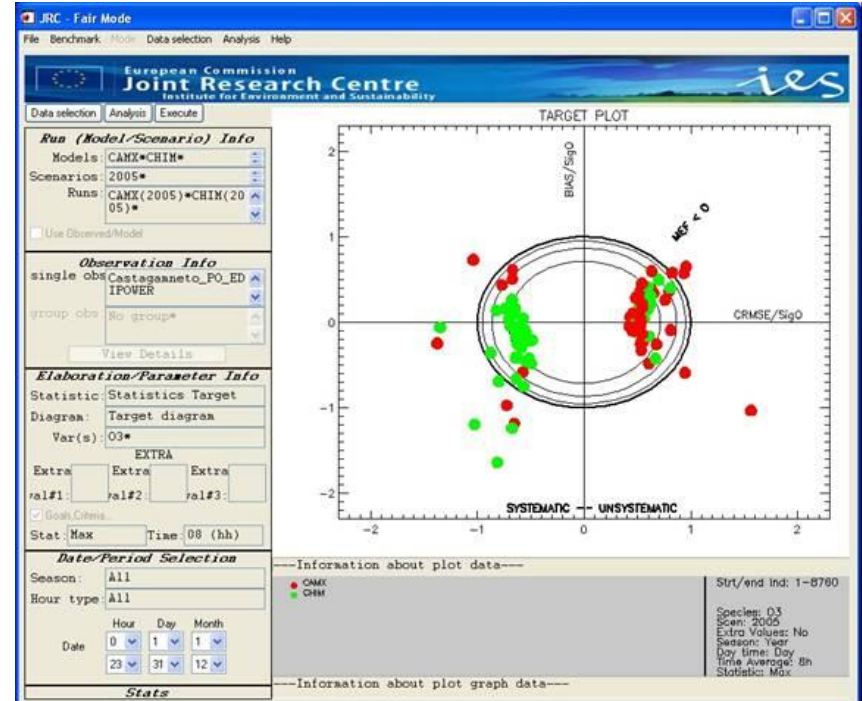
SG4 Objective: to support modelling groups in their application of AQ models (assessment & planning) in the frame of the Air Quality Directive, 2008 (AQD)



DELTA

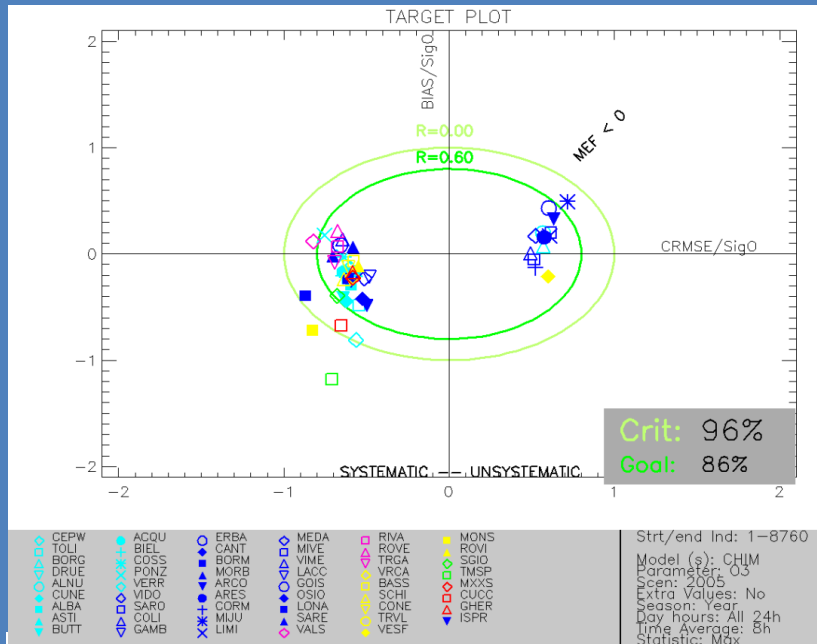


Input
↓
Configuration
↓
Analysis
↓
Output


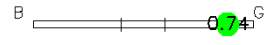
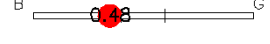
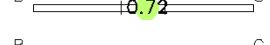
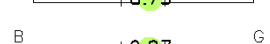

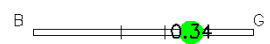



Main Characteristics:

- AQD pollutants (NO₂, PM & O₃) & temporal scales
- Modelled/observed data pairs
- Criteria & goals
- Exploration and benchmarking mode
- Favouring composite diagram
- Screening evaluation software



SUMMARY STATISTICS
Nb of stations: 50 valid / 53 selected

INDIC (Crit - Goal)	90% percentile	Min	Mean	Max
MFB (0.30-0.15)	B  0.35	0.00	0.17	0.61
FAC2 (0.50-0.60)	B  0.74	0.64	0.81	0.96
MFE (0.45-0.30)	B  0.48	0.26	0.40	0.65
IOA (0.65-0.78)	B  0.72	0.56	0.82	0.92
R (0.65-0.78)	B  0.73	0.50	0.80	0.88
TARGET (1.00-0.80)	B  0.87	0.49	0.69	1.37
RDE (0.50-0.40)	B  0.28	0.02	0.21	0.47
RPE (0.50-0.40)	B  0.34	0.00	0.21	0.55

- Summary set of statistics for model performance overview
- Common evaluation standard → Harmonization

4th Plenary FAIRMODE meeting , june 16th, SMHI (S)