

# WG3 session

## Forecast indicators

*FAIRMODE Technical Meeting*  
*Athens - Greece, October 4-6 2023*



1101 0110 1100  
0101 0010 1101  
0001 0110 1110  
1101 0010 1101  
1111 1010 0000



# agenda

11:30 – 11:37	A. Piersanti, A. Monteiro	Introduction - Status of WG3 activities
11:40 – 11:47	P. Durka, A. Norowski	Experiences with the Deltatool for forecast and feedbacks, IEP-NRI, Poland
11:50 – 11:57	K. Johnson	
12:00 – 12:07	L. Colombo	Evaluation of surface AQ forecasts in Lombardy
12:10 – 12:17	D. Burke	LIFE Emerald – Forecast Development for Ireland
12:20 – 12:27	M. Stortini	Evaluation of air quality forecasting system kAIROS over and Italy for year 2021 using DELTA TOOL
12:30 – 12:37	A. Bartocha	Forecast in Kosovo
12:40 – 13:00	Discussion AAQD guidance, forecast chapter	



Italian National Agency for New Technologies,  
Energy and Sustainable Economic Development



universidade de aveiro  
theoria poiesis praxis



## WG3

# STATUS OF WG3 ACTIVITIES

*FAIRMODE Technical Meeting  
Athens - Greece, October 4-6 2023*

Antonio Piersanti, Alexandra Monteiro



# WG3 ROAD MAP

WG3 Roadmap presented at FAIRMODE Plenary Meeting  
(Rome, March 2-3, 2023)

## WG3 Future activities

ROADMAP 2023-2025

**Future WG3 activities will focus on:**

- 1) Documenting the procedure for experts (slideshow, video, training sessions)
- 2a) Further testing of the indicators
- 2b) Assessing clarity of the output of the forecast evaluation and discussing possible tiered approach
- 3) Developing the AQI plots in view of improving the communication of results to non-experts
- 4) Developing an open and user-friendly software platform

# WG3 ACTIVITIES - DONE

- 1) Documenting the procedure for experts (slideshow, video, training sessions) ✓ DONE

On 31 May 2023 a [Training Session on the use of the Delta Tool for forecast evaluation](#) was held in Bologna in hybrid mode (in presence and online)



The presentations and the training materials are available on the FAIRMODE website:

<https://fairmode.jrc.ec.europa.eu/Activity/CT3/Show/20230531>

# WG3 ACTIVITIES – ONGOING

- 1) Documenting the procedure for experts (slideshow, video, training sessions) ✓ DONE
- 2a) Further testing of the indicators
- 2b) Assessing clarity of the output of the forecast evaluation and discussing possible tiered approach
- 3) Developing the AQI plots in view of improving the communication of results to non-experts
- 4) Developing an open and user-friendly software platform

# WG3 ACTIVITIES – TODAY

- WG3 participants results of their further testing of the indicators
- Discussion
  - What was the practical use of the Delta application? Internal, to improve the model application and/or contribute to FAIRMODE discussions? Reporting, for the managers/agencies? Reporting, for the public/citizens?
  - Were you able to “do the homework” of the training sessions and test/analyze all the plots? Which were the most useful? --> *this will help us to design a tiered approach in 2024*
  - Is the output clear to you and your stakeholders?
  - What would you suggest to develop the AQI plots in view of improving both their informative content and the communication of results to non-experts?

# WG3 ACTIVITIES – NEWS ON WG3 JOINT PUBLICATION

A standardized methodology for the validation of air quality forecast applications (F-MQO): Lessons learnt from its application across Europe

*Lina Vitali, Kees Cuvelier, Antonio Piersanti, Alexandra Monteiro, Mario Adani, Roberta Amorati, Agnieszka Bartocha, Alessandro D'Ausilio, Paweł Durka, Carla Gama, Giulia Giovannini, Stijn Janssen, Tomasz Przybyła, Michele Stortini, Stijn Vranckx, and Philippe Thunis*

*was accepted for publication on Geoscientific Model Development (GMD)*

*and is expected to appear here*

<https://doi.org/10.5194/gmd-2023-65>



# LET'S GO



universidade de aveiro  
theoria poiesis praxis



## CHAPTER 4 – Forecast

- **Role of modelling in the forecasting process**
  - TIER approach for forecast
  - Statistical techniques to improve forecast quality
  - Challenges in operational forecast modelling
- **Forecast Modelling Quality Objective & fitness for purpose**
  - MQO definition
  - Forecast indicators: AQI, daily avg, 1h max, warnings...
  - Relevance and challenges of threshold indicators
  - Modelling domain and spatial resolution
- **Link with CAMS products**
  - Downscaling of CAMS results
- **Forecast and short term planning**
  - Short term forecasts in scenario mode → useful? pros and cons



Feedback @

<https://ec.europa.eu/eusurvey/runner/MODGUI>