

WG3 session Forecast indicators

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



#### 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





WG3

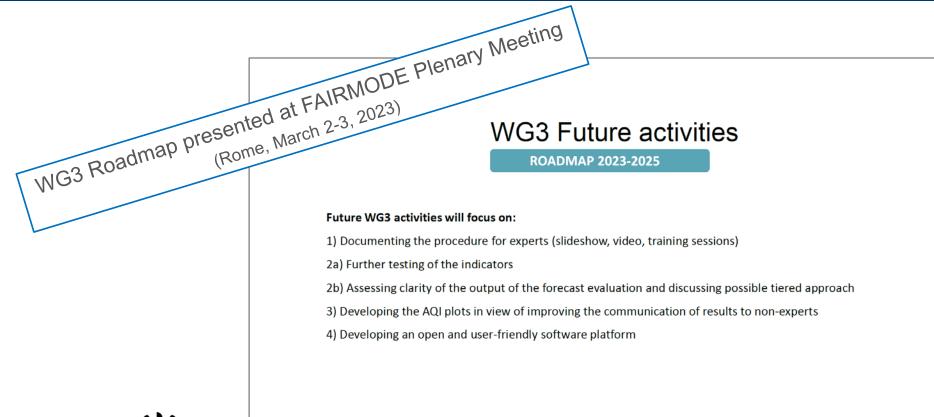
### **STATUS OF WG3 ACTIVITIES**

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

Antonio Piersanti, Alexandra Monteiro



# WG3 ROAD MAP





ENER

# **WG3 ACTIVITIES - DONE**

1) Documenting the procedure for experts (slideshow, video, training sessions) 🗸

On 31 May 2023 a <u>Training Session on the use of the Delta Tool for forecast evaluation</u> was held in Bologna in hybrid mode (in presence and online)



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

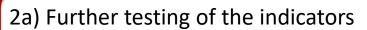
https://fairmode.jrc.ec.europa.eu/Activity/CT3/Show/20230531



DONE

# WG3 ACTIVITIES – ONGOING

1) Documenting the procedure for experts (slideshow, video, training sessions)  $\checkmark$ 



- 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 nonexperts
- 4) Developing an open and user-friendly software platform



DONE

# 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?
  - O 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
  - o 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 <u>https://doi.org/10.5194/gmd-2023-65</u>







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#### 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  $\rightarrow$  useful? pros and cons

Feedback @

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



