WG3
AQ forecast & short-term action plans

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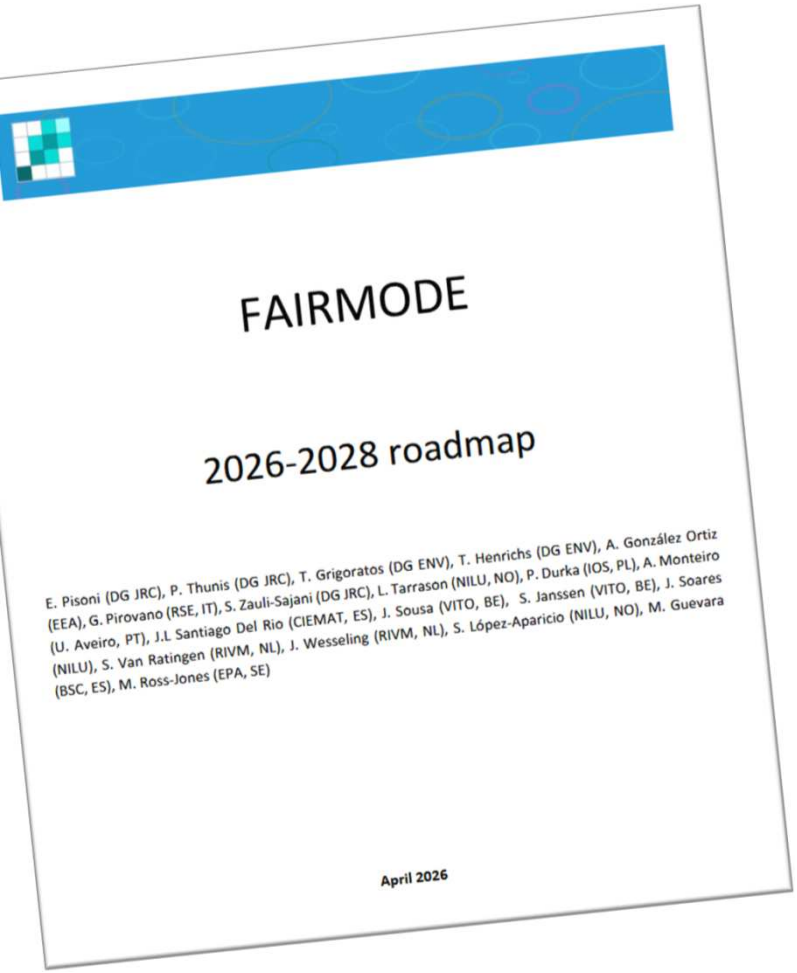
EUROPEAN COMMISSION

Agenda (part I)

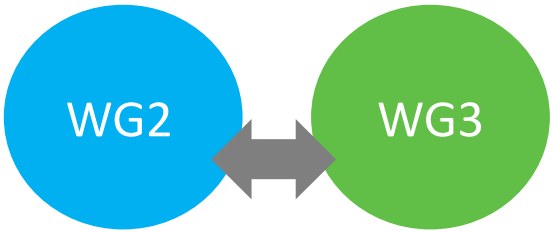
- Remembering WG3 ROADMAP
- DTpy tool for forecast
- Survey & results
- Next steps



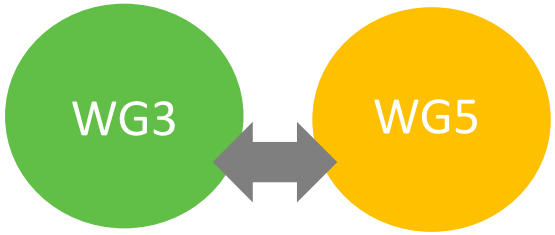
WG3 Roadmap

Strengthening the connections

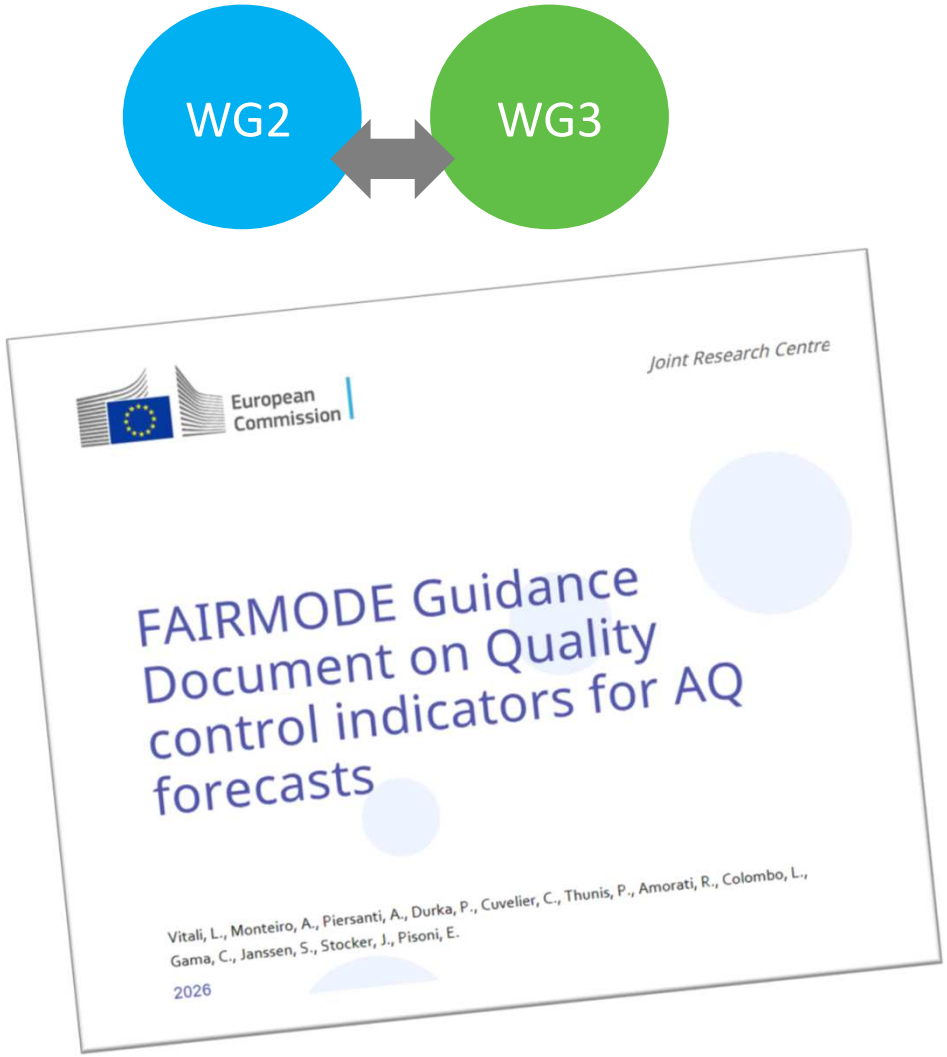
Activities



- **communication of forecast exceedances** to the citizens — Survey!
- **evaluation of modelling systems performances** for exceedance forecasting, in line with AAQD requirements — DeltaTool Python
- **assessment of AQ indices** due to their role to provide real time information to citizens

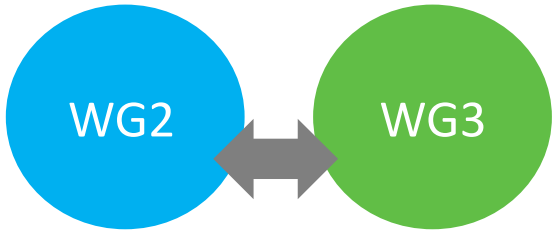


- **sharing of best practices** on the use of forecast models to support the development & evaluation of “short-term action plans”



DELTA-Tool Python version

Davide De Marchi | JRC



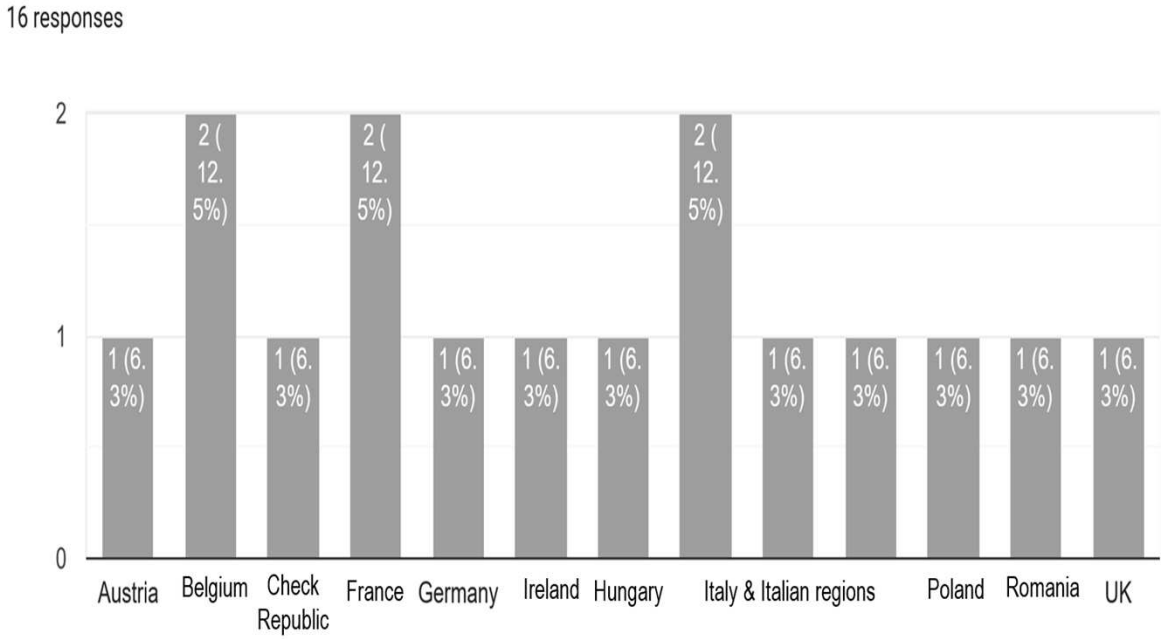
The Survey

Fairmode WG3 survey on forecasted exceedance of air pollution.

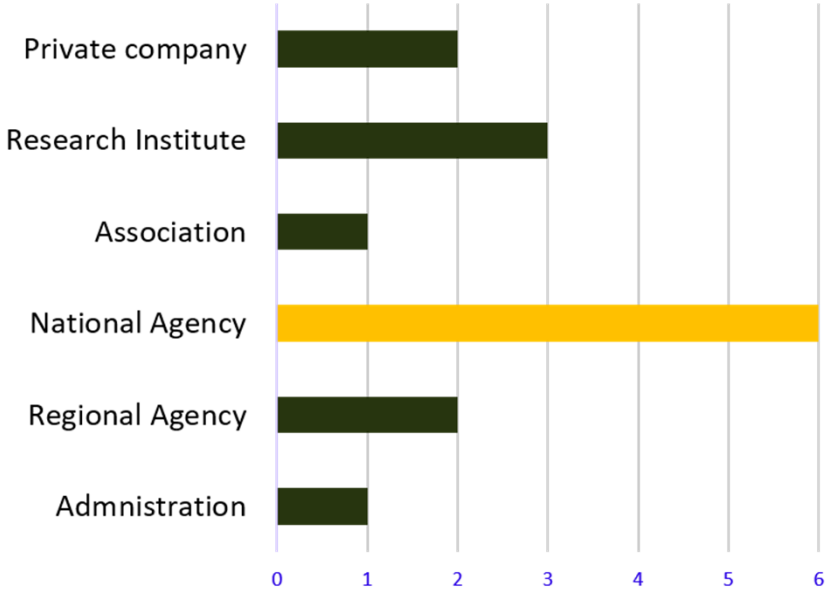
Dear all!
Below is a survey about air pollution exceedances forecasted, predicted or measured in Your county. It shouldn't take more then 5-10 minutes to complete it. If You are aware of any people or organization that could be interested or have knowledge to fill it out feel free to share it. All contributions will help us greatly to understand role of exceedances in EU contries. Summary of survey will be shown during Fairmode technical meeting in Kopenhagen on 1.10.2026.
Thank You for contributions!
Pawel&Alexandra
WG3 Fairmode

July 2026

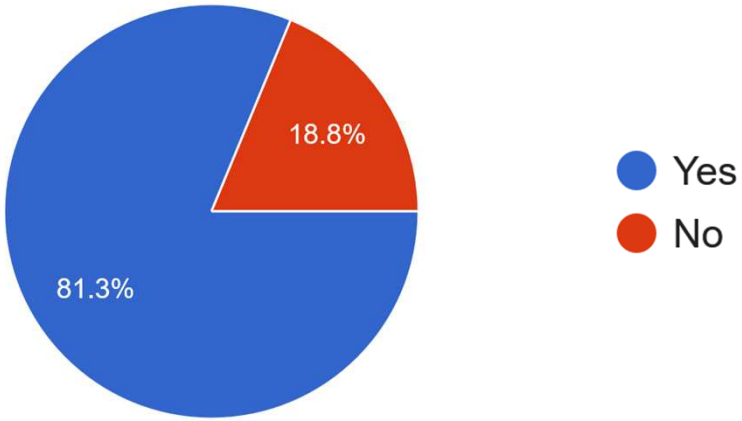
Representing country



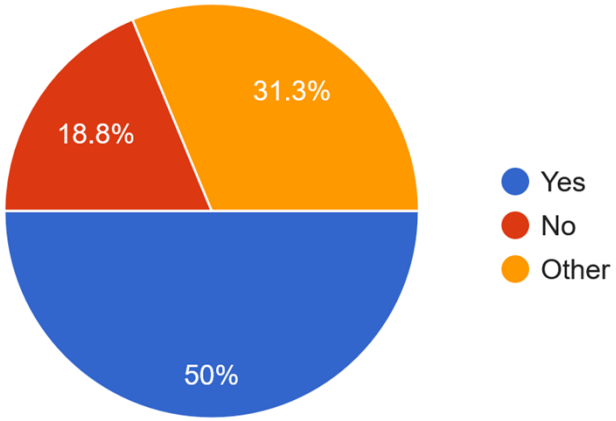
Representing organization



Are forecasted/predicted exceedances communicated in your Country?

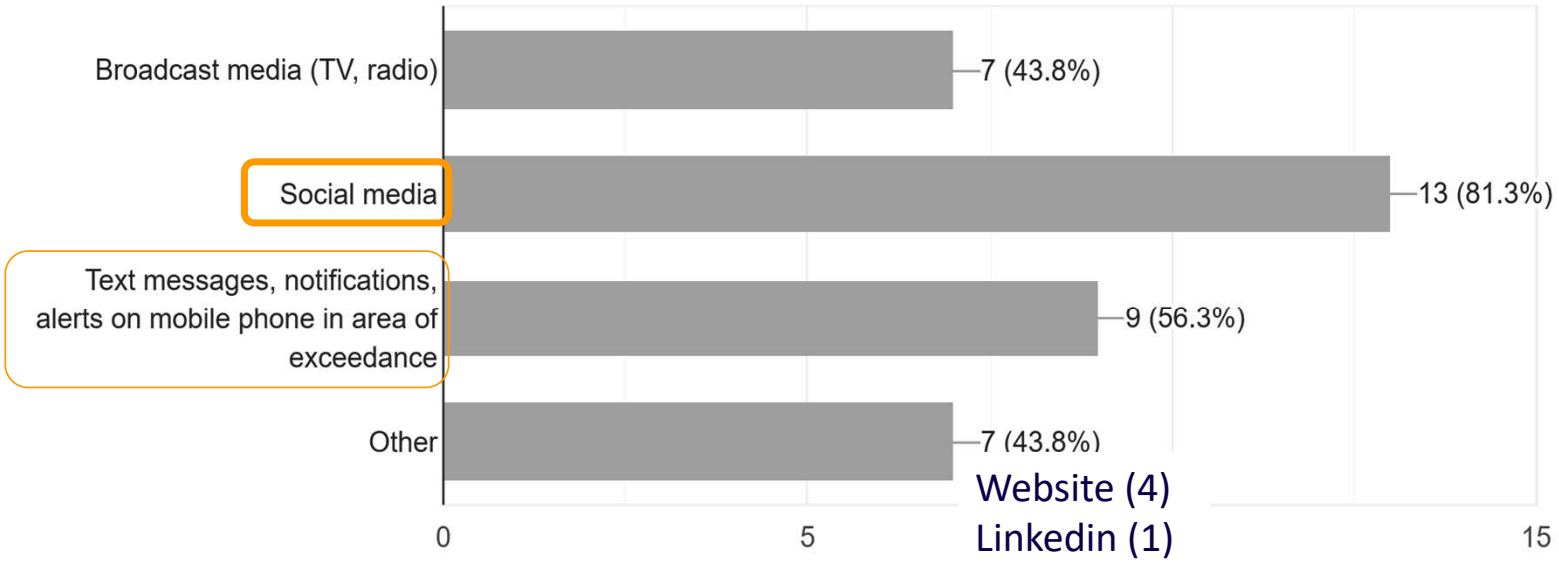


Is there a country-wide system/solution for communication of exceedances or is it communicated in other (local/regional way)?



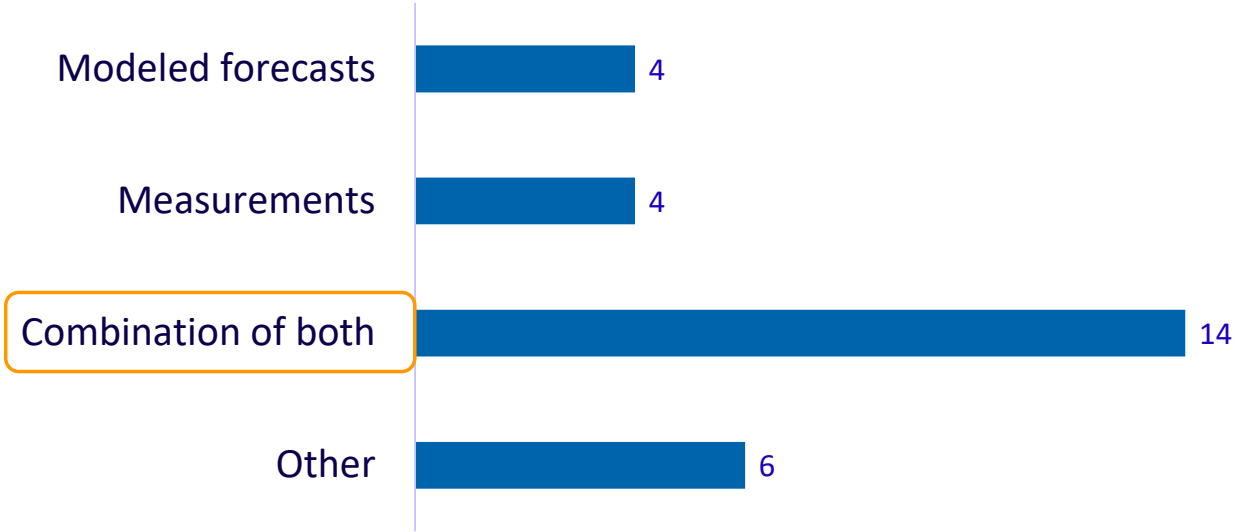
- **National forecast platforms/websites** – country-wide systems provide daily air-quality forecasts and information on expected exceedances
- **Regional communication systems** – regional air-quality authorities operate their own forecasting and communication channels, particularly where they are responsible for air-quality management
- **National–regional coordination** – some countries combine national forecasting with regional communication, while others are developing integrated systems linking measured and forecasted exceedances.

Which communication channels are being used to inform society about forecasted/predicted alerts or episodes of high concentrations of air pollutants?

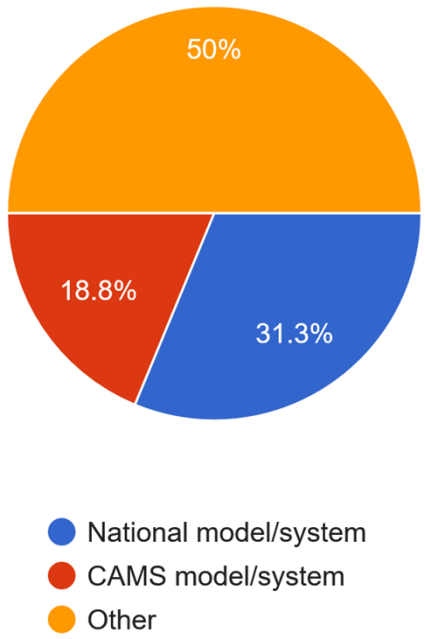


Website (4)
Linkedin (1)
Email (2)

Does alerts/information about air pollution episodes based on modeled forecasts, measurements, a combination of both, or other sources of information?

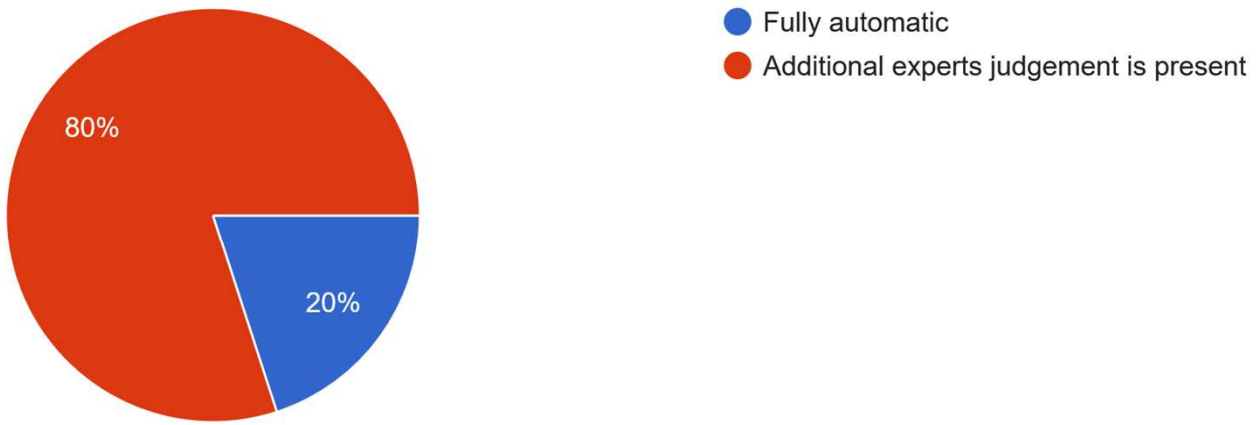


Does Your country use its own system to forecast and inform about exceedance of air pollution, or use a data/system available online (e.g. CAMS reg forecasts)?

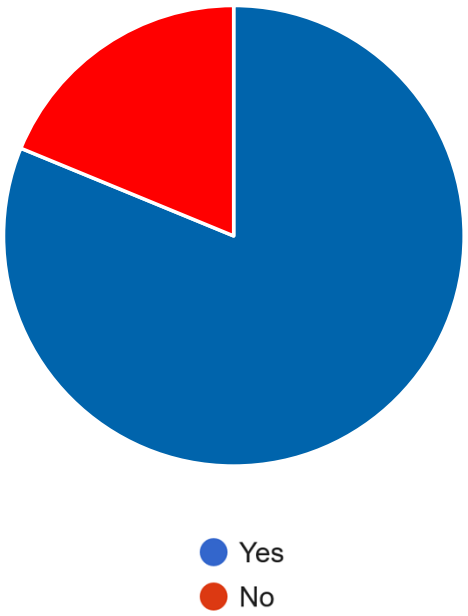


- Both – national ensemble & regional systems to specific regions
- Both – national/regional model + CAMS
- Both – national/regional model + CAMS (background)
- Both + forecast systems from neighbooring countries
- Data fusion of a national model + CAMS
- ATMOSYS air modelling system

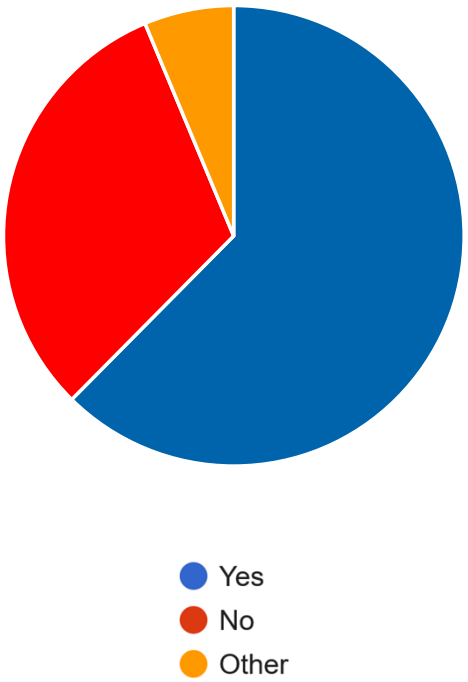
Is the process fully automatic, or is there an aspect of expert judgement?



Are You involved in the modelling of exceedances, preparation of alerts/informations or any other step of air pollution episode communication?



Are decision makers involved and if yes on which step?

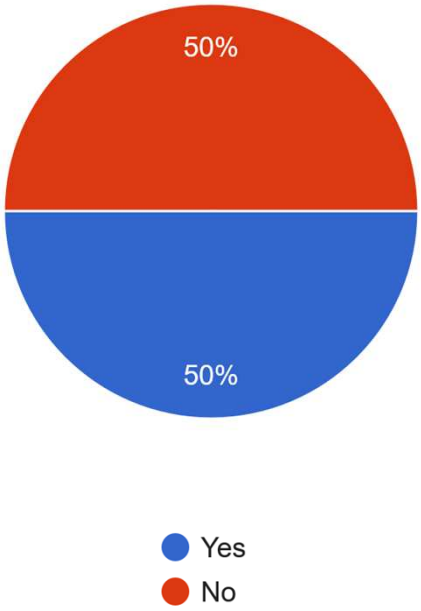


Definition of procedures – contributing to the definition of STAP activation procedures
Decision/approval of actions – receiving forecast results and formally deciding whether measures or alerts should be activated
Final validation before public communication – competent authorities may approve an alert before it is communicated to the public
Communication of alerts – authorities can be responsible for the final dissemination of warnings, including targeted SMS alerts
Implementation and compliance – authorities may oversee implementation of measures and verify compliance by regulated sectors during pollution episodes
Information of national and regional authorities – at national level, forecasts are primarily used to inform ministries, while at regional level, agencies work directly with regional stakeholders to support AQ management

Overall: the forecasting process is largely **technical/automated**, while decision makers are primarily involved in **procedure definition, activation/approval of measures, communication, and implementation/enforcement**.

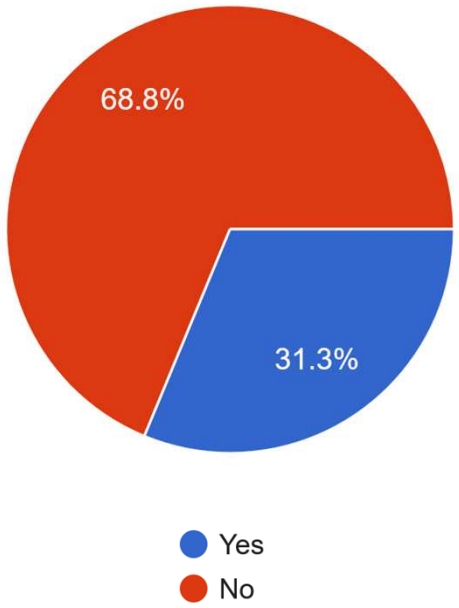
Are forecasted/predicted exceedance of air pollution alert thresholds trigger short term action plans in your country?

(e.g. free public transport for the time of predicted exceedance)



- **Traffic and mobility measures:** temporary restrictions on high-emitting vehicles, reduced speed limits (e.g., 90 km/h), and, in some cases, **free public transport**.
- **Residential heating and biomass burning restrictions:** restrictions or recommendations against wood/coal burning, open fires, and other combustion activities during forecasted pollution episodes.
- **Industrial & agricultural measures:** temporary emission-reduction requirements for industrial sources and, in some cases, restrictions on livestock/agricultural activity
- **Public information & health protection:** dissemination of AQ and health messages when exceedances are forecast.
- **Predominantly local/regional implementation:** STAP are often decided and implemented by municipalities or regional authorities/stakeholders
- **Limited or no formal STAP activation in some countries:** in some cases measures exist but do not constitute a formal STAP; elsewhere implementation is still under discussion, rarely activated, or considered unnecessary because alert-threshold exceedances are very unlikely.

Do you know of a case where your country has a history of implementing short-term action plans that were successful?



- **Traffic-related measures** – reported examples mainly involve temporary speed-limit reductions on highways, particularly during PM episodes.
- **Limited evaluation of effectiveness** – there is generally **no comprehensive or published assessment** demonstrating reductions in pollutant concentrations attributable to these STAP
- **Limited assessment of wider impacts** – effects on **citizen behaviour and public awareness** have also generally not been evaluated
- **Stronger evidence for long-term measures** – some permanent measures, such as long-term speed reductions, have been evaluated and shown to improve air quality, but this evidence cannot be extrapolated to STAP

What can we conclude?

- **No harmonised approach across Europe** – substantial differences exist between countries in forecasting systems, spatial coverage, communication procedures and institutional responsibilities.
- **National and regional systems coexist** – national forecasting platforms are often complemented by regional/local systems, with the latter playing an important role in communicating exceedances and managing pollution episodes.
- **Forecast information relies on multiple sources** – most systems integrate model forecasts and observations, often combining national/regional models with CAMS products.
- **Human expertise remains important** – although forecasting chains can be highly automated, expert judgement is still used to monitor and interpret forecasts and support episode communication and decisions.
- **Decision makers are mainly involved downstream** – their role is primarily related to activation/approval of measures, communication, implementation and enforcement, rather than forecast production itself.
- **STAP are predominantly regional/local and heterogeneous** – measures range from traffic restrictions and residential heating limitations to industrial/agricultural actions and public-health communication.
- **A major gap is the evaluation of STAP effectiveness** – there is little systematic evidence showing whether forecast-triggered short-term measures actually reduce pollutant concentrations or influence public behaviour and awareness.

Forecasting & communication systems exist, and STAP are implemented in several places, but their effectiveness is rarely evaluated.

WG3 next steps

- Volunteers to test the new DeltaTool for forecast?
  - Feedback until Jan 2027
  - Online meeting in Feb
  - Suggestions for further development (Technical meeting March)
- Assessment of forecasted AQ indices

Don’t wait to join WG3

☺