



Updates and new capabilities of the MQI Mapping tool

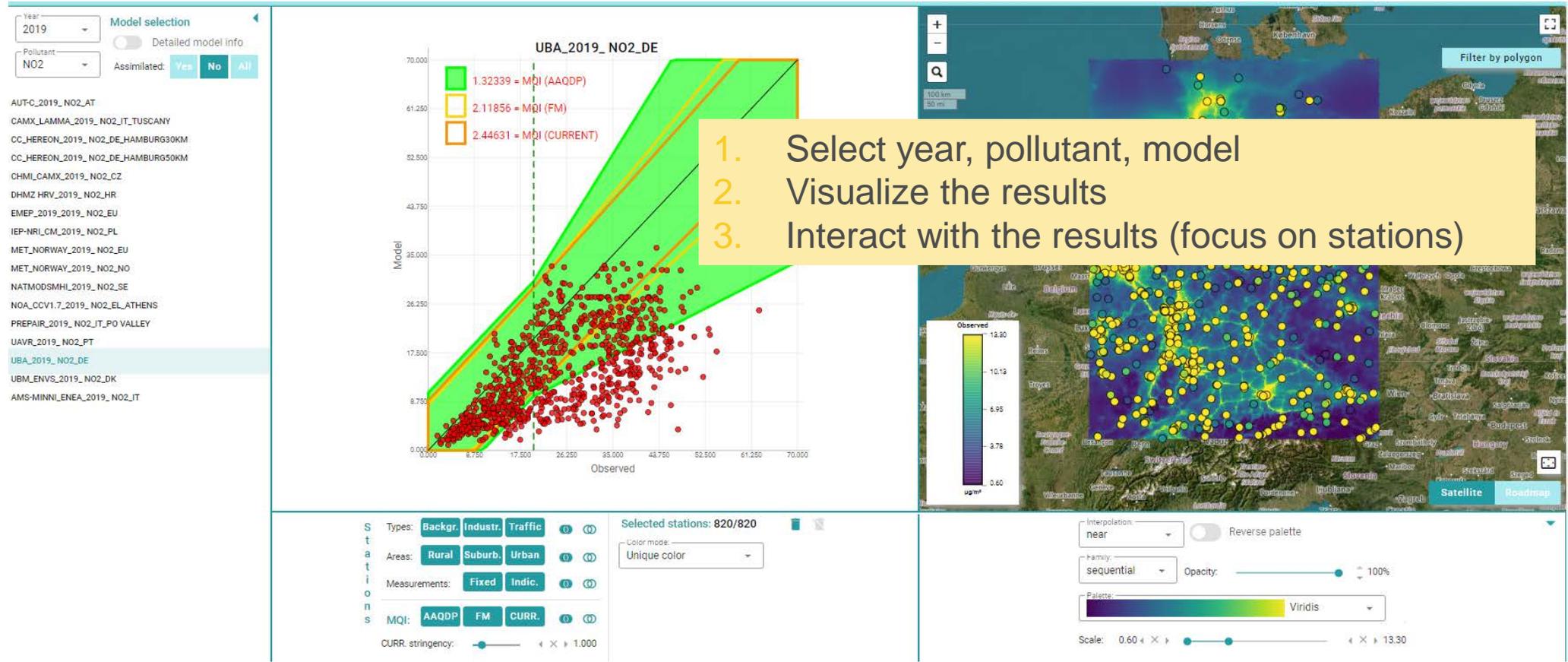
E. Pisoni, P. Thunis, S. Zauli, D. De Marchi, A. Di Taranto

<https://jeodpp.jrc.ec.europa.eu/eu/dashboard/voila/render/FAIRMODE/FAIRMODEConcentrations.ipynb>

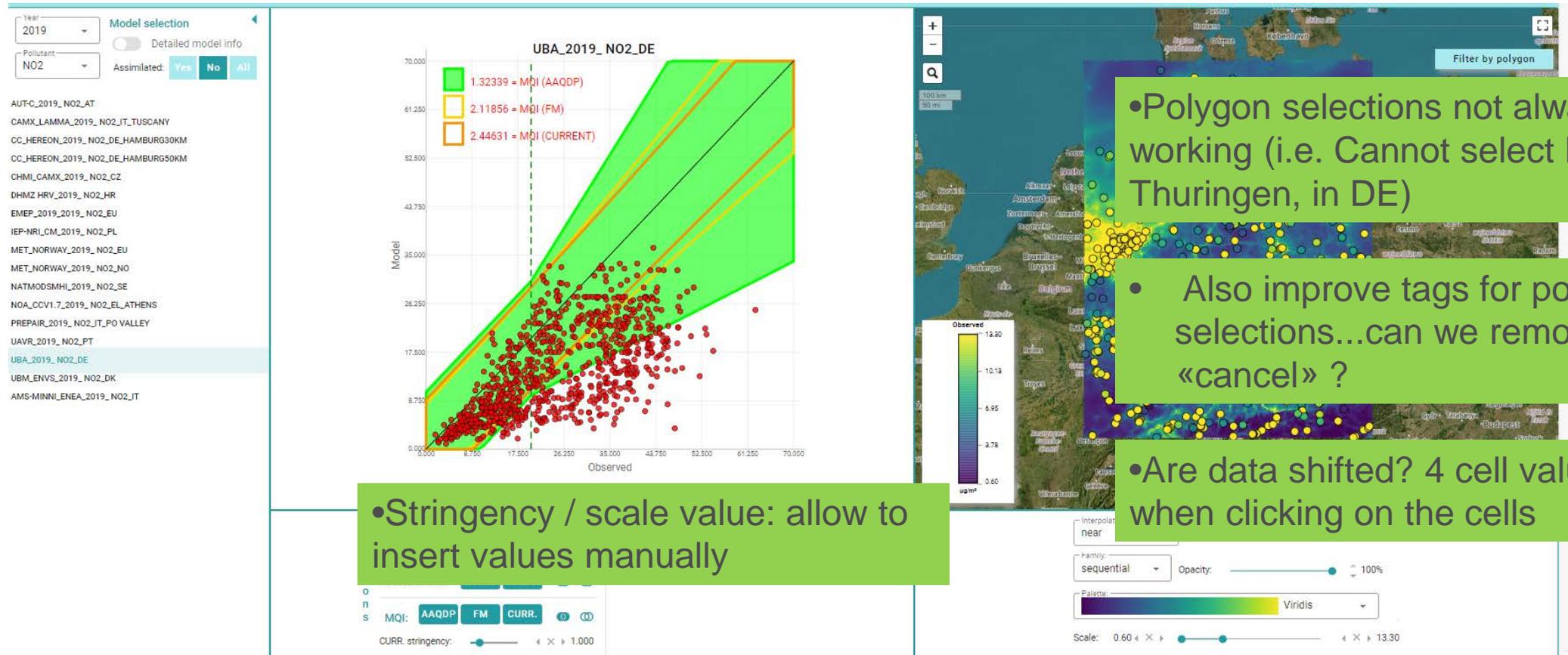
The screenshot displays the FAIRMODE dashboard with a scenic mountain background. At the top, the FAIRMODE logo (a 4x4 grid of squares) and the text "FAIRMODE Forum for air quality modelling in Europe" are on the left. On the right, there is a "Help ?" link, the European Commission logo, and the text "European Commission Joint Research Centre". Below the header, there are three main sections:

- EMISSIONS**: A white box containing the "EMISSIONS APP" icon (a blue car) and the text: "The emission benchmarking tool allows to compare top-down and bottom-up emission inventories, to evaluate inconsistencies among emission inventories estimated with different approaches and at different scales".
- CONCENTRATIONS**: A white box containing the "CONCENTRATIONS APP" icon (a blue cloud) and the text: "The concentration benchmarking tool allows to compute the Model Quality Objective (MQO), comparing model results against observed values. It allows to test different MQO definition, to select different subset of stations and work on different reference years and pollutants". This box is highlighted with a red border.
- BEST MODELS**: A white box containing the "BEST MODELS" icon (a blue trophy) and the text: "Map application to interactively display best models for each administrative polygon at NUTS2 level featuring on-the-fly models mosaic display".

Concentrations app: screenshot



Concentrations app: improvements



Concentrations app: open issues

To be done:

- Meta information in DB: spatial resolution? Emission data used? ...
- Simplify the DB for data upload
- Improve meta information for observations
- How to select stations for validation?

<https://jeodpp.jrc.ec.europa.eu/eu/dashboard/voila/render/FAIRMODE/FAIRMODEConcentrations.ipynb>

EMISSIONS

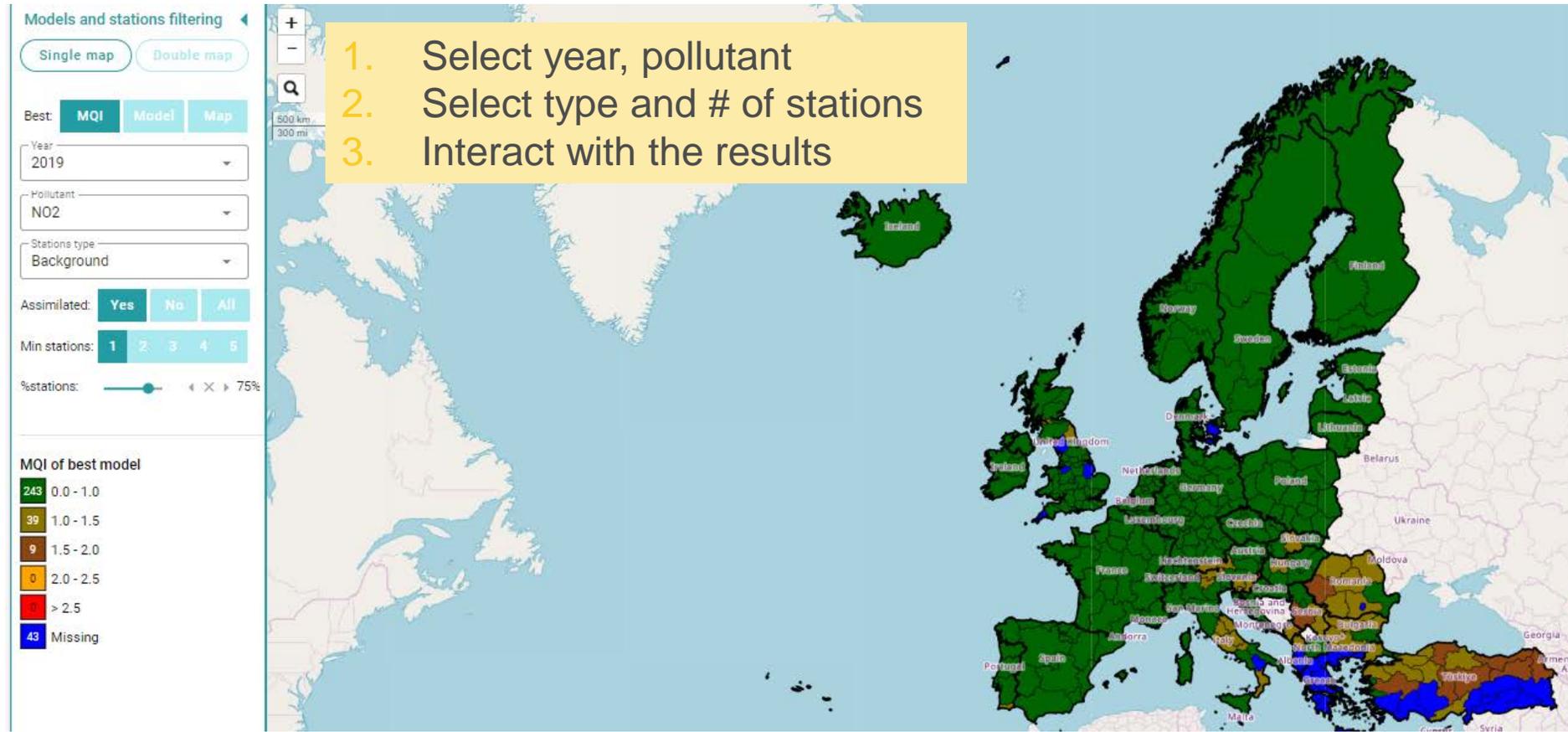
EMISSIONS APP The emission benchmarking tool allows to compare top-down and bottom-up emission inventories, to evaluate inconsistencies among emission inventories estimated with different approaches and at different scales

CONCENTRATIONS

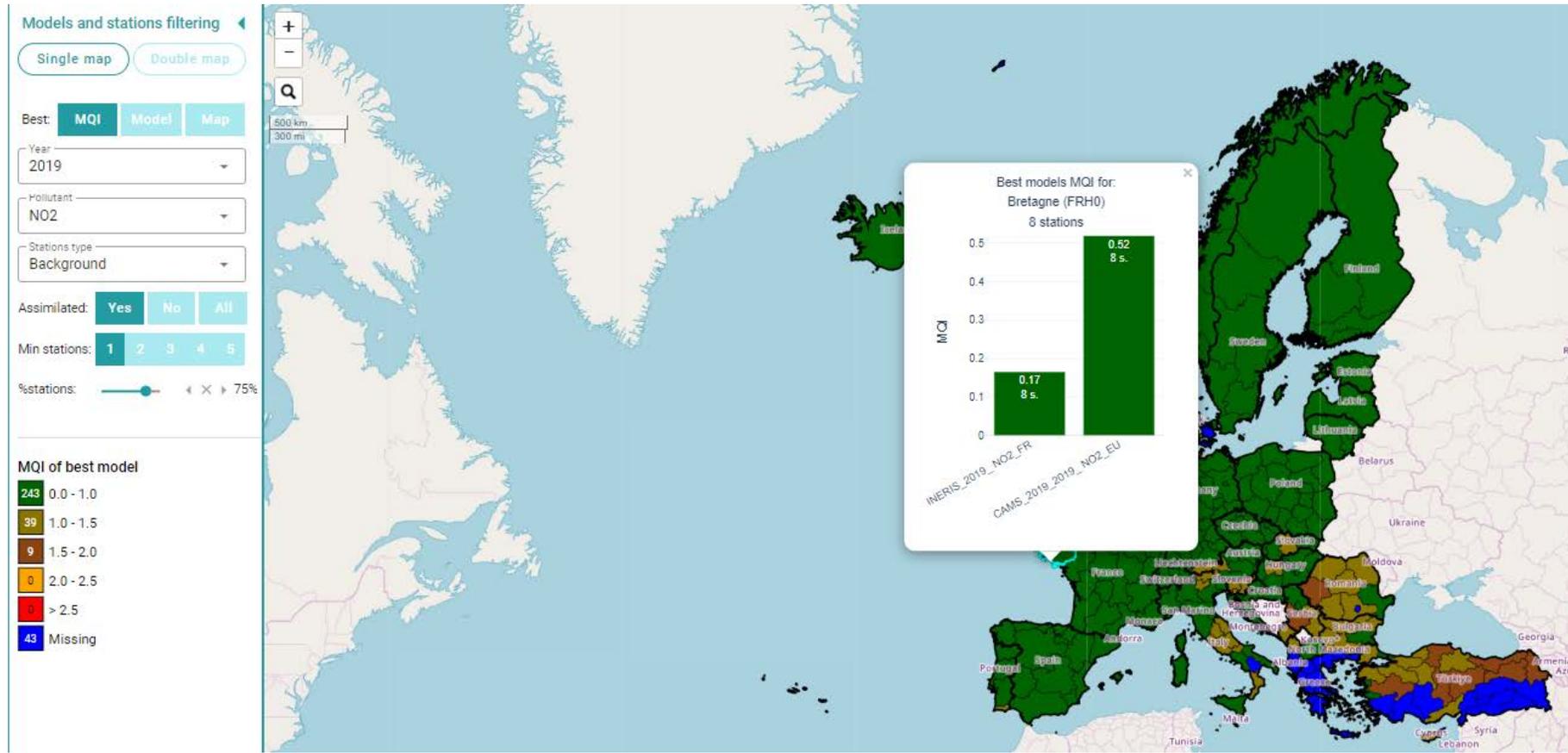
CONCENTRATIONS APP The concentration benchmarking tool allows to compute the Model Quality Objective (MQO), comparing model results and observed values. It allows to test different MQO definition, to select different subset of stations and work on different reference years and pollutants

BEST MODELS Map application to interactively display best models for each administrative polygon at NUTS2 level featuring on-the-fly models mosaic display

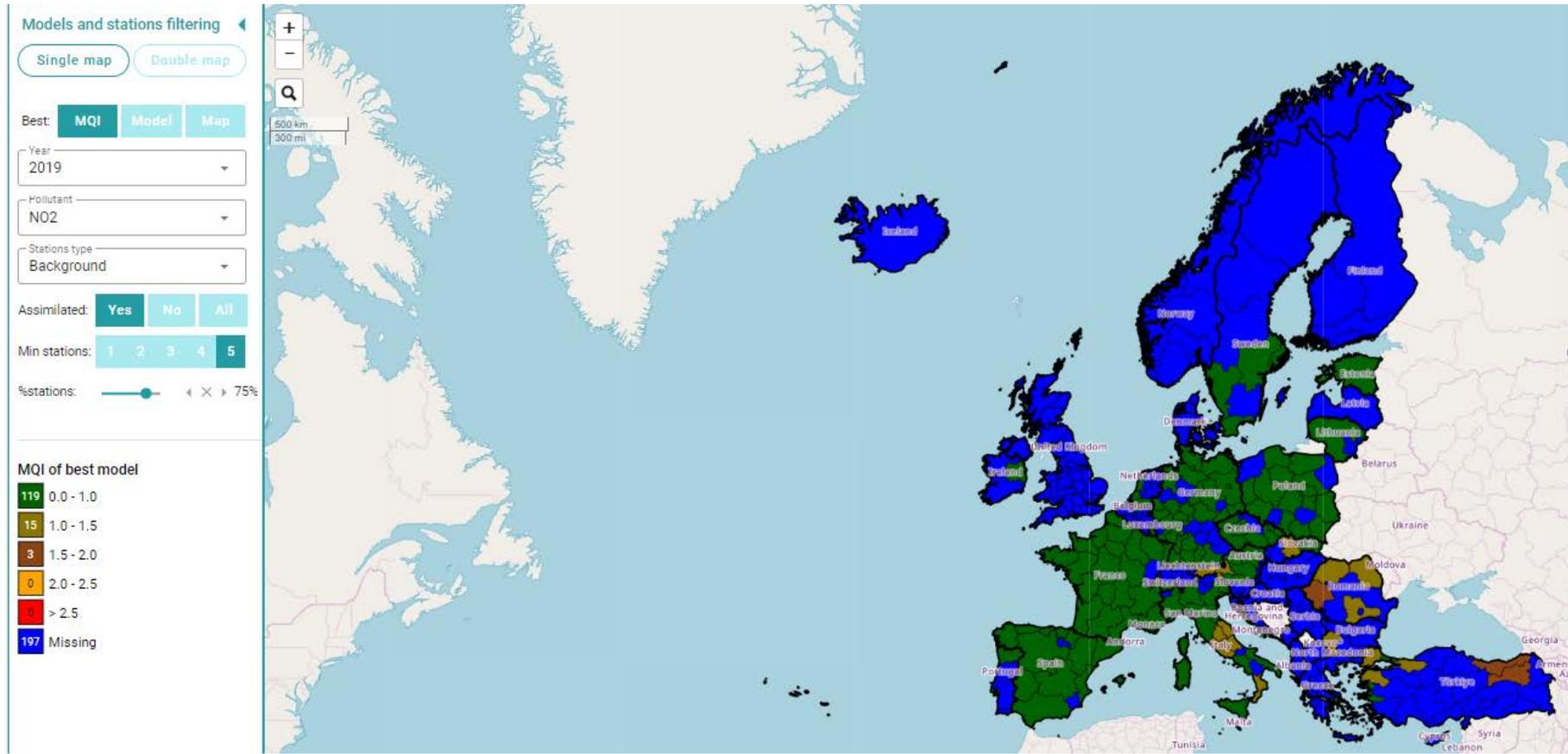
MQI – Model - Map



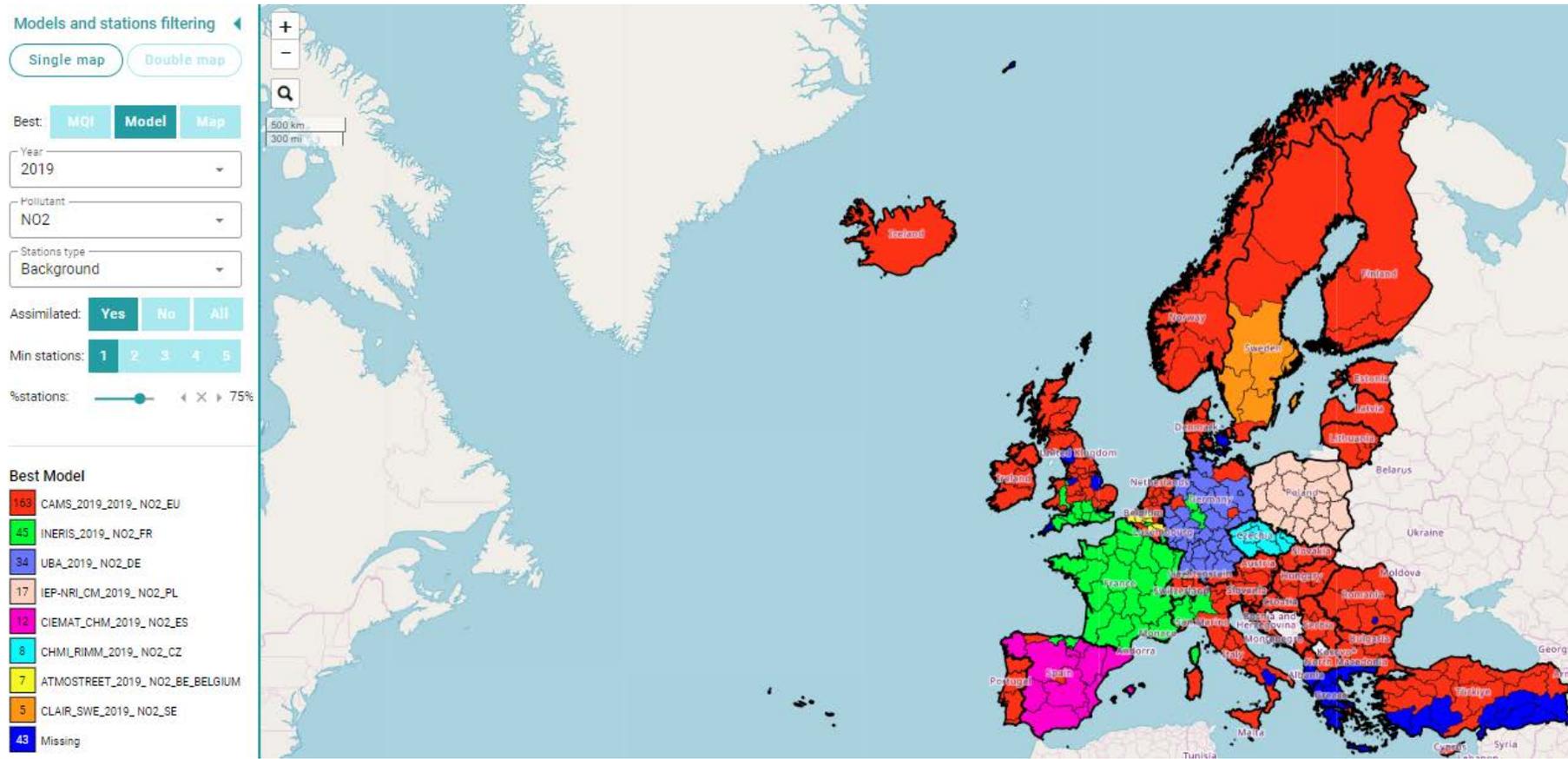
MQI – Model - Map



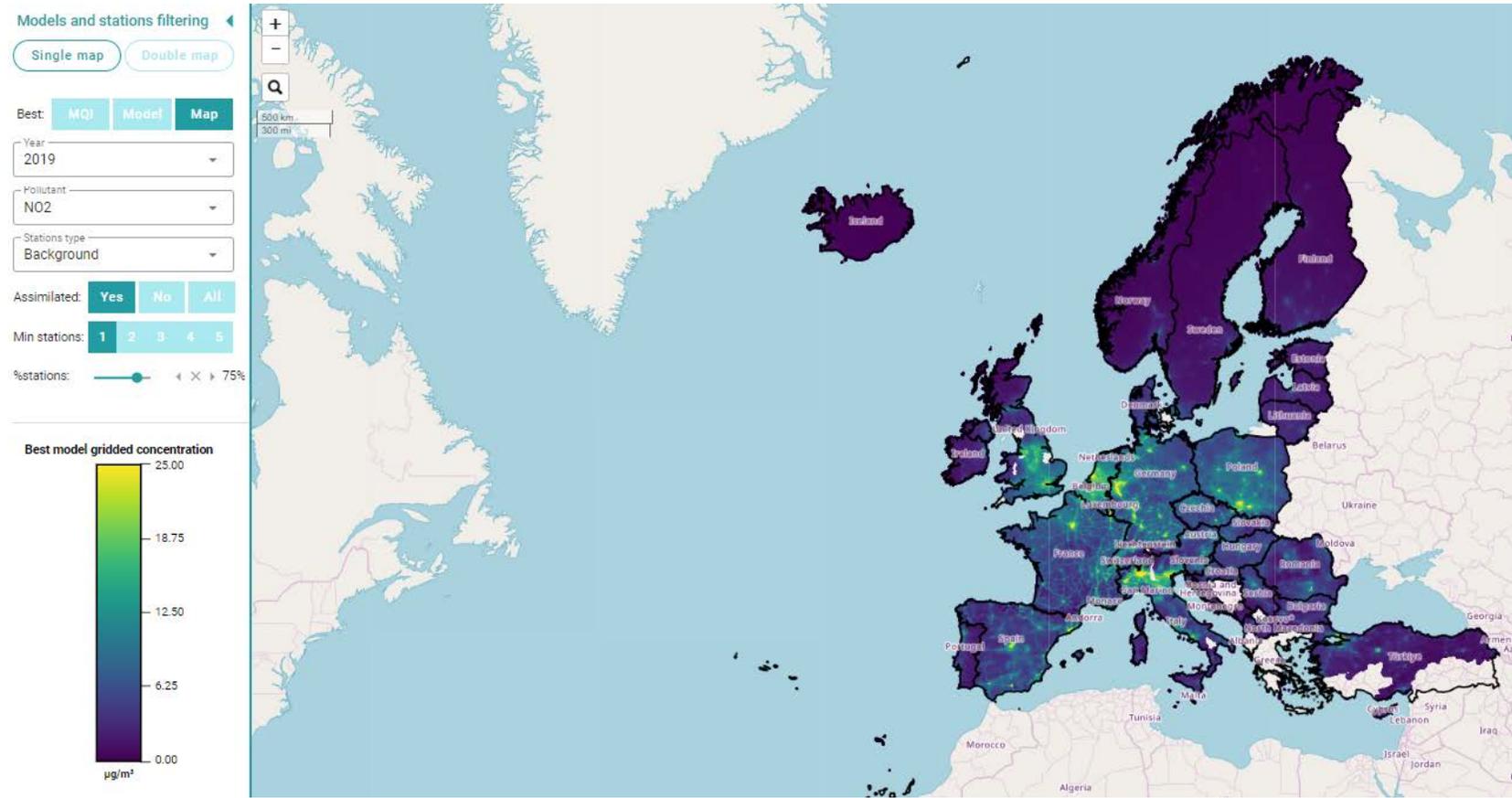
MQI – Model - Map



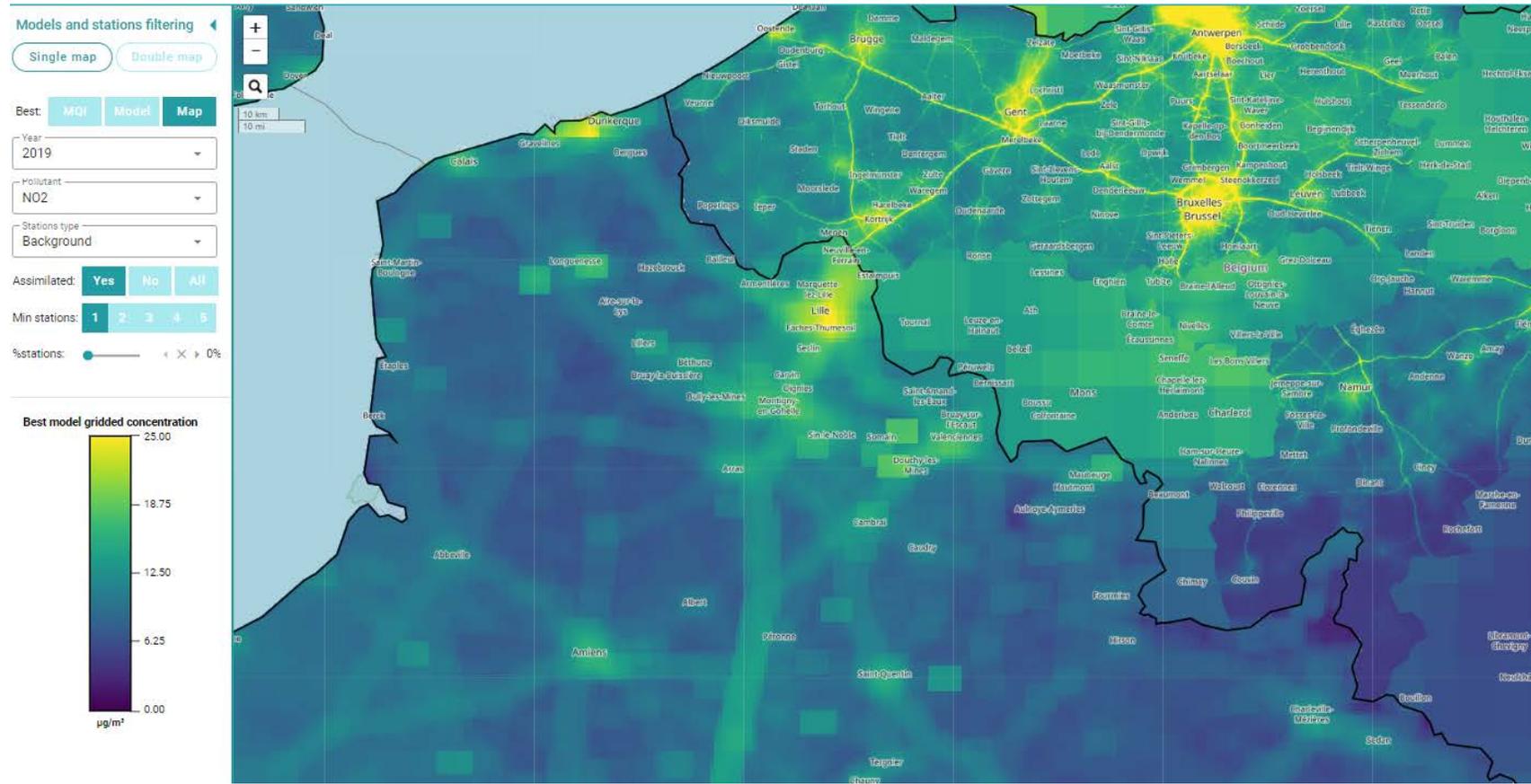
MQI – Model - Map



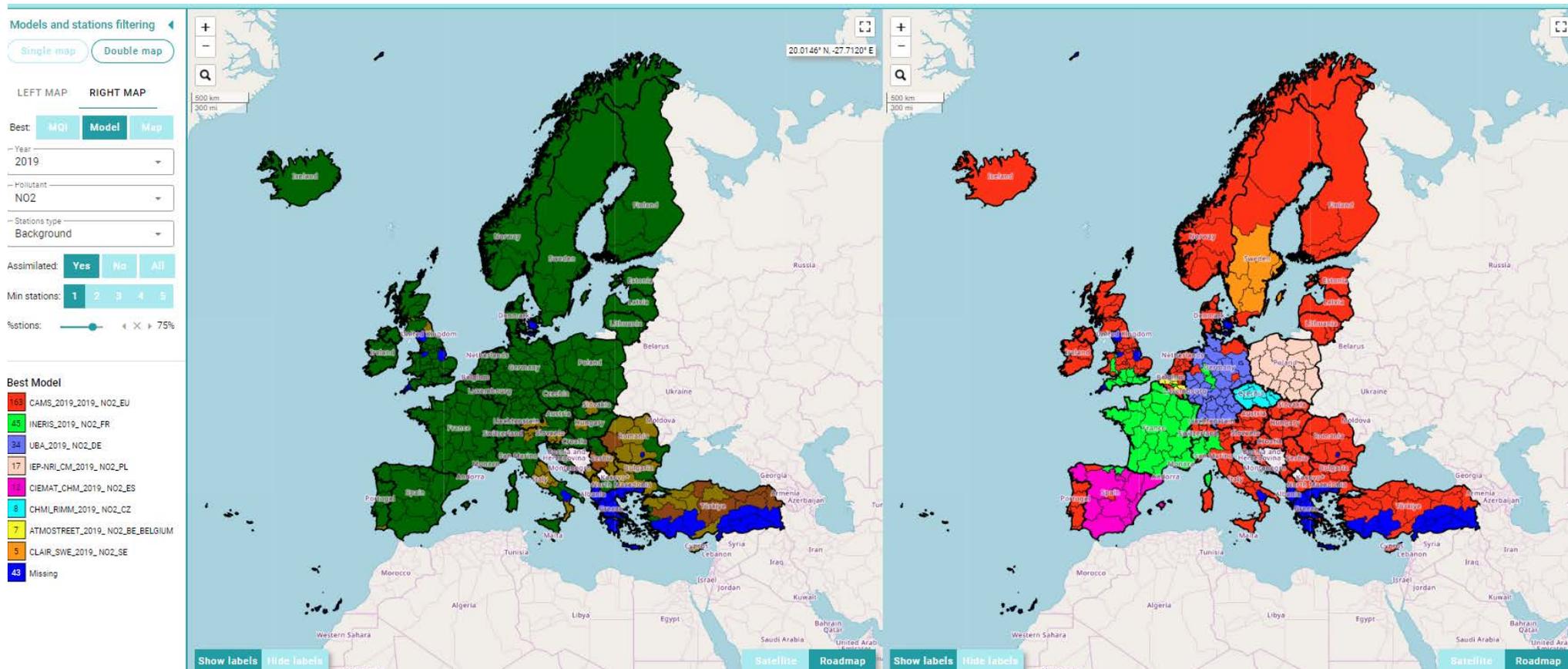
MQI – Model - Map



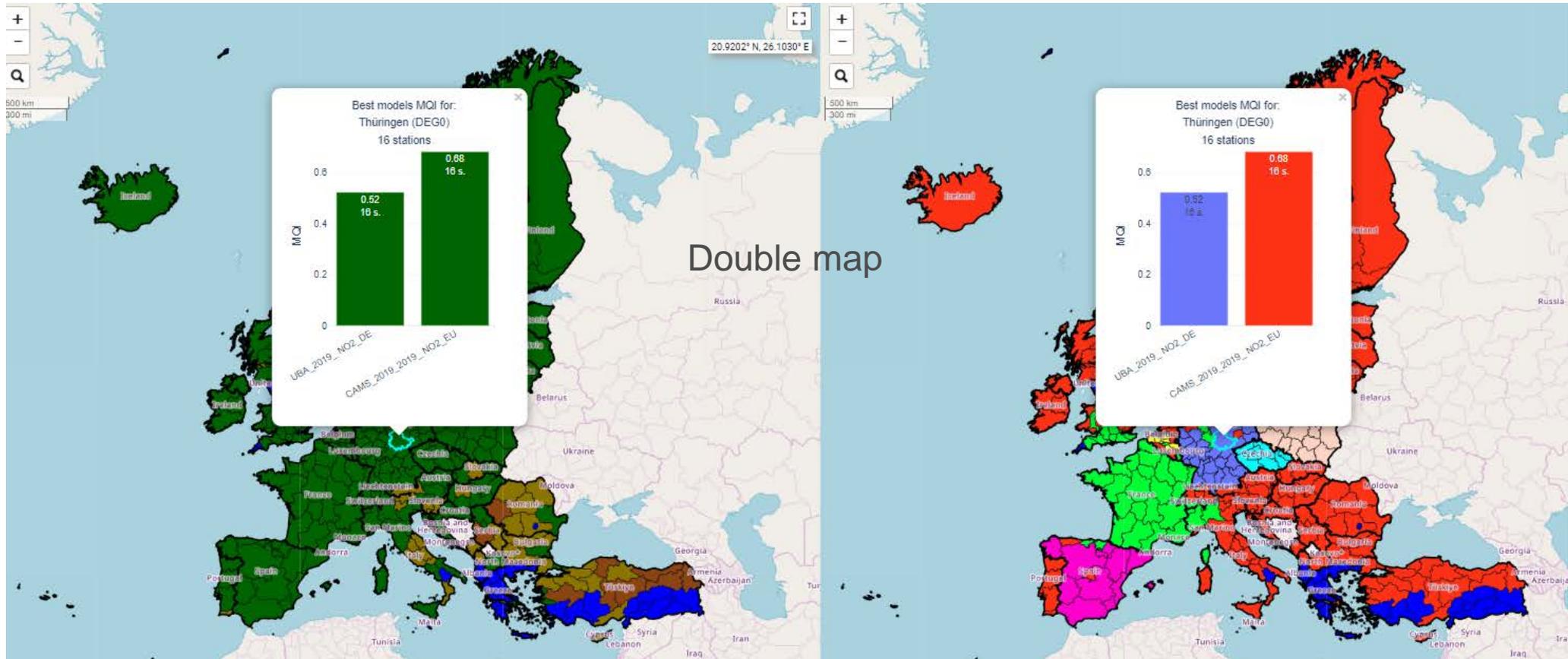
MQI – Model – Map(zoom)



Double map



Double map(zoom)



Conclusions

After uploading your yearly average concentrations on the DB, you can:

- Check your model vs observations (using MQI)
 - Meta information in DB: spatial resolution? Emission data used? ...
 - Simplify the DB for data upload
 - Improve meta information for observations
 - How to select stations for validation?
- Check your model vs other models on the same domain
 - Any feedback on this?

Thank you



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