

Near real time assessment with low-cost sensors (FAIRMODE CT6)

NEXT STEPS, March 2021

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- There was some discussion on the deliverables that we should aim for in the FAIRMODE/CT6 benchmarking activity.
- Presently, we are looking at available data and methods, it is difficult to define very specific goals and deliverables.
- The first deliverables were described to consist of a number of overviews:
 - Possibilities to calibrate the PM2.5 sensors in the Dutch data set.
 - Variation of the calibration results using different calibration methods.
 - Possibilities to combine the calibrated PM2.5 sensor data and present global concentration fields for the Netherlands in a data fusion or data assimilation approach.
 - Variation of the results using different data fusion or data assimilation methods.

- Options for a benchmark on NO2 sensors were discussed during the CT6 meetings.
- Uncertainties of low-cost NO2 sensors larger than for many types of PM2.5 sensors.
- In Europe not that many NO2 sensors in operation → no network approach possible.
- Fusion/assimilation of NO2 is more of a challenge.
- So, it was decided to start with PM2.5 and work on NO2 after that.

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- 2021 Feb: All parties involved “play” with the data.
 - 2021 Mar: Report proces at FAIRMODE plenary meeting.
If possible, initial results will be presented.
 - 2021 Mar: Next technical CT6 meeting on the web.
 - 2021 Jan-Sep: Work on benchmarks, regular meetings of CT6.
 - Test/improve present techniques.
 - Develop/test new approaches.
 - Apply to other data sets.When there are first results people from AQUILA will be invited.
 - 2021 Fall: Technical results in a CT6 session of the FAIRMODE technical meeting.
 - 2022 Spring: Start work on NO2?
 - 2022 Summer: Article PM2.5?

- Other parties can always join different aspects of the CT6 benchmarking process!
- Many aspects of both the FAIRMODE and AQUILA communities come together when incorporating sensors in air quality management.
- How to make optimum use of the different expertise's?
- WG42?

Discussion ...