



National Institute for Public Health
and the Environment
Ministry of Health, Welfare and Sport

QA/QC of Air Quality assessment in the Netherlands

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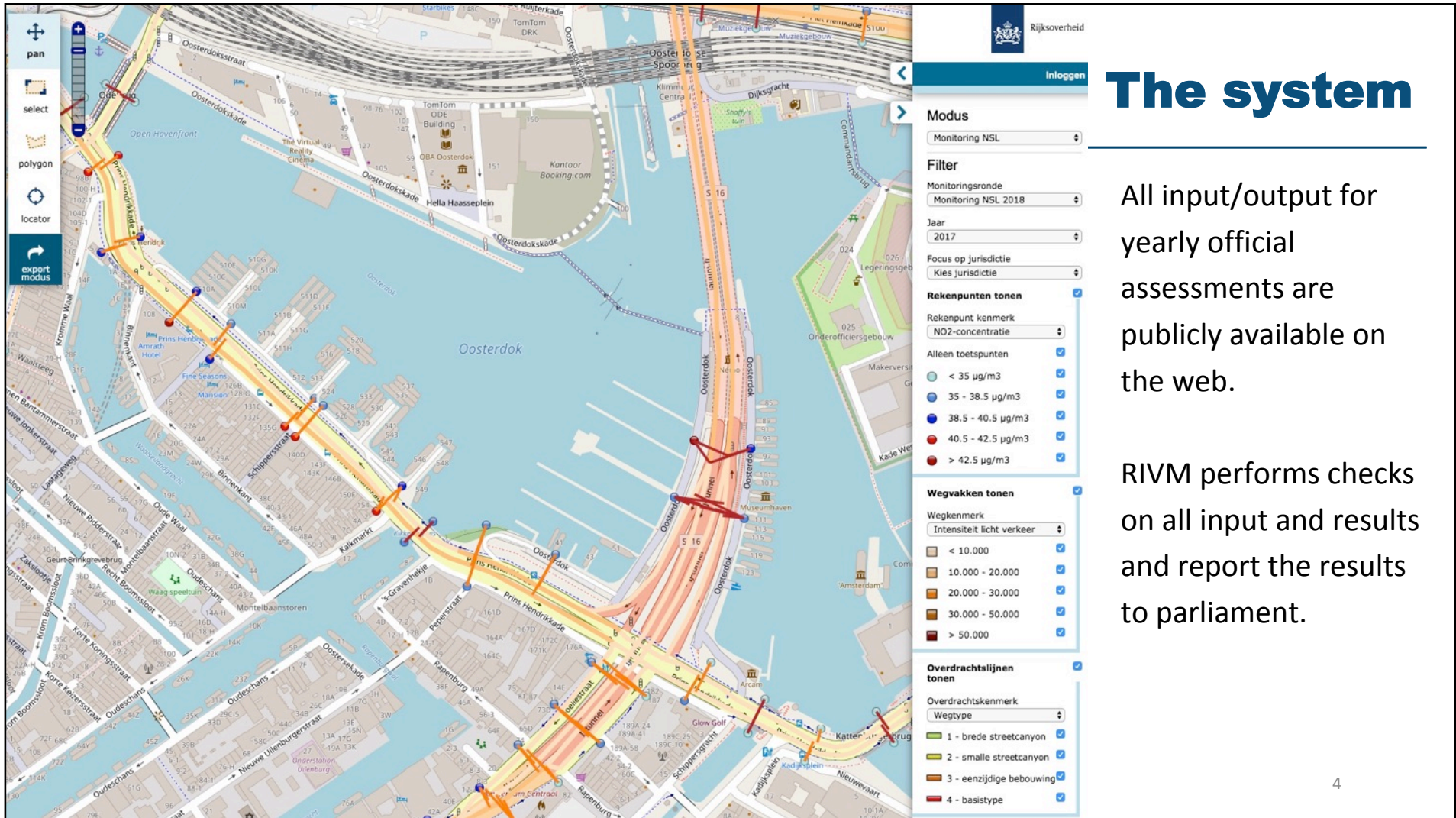


- Most formal rules concerning environmental issues are dealt in the Dutch law on “Milieubeheer”, “Environmental Management”.
- For air quality the underlying rules come from the Regulations and Directives from the EU.
- Many of the details of the Dutch law on air quality are regulated using directives from the Minister of Infrastructure and Water Management.
- For air quality the most important is the “Regulation air quality assessment, 2007”: the “Rbl 2007”.
- The present version was first published in 2007 and is updated (almost) every year.
- RIVM provides technical reports with all relevant details.



The Rbl 2007: inputs

- The “Rbl 2007” states which national emission factors, background concentration fields, meteo fields (etc.) and calculation methods **must** be used in a formal assessment of air quality.
- It is possible to use different inputs, but then you need permission from the minister, following advice from RIVM.
- The classification of the traffic in different emission categories is also prescribed by law.
- The effects of different types of measures on traffic emissions must be investigated and reported. They are open for criticism from others (RIVM).
- All traffic data must be made public.
- There is no differentiation of traffic emission factors over the country, all traffic is assumed to be relatively homogeneous.



The system

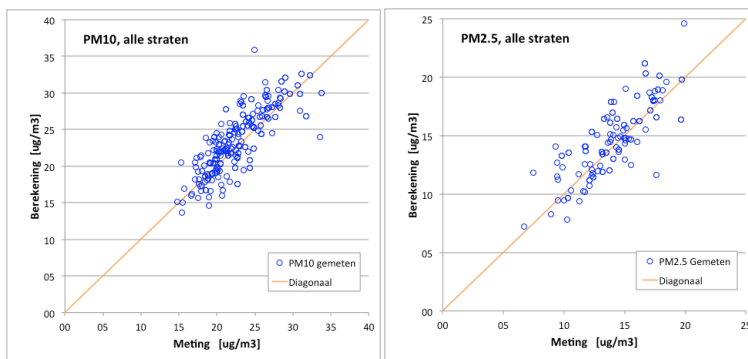
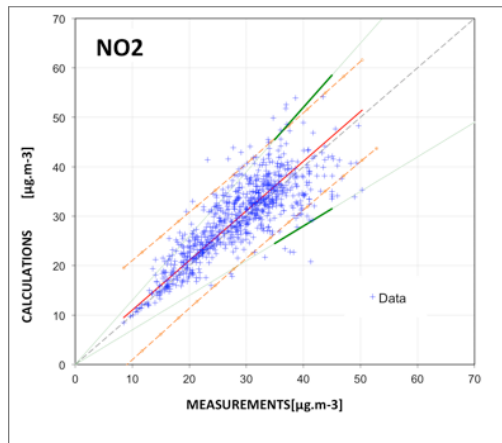
All input/output for yearly official assessments are publicly available on the web.

RIVM performs checks on all input and results and report the results to parliament.



The Rbl 2007: methods

- Three official calculation methods for air quality are officially used and allowed:
 1. Street canyons and general urban surroundings;
 2. General large streets/highways without close-by building;
 3. Industrial plants, general point sources
 - Wind tunnel studies are also accepted, if in line with a protocol.
- It is possible to use different models/methods, but then you need permission from the minister, following advice from RIVM.
- RIVM has helped organize free available official tooling to perform calculations using methods 1 and 2.
- For method 3 a free version is also available.



- Every few years RIVM collects the official data as well as all indicative measurements performed by (mostly) municipalities.
- Locations around roads and at background locations.
- Industrial sources are less well validated.
- For all locations input is made for the appropriate official calculation method(s).
- Most focus on NO₂ → model is, on average, very close to measurements, BIAS = +1.1, RMSE = 4.7 ug/m³.
- For 98% of NO₂ data the FAIRMODE MQI < 1.0 ($\beta=2$).
- For PM₁₀ and PM_{2.5}: 99% and 100% (parameters?)



Improvements?

- There is no legal obligation to correct for situations where the generic data are not/less representative for the local situation.
- In practice municipalities make a lot of effort to show the traffic in their region is cleaner than average.
- However, some municipalities clearly have traffic with higher than average emissions, but they refuse to correct for that. As long as the city council does not object, this is possible.
- The minister dealing with the environment is reluctant to take action in cases like this.
- Composite mapping can stimulate more/better discussions between countries by show the (in)consistencies in official concentration fields ;-)



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Questions ?