

EEF VAN DONGEN

ECLAIR – Emission CompiLation for AIR quality



Priority to most relevant emissions

Under development !

- Point sources: large combustion plants & medium industries (direct emissions or activity)
- Individual heating: household appliances & district heating (types & consumption per dwellings, census)
- Traffic sources: flow (average daily traffic) & fleet (total emissions, fleet & traffic counting)





QGIS plugin (under development)

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| Browser | ® News | |
| | GGIS for Peace A message of peace from the QGIS Community: We, the developers, contributors and community members of the QGIS Project view the ongoing world events in Ukraine and other conflict areas around the world with great sadness. Our aim in developing QGIS has always been to provide a powerful tool to | A Free and Open Source Geographic Information System |
| ✓ ▲ ∞ ▼. 5₀ × № □ □. | support the creation of a just and humane society. We want to enable a world where every person has a voice, the ability to express, and be secure in, their tenure in their homes, villages, towns, cities and countries. We hope tools like QGIS are used to the benefit of all citizens on earth, to support a sustainable environment an orderly society and in particular to establish and preserve sourcein dionity. security and freedom from onpression | |
| | We ask the leaders of the world to resolve their disputes peacefully, through negotiation and compromise, humility and deference to the citizens who are placed in your care. To the GGIS Community that are caught up in this conflict, our thoughts and support are with you, and we hope that you and your families are safe and that this conflict comes to a speedy end. | since 2002 |
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| Value tool is enabled | New QGIS version available: Visit https://download.ggis.org to get your copy of version 3.28.10 | Nb. tutorials & user guides |
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Data structure for pointsources

Pointsource

- Facility
- Chimney properties
- Coordinates
- ActivityCode (SNAP, GNFR etc)

Emission

- Substance (NOx,
- PM10 etc)
- Unit (ton/year)



Data structure for pointsources and activities





Time variation

| ID | typeday | monday | tuesday | wednesday | thursday | friday | saturday | sunday | | | | | |
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Gives **weight** to emissions, yearly total emission as specified in import.

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Let's try!





SMHI

Household heating

- 1. Geographic distribution of appliances according to:
 - urban areas
 - type of building
 - population density
 - building typology & energy use
- 2. Conversion to heating energy use:
 - by type of appliances
 - by fuel
 - by area
- 3. Conversion to area emissions:
 - using EEA emission factors
 - using local emission factors





Traffic

- 1. Geographic distribution of traffic flow according to:
 - road network (Open Street Map)
 - few traffic measurements (large roads)
 - total traffic work in area (vehicles/year/km)
- 2. Total aggregated emissions (ex. Copert) from:
 - vehicles fleet composition
 - yearly millage
 - emission factors
- 3. Geographic distribution of emissions





THANK YOU !

QUESTIONS, COMMENTS?