

FAIRMODE pilot Helsinki

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9:00-12:00

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Air quality plans preparation

- **Which are the air quality challenges in your domain?**
 - The air quality plan for the city of Helsinki focuses on NO₂ (annual limit value exceedance in some busy street canyons), PM₁₀ (risk of exceedance of the daily limit value in street canyons) and PM_{2.5} and B(a)P from domestic wood burning (no exceedances of limit or target values)
- **How do you identify the main sources of pollution in/to your domain?**
 - **In terms of activity sectors:** dispersion modelling by FMI for traffic, energy production, ships and residential heating
 - **In terms of geographical sources:** when reporting the AQP, urban, regional and national background concentration were used to estimate the increment coming from local emissions
- **Which tool/approach do you use to identify sources?**
 - Dispersion modelling by FMI for traffic, energy production, ships and residential heating
- **Are you aware of differences between “source apportionment” and “planning” approaches?**
 - No, when modelling was carried out for the Helsinki AQ plan, we did not apply these approaches
- **Do you perform any kind of “validation” of your results?**
 - Modelling results are compared to measured concentrations

Future projections and measures

- How do you project in the future the current concentrations? Do you perform 'business as usual' scenarios for the future? Using which tools?

For the Helsinki AQP we modelled NO₂ and PM_{2.5} annual concentrations for 3 hot spots (busy street canyons) by OSPM for BAU and the effects of scenarios with selected measures on traffic:

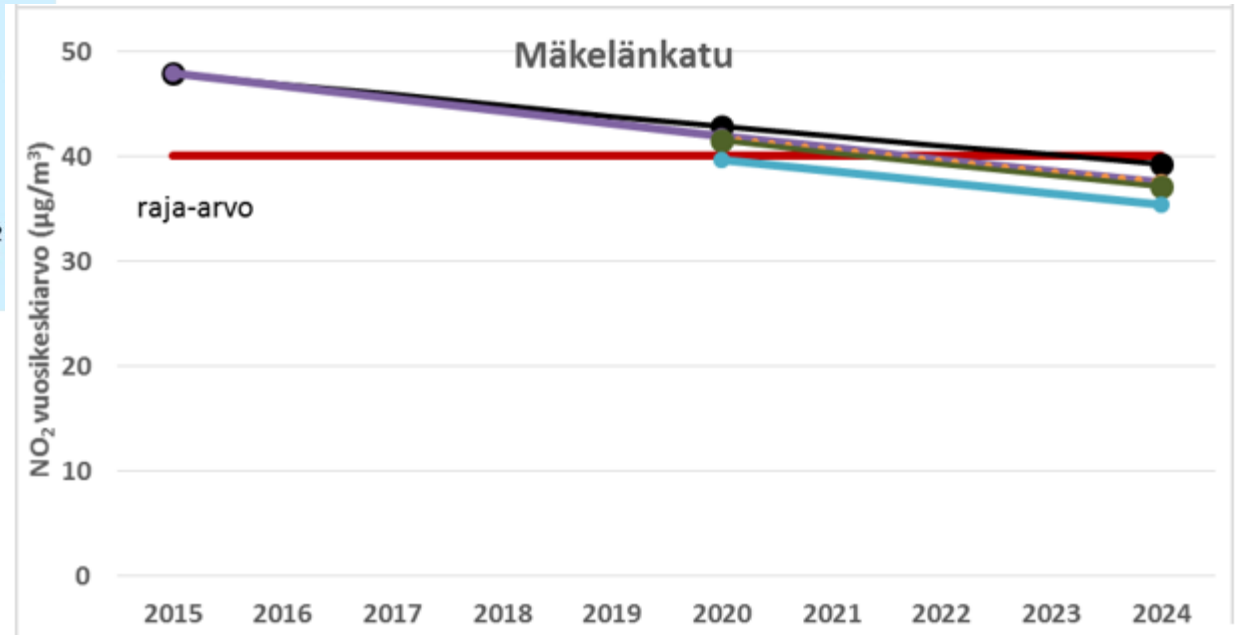
- Renewal of the local bus fleet: increasing the share of electric buses to 30 % and cutting NO_x and PM emissions of the bus fleet by about 94 % by 2025, 100% waste-based renewable diesel by 2020, new buses at least Euro VI in the environmental zone
 - Promoting congestion charges: estimated to reduce traffic volume by 20 % in the city centre
 - Implementing the City's parking policy with higher prices of parking: estimated to reduce traffic volumes by 5 %
 - Converting one major street canyon into a public transport street with no through driving
- How do you select additional measures to be applied? How do you evaluate impacts and costs of additional measures?
 - On the basis of expert consultation and other cities' experiences the most feasible measures were selected and their effect on traffic volumes in the modelled hot spots were estimated
 - Impacts on NO_x emissions and NO₂ concentrations were evaluated with OSPM (HBEFA emission factors)
 - Costs of the selected measures were not evaluated

Uncertainty and governance

- Do you evaluate uncertainties of your results? How?
 - A qualitative expert evaluation was made
- Do you coordinate the air quality plan with other policies? i.e. National air pollution control programmes (NEC directive)? Covenant Of Mayors? Mobility plans?
 - At the time of the modelling for Helsinki AQP in 2015-2016 the new NEC directive and its requirements had not yet entered into force
 - Synergies with the City's sustainable energy plans and mobility plans were recognized in the preparation of the AQP, some measures are carried out in the framework of those plans

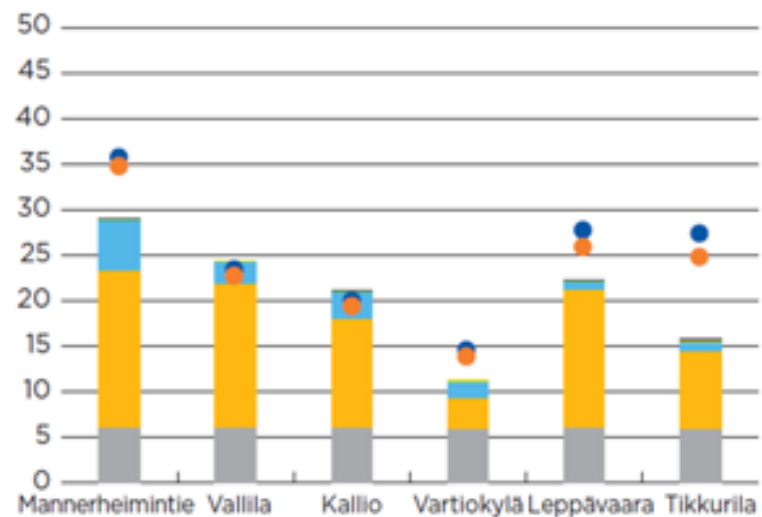
FAIRMODE tools

- Are you aware / are you using the source apportionment (SA) and planning FAIRMODE tools/resources?
 - DeltaSA tool
 - SPECIEUROPE database
 - Dynamic indicators in the delta tool
 - SHERPA
- If no, explain why
 - We have only just started testing SHERPA



- Development of vehicle technology (BAU)
- Improvement of HSL fleet (28 % electric buses and 100 % biofuel)
- ...●... Environmental zone (all HSL buses Euro VI)
- Increasing parking fees (5 % reduction in traffic volume)
- Congestion charge (20 % reduction in traffic volume)

NO₂ vuosikeskiarvo (µg/m³)



Aviation



Energy production



Harbour



Vehicle traffic



Background concentrations



Measured concentration 2012



Measured concentration 2013



Measured concentration 2014