



Update: Air quality management practices (CT5)

Outline

- The CT5 'best practices' document
- Defining a fit-for-purpose system for air quality measures

Current activity



Under internal revision at JRC

Soon we should finally publish it

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Annex 2: low emission zones

Copenhagen and Antwerp examples

Key messages: There are many parameters influencing the design of an LEZ. The choices for these parameters are crucial for success or non-success (ineffectiveness) of an LEZ introduction:

- Vehicle allowed to enter
- Timing of implementation
- Geographical extent
- Method of enforcement

	Averaged impact in Copenhagen (2010)	Max impact in Antwerp (2019)
PM _{2.5}	0.2 µg/m ³ à 1 – 1.5%	
BC		0.15 µg/m ³ à 8%
NO ₂	2 µg/m ³ à 5%	1.7 µg/m ³ à 3%

Annex 3: non-exhaust traffic sources and PM

Case of Stockholm

While exhaust PM emissions from transport are declining as a result of increasingly tighter standards ... unregulated non-exhaust PM-emissions are increasing (tire, brake and surface wear) -> studded tires focus

Measures:

- reduced use of studded tires (bans, regulations or taxes).
- reducing the effect of studded tires and minimizing resuspension of road dust. These measures (more general for non-exhaust emissions) include speed regulations, extensive street cleaning, reduced use of traction sand, using wear resistant aggregate material in the pavement ...

Annex 4: how to reduce ozone concentrations

Complex nonlinear phenomena that lead to final O₃ concentrations:

- The production of O₃ is decreasing in Europe due to less precursors
- The hemispheric background O₃ is increasing: emissions from Asia.
- Close to traffic, O₃ titration is decreasing due to NO_x decrease.

Key sectors for O₃ production:

- For NO_x: road transport, industry, energy supply and agriculture
- For NMVOCs: industry, agriculture and households
- For CH₄, agriculture, waste and industry.

Annex 5: estimate future traffic related air quality



Of course, a local modelling study is still the most valid way for concentration projection at a single point of interest. However, the simplified approach presented here makes it possible to estimate future concentrations at traffic-related measurement sites

Annex 6: NEC and co-benefits (including GHG) in an air quality plan

Stressing the importance of:

- ‘National Air Pollution Control Programmes’ – interaction with air quality
- Interaction with Nitrogen budgets (biodiversity strategy, farm-to-fork,...)
- Integrated Assessment Modelling to support the design of national and regional plans complying with NECD and the Green Deal (assessment the impact of end-of-pipe and energy measures on air quality, health, costs (of such measures implementation) and savings, constrained to precursors and GHGs emissions defined levels.)

Annex 7: socio-economic impacts of measures

Case study is based on the City of Southampton, to assess the socio-economic impacts of measures to improve NO₂

Different scenarios: looking at average population-weighted NO₂ concentration, and average change in concentration

- split by change for different Index of Multiple Deprivation (IMD).
- Considering sensitive receptors (hospital, playing fields...)

Checking also the economic impact of policies

- For business
- For households

Next steps

- A review paper?
- A version 2 (extension) of the document?

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From FAIRMODE TM, 6th of October

Need to share experiences among member states on measures, to replicate good ideas and avoid possible mistakes

Some efforts in this direction

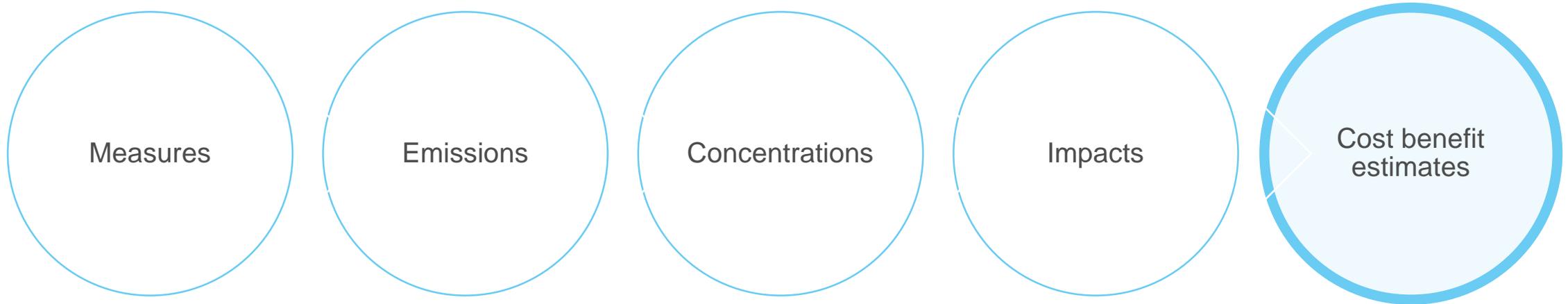
FAIRMODE CT5 (best practices document, but partial view...)

Data flow K (MS official reporting, but complex data flow, missing data...)

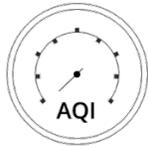
Catalogue of AQ measures - CAQM (now a bit old, not really used...)

Still information is lacking and unclear, information should be simple enough to report and complete enough to be used

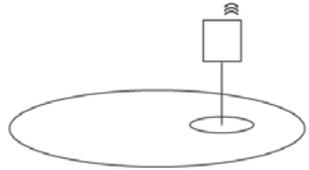
Frame proposed during the TM (1/2)



Frame proposed during the TM (2/2)



Which **indicator(s)** is(are) selected to assess the impact of the measure (PM_{2.5}, PM₁₀, NO₂...)?



Receptor

Over **which spatial area** is the indicator averaged (city, core city, street...)?
Over **which time period** is the indicator averaged (hours, days, year...)?



Source

Over **which spatial area** is the measure applied (city, core city, street)?
Over **which time period** is the measure applied (hours, days, year...)?
Which sectors/activity are abated (transport, Euro5,...)?
By how much are source emissions abated (full, 20%,...)?



Method

Which methodology to estimate the impacts?
What is the method to estimate costs?
What is the method to estimate benefits?



What are the estimated **costs and benefits**

Some SLIDOS during FAIRMODE meeting

If an ideal DB of measure would exist, would you use it?

017

Yes



88 %

No



12 %

Are you willing to participate in a pilot to define what should be reported under data flow K'?

018

Yes



72 %

No



28 %

If yes, please indicate your name

- Kaspar Graf
- Stephan Nordmann
- Alexander de Meij - MetClim
- Joana Ferreira
- Leonor Tarrason
- beth conlan
- Matthew Ross-Jones & Hilma Engholm (Swedish EPA)
- Gabriela Sousa Santos - NILU
- Christian Nagl
- Stijn (VITO)
- Hélder Relvas

Next steps

Call for a meeting with FAIRMODE interested participants

Starting from scratch, we want to design this new system

Do you have any comment / feedback on this plan?

Thank you



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