FAIRMODE CT5,
the present: 'reporting abatement measures'

Tue 18th, 17:00-18:00

FAIRMODE previous meeting

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 offical 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

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In the last meetings we agreed on a template

Objectives

- Strengthen harmonization

- Favor sharing of good practices

- Allow reproducibility of measures on other locations

- Keep required data to a minimum

Next slides to detail the template

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Measure applied

- Please define the applied measure, with sufficient detail to allow for measure's replication

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'Source' side (this section refers to emissions)

- Over which spatial area is the measure applied (city, street, …)?

- Over which time period is the measure applied (hours, days, year, …)?

- Which sectors/activity are abated (transport, Euro5, …)?

- By how much does the measure/set of measures reduce the source emissions (full, 20%, …)? Please specify if the % reductions are related to the total emissions, or to the specific considered sources

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'Receptor' side (this section refers to concentrations)

- Which indicator is used to assess impact of a measure? PM2.5? NO2?

- Over which spatial area is indicator averaged (city, set of stations, …)?

- Over which time period is the indicator averaged (days, year, …)?

- By how much the indicator change due to measure?

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Methodology

- Which methodology is used to estimate the impacts?

- What is the method to estimate benefits?

- What is the method to estimate costs? Are costs related to the society in general? To groups of persons?

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To make everything more concrete: exercise

Group exercise on a case studies

Fill in the template we distribute.

Is this allowing reproducibility of the measure?

Steps

Split in groups: each group nominates a rapporteur

- STEP 1 (30 minutes): Analyse your case study

    - Fill in the form; What is missing? Fill in missing part to allow reproducibility

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Background material

Case 1: Duckburg

Duckburg is an industrial city, located in a complex orography domain. Lot of lorries enter the city every day, to deliver goods to the main industrial facilities, located in the very centre of the city. For this reason, NO2 yearly average is quite high, with a value of 56 µg/m3. To reduce emissions and improve air quality, the Mayor plans to implement a 'last-mile delivery' scheme, to avoid lorries to enter the city, and to optimize the distribution of goods in the city centre. The scheme will be active from Monday to Friday, from 8:00 to 20:00 and (based on high resolution modelling results) would reduce NO2 concentrations as in the Table below; emissions will be reduced by 20%. Thanks to this plan, the Mayor declares that each year 10000 premature deaths will be avoided.

Table 1: change in NO2 yearly average concentrations (µg/m3) as measures in the Duckburg air quality station, for the current situation (basecase) and for the scenarios with 'last-mile delivery' scheme implementation.

BASECASE	SCENARIO
56 µg/m^3	50.4 µg/m^3

Case 2: Mouseton

Thanks to its position, Mouseton is a renowed touristic location, with 100.000 inhabitants and with a city covering an area of 180 km^2. However, its touristic development came with a price: lot of cars enter every summer the city centre and pollute the area, that now (in specific days of the year) can reach up to 90 µg/m^3 of NO2 concentrations.

The current emissions by different car technology is as follows:

Table 2: passenger cars emissions, in kton/year, split by technology.

Emissions of cars in Mouseton [ton/year]
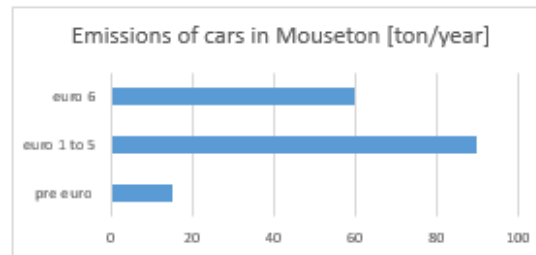
To solve this problem, a 'park-and-ride' system is under development. With this scheme, pre euro6 cars will have to park in a site external to the city, and then electric buses will be available to go from the parking place to the city centre. This area, that will be closed to pre euro6 cars, has a surface of 100 km^2. Thanks to this policy, concentrations will be reduced up to 35%. Each of the 10 buses that will be bought for this 'park-and-ride' scheme, will cost approximately 60000 euros.

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The form to be filled in

1. Context and measure's general description

- General information of the domain under study:
  - Size of the city
  - Orography
  - Other important information to characterize the city
- Information on the current situation in terms of:
  - Level of activities
  - Emissions
  - Concentration composition
- General description of the measure, with sufficient detail to allow for possible replicability

2. 'Source' (emissions)

- Over which **spatial area** is the measure applied (city, core city, street, …)?
- Over which **time period** is the measure applied (hours, days, year, …)?
- Over **which sectors/activity** is the measure applied (specific sectors? specific pollutants?)
- By **how much** does the measure/set of measures reduce the emissions (full, 20%, …)?
- Which is the **methodology** used to evaluate the emission change?

3. 'Receptor' (concentrations)

- Over which **spatial area** is the indicator averaged (city, core city, street, set of stations, …)?
- Over which **time period** is the indicator averaged (hours, days, year, …)?
- **Which indicator** is selected to assess the impact of the measure?
- By **how much** the indicator (concentrations) change due to the measure?
- Which is the **methodology** used to evaluate the concentration change?

4. Methodology

- Which is the estimated benefit of the measure?
- Which is the estimated cost of the measure?
- Which methodologies are used to estimate the benefit and cost?

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Steps

Split in groups: each group nominates a rapporteur

- STEP 1 (30 minutes): Analyse your case study, fill in the form

  - Fill in the form; What is missing? Fill in missing part to allow reproducibility

- STEP 2 (15 minutes): we exchange the form:

  - Could you apply this measure on your domain? What is missing?

- STEP3 (20 minutes): plenary part, each group explains:

  - Discuss STEP 1 (analyzing the case study) and STEP 2 (after forms swap)

  - Suggestions to improve the minimum required data

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