Recommendations from FAIRMODE WG2 on emissions

Leonor Tarrasón, Marc Guevara, Susana López-Aparico
and the WG2 team in Athens

Request for additional information

- There is need for more specific information in the national IIR to EMEP on the tier level used to spatially disaggregate emission by GNFR sector in the EMEP 0.1x0.1 inventory
- Request of information in a web-survey to be sent by DG_ENV in cooperation with FAIRMODE WG2

- Investigate if this information is publicly available
- Contact National points and ask for this information (or if there is a specific report describing the emission mapping)
- Design a survey to collect the ancillary data and methodology
- Distribute the survey through the DG ENV (as suggested by Frauke Hoss)

EMEP/EEA guidelines: Spatial mapping of emissions

		Best ---------- Worst			
GNFR sector	**Cat.**	**Tier 3**	**Tier 2**	**Tier 1**	**Notes**
C_OtherStationary Comb	D	Detailed fuel deliveries for key fuels (e.g.gas) and modelled estimates for other fuels using data on population density and/or household numbers and types.	Population or household density combined with land cover data if smoke control areas exist in cities.	Land cover	Tier 1 & 2 methods assume that a linear relationship between emissions and population density or land cover exists. This assumption will be most realistic if a country has a uniform distribution of fuel use by type. Where there is a broad variation of fuel type use in different areas, the accuracy of the simple method will be much lower
I_OffRoad	D				

		Best ---------- Worst			
GNFR sector	**Cat.**	**Tier 3**	**Tier 2**	**Tier 1**	**Notes**
F_RoadTransport	D				usually need to apply a Tier 2 method for minor roads
F_RoadTransport	D	Traffic flows and types of vehicles	Using road network information and population based traffic intensity	Population and Land cover	Different tiered approaches will usually be needed for different road types. Major roads will often have traffic counts or modelled flows, while minor roads will not. Countries that have traffic count/flow information will usually need to apply a Tier 2 method for minor roads
F_RoadTransport	D				
F_RoadTransport I	D				

Guidance in place
Information on what is used
missing?

WG 2 : Guidance on spatially disaggregated emissons

- Most spatially disaggregated emission inventories use a combination of tier methods to calculate emissions in the different activity sectors

- The uncertainties in the sectors where tier 3 methods for spatial disaggretation are used are considerably smaller than in the sectors where tier 2 or tier 1 methods are used.

- **For urban scale applications**, the use of tier 1 methods for spatial disaggregation is not advisable.
  - Inventories using predominantly Tier 1 spatially re-distribution methods should not be used in urban scale applications
  - Need for further refinemnet of tier 3 methods in Road traffic for urban application (congestion, resuspension needs to be included)
  - Guidance is recommended in the domestic combustion sector where current tier 2 methods are satisfactory
  - 'Left-over' industrial emissions (not linked to LPS) should no be distributed using urban land uses as a proxy

WG 2 : Evaluation of emission inventories

- Benchmarking with other inventories to understand strengths and limitations

- Guidance on how to evaluate an emission inventory
  - Cookbook
  - User guidance documents
  - 3 publication examples
  - Bilateral support
  - Workshop group discussions

Documentation of the inventory:
- What to look for
- How to classify the inventory

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Benchmarking Δ- emission tool
- identify stengths
- identify possible processes missing

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Benchmarking emission composite
- check spatial differences across pollutants

Thank you!