



Ricardo
Energy & Environment

Task Force on Emission Inventories and Projections

European Commission contract on
'Assistance to Member States in
Developing National Air Pollutant
Projections'

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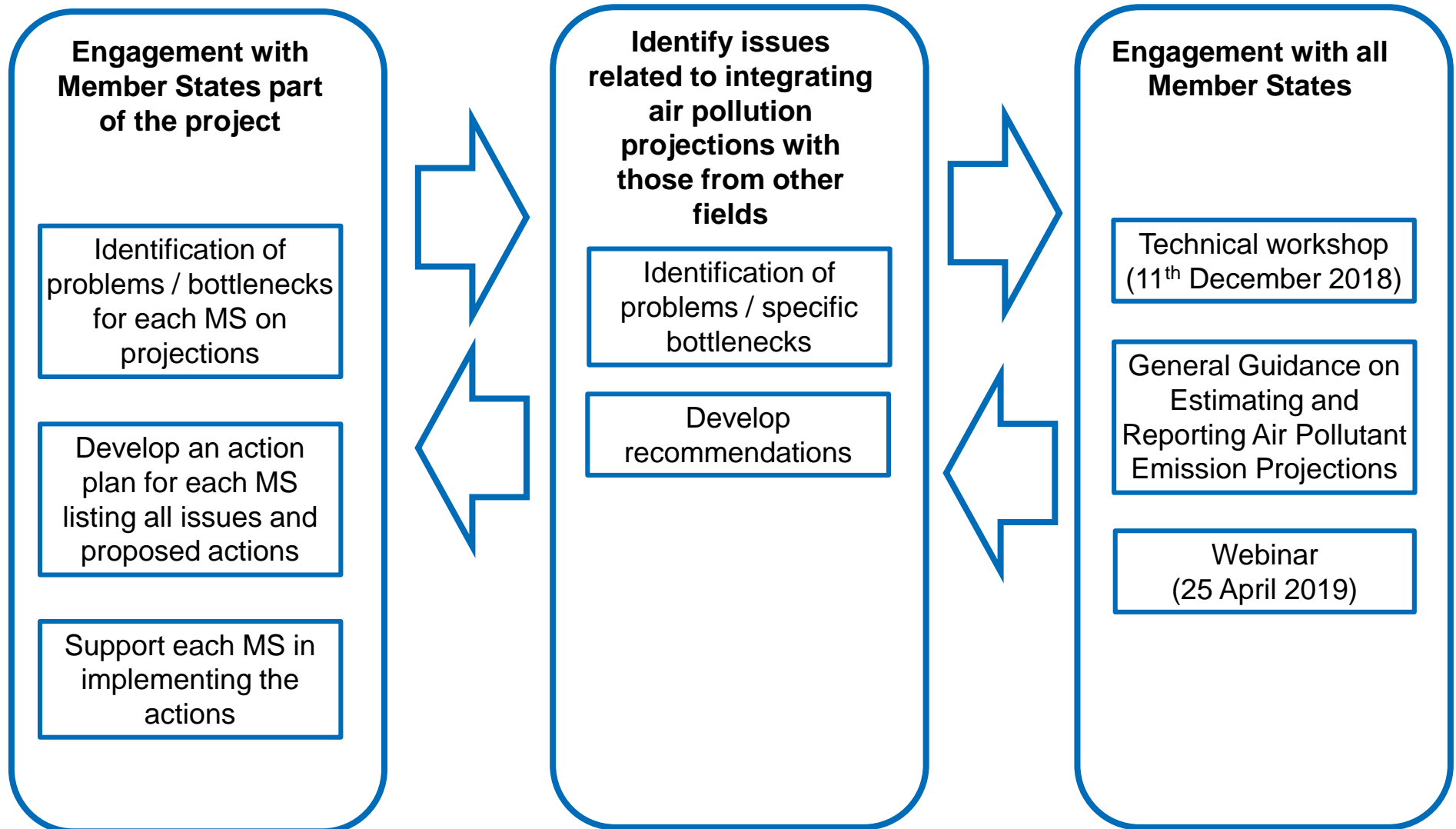


- Project Overview
- Conclusions
- General Guidance on Estimating and Reporting Air Pollutant Emission Projections
- Waste Projections Guidance

The primary aim of the project was to assist up to ten Member States in preparing and improving their national air pollutant emission projections, by providing technical assistance, guidance and templates as well as support via in-country sessions/workshops and remote expert advice.

The following ten MS participated in this project: Bulgaria, Estonia, Croatia, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Malta and Romania.

The focus was on helping Member States improve their air pollutant emission projection estimates submitted in future NECD submission cycles. However, the immediate focus was on the projections that informed the first National Air Pollution Control Program due by 1 April 2019.



Conclusions (1)

- **Transparency:** At the current time, there is a lack of transparency in many MS air pollutant emission projections reporting. It is hoped that as a result of the General Guidance on Estimating and Reporting Air Pollutant Emission Projections being produced and the NAPCP reporting requirements this aspect will improve.
- **Review of Projected AP Inventories.** MS AP emission projections will be reviewed thoroughly in 2019 and this should also lead to improvements. It is recommended that the review of projections is repeated every 2 years in line with the reporting cycle of projections under the NECD.
- **Institutional arrangements:** Some MS lack institutional arrangements, which hinders their AP emission projection development. Guidance has been provided in the 'General Guidance on Estimating and Reporting Air Pollutant Emission Projections' report and additional advice was provided during the one on one support.
- **Lack of integration between MS AP and GHG emission projections.** For many of the MS that were supported through this project, there is little collaboration between the air pollutant and GHG emission projection teams. In addition, there is little or no information in other MS' IIRs on this aspect. This item has been included in the list of recommended title headings in the projection section of the IIRs.

Conclusions (2)

- **The lack of detailed sector specific AP emission projections guidance** has limited the accuracy of MS projections to date. Through the guidance produced as part of this project this should improve this aspect.
- **Lack of detailed sector specific activity data and emission factors** in MS historic inventory. Some sectors, such as 1A2a-f (Manufacturing industries and construction) cover a wide variety of different plants ranging from small space-heating plants that might only be slightly larger than domestic combustion appliances, to plants that are well in excess of 50 MWth. The large number of sites/plants are making it practically impossible to collect detailed data on. Across these plants a wide-range of combustion technologies is in use, which may be poorly understood by the inventory compiler, leading to difficulty applying Tier 2 type factors. Linked to the large number of sites, a poor understanding of the extent and nature of abatement in place in the base year again hampers the use of Tier 2 methods for the historical inventory and makes it difficult to assess what different impacts future regulations have. The improvement of projections has to go hand in hand with the improvement of the historic inventory.
- **The different guidance documents available** are at risk of being inconsistent in their approach on what historical year should be used as the starting point for the projections. It is recommended that this is discussed at the next EMEP Steering Body meeting to ensure that consistent guidance is being provided across all documents.

General Guidance on Estimating and Reporting Air Pollutant Emission Projections (1)

The general guidance document provides advice on the following topics:

- Planning
- Institutional arrangements
- Historical emissions inventory
- Inventory Management and Quality
- With Measures Scenario
- With Additional Measures Scenario
- Continuous Improvement

General Guidance on Estimating and Reporting Air Pollutant Emission Projections (2)

Technical Annexes:

- NFR 1 Energy (1A1 – 1A5)
 - NFR 1A1. Energy Industries
 - NFR 1A2. Manufacturing industries and construction
 - **NFR 1A3 Transport**
 - **NFR 1A4 Small combustion - stationary**
 - NFR 1A4 and 1A5 Small combustion – mobile (non-road mobile machinery)
- NFR 2. Industrial processes and product use
 - NFR 2D – 2L Other Solvent and product use
- NFR 3. Agriculture
 - NFR 3B. Manure Management
 - NFR 3D. Agricultural Soils
 - NFR 3F. Field Burning of Agricultural Residues
 - Good practice for including abatement techniques
 - International sources of activity forecasts
- NFR 5. Waste sector

3 key issues for waste projections compilation:

- How national waste generation (quantities and types) will change in future years
- How the utilisation (% share) of treatment, disposal and recycling systems will evolve
- Whether waste parameters and emission factors will change e.g. due to technological advances or planned abatement systems



Link to GHG emission projections:

- Emissions from the waste sector tend to be of greater significance for greenhouse gases (GHGs) over air pollutants.
- Activity data should be aligned with that used for the GHG inventory where possible.



Waste Projections Guidance (3)

Emissions from the following sectors are covered in the guidelines:

- Landfill
- Anaerobic digestion
- Composting
- Waste incineration
- Wastewater

*** Consider: Linkages with other sectors**

*** Care to be taken: ensure that emissions and projections resulting from the generation of electricity from waste are accounted for in the energy sector and not double counted (e.g. landfill gas)**

*** Consider: contribution of waste sector experts to projections calculations to understand current and planned cross-sectoral waste and regulatory / energy policy to determine projected activity levels**



Activity data:

- Identify proxy data for future waste generation depending on the waste stream:

Waste stream: municipal / industrial

Default proxy: population / GDP

* Consider: Decoupling of historical waste generation with proxy data = potential for high uncertainty in projections

- Waste sector PaMs will lead to interactions / fluxes between waste treatment pathways and waste composition e.g. diversion of waste from landfill



Emission factors:

- 2016 Guidebook mostly at T1 basis. Generally acceptable to maintain EFs to future years without country-specific information

- Drive planned improvements and EF research into important sources (likely to be 5B and 5C), where national / international / EU PaMs:
 - Promote the uptake / reduction of certain treatment pathways or waste streams
 - Promote installation / replacement of technologies and abatement controls





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