



TFIAM-CIAM

Relevance of the “Policy brief” for the negotiations of the
Gothenburg Protocol revision

Simone Schucht & Zig Klimont for the TFIAM/CIAM team

TFIAM/CIAM Policy brief on potential targets to reduce risks for health and ecosystems

- An informal document to be updated throughout the GP revision process
- Reflecting CIAM modelling work in support of GP revision and negotiations
 - Assessing the feasibility of reduction targets for health and the environment, covering all air pollutants
 - Exploring also the potential of “flexibilities” for current non-Parties
- Requested by WGSR-61 and EB-43
- Timeline
 - Version 1 at [EB-43](#) (Dec 2023)
 - Version 2 at [WGSR-62](#) (May 2024)
 - Version 3 for informal delegates meeting [Leuven](#) (Oct 2024)
 - Version 4 for [EB44 item 5](#) (with Russian translation), all emission data per country and sector [now available](#) (Dec 2024)

A compilation of the comments received is available on [Centre for Integrated Assessment Modelling \(CIAM\) | IIASA](#)

Contents of the Policy Brief

- Overview of scenarios

- Baseline climate, energy, and air pollution scenario
- Maximum Technically Feasible (MTFR) air pollution control scenario
- Combined advanced climate/energy/dietary scenario + MTFR = LOW

- Scenario impacts for pollutants, health and ecosystems

- Options for policy targets

- Health PM_{2.5}
- Ozone concentrations
- Reduction of biodiversity risks
- Inclusion of sectoral staged approaches - “flexibilities” (current non-parties)

=> Optimized scenarios addressing specific policy targets are only for UNECE excl. NA

- Conclusions

Selected conclusions of the Policy Brief

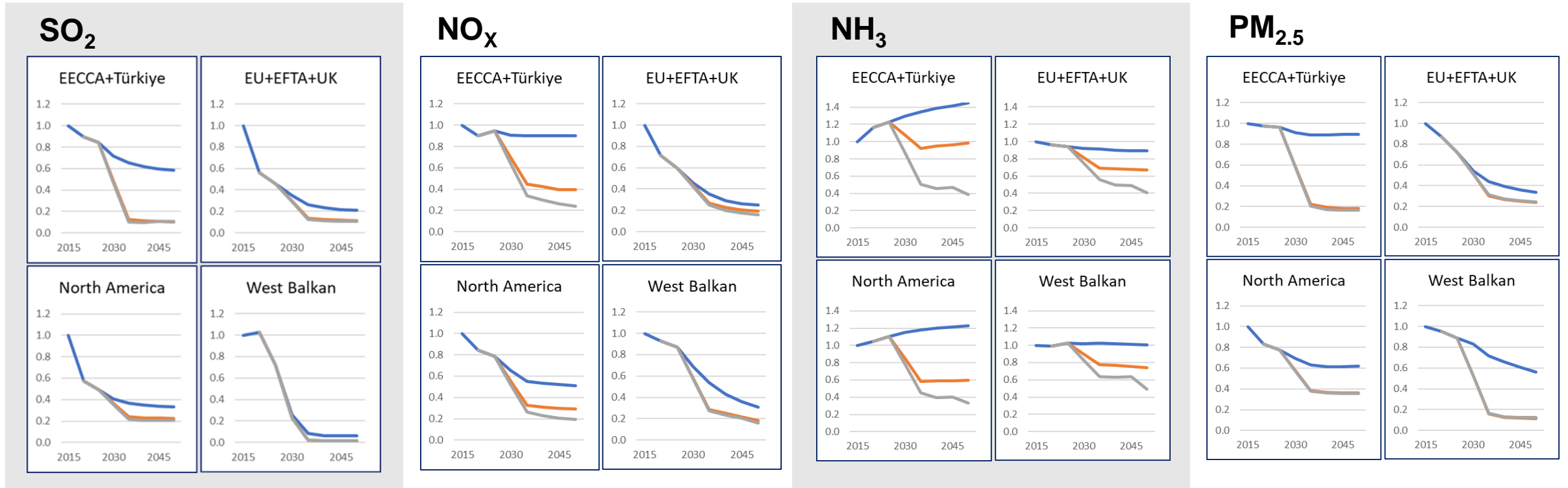
- Health PM_{2.5} targets
 - The **indicative** 50% target appears feasible at the UNECE level, but not for each country
 - Substantial differences in costs (as percentage of GDP)
- Pursuing climate and dietary change policies appears essential
 - Could bring important co-benefits and reduce additional cost
- A 50% health target for O₃ is more challenging
 - Current air pollution policies (BL) are largely offset by the global increase in methane emissions
 - Feasibility of the target is more dependent on global cooperation to reduce ozone precursors (NO_x, NMVOCs, as well as CH₄)
- Staged approach can provide important improvements, but not in all regions and possibly at relatively high cost, compared to the least-cost solutions

=> Further conclusions are presented in the policy brief

Need for feedback and interactions

- Indicative results for possible implications of staged approaches included in the Policy Brief
 - Guidance is still needed from EECCA/WB/Türkiye to focus further assessments
 - TAIEX workshop (31 March – 2 April 2025) back-to-back with annual TFIAM meeting (3-4 April 2025) in Laxenburg/Austria
- Frequent interaction between WGSR and modellers needed
 - Improve mutual understanding of the complexity
 - Jointly develop a scenario that can be used as fair basis for the actual negotiations
 - WGSR is invited to give guidance on the choices to be made in modelling
- Feedback on Policy Brief
 - By Friday, February 3rd , 2025

Emission trends across the UNECE region (scenario version 5)



LOW scenario is not entirely consistent for energy sources; work in progress



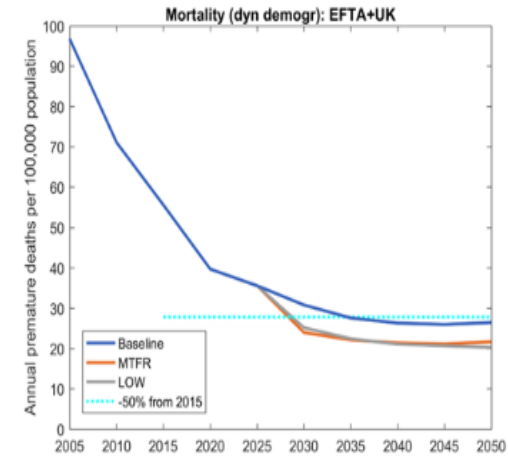
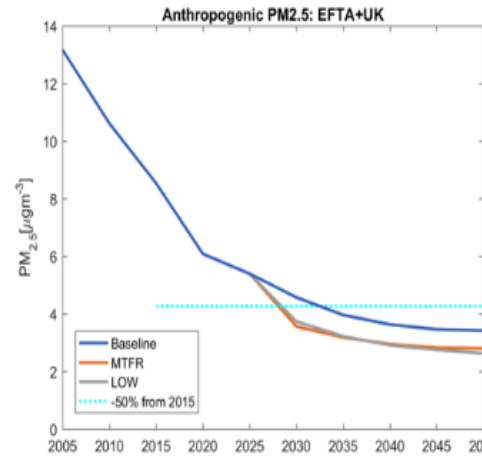
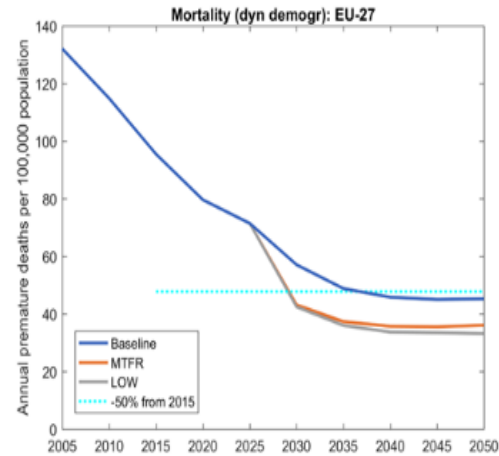
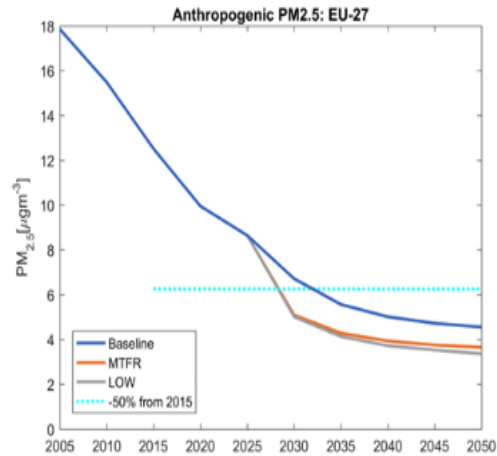
Scope for further mitigation in selected regions

Exploring attainability of reducing $PM_{2.5}$ related health risks by 50%

European Union (27)

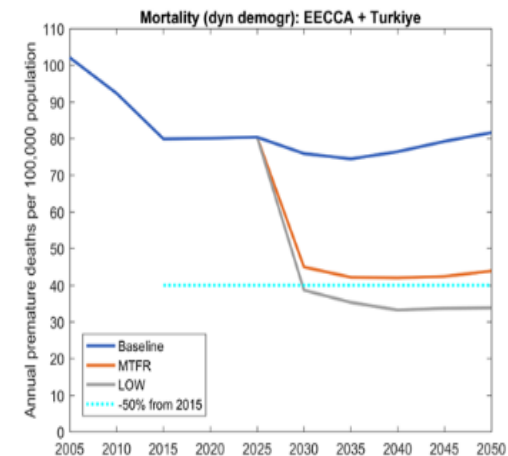
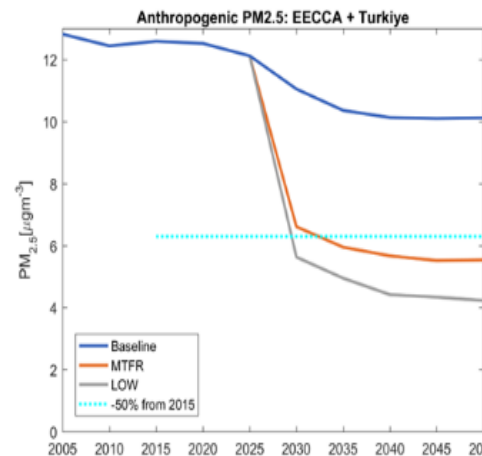
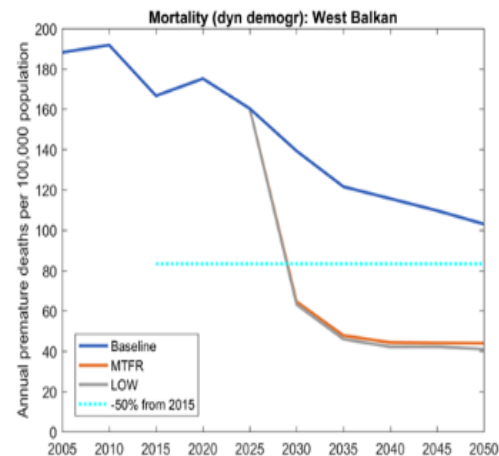
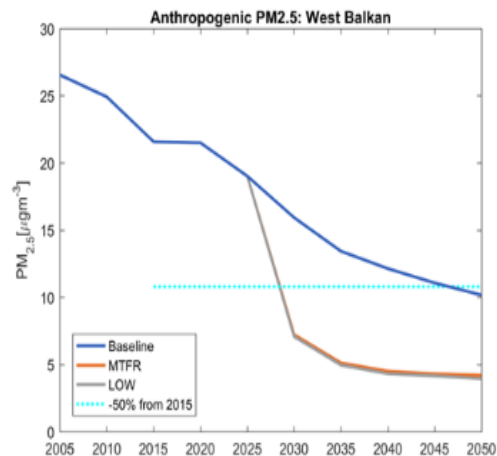
EFTA + UK

Scenario_v5



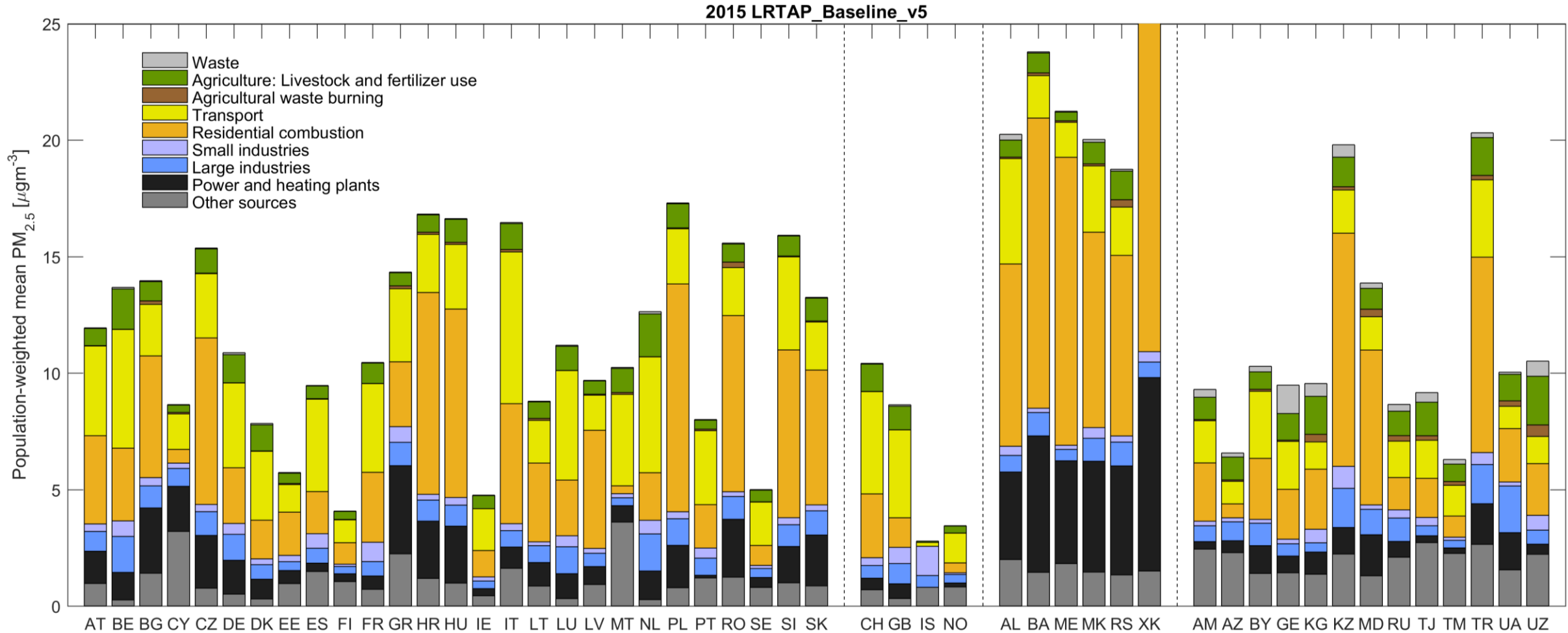
West Balkan

EECCA + Türkiye



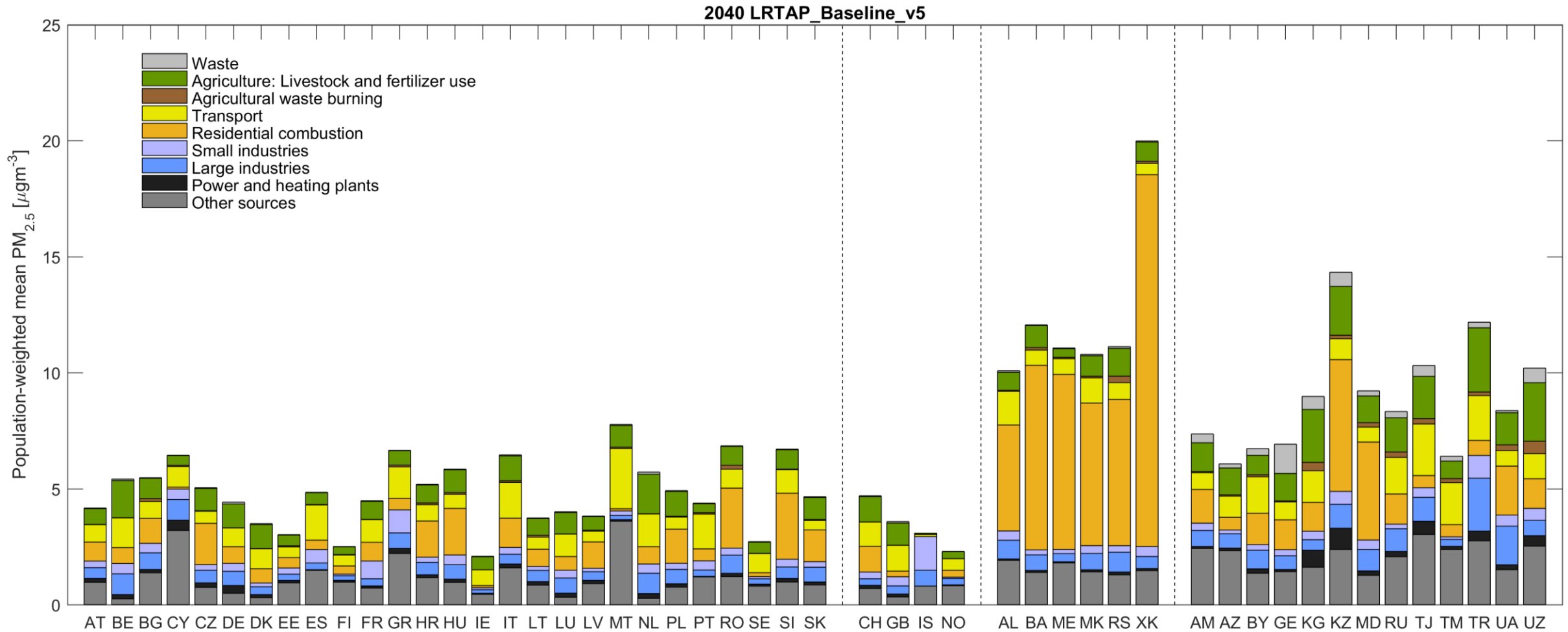
Sector source contributions to PM_{2.5} in UNECE (excl. North America)

Results for **2015**: Population weighted country mean anthropogenic PM_{2.5} concentrations



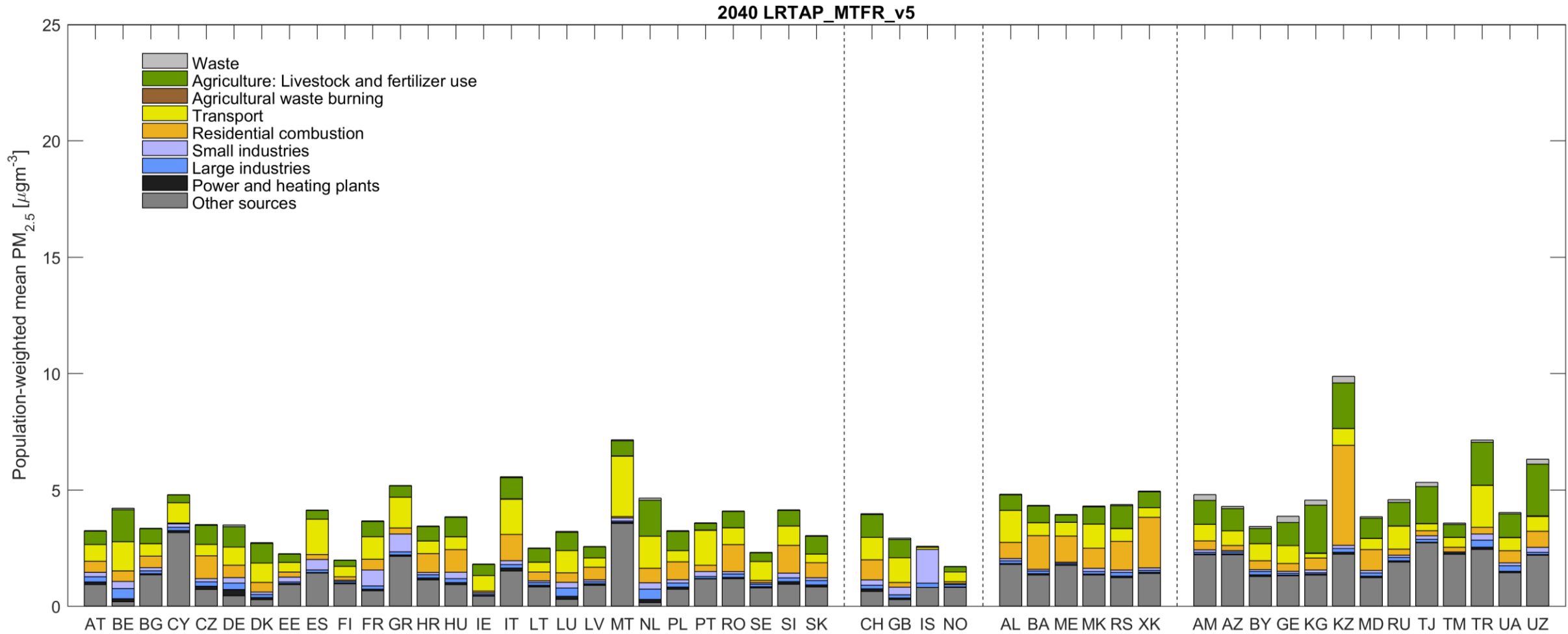
Sector source contributions to PM_{2.5} in UNECE (excl. North America)

Results for **2040 Baseline**: Population weighted country mean anthropogenic PM_{2.5} concentrations



Sector source contributions to PM_{2.5} in UNECE (excl. North America)

Results for **2040 MTR** : Population weighted country mean anthropogenic PM_{2.5} concentrations



Designing preliminary staged/phased approaches in GAINS

Sector intervention scenarios

- 4 sectors with specific intervention scenarios as variants of the baseline scenario
- For these sectors we assume that EU standards for emission controls will be implemented after 2030 to comply with the EU policies
 - PP: Power & Heating Plants
 - IND: Industrial combustion and processes
 - TRA: Road and off-road transport
 - DOM: Residential combustion
- All other sectors remain as in the Baseline

Thank you!

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For presentations & conclusions from TFIAM and EPCAC meetings and documents:

[Task Force on Integrated Assessment Modelling \(TFIAM\) under the LRTAP Convention | IIASA](#)

For data and documents from CIAM:

[Centre for Integrated Assessment Modelling \(CIAM\) | IIASA](#)