

*Policy brief on potential targets to reduce risks  
for health and ecosystems*

As requested by WGSR61 and EB43

TFIAM - 15-17 April 2024

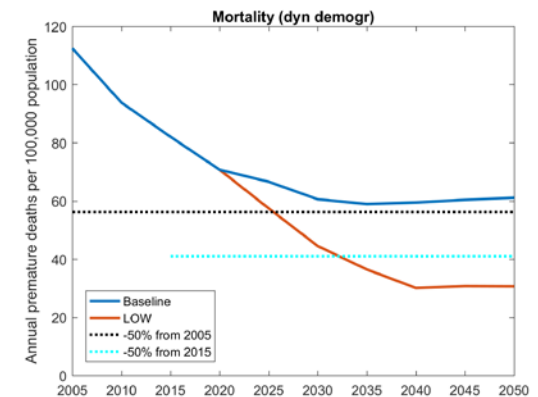
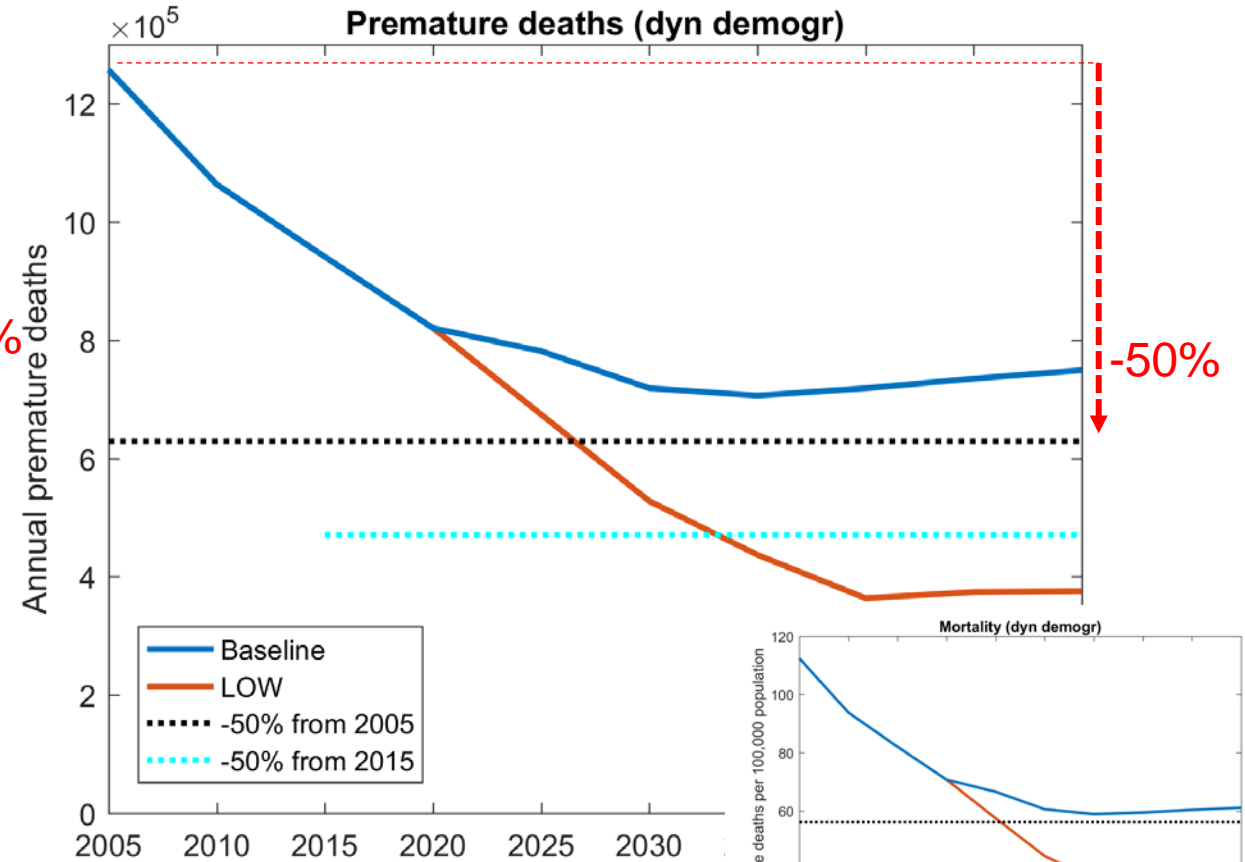
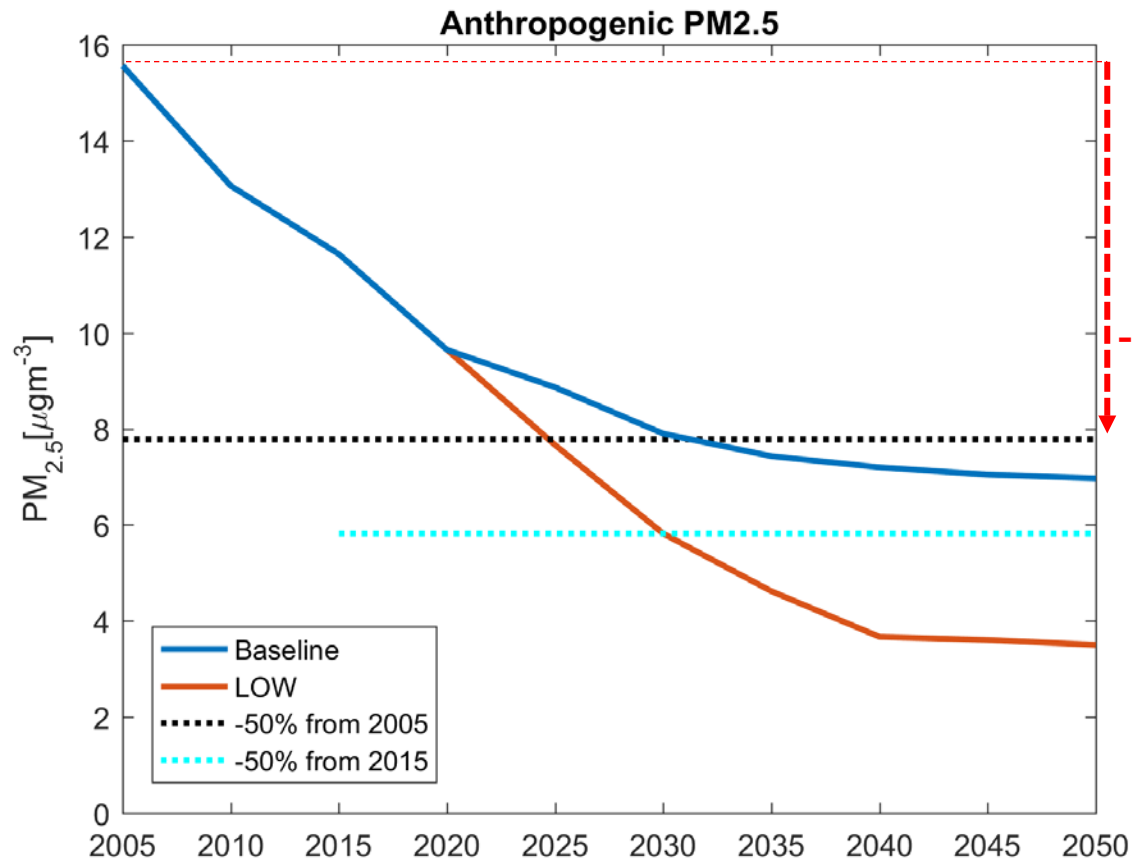
# Requests

- **Saltsjöbaden VII:** “set a 50% reduction target for the air pollution related health risks” → [Gothenburg Protocol – Where we are and where we can go \(iiasa.ac.at\)](#) and [TFIAM 52 \(unece.org\)](#)
- **WGSR61:** Policy Brief on “feasibility of overarching risk-based goal for the Convention” ..... covering all air pollutants
- **EB43:** “covering also the risks of biodiversity loss”  
+ “further explore the potential of staged/phased strategies”

**Report to WGSR62**

# Scope for further mitigation in the UNECE region

*Exploring attainability of health improvement 'goals'*

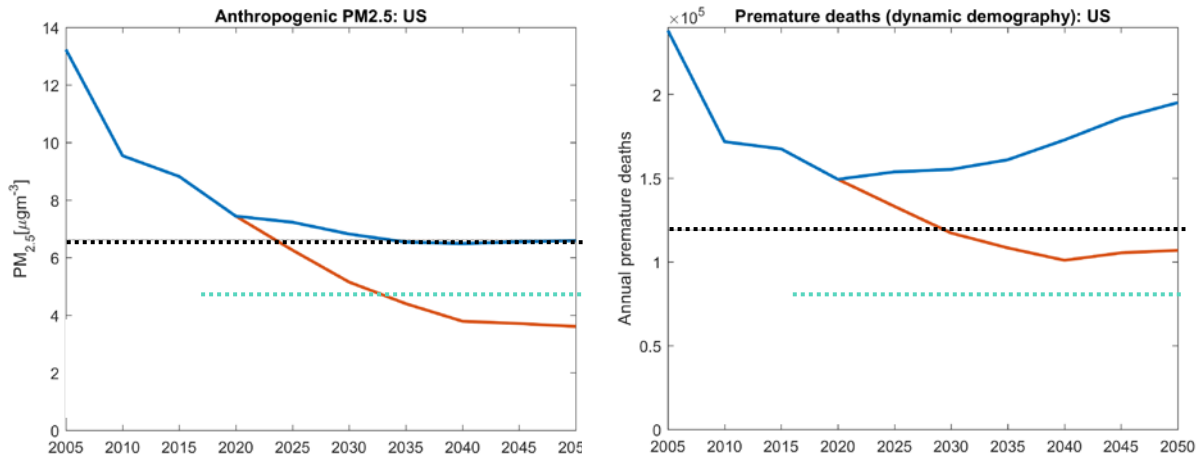


Source: GAINS model (CIAM/IIASA)

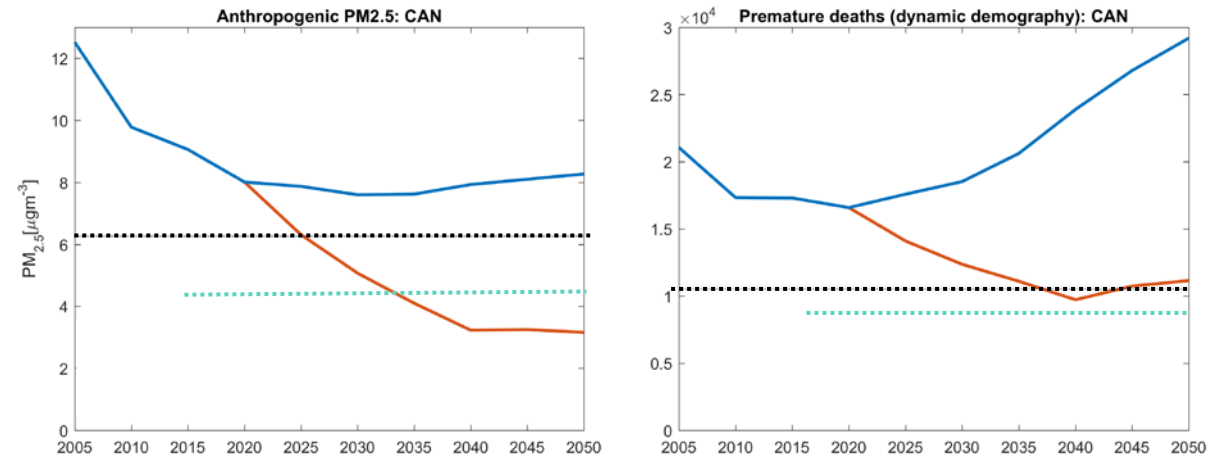
# Scope for further mitigation in the UNECE region (3)

Exploring attainability of health improvement 'goals'

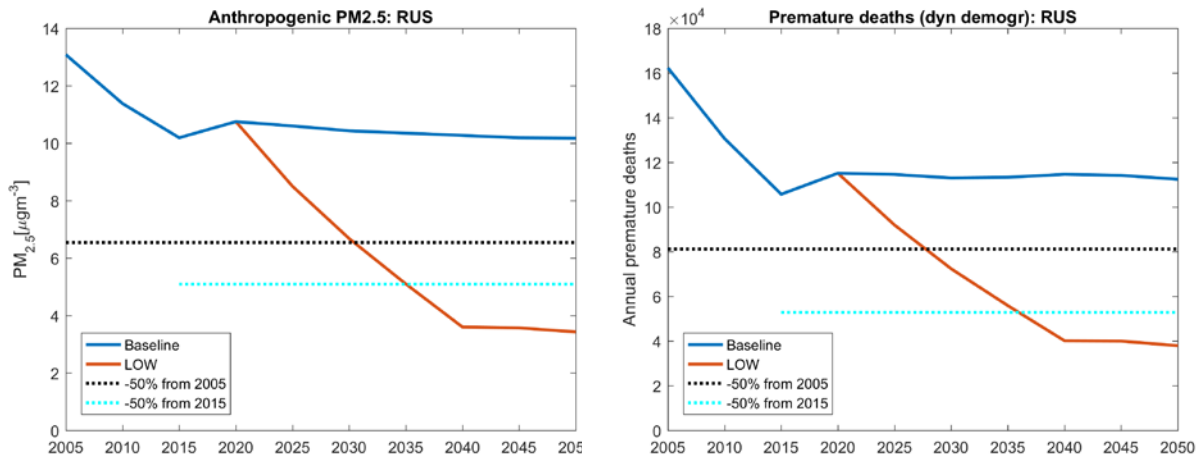
## United States



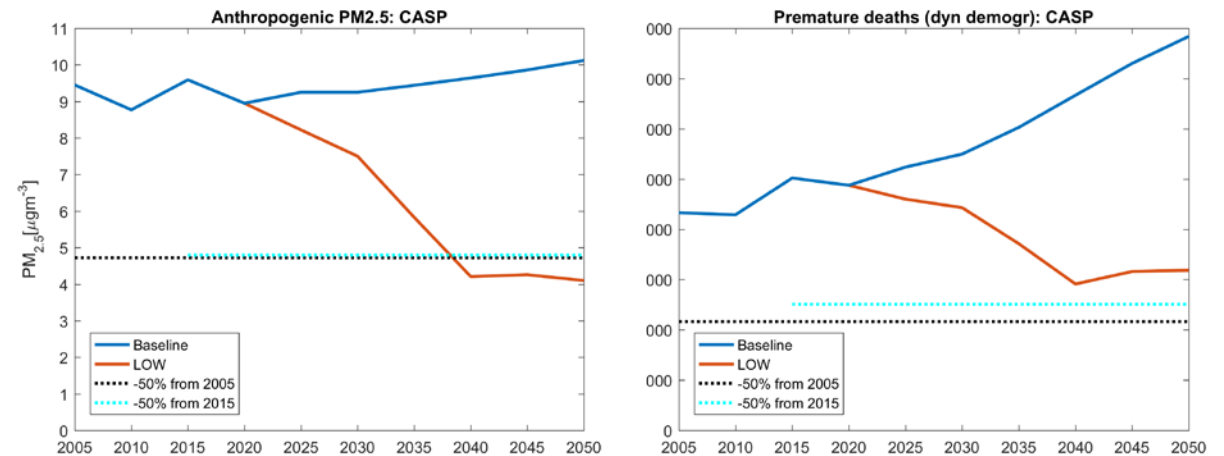
## Canada



## Russian Federation



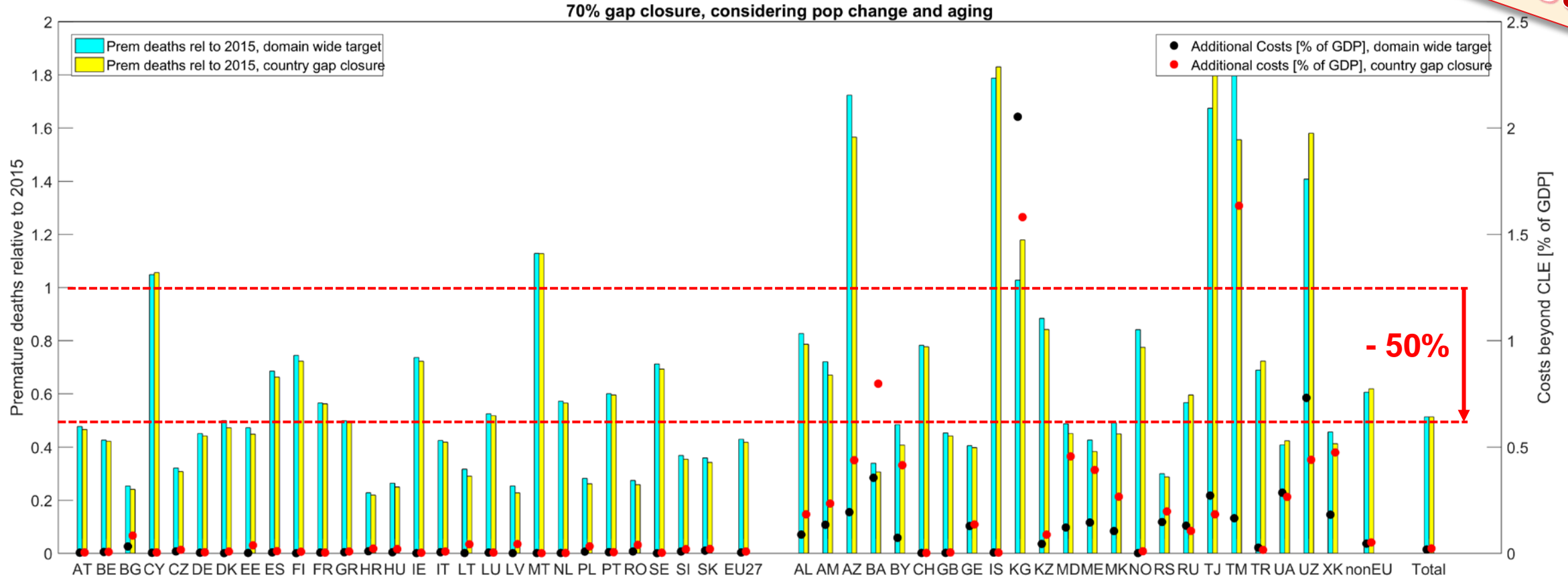
## EECCA (excl Belarus, Russia, Ukraine)



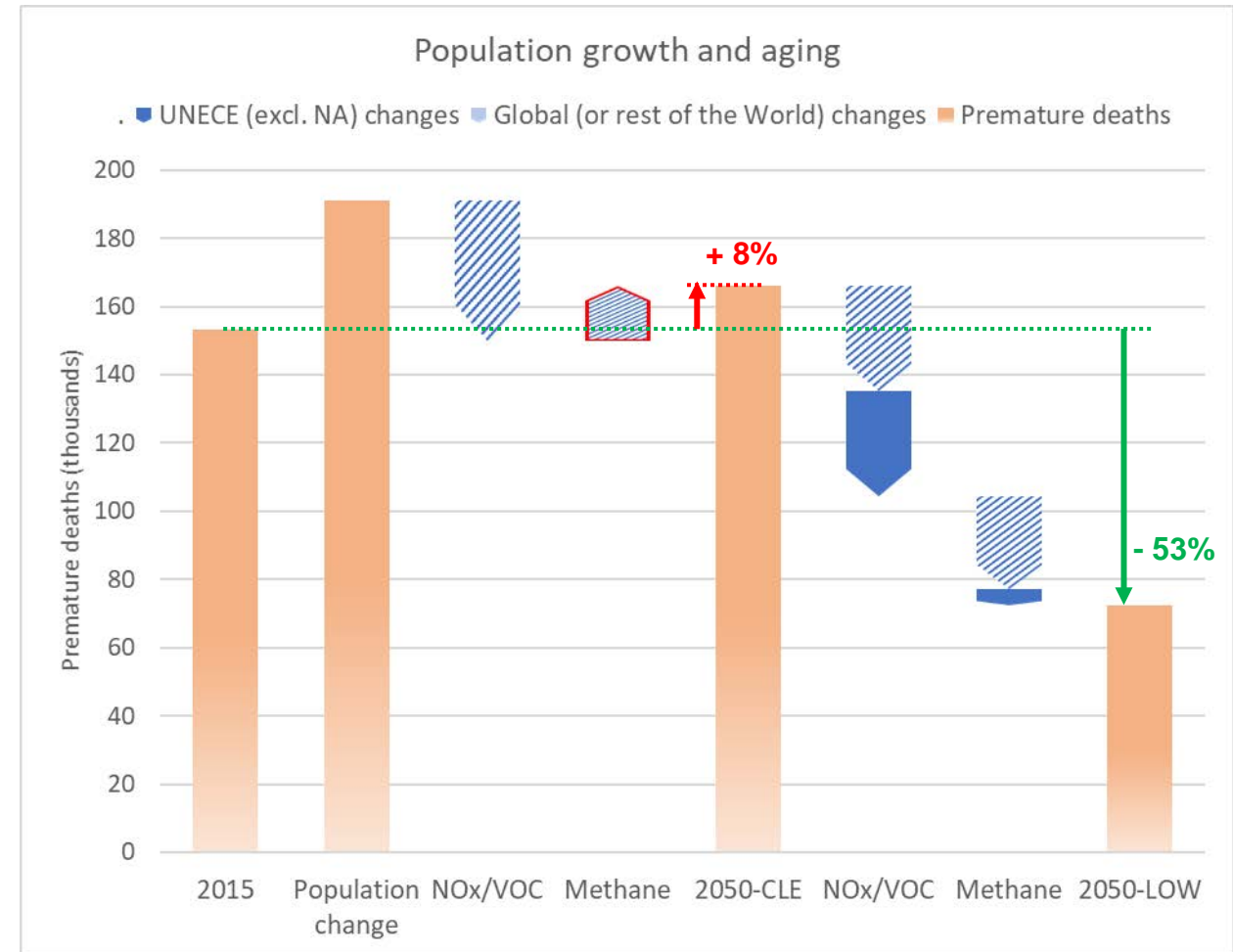
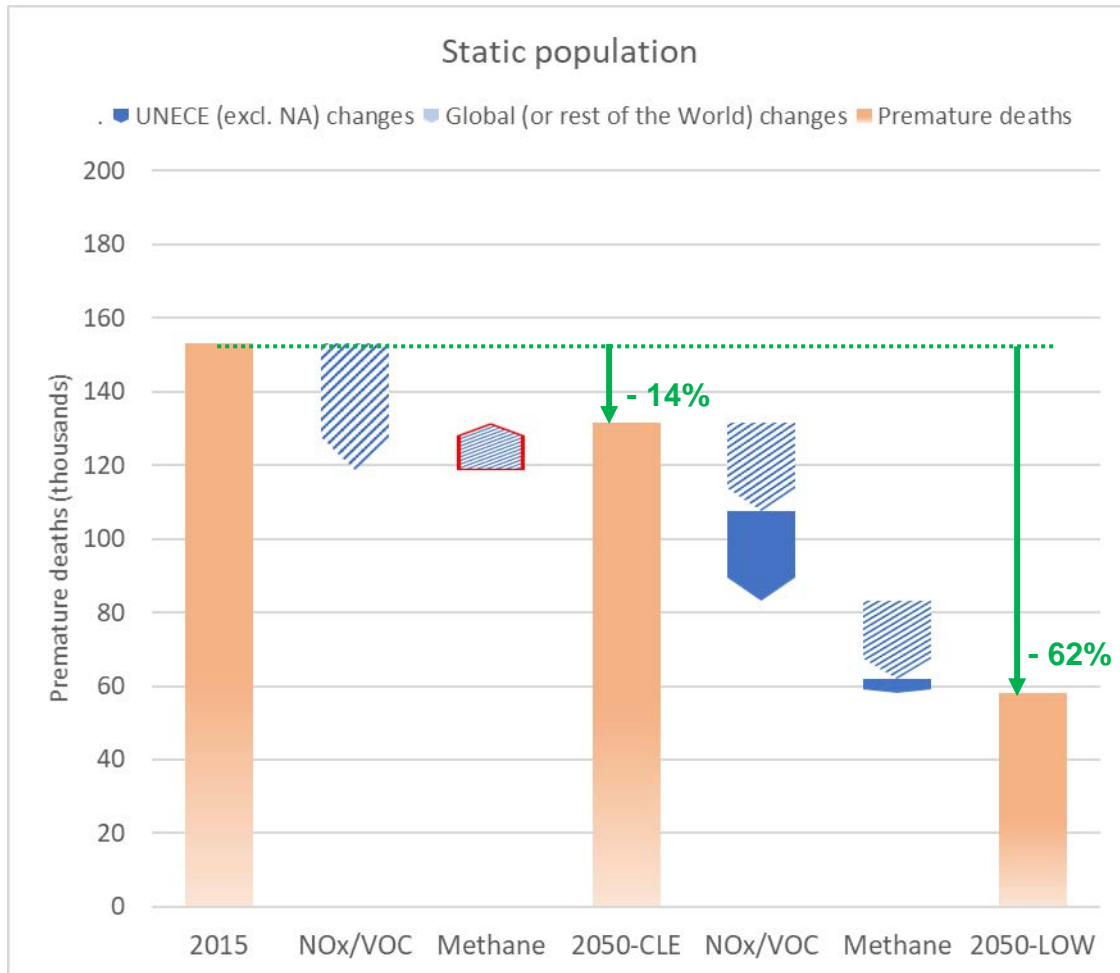
# Least-cost reduction of PM health impacts in UNECE (excl. North America)

Results for the 'Baseline' considering population growth and aging, 2050

**Draft results**



# Potential health benefits in the UNECE (excluding North America) of (global) ozone policies



Source: EMEP and GAINS models (MSC-W/CIAM);

Preliminary results pending further updates to health impact calculation methodology (HRAPIE2 upcoming).

# Conclusions

- A 50% target appears feasible at the UNECE level, although cannot be achieved for each country for currently analysed scenarios
- A 50% target for the whole region would be more cost-effective than country level gap-closure targets (“equal improvement”), but less equitable
- Pursuing climate and dietary change policies appears essential and could get us ‘*half-way*’ and reduce ten-fold the additional air pollution control costs (compared to *Baseline* case)

# Summary/Conclusions [2]

- Comparable ozone target more challenging
  - Current air pollution policies largely offset by global increase in methane emissions
  - Feasibility of the target is more dependent on global cooperation to reduce ozone precursors, including methane
- Further analysis will consider, i.a.:
  - Ecosystems targets
  - City level targets
  - Validation and improvement of cost estimates and assessment of cost of non-technical measures



# Additional written requests from Parties

- a) **What would be the results for an intermediate target year (e.g. 2035, 2040)?**
- b) Can the impact of the latest climate policy measures be included (i.e. use of hydrogen and ammonia as energy carriers; peat restoration)?
- c) What would be the effect of a three years averaged base year or target year?
- d) **Can other metrics for health impacts be explored: years of life lost?**
- e) Could optimizations be carried out for combined health impacts of PM<sub>2.5</sub> and ozone?
- f) **Can other metrics for biodiversity protection be explored: i.a. average exceedance of critical loads per ecosystem type?**
- g) Can targets be adjusted for GDP?
- h) **Can alternative GAINS scenarios be developed illustrating implications of staged/phased approaches for EECCA and West-Balkan countries?**
- i) What would be the sensitivity for other baseline assumptions, e.g. less than full implementation of the European Green Deal, inclusion of condensables or inclusion of marine ecosystem objectives ?
- j) What would be the result of an optimization with a larger weight on BC abatement?