

Towards successful collaboration addressing air quality challenges

LRTAP Convention perspective

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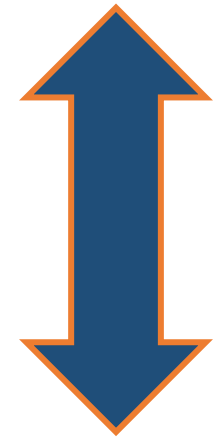
Energy, Climate and Environment program, IIASA, Austria

Towards successful regional* collaboration

Important ingredients in the EU/LRTAP** work

- Joint recognition of problems
- Common agreed objectives and goals
- Establishing and institutionalizing expert networks
- Accepting science/modelling tools to support/inform discussion
- Building trust and common language

Science/Modelling



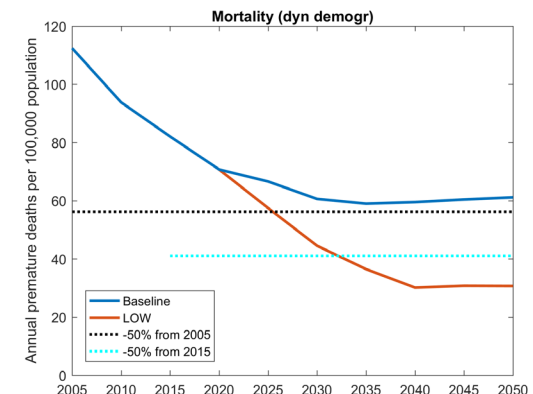
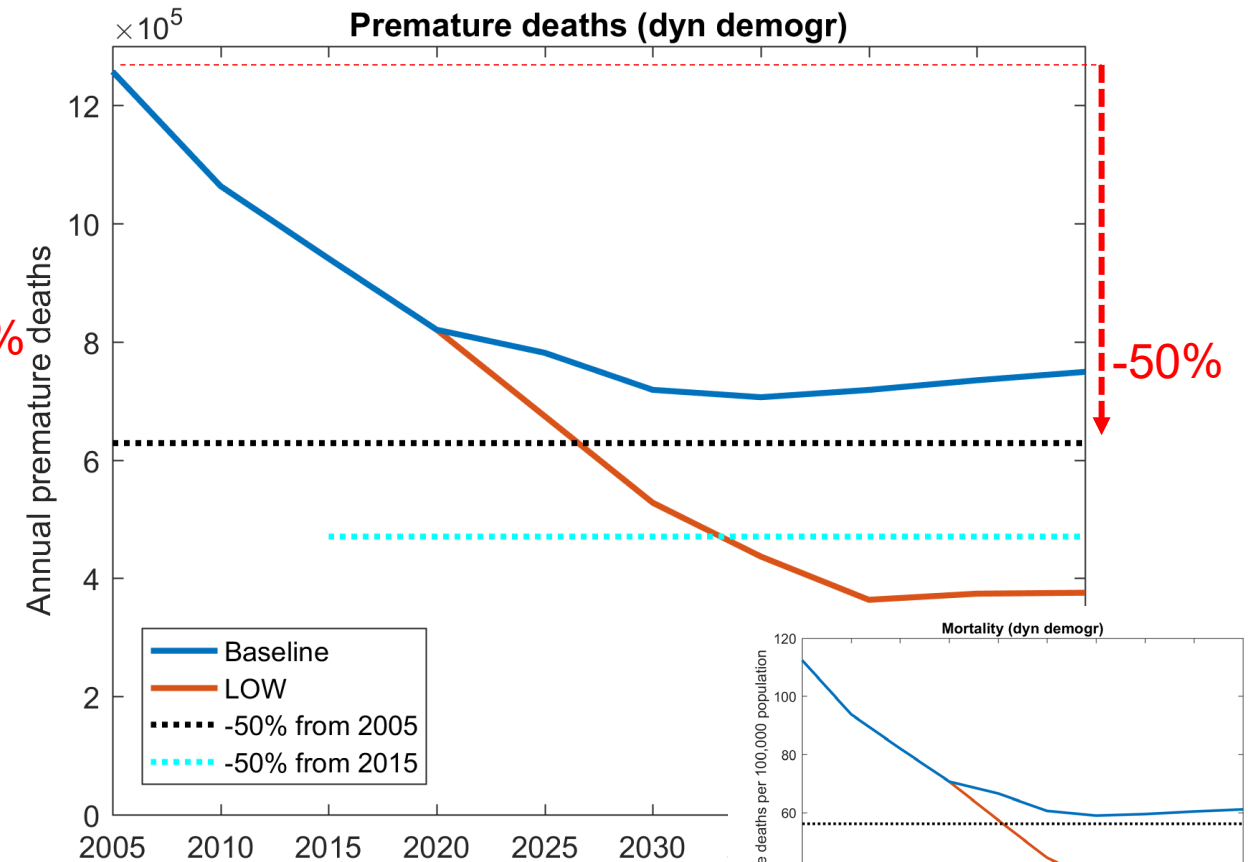
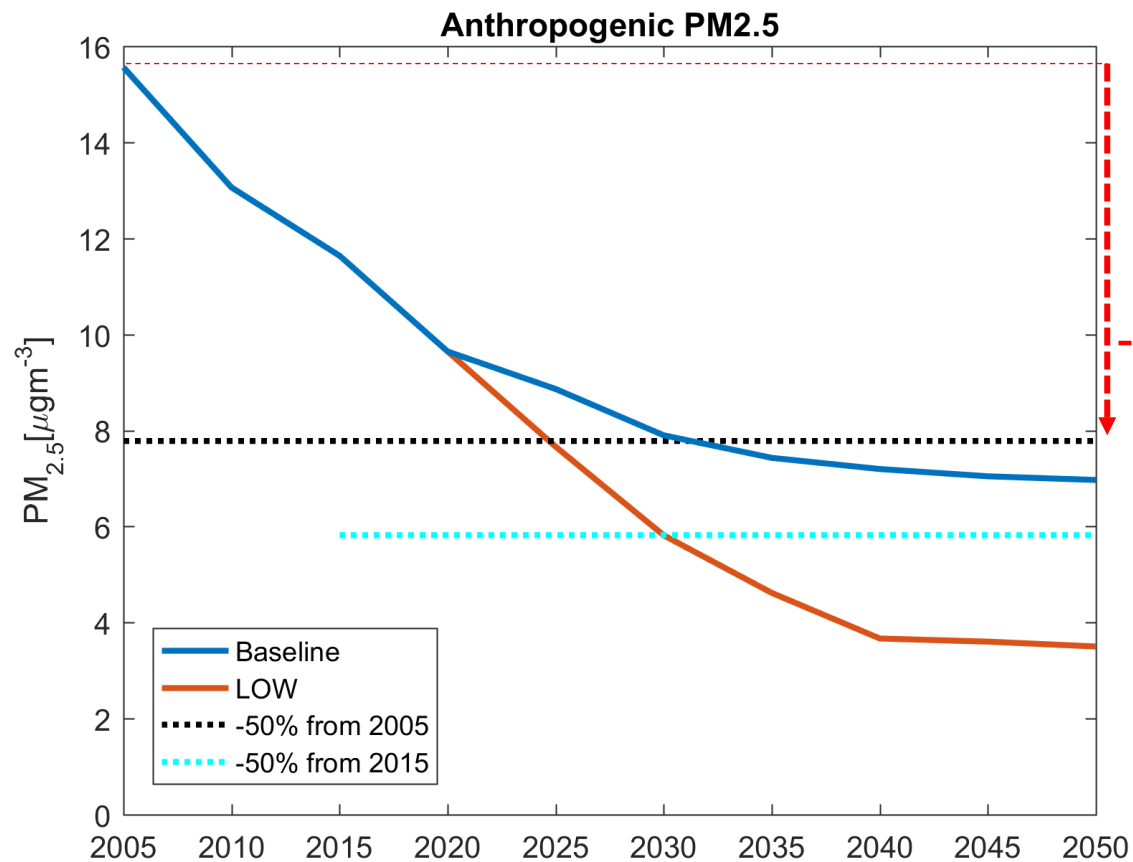
Policy

* Applicable across scales from local to continental

** LRTAP - UNECE Convention on Long-Range Transboundary Air Pollution

Scope for further mitigation in the UNECE region*

Exploring attainability of health improvement 'goals'



* Here: Europe, Türkiye, and Central Asia (EECCA)

Source: GAINS model (CIAM/IIASA)

Why integrated assessment models?

Cost-effectiveness approach

Models help to separate policy and technical issues

Decision makers

Decide about:

- Ambition level (environmental targets)
- Level of acceptable risk
- Willingness to pay

Models

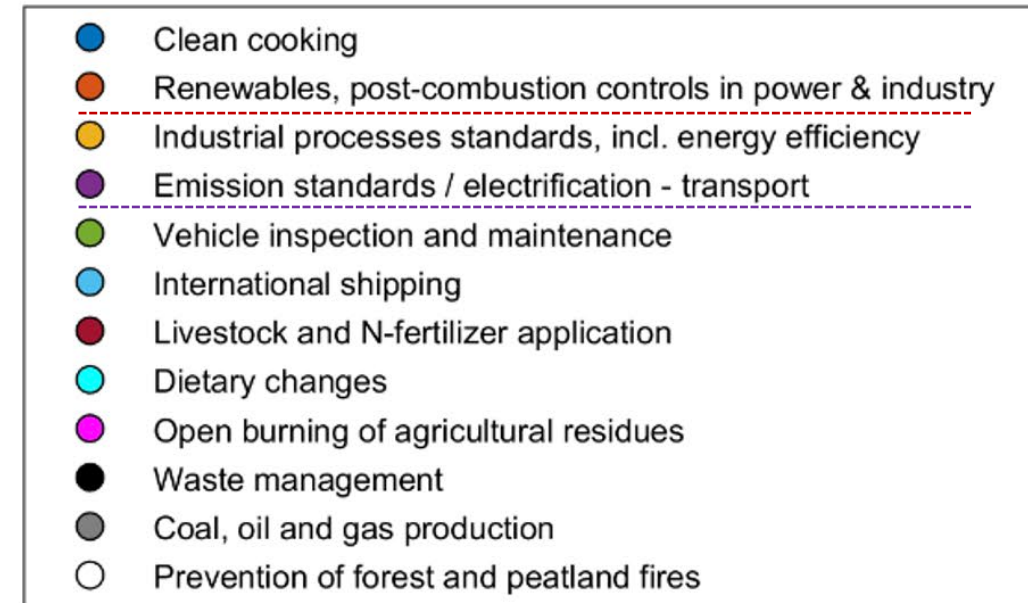
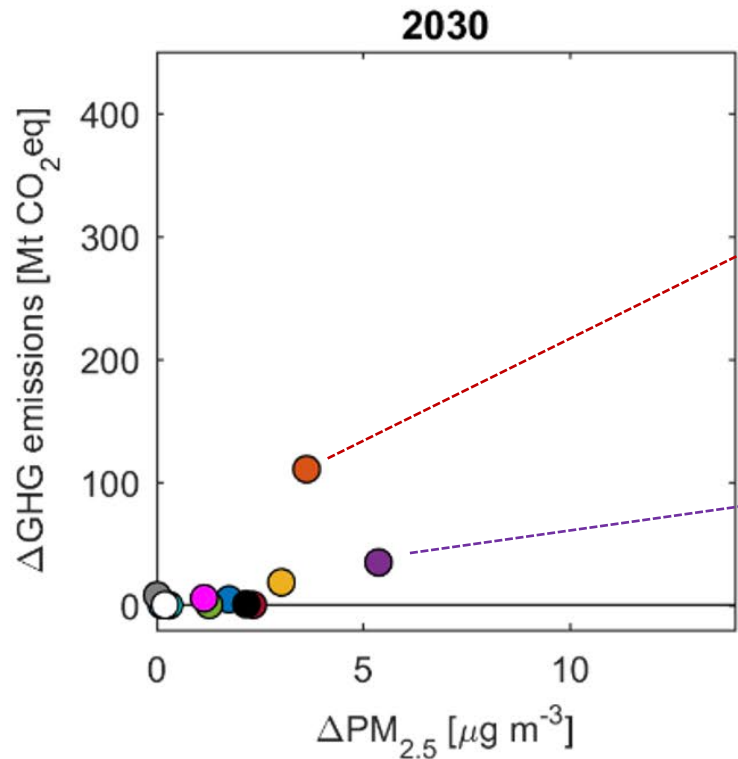
Identify cost-effective and robust measures:

- Balance controls over different countries, sectors and pollutants
- Regional differences
- Side-effects of present policies
- Maximize synergies with other air quality (and climate) problems
- Search for robust strategies

Understanding impact of single measures

Co-benefits of individual measures for GHG emissions ($\text{CO}_2 + \text{CH}_4$) when fully implemented in 2030 and 2050

Example for Indonesia



(Cost-effective) air quality management requires an integrated approach

- Effective policy to reduce air pollutants' exposure needs to **address multiple policy domains***, resulting in **multiple benefits**
- Many measures represent **no regret policies addressing air quality/climate nexus**
- Better **understanding of the multiple benefits** of policy interventions and their distribution across different groups in the society **could enhance public support** for changes that are required for long-term transformations
- The **GAINS model** allows to assess further mitigation potential at a regional and local level, including **cost-effectiveness analysis of prospective measures to reduce PM exposure and/or ecosystem impacts**
- Development/application of the GAINS tool and analysis strongly relies on, and **benefits from, collaboration with local partners** 😊

* For example, energy efficiency and climate, air pollution, agriculture, waste management, food consumption patterns, local vs regional/national policy

Concluding remarks

Experience from the EU and LRTAP could support further enhancement of already existing regional collaboration in NE Asia and/or within single country

Current scientific collaboration and policy dialog(s) in NE Asia have several common elements to EU or LRTAP processes

However,

- Recognition of importance of collaboration to solve existing and emerging air pollution problems, considering also co-benefits of climate policies,

- No history of common environmental policy goal setting agreements,
- Lack of harmonized methods and formats for emission reporting,
- Differences in how science is used in policy process across countries,
- No agreement on common tools for regular evaluation/assessment of status and eventual progress in achieving goals.