



Developments related to the Gothenburg Protocol Revision

Simone Schucht for the TFIAM/CIAM team

Revision of the Gothenburg Protocol decided by EB-43

- Decision 2023/5 (December 2023)

- Launching a process to revise the Protocol to Abate Acidification, Eutrophication and Ground-level Ozone, as amended in 2012 and to address other conclusions of its review

	United Nations	ECE/EB.AIR/154
	Economic and Social Council	Distr.: General xx-2024 Original: English

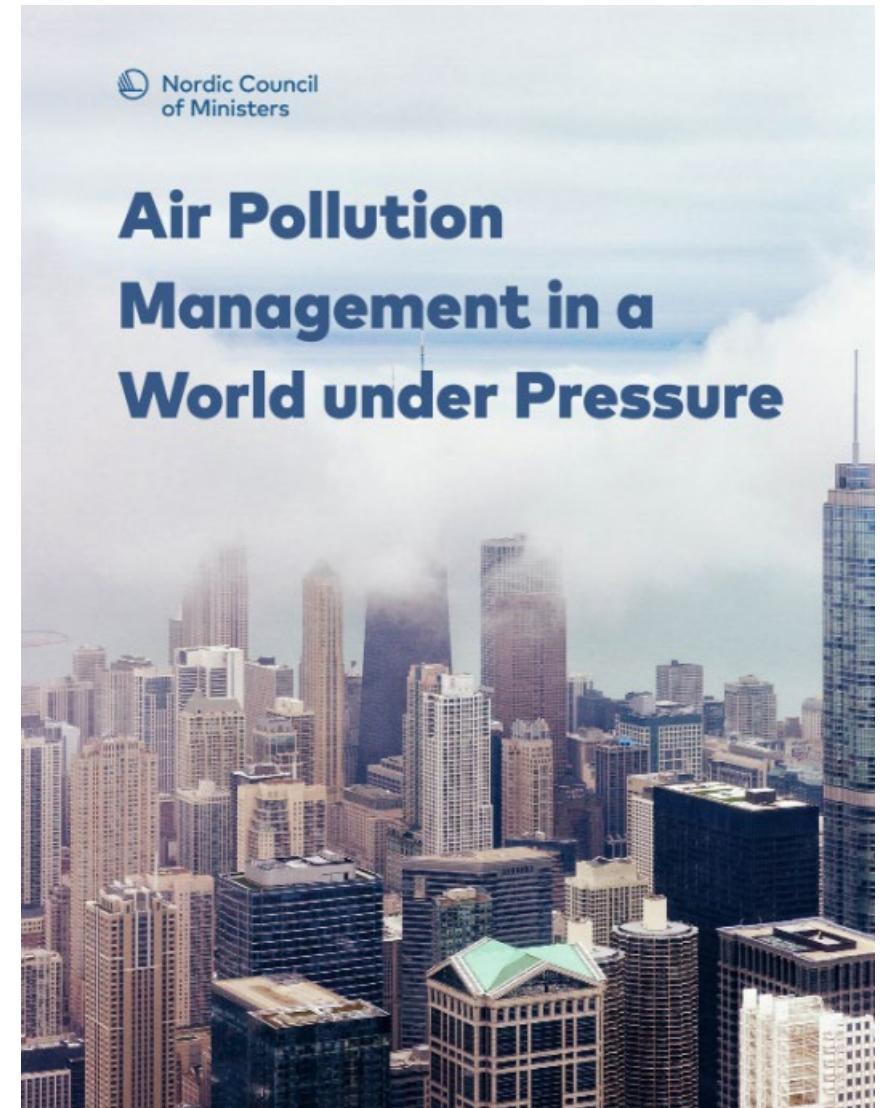
2. *Also decides* that the revision process will include consideration of, inter alia:

- (a) New emission reduction commitments for the pollutants currently covered by the Gothenburg Protocol;
- (b) Potential revisions to the technical annexes to the present Gothenburg Protocol including with regard to their scope and level of ambition;
- (c) How to deliver further reductions of black carbon emissions;
- (d) Whether and how to address methane emissions;
- (e) How to achieve additional ammonia emission reductions;
- (f) New flexibilities, and other approaches to better facilitate ratification and subsequent implementation by current non-Parties to the present Gothenburg Protocol;
- (g) Overarching, collective risk-based target(s) to reduce harmful effects to health and to ecosystems including biodiversity loss in the ECE region;
- (h) How to achieve integrated approaches among climate, energy and air policies.

Saltsjöbaden VII workshop

Consider setting a global target for air quality control

A global environmental agreement for air pollution does not exist. Common environmental targets, however, have proven to provide good motivation for ambitious cooperation both internationally and within countries. Such global targets have been inspirational for the United Nations Framework Convention on Climate Change (limit global temperature increase to well below 2 degrees Celsius), and the United Nations Convention on Biological Diversity (protect 30 per cent of Earth's lands, oceans, coastal areas and inland waters). In a similar way, a target for air pollution could be formed as a reduction of XX per cent between a base year and the target year. A suggestion presented at the workshop was that a **50 per cent improvement in health effects should be achieved** by 2035. Such a target needs, however, to be further assessed and elaborated before presented at top-level meetings in key organizations. Future discussions also need to include possible targets for other air pollution effects.



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

Background

- TFIAM-CIAM presenting first results of modelling the feasibility of a 50% reduction target for air pollution related health risks at WGSR-61
- WGSR-61 request for a policy brief on "feasibility of an overarching risk-based goal for the Convention" covering all air pollutants
- EB-43 request to "Cover also the risks of biodiversity loss" and "Further explore the potential of staged/phased strategies"
- Included in adopted WP 2024-2025 item 2.1.12

2024–2025 workplan for the implementation of the Convention

2.1.12	Provide further analysis on potential implications of introducing collective risk-based targets for the UNECE region to address air pollution impacts on health and ecosystems	→ Policy brief on this analysis	TFIAM
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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 (~2026)
- A document reflecting CIAM modelling work
- Timeline
 - Version 1 presented to EB-43
 - Version 2 submitted to WGSR-62 with replies to comments from Parties
 - Version 3 for the Informal Meeting in Leuven in October 2024 with replies to comments from Parties
 - To be submitted to EB-44 (with Russian translation)

The version 2 (April 2024) of the Policy Brief is available here: <https://unece.org/environment/documents/2024/05/informal-documents/agenda-item-2-draft-policy-brief-potential-targets>

A compilation of the comments received is available on the TFIAM website:

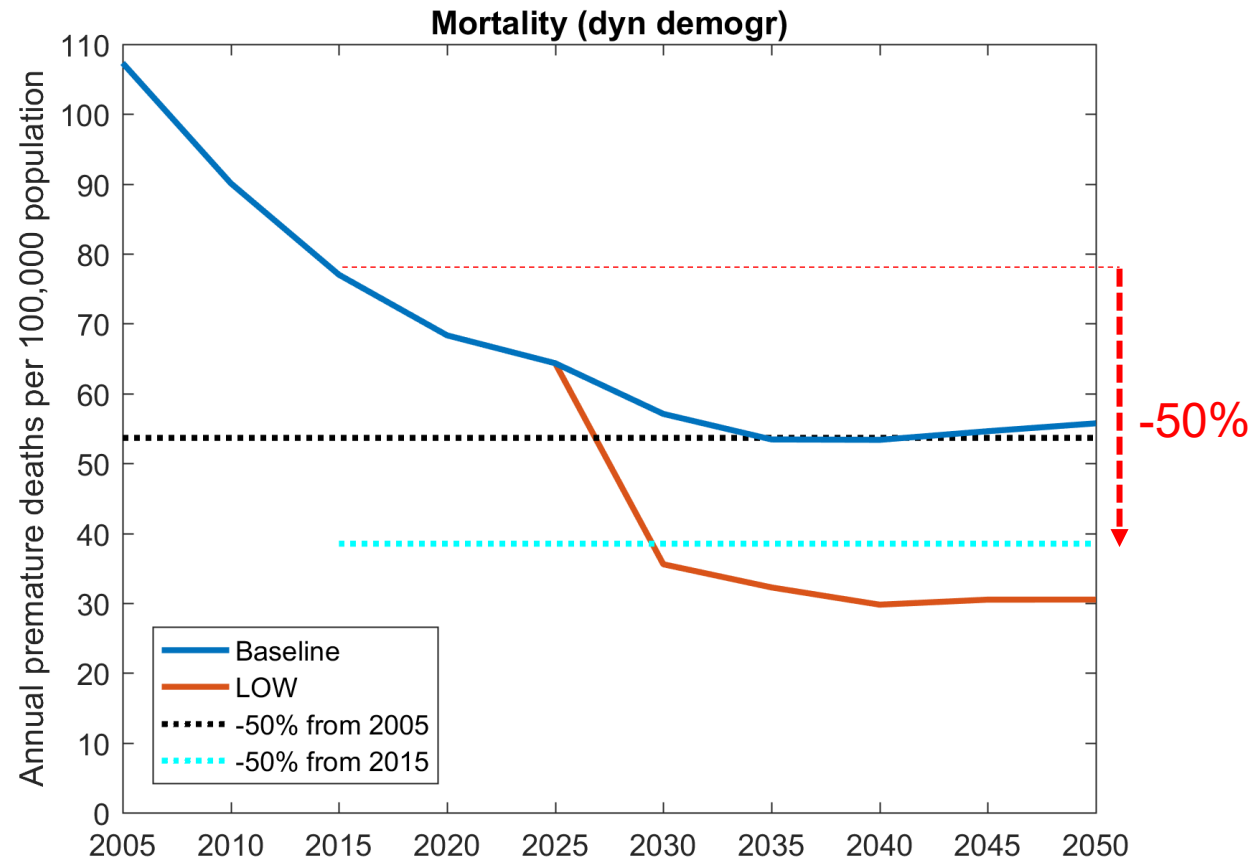
<https://previous.iiasa.ac.at/web/home/research/researchPrograms/air/policy/TFIAM.html>

Contents of the Policy Brief

- Overview of policy 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 health and ecosystems
- Options for policy targets
 - Health PM_{2.5}
 - Ozone – concentrations and health
 - Reduction of biodiversity risks - WGE centres provided an empirical critical load dataset for N deposition for the whole UNECE region (excl. NA) for minimum, mean, and maximum CL levels
 - Inclusion of sectoral and staged/phased approaches
- Conclusions

Scope for further mitigation in the UNECE region

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



Initial conclusions – Health targets by 2040

- **Feasibility:** Achieving 50% reduction of 2015 premature deaths by 2040 is feasible at the UNECE level
- **Importance of CLE enforcement:** Full enforcement of Baseline policies (CLE) achieves by 2040 about 30% reduction in mortality compared to 2015, for dynamic population case (or about 60% of the target goal, respectively)
- **Mitigation efforts needs:** The 63.5% reduction of the feasible range ('gap closure') allows to achieve the 50% health mortality target with dynamic population

Selected conclusions of the Policy Brief (version 2, April 2024)

- Health PM_{2.5} targets
 - 50% target appears feasible at the UNECE level, but not for each country (gap closure approach proposed)
 - Target for the whole region more cost-effective but less equitable than country level gap closure
- Pursuing climate and dietary change policies appears essential
 - Ambitious LOW scenario would allow meeting the target and reduce ten-fold the additional air pollution costs
- 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, CH₄)

Issues to be investigated in 2025

- Indicative results for possible implications of staged/phased approaches included in the Policy Brief
 - Guidance is still needed from EECCA/WB/Türkiye to focus further assessments
 - Workshop planned in 2025
- O₃ health to be included in 2025
- The possibility for a combined PM_{2.5} & O₃ target for health will be explored in 2025
- Further sensitivity scenarios are planned for 2025
 - E.g., impact of targets for marine ecosystems, impact of N management policies, inclusion of further equity criteria
- Ex-post analyses with WGE and other expert groups will be added in 2025, e.g.
 - Implications of scenario results for black carbon
 - Implications of scenarios for cities
- Exploration of reduction targets higher than 50%

TFIAM Guidance document on non-technical and structural measures (WP item 2.2.3)

- [Annotated outline submitted to WGSR-62 as informal document](#)
- [The document presents](#)
 - The importance and advantages of so called ‘non-technical’ measures
 - The policy instruments that can be used to support the implementation of such measures
 - Inventories of effective measures for mobility, domestic heating and dietary change
 - Challenges and limitations of non-technical measures (political, motivational and scientific)
 - Their possible integration in GAINS scenarios
 - Lessons and conclusions
- [Next steps](#)
 - Provide full draft for comments in December 2024
 - Provide an overview of comments at TFIAM webpage
 - Final draft to WGSR in spring 2025
 - Submit the final version to EB-45 in 2025

Conclusions and outlook

- NTM guidance document relevant for EPCAC
 - Ensure consistency concerning common measures (residential wood burning, traffic ...)
- TFIAM/CIAM currently focus on feasibility of reducing risks to health and ecosystems at the UNECE and country level
 - The measures considered will likely be insufficient to reach air quality limit values and guideline levels at the city level
 - More action will be needed at the sub-national level
- Cooperation between policy levels is needed
- Future CIAM modelling might also target pollution hotspots or cities
 - We should interpret the results together between TFIAM/CIAM & EPCAC

Thank you!

TFIAM co-chairs

Stefan Åström (Sweden) Stefan.Astrom@anthesisgroup.com

Simone Schucht (France) simone.schucht@ineris.fr

CIAM head & deputy head

Zbigniew Klimont klimont@iiasa.ac.at

Gregor Kieseewetter kiesewet@iiasa.ac.at

Special consultant

Rob Maas rob.maas@rivm.nl

Presentations and conclusions from TFIAM and EPCAC meetings found at:

<https://iiasa.ac.at/TFIAM>