



# UNECE's Air Convention Gothenburg Protocol Review

20 April 2021

International Cooperative Programme on  
Modelling and Mapping of Critical Levels & Loads  
and Air Pollution Effects, Risks and Trends

*For the GP Review Group:  
Dominique Pritula, WGSR Vice-Chair*

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# *Gothenburg Protocol*

- Multi-pollutant, multi-effect approach looking together at problems and pollutants that contribute to acidification, eutrophication and ground-level ozone.
  - Signed in 1999, entered into force in 2005, amended in 2012
- Includes national emission reduction commitments for NO<sub>x</sub>, SO<sub>2</sub>, VOCs, ammonia, and PM (since 2012)
  - With this change, the amended GP became the first legal agreement to include an SLCP - Parties should prioritize reductions of PM that are also significant sources of black carbon
- Emission reduction commitments expressed as percentage reductions from 2005 levels; to be met by 2020
- Specific emission limit values for sources and pollutants that apply to all Parties included in Annexes.
- The amended Protocol entered into force on October 7, 2019

# *Review provision of the Protocol*

- Now that the Protocol is in force, it must be reviewed for its effectiveness and adequacy (article 10)
  - Specifically calls for an evaluation of mitigation measures for black carbon emissions and ammonia control measures
  - A list of elements that is to be considered in the review was developed, based on the Long-term Strategy, recommendations from the Policy Review Group on the 2016 Scientific Assessment of the Convention, as well as inputs from the science bodies
- The review was launched in 2019 by decision EB 2019/4. At this time the WGSR was tasked with leading the review process and with developing the scope, content and work schedule of the review
- The WGSR Chair, in consultation with the EB Bureau, created the Gothenburg Protocol Review Group (GPG) to assist in undertaking this work

# *Key Priorities of the review*

- Initial focus on the legally required elements, including under article 10 of the Protocol (**black carbon** and **ammonia**); and broadly on existing elements like the **sufficiency** and **effectiveness** of current obligations and success in **achieving the Protocol's objectives**
- Review will also include elements meant to address gaps and additional inputs
- Gather information that will help inform recommendations and conclusions of the review to also support the increase in ratifications of Parties

# *Gothenburg Protocol Review Group*

- Developed the **“Preparations for the review of the Protocol to Abate Acidification, Eutrophication, and Ground-level ozone, as amended in 2012 (2020/3).”** Includes the scope and content of the review and elaborates on the elements found in EB Decision 2019/4. (Adopted at EB in December 2020)
- **Annex I** of the “Preparations” document provides a list of questions to the subsidiary bodies.
- Based on the elements contained in the “Preparations” document for the review, a **“Draft annotated outline of the report on the review of the Protocol to Abate Acidification, Eutrophication and Ground-level Ozone (2021/4)”** has been prepared as official document for the 59<sup>th</sup> Session of the WGSR

# *Annex I of the “Preparatory” Document*

- List of questions to help guide Subsidiary Bodies (EMEP SB, WGE, WGSR and IC) in preparing for the review
  - Each question has a suggested group, TF or centre that the GPG has proposed answer the question – some have more than one group identified
- The answers to the questions will provide inputs needed to address the review elements (which were identified in the preparatory document and elaborated on in the outline)

# *Elements of the review as reflected in Annex I of the “Preparatory” Document*

- Questions to Subsidiary Bodies of the Convention are related to:
  - Review of **obligations** in relation to emission reductions
  - Review of **progress towards achieving** the environmental and health **objectives of the Protocol**
  - Review of **adequacy** of obligations in attaining the environmental and health **objectives of the Protocol**
  - Evaluation of mitigation measures for **black carbon** emissions
  - Evaluation of **ammonia** control measures and consideration of the need to revise annex IX

# *Draft Outline of the Review Report*

- Introduction
- Legal requirements for the review
- Emissions
- Measured and modelled atmospheric concentrations and deposition levels
- Measures and modelled effects on natural ecosystems, materials and crops and assessment of human health effects
- Emission reduction commitments for Parties
- Emission limit values, technical annexes and the related guidance documents of the Protocol (with priority given to black carbon and ammonia measures)
- Specific sector approaches (e.g., residential solid-fuel, agriculture, shipping)
- Non-technical measures, best available technology and energy-efficiency requirements
- Flexibility provisions
- Convention Parties that are not Parties to the Protocol
- Canada and the United States
- Hemispheric Transport
- Integrated multi-pollutant, multi-effect approach,
- Synergies and interactions with other policy areas
- Progress towards achieving the objectives of the protocol
- Additional policy issues
- Conclusions



# *Inputs*

- Annex I Questions: appropriate questions listed in each section
- Key documentation: see correlation table. Subsidiary bodies to add documentation to the table as well as reports or separate informal documents needed for the Review.
- Timeline for completion of input: Bodies to insert timing of products and completion of work to answer the Annex I questions.
- Resource implications (as appropriate): Bodies to add needs to complete work.
- This information will evolve into the eventual conclusions and/or recommendations of the review

## *Process for submitting input*

- Initial input was due April 9 – the Chairs of EMEP SB and WGE will work with GPG to streamline the input
- The next draft of the annotated outline will become an informal document for WGSR59
- That informal document will become Draft 1 of the Review Report
- Further input can be provided to EMEP SB/WGE Chairs who will work with GPG as we continue to work on Draft 1 over the summer; by September 2021 it will become an official document for the EB in December
- Progress on Draft 1 will be discussed at EB in December 2021, and further work on the review will continue into 2022
- Additional input into the review will continue to be accepted until Jan 10, the GPG will then work on Draft 2 and submit it by Jan 17 for the official document deadline
- Draft 2 to be discussed at WGSR 60 in April; between April-Sept GPG will be further elaborate the remaining inputs
- This will become Draft 3/final draft and will be discussed at EMEP SB/WGE meeting in September 2022
- Draft 3/final draft will be submitted by official UNECE doc deadline in Sept 2022

# Timeframe

Meeting	Title of report tabled for consideration	Deadline
WGSR 58 / EB 40	<i>Preparations for the review (final)</i> <i>ECE/EB.AIR/WG.5/2020/3</i> <i>Consideration for ammonia relevant to future review of the Gothenburg Protocol</i> <i>Informal document on prioritizing reductions of PM to also achieve reduction of BC</i>	25 September 2020 for official documents <i>Evaluation per Article 10.3 &amp; 10.4 (WGSR informal documents)</i>
WGSR 59 (18-20 May 2021)	<b>First draft annotated outline</b> on the Review	February 2021
TF/centre/ICP meetings	<b>First draft</b> of the report for the review <b>Informal Document</b>	<b><u>Initial Input April 2021</u></b>
EMEP SB/WGE meeting (13-17 Sept 2021)	<b>First Draft</b> of report of the review ECE/EB.AIR/WG.##/##	September 2021
WGSR 60 (11-14 April 2022)	<b>Second Draft</b> of report of the review ECE/EB.AIR/WG.##/##	January 17 2022
EB 42 (Dec 2022)	<b>Final</b> report of review adopted/Conclude the Review	September 2022

# *GPG Members*

- *Chair:* Kimber Scavo
- *WGSR Bureau:*  
Ivan Angelov, Dominique Pritula, Till Spranger
- *WGE & EMEP SB Chairs:*  
Isaura Rabago, Laurence Rouil
- *Invited experts:*  
Richard Ballaman, Noe Megrelishvili, Peter Meulepas
- *Task Force Co-Chairs:*  
Rob Maas & Stefan Åström (TFIAM); Claudia Marques dos Santos,  
Tommy Dalgaard & Mark Sutton (TFRN); Tiziano Pignatelli &  
Jean-Guy Bartaire (TFTEI)
- *Advisors:* Anna Engleryd (EB), Susanne Lindahl (EC)
- *Secretariat:* Alina Novikova