

42nd session of the Executive Body
Report on the review of the Protocol to Abate Acidification, Eutrophication and
Ground-level Ozone, as amended in 2012 (ECE/EB.AIR/2022/3)
Comments by Canada

Canada's suggested edits and comments were provided embedded in the draft review report for ease of consolidation by the Gothenburg Protocol Review Group.

The following transcribes those changes for transparency and clarity.

1. **Summary box and Paragraph 1:** The word amendment is not pluralized. Is the formal way to refer to the 2012 amendments to the Gothenburg Protocol, as "2012 amendment", meaning all the amendments are treated as a whole, i.e. as one? If not, amendment should have "s" added here.
2. **Paragraph 2:** The 40th EB session was held in hybrid format.
3. **Paragraph 6:** Canada proposed to delete the following text:

~~This report and its accompanying documents (annexes) include the main review findings on NH₃ and BC, as well as references to newly drafted documents that contain the requested information on the evaluation of mitigation measures for BC and NH₃.~~

And replace it by adding:

In accordance with Executive Body decision 2020/2, these evaluations have been subsumed **and addressed** by the broader review of the Protocol. **The information used as the basis for these evaluations can be found in the accompanying annexes, including references for further information**

In Canada's view the previous text seems to have been added to close the loop on the 10 (3) and 10 (4) BC and ammonia evaluations that were needed. But does a reference like this stand the test of time? Recommend deleting the text and/or replacing with the proposed text.

4. **Paragraph 7:** Delete "all" in "...including assessments of all relevant human health effects..." Can "all" be used definitively? "All" implies a thorough assessment of every possible health effect. Suggest removing this qualifier, it does not take away from this sentence.
5. All instances of the use of PM_{2.5} and any other pollutants should be standardized.
6. **Paragraph 9:** These statistics are a snapshot in time. Recommend rewording to indicate that despite inventories being reported there are still some issues without specifying how many had issues. Propose edits to the following sentence:

However, **some** submissions ~~from 9 Parties~~ were still incomplete, ~~and 9 Parties did not provide~~ **or lacked** an Informative Inventory Report.

7. **Paragraph 12:** Canada proposes to add this information to match what is there for Europe and US. Propose edits to the following sentence:

For the United States of America **and Canada**, around 8 per cent **and 23 per cent** of emissions, **respectively** are from residential solid wood burning.

8. **Paragraph 13:** Editorial comments in the following sentences:

Updated guidance should aim at properly characterizing real-world emissions for ~~the~~ different wood and other solid fuel burning appliances and their operating conditions. In addition, emissions methodologies in the Guidebook need to better account for the influences of climate change. A decision on the inclusion of condensables for domestic solid fuel burning must take due consideration of the policy implications involved, such as compliance, information that is not yet fully available at the time of the ~~completion~~ **finalization** of this review.

9. **Paragraph 20:** Propose to add the following as the information is true not only for Europe:

Wildfires and wind-blown dust originating outside Europe **and North America** substantially influence concentration levels during episodes **in those regions** (typically a few times a year).

10. **Paragraph 31:** It is not clear what the intended use of “Parties” is in the following sentence. Is it other countries or other Parties to 1999 GP that have not ratified the amendments:

Other Parties currently not yet listed in tables 2–6 of annex II to the Protocol may also be considering ratification.

11. **Paragraph 32 (a):** The statements in (a) and (b) are confusing and seemingly contradictory. The Gothenburg Protocol does not have a collective goal and a statement like this can be misleading. It seems odd to combine emissions reduction targets in this way, all together with all countries and all pollutants summed up showing that these exceed the 2020 goal, but then indicating the majority of individual countries do not meet their goals for one or more pollutant. Suggest the point of this paragraph is to indicate significant differences between Parties towards meeting their commitments. That seems a more important conclusion. Edits have been proposed in this regard.

Also in this paragraph, 34 Parties is used here, while 26 is used in paragraph 66. Should clarify.

~~The collective efforts of all 34 Parties resulted in combined emission reductions between 2005 and 2019 that already exceed the combined emission reductions envisaged by the Parties' emission reduction commitments for 2020, except for PM2.5. However, for **Although**~~

significant reductions have been made, for individual Parties, there is a significant difference in the progress made towards meeting the emission reduction commitments.

12. **Paragraph 32 (c)**: Editorial:

There is possibly a lack of enforcement **by** ~~in~~ some Parties/**in** sectors.

13. **Paragraph 33**: The use of “Parties” is not clear. Does this mean Parties to the original Gothenburg Protocol?

14. **Paragraph 41**: Editorial:

Work on the inclusion of condensable particles in future PM emission reporting needs to continue ~~after the completion of~~ **beyond** this review. This will include an assessment of the policy implications of including condensable particles. Meanwhile, more Parties have started to report whether the residential PM2.5 emissions include condensable particles.

15. **Paragraph 42**: It is unclear what the benefit of this statement is. Since the Gothenburg Protocol does not have a collective goal, it is unclear if by “collective projected reductions” we are talking on a pollutant-by-pollutant basis or summing over all of them. This statement is too short on details. Some edits have been proposed.

Significant progress has been made towards achieving the overall goal of the amended Gothenburg Protocol. For many pollutants, further reductions are expected from 2020 onwards with the implementation of the 2020 remission reduction commitments. ~~The collective projected emission reductions will overachieve the original overall goal of the amended Protocol in terms of targeted emission reductions from 2020 onwards through the implementation of the 2020 emission reduction commitments.~~ However, current commitments and legislation will not be sufficient to achieve the long-term objectives (no exceedance of critical loads and levels).

16. **Paragraph 44**: Editorial:

A more extensive report, with detailed information on the TFTEI review, ~~is available~~ **was prepared** as an informal document for the sixtieth session of the Working Group on Strategies and Review.

17. **Paragraph 45**: Editorial:

Possible adaptation of the annexes to better address key sectors in South-Eastern Europe, Eastern Europe, the Caucasus, Central Asia and **Türkiye**, are related to the flexibility

mechanisms of the Protocol. TFTEI has developed a case-study “Technological Pathway toward ratification’ of the current ELVs in the amended Protocol.

18. **Paragraph 46:** Further information was provided as there were details missing about both Canada’s Air Quality Program and Air Quality Management System. The edits are to provide clarity and distinguish between the two.

Canada’s ~~air quality programme~~ is its Air Quality Management System, **the cornerstone of its Air Quality Program (AQP)**, which is a collaborative effort - implemented by federal, provincial and territorial governments. ~~#~~ **The System** includes ambient standards and emissions requirements for industrial sectors/**equipment, provincial/territorial air zones, and inter-jurisdictional airshed.** ~~as well as~~ **The AQP also includes** emission reduction measures for transportation and consumer and commercial products; along with monitoring, modelling and data collection. The United States of America and Canada implement their commitments under the applicable technical annexes **of the Gothenburg Protocol** through emission reduction measures that are part of their respective air quality programs.

19. **Paragraph 48:** Editorial:

In parallel, ~~the~~ the following guidance and other documents related to NH3 and the wider N cycle need to be kept up-to-date as follows...

20. **Paragraph 49:** Editorial:

There are key sectors that require specific attention in further reducing their emissions of pollutants under the Protocol and their impacts on human health and the environment. ~~It is focused on the following pollutants:~~ **including** PM and BC (residential solid fuel burning), NH3, CH4, NOx, VOCs (agriculture) and NOx (shipping).

21. **Paragraph 52:** Editorial:

~~In the sector of the~~ **For** international shipping, potential further reductions in the NOx emissions are possible with the new/upgraded technologies, as highlighted by **the** analyses carried out by TFHTAP...

22. **Paragraph 53:** Editorial:

Steam-assisted flares are ~~clearly~~ the most efficient measure in terms of soot emission reductions

23. **Paragraph 57:** In terms of keeping this report future friendly, propose revising this as suggested.

The importance of linking across the nitrogen cycle for multiple co-benefits has been recognized in **the** new Guidance document on integrated sustainable nitrogen management. In addition, **an new-improved** way to address N is **through** reporting of national nitrogen budgets, as this provides an opportunity to optimize for multiple benefits in relation to environment, climate, health and economy.

24. **Paragraph 59:** Editorial

The “Prioritizing reductions of particulate matter from sources that are also significant sources of black carbon – analysis and guidance”...

25. **Paragraph 63 (a)-(c):** Propose that these be their own paragraphs and deleting “key conclusions”. These are clearly conclusions but the style is different from how the rest of the report is written. For example, the emissions, concentrations and trends chapter makes conclusions within its section without the need of a chapeau paragraph.

26. **Paragraph 63 (b):** Editorial:

For the time being, a cautious approach should be taken ~~to~~ **before** drawing firm conclusions on the usefulness and effectiveness of the current flexibility provisions, as the amended Protocol only entered into force in October 2019, ~~most of the time since then has been under a global pandemic~~ **has occurred** and insufficient information on their use is available.

27. **Paragraph 66:** Need consistency in number of Parties indicated, 26 is used here while 34 Parties is used in paragraph 32.

28. **Paragraph 67:** Editorial:

Air pollution monitoring, allowing observed ambient concentrations to be compared to the ~~(new)~~**2021** WHO air quality guidelines...

29. **Paragraph 69:** Editorial to reflect current status.

The key conclusions of the review and assessment **are expected to be agreed** ~~scheduled for completion in late 2022~~ **2023**.

30. **Paragraph 70**: Editorial

Both countries **intend to** ~~should~~ continue their effective bilateral cooperation to address the remaining health and environmental issues related to transboundary air pollution.

31. **Paragraph 80**: Editorial as this appears to be the first time this acronym is being used.

Calculations **by the Centre for Integrated Assessment modelling (CIAM)** ~~calculations~~ indicate that full implementation of policies and measures in these other areas could offer substantial and cost-effective emission reductions of air pollutants covered by the Protocol.

32. **Paragraph 87**: Editorial:

In order to assess whether the Protocol obligations, if fully implemented, would lead to the desired results in reducing emissions of S, NO_x, NH₃, VOCs and PM, including BC, and their effects on human health and the environment, in view of the latest best available scientific knowledge, ~~the Centre for Integrated Assessment Modelling (CIAM)~~ developed a series of scenarios, calculating emissions, concentrations, depositions and effects up to 2050.

33. **Paragraph 89 (a)**: The Gothenburg Protocol does not have a collective goal. Such a statement right up front in the conclusions section is misleading and for policy makers gives the first impression that there no further issues that need addressing. Propose deleting this first sentence to instead focus this conclusion on the fact that there have been consider decreases in emissions, except for NH₃ and generally in Western Balkans and EECCAs.

~~Collective projected emission reductions will exceed the original overall emission reduction goal of the amended Protocol in terms of targeted emission reductions through the implementation of the 2020 emission reduction commitments.~~ Emissions of air pollutants have decreased considerably over the last 20 years, although less for NH₃ and generally much less for the Western Balkan and Eastern Europe, the Caucasus and Central Asia.

34. **Paragraph 89 (e)**: Editorial:

In scenarios with full implementation of available technical reduction measures (MFTR or 'maximum technically feasible reduction' scenario) and with additional changes in the energy system and agriculture (Low scenario),₂ further emission reductions by 2050 are possible, although still modest by 2030 due to the short time available for new measures to become fully effective by 2030. **In particular,** ~~Technical~~ technical emission reduction potentials are ~~particularly~~ still large for Eastern Europe, the Caucasus and Central Asia, inter alia, for coal burning, transport and waste treatment.

35. **Paragraph 89 (f)**: The use of “Parties” in this paragraph is confusing. Does this mean Parties to the Convention or is this supposed to mean countries? A country would already be a Party if it ratified.

36. **Paragraph 89 (g)**: Editorial:

Due to the technological development in the last decade, new and updated BAT, **which** show higher reduction potentials than the current emission limit values ~~in the technical annexes~~ **will need to be considered**, but non-technical and structural measures, synergies of climate and energy policies, as well as additional efforts outside the ECE region (e.g., in international shipping), will also be needed.

37. **Paragraph 90 (a)**: Propose being more explicit about what the options are for next steps, including the consideration of potential options for revisions. It is stating a fact of things that could be considered by Parties. Alternatively, this bullet could be moved to the end as a new (j) so the consideration of potentially revising the Protocol comes after we’ve looked at next emissions reduction steps and removing barriers etc.

Parties should t~~ake~~ further steps towards meeting the long-term objectives of the amended Protocol **including** ~~C~~carefully considering different options for **revising the Protocol to make**~~ing~~ further progress towards these targets, taking due account of the barriers to ratification by the current non-Parties;

38. **Paragraph 90 (h)**: Propose these edits to more directly align with the information presented in the review report.

The technical annexes are out-of-date, ~~A~~an update **should be considered** ~~of the technical annexes~~ **and** should take into account current barriers to implementation;