Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals

Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals **23 June 2023**

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Item 2 (h) of the provisional agenda
Hazard communication for gases addressed in the Montreal Protocol and other conventions

Hazard communication for substances that are hazardous to the atmospheric system: Terms of reference and workplan

Transmitted by the experts from Austria and Germany and the European Union

1. At its forty-second session[1], the Sub-Committee acknowledged the need to clarify the scope of the GHS hazard class "hazardous to the ozone layer" following the adoption and entry into force of the Kigali amendment" (Annex F) to the Montreal Protocol regarding hydrofluorocarbons that are known greenhouse gases.

2. At the forty-third session[2], the Sub-Committee considered potential options on how to take forward the work and all the experts who expressed an opinion were in favour of the option to rename chapter 4.2 and adding a second hazard class. At the same time there was also some support to extend the scope of the GHS to cover additional hydrofluorocarbons or all greenhouse gases (potential "future work") in a separate chapter, as detailed in informal document INF.37 from the forty-third session.

3. In response to the need to align GHS with the Kigali amendment to the Montreal Protocol, document ST/SG/AC.10/C.4/2023/4 presents the outcome of the discussions of the authors of that document for the initial revision of chapter 4.2. This work forms the basis for the work proposed in this document. Any amendment to the text proposed in document ST/SG/AC.10/C.4/2023/4 by the Sub-Committee will naturally also be used for the work that is proposed in this document.

4. For continuing the discussion towards a possible widening of the scope of the reviewed chapter 4.2 to cover additional fluorinated greenhouse gases or all greenhouse gases, the delegations who developed the proposal in document ST/SG/AC.10/C.4/2023/4 consider that the formation of an informal working group would be a more appropriate way to conduct those discussions. The European Union volunteers to lead the work of the informal working group.

5. INF.37 from the forty-third session already outlined that future discussions should take into consideration the scope of the gases that should be included. The document also clarified that, naturally, a potential labelling requirement would not cover emissions of greenhouse gases or natural sources but only goods that are placed on the market for use. Greenhouse gases of commercial relevance will usually be put on the market as pressurised gas, thus already falling under the relevant provisions of GHS.

6. The benefits of potentially extending the scope and creating specific criteria would be that the positive effects of a classification in terms of awareness raising and contribution to achieving climate action targets would not be limited to hydrofluorocarbons (HFC) but extended to all greenhouse gases and could be multiplied accordingly.

[1] See informal document INF.14 and report ST/SG/AC.10/C.4/84 from the forty-second session.
[2] See informal document INF.37 and report ST/SG/AC.10/C.4/86 from the forty-third session.

7. Currently GHS only covers ozone-depleting substances that are listed in the annexes to the Montreal Protocol[3]. For example, it does not cover chlorinated very short-lived substances (i.e. substances with an ozone-depletion potential but having a short atmospheric lifetime of less than 0,5 years) as it was initially believed that those would not reach the stratosphere in noteworthy amounts. However, scientific evidence meanwhile shows that this assumption was not entirely correct and today chlorinated very short-lived substances are one of the noteworthy, and increasing, anthropogenic contributors to the ongoing stratospheric ozone depletion. The Scientific Assessment Panel of the Montreal Protocol reported in its 2022 assessment[4] that chlorinated very short-lived substances now contribute 3–4% to stratospheric chlorine whilst pointing out that this, even though the contribution to total stratospheric chlorine is relatively small, has shown a strong positive trend over the last decades. Therefore, it appears appropriate to consider whether labelling of additional ozone-depleting substances could contribute to raising awareness and thereby help Parties in their obligation under the Vienna Convention[5] to protect human health and the environment against adverse effects resulting or likely to result from human activities which modify or are likely to modify the ozone layer.

8. At the same time greenhouse gases can have a direct impact on ozone-depletion. An example is dinitrogen oxide (aka nitrous oxide) which is a greenhouse gas and currently estimated to be the largest contributor to stratospheric ozone depletion. While dinitrogen oxide is referred to in the Vienna Convention as ozone-depleting, it had not been included into the Montreal Protocol as it is already controlled under the United Nations Framework Convention on Climate Change. The 2022 assessment of the Scientific Assessment Panel reports that the accelerating increase of nitrous oxide abundances and emissions is a serious threat for stratospheric ozone. Therefore, it appears appropriate to consider, when considering a potential labelling of greenhouse gases, whether those greenhouse gases should also be labelled as harmful to the ozone layer to raise awareness and contribute to achieving the international commitments under the Vienna Convention.

9. Mindful of the political and economic differences in jurisdictions, it appears desirable that any such amendment of the GHS respects the building block principle.

10. There may be uses where it may not be meaningful or technically possible to label substances that are hazardous by contributing to global warming. Potential examples referred to in the discussions include dry ice (i.e., frozen carbon dioxide) and water (which in its vapour phase has a global warming potential).

11. Finally, the delegations who developed the proposal in document ST/SG/AC.10/C.4/2023/4 considered adding the precautionary statement P273 “Avoid release to the environment” to both proposed hazard classes in document ST/SG/AC.10/C.4/2023/4. However, given the limited scope of this work (i.e. to clarify the scope of the GHS hazard class “hazardous to the ozone layer” following adoption of the “Kigali amendment”) further future work is anticipated. It is unclear what impact this future work will have on the scope or need for the precautionary statement. Therefore, delegations who developed the proposal in document ST/SG/AC.10/C.4/2023/4 recommend that the precautionary statement is addressed in the context of future work.

12. This document provides the terms of reference proposal that provides more structure regarding the scope of the work. Based on terms of reference, this document also proposes a simplified short-term workplan for approval by the Sub-Committee.

[3] The Montreal Protocol on Substances that Deplete the Ozone Layer (https://ozone.unep.org/treaties/montreal-protocol)

[4] World Meteorological Organization (WMO). Scientific Assessment of Ozone Depletion: 2022, GAW Report No. 278, 509 pp.; WMO: Geneva, 2022 (https://ozone.unep.org/system/files/documents/Scientific-Assessment-of-Ozone-Depletion-2022.pdf)

[5] The Vienna Convention for the Protection of the Ozone Layer (https://ozone.unep.org/treaties/vienna-convention)

Terms of reference

13. The following terms of reference are proposed:

(a) Initiate discussions on the extension of scope on substances that are hazardous to the atmospheric system

The informal working group will discuss the possible addition of substances that are hazardous to the atmospheric system due to their potential to deplete stratospheric ozone or by contributing to global warming.

(b) How to potentially widen the scope

The informal working group will discuss whether a new chapter will have to be developed or whether the necessary changes can be taken up within the structural changes proposed in document ST/SG/AC.10/C.4/2023/4 (and any subsequent amendments by the Sub-Committee).

(c) Determination of criteria

Based on agreement from discussions in (a) and (b) above, the informal working group will develop criteria to classify substances and mixtures in a way that respects the building block principle.

(d) Precautionary statement P273

The informal working group will continue the discussion on the potential addition of precautionary statement P273 in chapter 4.2.

(e) A proposal

The informal working group will prepare a proposal to ensure that substances and mixtures that are hazardous to the atmospheric system are appropriately classified and labelled.

Workplan

14. The initial tasks of the informal working group will be as follows:

(a) Discuss the principal aspects of a possible addition of substances that are hazardous to the atmospheric system due to their potential to deplete stratospheric ozone or by contributing to global warming.

(b) Determine the scope for a widening of the current chapter 4.2.

(c) Continue the discussion on P273.

(d) Develop a workplan of the informal working group to be addressed between the forty-fifth and the forty-sixth sessions of the Sub-Committee

The informal working group will provide a report to the Sub-Committee at its forty-fifth session (December 2023) on the progress of the work on items 14 (a) to (d) above.

Proposal

15. The Sub-Committee is invited to adopt the proposed terms of reference and workplan for the informal working group on hazard communication for substances that are hazardous to the atmospheric system.