

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**

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Item 2 (h) of the provisional agenda

**Work on the Globally Harmonized System of Classification
and Labelling of Chemicals: Hazardous to the atmospheric system**

Status of the work of the informal working group on substances that are hazardous to the atmospheric system

**Transmitted by the European Union on behalf of the informal working
group hazardous to the atmospheric system**

Introduction

1. This informal paper provides an update on the work undertaken by the informal working group “hazardous to the atmospheric system” since the forty-fourth session of the Sub-Committee in July 2023.

Background

2. At its forty-fourth session, the Sub-Committee agreed to the proposal by the European Union to establish an informal working group (IWG) to discuss a potential extension of scope of chapter 4.2 on substances¹ that are hazardous to the atmospheric system.

3. The Sub-Committee agreed to the terms of reference and the workplan as presented in document INF.11 (forty-fourth session).

Status report

Relevance of the discussion

4. In line with the workplan, the IWG started its work with deliberations on the principal aspects of a widening of the scope of chapter 4.2 to further substances that are hazardous to the atmospheric system due to their potential to deplete stratospheric ozone or by contributing to global warming.

5. The group reaffirmed the importance of the discussion. Classification and labelling and classification can lead to increased awareness, behavioural changes and more informed decision-making, thus contributing to addressing the climate crisis and the acceleration of the recovery of the ozone layer. A widening of the scope of chapter 4.2 would not limit the impact of GHS to substances included in the Montreal Protocol but offer the opportunity to extend the benefits to a large number of substances, thus multiplying the impact accordingly.

6. Given the increasing pressures due to the climate crisis, nations and regions are increasingly taking actions. Introducing an extended globally harmonised framework for the classification and labelling of such substances soon will prevent negative economic

¹ Unless otherwise mentioned, for the purpose of this document the term “substances” always includes mixtures as well.

implications that may result from the divergence in the classification and labelling systems which are likely to occur if there was no global harmonisation.

Coverage through the Montreal Protocol and related limitations

7. At its 44th session, the Sub-Committee agreed to create in chapter 4.2 a dynamic link to the Montreal Protocol², ensuring that any substance included in a future amendment of the Montreal Protocol is automatically covered by GHS. However, this leads to a labelling of greenhouse gases (GHGs) only for a small subset of substances with a global-warming potential (GWP): currently 31 substances in total; namely, 18 hydrofluorocarbons (HFC) and 13 ozone-depleting substances (ODS).

8. The IWG considered whether the dynamic link would ensure that in future more substances would be covered. For this, it was first important to understand why the Kigali amendment to the Montreal Protocol has included only a certain number of HFC in its scope. Two important reasons for including those particular HFC in the Montreal Protocol although they are not having ozone-depleting properties were:

- (a) The sharp increase in the consumption of HFC is due to the phase-out obligations for hydrochlorofluorocarbons (HCFC) that have previously been used as refrigerants and which were to a large degree replaced by HFC.
- (b) With its experience in managing the risk from deliberately used substances, in contrast to the mechanisms under UNFCCC which are primarily about managing unwanted emissions, the Montreal Protocol has the relevant experience, mechanisms and networks in place to more efficiently manage the risk from HFC and their phase down.

Consequently, the Kigali amendment concerns only those HFC that are used as refrigerants in noteworthy amounts. It is unlikely that the Montreal Protocol will in future cover greenhouse gases that are not used as refrigerants.

9. In GHS this leads to the situation that classification and labelling is needed for substances with a comparably low GWP (e.g., HFC-152 with a GWP of 52), whereas classification of labelling is not required for greenhouse gases with a much higher GWP (e.g., sulphur hexafluoride with a GWP of 20900). To ensure a consistent and effective hazard communication, it would be necessary to cover more greenhouse gases.

Supporting informed decision making, affected sectors and work ahead

10. The IWG also discussed the role of GHS in the identification of hazards to support informed decision making. Currently, it is not systematically identified whether substances are hazardous to the ozone layer or contribute to global warming. This may hamper the work of the relevant scientific bodies to estimate the associated risks and subsequently inform the decision-making bodies accordingly. Through the systematic identification of hazards, GHS could contribute to improving the knowledge base needed to assure informed decision making.

11. Furthermore, the IWG discussed which sectors may potentially be affected by a wider scope of chapter 4.2. While there are theoretically many substances with a global warming or ozone-depletion potential, those that are of noteworthy commercial relevance are mostly gases and are typically placed on the market as pressurised gases. They are, therefore, already falling within the scope of GHS for that hazard but without communicating their environmental impact. There is also a set of volatile liquids, in particular halogenated

² The Montreal Protocol on Substances that Deplete the Ozone Layer (<https://ozone.unep.org/treaties/montreal-protocol>)

substances, that would be affected. Those substances are typically also already falling within the scope of GHS due to their hazards to human health or physical hazards.

12. Consequently, manufacturers of those substance groups would be mostly affected by classification and labelling requirements that would be additional to the current ones. The degree to which actors in the supply chain and final users would be affected, depends on the potential risk management measures that may or not be necessary, and which are beyond the scope of GHS. The IWG would welcome a participation of the relevant actors in its deliberations.

13. The IWG concluded that further discussion on some principal aspects of a widening of the scope of chapter 4.2 is needed. This concerns, for example, potential divergence or overlap between international agreements, and the potential scope of the widening. The group plans to continue its deliberations with the workplan outlined below.

Workplan

14. For 2024 (i.e., until the end of the biennium), the IWG plans to conduct the following work:
- (a) Continue the principal discussion on the extension of the scope on substances that are hazardous to the atmospheric system.
 - (b) If the IWG deems appropriate, begin discussions outlining how the chapter could be expanded.
 - (c) Develop criteria to classify substances that are hazardous to the ozone layer and that are not included in the Montreal Protocol.
 - (d) Develop criteria to classify substances that are hazardous by contributing to global warming and that are not included in the Montreal Protocol.
 - (e) Continue the discussion on P273.
 - (f) Discuss any other related issue that the IWG considers relevant in the context, including:
 - (i) A possible oversight in the amendment introduced with document ST/SG/AC.10/C.4/2023/4³: H421 may need to be added to annex 3, table A3.1.3
 - (ii) Whether it would be meaningful to update the guidance on the preparation of safety datasheets and add the ozone-depletion and global warming potential in table A4.3.9.1 as basic physical and chemical properties that are obligatory to indicate in a safety data sheet, so that they are more prominently visible.
 - (g) If the progress allows to do so, prepare a proposal to ensure that substances and mixtures that are hazardous to the atmospheric system are appropriately classified and labelled.
 - (h) Else, develop a 2025-2026 workplan of the IWG for Sub-Committee's approval.

³ Revision of chapter 4.2 to include classification and hazard communication for greenhouse gases listed in the annexes of the Montreal Protocol
<https://unece.org/transport/documents/2023/04/working-documents/revision-chapter-42-include-classification-and-hazard>