

## **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 3 (a) of the provisional agenda

### **Implementation of the GHS:**

**possible development of a list of chemicals classified in accordance with the GHS**

## **Status update on the ongoing work of the global list informal correspondence group**

### **Transmitted by the experts from Canada and the United States of America on behalf of the informal correspondence group**

### **Introduction**

1. The Sub-Committee has been studying the possibility of developing a global list of chemicals classified in accordance with the GHS in order to facilitate GHS implementation since 2008 (ST/SG/AC.10/C.4/2008/22 paragraph 4.4 (g)). It has done considerable work in this regard, including a survey of international classification lists, developing a set of guiding principles, a pilot classification project, and a list comparison exercise (ST/SG/AC.10/C.4/2017/4).
2. Most recently, the United States of America and Canada administered the United Nations GHS Global Classification List Survey, on behalf of the global list informal correspondence group (ICG), to enable the comparison of existing lists that follow the GHS with the guiding principles developed by the Sub-Committee (see ST/SG/AC.10/C.4.48 Annex III).
3. At this time, the global list ICG is inviting the Sub-Committee to consider how the Sub-Committee would like the results of the survey to be evaluated and presented (see paragraphs 21 to 27 of this document) and to consider whether there is any interest and capacity for parallel work (see paragraph 28 of this document).

### **Background**

4. The global list project stemmed from a paper submitted by the United Nations Institute for Training and Research (UNITAR) at the fifteenth session of the Sub-Committee (July 2008), which explained that the development of multiple chemical lists by various competent authorities was creating disharmony and increased the complexity of classifying internationally-distributed chemicals (see informal document INF.32, fifteenth session). The two issues raised by UNITAR were:
  - (a) Why classifications are resulting in different findings, and whether there is a need for more guidance to ensure consistency in classifications; and
  - (b) Whether there is a need for an internationally developed and maintained list (see informal document INF.32, fifteenth session and ST/SG/AC.10/C.4/2008/22 paragraph 4.4 (g)).

5. Initially, this topic was tasked to the informal working group on GHS implementation issues, led by the expert from Australia (see ST/SG/AC.10/C.4/30 paragraph 84). The informal implementation working group discussed these two issues at its meeting in July 2008 and submitted recommendations for the consideration of the Sub-Committee.

6. There was no firm proposal for how to address issues of differing classifications, or whether such differences were a significant problem for the GHS. It was thought if implementation experience identifies that there are specific areas of the GHS that would benefit from revision and/or the development of guidance material, then the Sub-Committee could decide how best to address those issues at that time (ST/SG/AC.10/C.4/2008/22 paragraph 4.4 (g); ST/SG/AC.10/C.4/32 paragraph 69).

7. The Sub-Committee endorsed the recommendation by the informal working group that an internationally developed and maintained list was an issue worth exploring. However, it was noted by all commentators that there would be a number of high-level policy decisions to be made about such a list, including who would develop and maintain such a list, before the Sub-Committee could consider whether to proceed with a proposal for a list (ST/SG/AC.10/C.4/2008/22 paragraph 4.4(g); ST/SG/AC.10/C.4/32 paragraph 69).

8. Two studies subsequently presented to the Sub-Committee showed discrepancies between existing lists.

- (a) The first (informal document INF.6, nineteenth session), prepared by OECD, studied the classifications assigned by the European Union, Japan, and New Zealand to the chemicals listed in Annex III of the Rotterdam Convention. Of those chemicals, only one, asbestos, was classified identically in each system. The OECD studied the classifications of five chemicals in depth and found that the use of differing data sets was the most important reason for the discrepancies, followed by differences in interpretation of the data and application of the classification criteria.
- (b) The second (informal document INF.7, nineteenth session), prepared by the secretariat, showed a number of discrepancies between the transport classifications in the “Recommendations on the Transport of Dangerous Goods, Model Regulations” (Rev. 16) and the classifications in Annex VI of Regulation (EC) No. 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures (CLP Regulation). The secretariat updated this comparison for Rev. 17 of the Model Regulations (see informal document INF.10, twenty-fifth session).

9. The Sub-Committee’s implementation working group conducted a survey of international classification lists in 2010. This survey showed that, at the time, GHS classification lists were adopted by at least five countries (Australia, Japan, New Zealand, Republic of Korea, and Switzerland) and the European Union. Additionally, it showed that other classification lists are maintained by the International Maritime Organization (IMO) (Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP)), the Sub-Committee of Experts on the Transport of Dangerous Goods, and World Health Organization (WHO) (pesticides and International Chemical Safety Cards) (ST/SG/AC.10/C.4/2010/20; informal documents INF.4 and INF.5, twentieth session; ST/SG/AC.10/C.4/2017/4).

10. At the twentieth session of the Sub-Committee (December 2010), it was recognized there were still a number of issues related to the possible development of a global list of classified chemicals that needed to be considered further. The Sub-Committee agreed to have this work addressed by an informal group under the leadership of the expert from the United States of America. This created the informal

correspondence group (ICG) on assessing the possible development of a list of chemicals classified in accordance with the GHS (see ST/SG/AC.10/C.4/40 paragraph 40; ST/SG/AC.10/C.4/2010/20 and informal document INF.15/Rev.1, twentieth session).

11. Next, by way of the global list ICG, the Sub-Committee developed a set of guiding principles to inform the development of a global non-binding list. The goal of the guiding principles is to ensure that classifications are developed transparently, with stakeholder input, from publicly available and electronically accessible data, and are non-binding. The guiding principles also state that all GHS hazard categories and classes must be included in a global list, but with the recognition that development of a list needs to involve priority setting and to proceed in a stepwise fashion (see ST/SG/AC.10/C.4/48 Annex III and ST/SG/AC.10/C.4/2017/4).

12. Following the development of the guiding principles, the global list ICG conducted a pilot classification project. The pilot classification project, conducted in conjunction with the OECD, involved posting draft classification reports prepared by sponsors for three chemicals on a website hosted by the OECD, and inviting all interested parties to provide comments. The documents were then revised based on the comments, and outstanding comments were resolved by way of teleconference. The pilot project was successful in that non-binding consensus classifications were reached for each of the three chemicals. It also showed that significant resources and a sustained commitment would be necessary if the Sub-Committee were to develop a global list this way (see ST/SG/AC.10/C.4/2016/18; informal document INF.4, thirty-second session; ST/SG/AC.10/C.4/2017/1 and ST/SG/AC.10/C.4/2017/4).

13. Additionally, the global list ICG conducted a comparison of the classifications in CLP Annex VI derived from opinions from the European Chemicals Agency Committee for Risk Assessment (ECHA RAC) and the Japanese classification list. The list comparison showed that, of the 89 chemicals in common to the two lists, none had identical classifications (see ST/SG/AC.10/C.4/2017/4 and informal document INF.14, thirty-third session). No further analysis has been conducted to compare the classifications.

14. Following these projects, the ICG considered potential next steps and whether the group should begin work on a global classification list in accordance with the guiding principles. Arguments that have been presented in favour of beginning work on a global list of classifications include (ST/SG/AC.10/C.4/2017/4):

- (a) The Sub-Committee has identified a process for reaching agreed classifications that works. While substantial effort was required to develop classifications in the pilot project, efficiencies will be found with more experience.
- (b) A list of internationally agreed classifications furthers the goals of the GHS, which is to ensure that users of chemicals have “consistent and appropriate information” worldwide (see paragraph 1.1.1.3 of the GHS);
- (c) A global list will help countries without their own classification lists ensure consistent hazard communication and GHS implementation. It may be especially beneficial to developing countries considering GHS implementation. This will enhance the protection of human health and provide a recognized framework for countries without an existing system (see paragraph 1.1.1.4 of the GHS).
- (d) A global list will also help manufacturers and suppliers ensure accurate classifications in countries without classification lists. This will both enhance the protection of human health as well as facilitate international trade (see paragraph 1.1.1.4 of the GHS);

- (e) Developing a list might lead to potential cost savings or other efficiencies where competent authorities that have adopted mandatory or recommended lists would be able to adopt more classifications by pooling their resources on an international level than by doing so on their own; and
- (f) Finally, in response to concerns about possible conflicts between national, or regional, legally binding lists and an international non-binding list, experts in favour of a global list argued that an additional global review of classifications should only improve their scientific accuracy.

15. Concerns that have been presented about going forward with a global list included (ST/SG/AC.10/C.4/2017/4):

- (a) The pilot project has shown that developing a list of harmonized classified substances would require substantial resources;
- (b) Work on the international level might unnecessarily lead to duplication of work already done at the competent authority level; and
- (c) Differing results in a global list might undermine the credibility of a competent authority's binding list and might create potential legal issues in the enforcement of the competent authority's classifications.

16. In 2019, the Chair of the global list ICG stepped down due to a new role and additional responsibilities, and Canada joined the United States as Co-chairs of the ICG (see ST/SG/AC.10/C.4/72 Annex II and ST/SG/AC.10/C.4/2019/6).

17. Based on the accomplishments and discussions to date, potential work streams were presented to the Sub-Committee and adopted for the 2019-2020 programme of work, with the understanding that the first step would be to perform the work in items (a) and (b) of Work stream A (see ST/SG/AC.10/C.4/74 paragraph 56 and informal document INF.10 thirty-seventh session). These first two items in work stream A are to identify existing lists that follow the GHS and compare them with the guiding principles in Annex III to the report of the twenty-fourth session (see ST/SG/AC.10/C.4.48).

18. Preliminary work was conducted on items (a) and (b) of Work stream A through 2019 and 2020, and the Sub-Committee agreed this work should continue in accordance with the existing work streams during 2021-2022 (see Annex I to this document).

## **Current status**

19. Sweden conducted a study on the "The Role of National Substance Classification Lists in the Implementation of the GHS" (see informal document INF.15/Add.1, fortieth session), which was finalized in 2021 and presented to the Sub-Committee at the fortieth session (July 2021) (ST/SG/AC.10/C.4/80 paragraph 41 and informal document INF.15, fortieth session). The study was a stand-alone initiative and analysed if and how substance classification lists are used or can be used as an instrument to promote GHS implementation (see ST/SG/AC.10/C.4/2020/17 paragraphs 5 to 7).

20. The study surveyed twenty-one countries or jurisdictions, of which eight responded that they had full implementation of the GHS with a classification list. The study also captured perceived advantages and disadvantages of classification lists, and concluded that lists are a way to enhance GHS implementation, can simplify trade, and that countries that have not yet implemented GHS are planning to but are looking for assistance.

21. Subsequently, the global list ICG planned the "United Nations GHS Global Classification List Survey", administered by the Co-chairs with the assistance of the U.S.'s consultant, to complement the work of Sweden. The purpose of the survey was

to address items (a) and (b) from Work stream A on the 2021-2022 programme of work (see ST/SG/AC.10/C.4/78 paragraph 44 and ST/SG/AC.10/C.4/2020/17). That is, to identify existing classification lists that follow the GHS and compare these lists with the guiding principles (see ST/SG/AC.10/C.4.48 Annex III), with the aim of filling in knowledge gaps (see informal document INF.15, fortieth session).

22. The scope of the survey included widely-used national, regional, and third-party lists that follow the GHS as per item (a) of Work stream A. An initial list of thirteen classification lists that follow the GHS was presented to the Sub-Committee at the fortieth session, with the purpose of identifying contacts and additional participants for the survey. The Sub-Committee was invited to review the information and consider whether there were additional lists to be added (see informal document INF.15, fortieth session paragraphs 9-10 and the Annex). Following the session, additional lists were nominated for inclusion in the survey. Annex II to this document includes the final list of seventeen classification lists for which an invitation was sent to participate in the survey. It should be noted Annex II to this document is not intended to capture an exhaustive list of classification lists that follow the GHS and there may be additional lists.

23. The survey questions were based on the guiding principle questions developed by the ICG in 2020 (see ST/SG/AC.10/C.4/2020/17 paragraph 4). These questions were developed to help enable a comparison between a classification list and the guiding principles. Additional background questions were added to the survey, and the questions were edited as applicable to incorporate plain language, minimize any potential introduction of bias, as well as to address any technical concerns raised by the ICG during the brief review period for the survey. The final survey questions can be found in the addendum to this document (see INF.13/Add.1).

24. The “United Nations GHS Global Classification List Survey” was initiated on October 25, 2021 and closed on November 26, 2021. The survey was administered in English, and respondents were provided the opportunity to request translation. The survey was administered through an electronic platform with the option to download a pdf version of the survey for information.

25. Responses were received from sixteen of the seventeen invitees. A record of whether a response was received can be found in Annex II to this document.

## Discussion

26. As a next step, the Co-chairs will compile the survey responses into a matrix (see ST/SG/AC.10/C.4/2020/17 Work stream A(b)) and the ICG can then evaluate the findings. The Co-chairs plan to hold at least one ICG meeting in the months following the forty-first session of the Sub-Committee (December 2021) to facilitate evaluation and discussion of the results. The survey results and outcome of the evaluation could then be presented to the Sub-Committee at the forty-second session (July 2022).

27. As the ICG prepares to evaluate the survey results, we invite the Sub-Committee to provide feedback on how the Sub-Committee would recommend the information to be evaluated and presented, beyond having the responses compiled into a matrix. The following are a subset of questions for the Sub-Committee to consider:

- (a) How detailed should the matrix comparison be?
- (b) Although the intent is to compare the lists to the guiding principles, are there other ways we should consider comparing the lists moving forward?

- (c) Should all lists be compared together, or should lists be categorized and grouped accordingly for comparison? If the latter, how should lists be categorized?
  - (i) Should competent authority lists be grouped together and third-party lists be compared separately?
  - (ii) Should UN Specialized Agencies (e.g. IMO, WHO, ILO) be grouped together and non-governmental organizations be grouped together?
  - (iii) Should competent authority lists be categorized as national and regional?
  - (iv) Should lists be compared based on the number of substances on that list?
  - (v) Should the lists be compared based on whether they are legally binding or voluntary?

28. Additionally, the results of the survey will play a key role in helping to decide the appropriate next steps for the global list ICG. The current programme of work is outlined in Annex I to this document. There is no commitment to complete the work streams in a linear order, though some items would need to proceed in a step-wise fashion (for example, the ICG cannot further evaluate a subset of the lists per item (c) from Work stream A before compiling information on widely-used lists and comparing them to the guiding principles per items (a) and (b)). Parallel work can be conducted if deemed appropriate and there are available resources. We invite the Sub-Committee to consider whether there is any interest in conducting parallel work and any capacity to take this on.

29. An update will be provided to the Sub-Committee at the forty-second session (July 2022) on the outcomes of the intersessional work and discussions of the global list ICG, as well as any recommendations on potential next steps.

## Annex I

The 2021-2022 programme of work for the global list informal correspondence group (see ST/SG/AC.10/C.4/2020/17 and paragraphs 44 and 45 of ST/SG/AC.10/C.4/78).

### **Work stream A: Continue to research and analyse the existing classification lists**

- (a) The Sub-Committee could compile information on widely-used lists (e.g., national, regional, third-party lists) that follow the GHS, including how the list was developed, whether the rationale and data underlying the classification is available, whether the list is legally binding, and what building blocks were adopted in the implementation for which the list was prepared. Some experts at the thirty-fifth session commented this could be done before deciding on further steps (ST/SG/AC.10/C.4/70, para. 69).
- (b) The Sub-Committee could then develop a matrix comparing these lists to the guiding principles (ST/SG/AC.10/C.4/48, Annex III).
- (c) Based on that comparison, the Sub-Committee could further evaluate a subset of these lists (e.g., lists that best comport with the guiding principles) by hazard class or category or compare classification of high-volume chemicals (in terms of trade or production).
- (d) This could provide transparency about the classifications that currently exist and can provide a starting point for understanding differences in the lists as well as the opportunity to identify where problems or patterns exist. In this capacity, the role of the informal correspondence group would be to identify where the problems or patterns exist and present these to the Sub-Committee.
- (e) If a detailed analysis of the problems or patterns reveals issues with the application or implementation of the classification criteria, the informal correspondence group could present these findings to the Sub-Committee. If the Sub-Committee agrees that the disharmony is due to issues with the classification criteria itself, it could recommend the Practical Classification Issues working group clarify the criteria or give further guidance on how to apply the criteria.
- (f) Additionally, this work could provide a basis for considering the options in the below work streams.

### **Work stream B: Further explore possibilities to develop a global list**

- (a) While many commenters were concerned about the time, effort, and consequences for countries that have already developed a binding list, the Sub-Committee might want to consider developing a list of classifications for mutually agreed upon chemicals or reviewing chemical classifications on a case-by-case basis.
- (b) Alternatively, the Sub-Committee could explore endorsing an existing internationally recognized third party classification list that meets the guiding principles and support its further development.
  - (i) For example, the WHO/ILO International Chemical Safety Cards (ICSCs), which are developed through robust consensus process involving 20-25 experts from 18 countries; they present the GHS pictogram, signal word, and hazard statement but they do not contain the classification. Some work and resources would be required to make the GHS classification rationale and supporting data publicly available.
  - (ii) Another example is the Dangerous Goods List in the UN Model Regulations, which has over 2000 entries.

- (iii) Are there other third-party lists that the Sub-Committee could consider?
- (c) A third option would be to extend OECD's eChemPortal in some fashion.
  - (i) The eChemPortal contains information on several existing GHS classification lists but it does not provide its own classifications in accordance with the GHS. This option may present challenges for competent authorities and manufacturers, however, because the eChemPortal may contain inconsistent classification for the same substance.

**Work stream C: Develop a list limited to specific hazards or chemicals of concern**

- (a) The Sub-Committee could develop a priority substance or hazard list. The Sub-Committee would need to decide what considerations should guide the development of this list, perhaps focusing on the more significant hazards (e.g. carcinogenicity) or high-volume chemicals. This would likely be resource-intensive, but the resources may be justified to address a discrete number of sufficiently important classifications.
- (b) However, this option may not be helpful for a country without the capacity to develop its own list that is looking to adopt a more extensive "GHS-approved" list.



## Annex II

### Chemical classification lists that follow the GHS included in the 2021 United Nations GHS Chemical Classification List Survey administered by the global list informal correspondence group

(This list includes widely-used lists that follow the GHS, but it is not intended to be an exhaustive list of all existing classification lists that follow the GHS. See paragraph 22 of this document and Work stream A(a) in Annex I to this document.)

Responsible Authority/Organization	List Name	Weblink (if available)	Response Received?
Australia – Safe Work Australia	Hazardous Chemical Information System (HCIS)	<a href="http://hcis.safeworkaustralia.gov.au/HazardousChemical">http://hcis.safeworkaustralia.gov.au/HazardousChemical</a>	Yes
Canada – Health Canada	WHMIS Classifications	Not applicable	Yes
China - State Administration of Work Safety (SAWS)	Catalogue of Hazardous Chemicals (2015)	Unknown	Yes
Concawe	Hazard Classification and Labelling of Petroleum Substances in the European Economic Area - 2020	<a href="https://www.concawe.eu/wp-content/uploads/Hazard-classification-and-labelling-of-petroleum-substances-in-the-European-Economic-Area-%E2%80%93-2020.pdf">https://www.concawe.eu/wp-content/uploads/Hazard-classification-and-labelling-of-petroleum-substances-in-the-European-Economic-Area-%E2%80%93-2020.pdf</a>	Yes
European Union - European Chemicals Agency (ECHA)	EU Harmonised C&L (Annex VI to Classification, Labelling and Packaging Regulation (CLP, Regulation (EC) No 1272/2008) and opinions of the Committee for Risk Assessment (RAC))	Annex VI to the EU CLP Regulation: <a href="https://echa.europa.eu/information-on-chemicals/annex-vi-to-clp">https://echa.europa.eu/information-on-chemicals/annex-vi-to-clp</a> RAC opinions: <a href="https://echa.europa.eu/registry-of-clh-intentions-until-outcome">https://echa.europa.eu/registry-of-clh-intentions-until-outcome</a>	Yes
European Committee of Organic Surfactants and their Intermediates (CESIO)	CESIO recommendations for the harmonized classification and labelling of surfactants	<a href="https://www.cesio.eu/images/content/210526-Cesio-CL_Recommendations_2021-Final.pdf">https://www.cesio.eu/images/content/210526-Cesio-CL_Recommendations_2021-Final.pdf</a>	Yes
International Fragrance Association (IFRA)	IFRA-International Organization of the Flavor Industry (IOFI) Labelling Manual	<a href="https://ifrafragrance.org/policy/labelling-manual">https://ifrafragrance.org/policy/labelling-manual</a>	Yes
International Labour Organization (ILO)/ World Health Organization (WHO)	International Chemical Safety Cards	<a href="https://www.ilo.org/dyn/icsc/showcard.home">https://www.ilo.org/dyn/icsc/showcard.home</a>	Yes
International Maritime Organization (IMO) - Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) an advisory body to the UN system (IMO, FAO, UNESCO-IOC, WMO, IAEA, UN, UNEP, UNIDO, UNDP, ISA)	GESAMP Composite List	<a href="https://wwwcdn.imo.org/localresources/en/OurWork/Environment/Documents/GESAMP%20Composite%20List%20of%20hazard%20profiles-2019.pdf">https://wwwcdn.imo.org/localresources/en/OurWork/Environment/Documents/GESAMP%20Composite%20List%20of%20hazard%20profiles-2019.pdf</a>	No

<b>Responsible Authority/Organization</b>	<b>List Name</b>	<b>Weblink (if available)</b>	<b>Response Received?</b>
Japan - National Institute of Technology and Evaluation (NITE)	GHS Classification Results by the Japanese Government	<a href="https://www.nite.go.jp/chem/english/ghs/ghs_download.html">https://www.nite.go.jp/chem/english/ghs/ghs_download.html</a>	Yes
Malaysia - Department of Occupational Safety and Health (DOSH)	Industry Code of Practice (ICOP) Part I List of Classified Chemicals	<a href="https://www.dosh.gov.my/index.php/legislation/codes-of-practice/chemical-management/3460-industry-code-of-practice-on-chemicals-classification-and-hazard-communication-amendment-2019-part-1/file">https://www.dosh.gov.my/index.php/legislation/codes-of-practice/chemical-management/3460-industry-code-of-practice-on-chemicals-classification-and-hazard-communication-amendment-2019-part-1/file</a>	Yes
New Zealand – Environmental Protection Authority	Hazardous Substances and New Organisms (HSNO) Chemical Classification Information Database (CCID)	<a href="https://www.epa.govt.nz/database-search/chemical-classification-and-information-database-ccid/">https://www.epa.govt.nz/database-search/chemical-classification-and-information-database-ccid/</a>	Yes
Republic of Korea - National Institute of Environmental Research (NIER)	National Chemicals Information System (NCIS)	<a href="https://ncis.nier.go.kr/en/main.do">https://ncis.nier.go.kr/en/main.do</a>	Yes
Sub-Committee of Experts on the Transport of Dangerous Goods – maintained by UN Secretariat	Dangerous goods list	Part 3, Chapter 3.2 of the UN Recommendations on the Transport of Dangerous Goods Model Regulations Volume I <a href="https://unece.org/transport/dangerous-goods/un-model-regulations-rev-22">https://unece.org/transport/dangerous-goods/un-model-regulations-rev-22</a>	Yes
United Kingdom of Great Britain and Northern Ireland – Health and Safety Executive acting as the Agency for the CLP Regulation	Great Britain (GB) mandatory classification and labelling list (GB MCL List)	<a href="https://www.hse.gov.uk/chemical-classification/assets/docs/mcl-list.xlsx">https://www.hse.gov.uk/chemical-classification/assets/docs/mcl-list.xlsx</a>	Yes
Vietnam - Vietnam Chemicals Agency and Ministry of Industry and Trade	National Chemical Inventory	<a href="http://chemicaldata.gov.vn/cms.xc">http://chemicaldata.gov.vn/cms.xc</a>	Yes
World Health Organization (WHO)	The WHO Recommended Classification of Pesticides by Hazard and guidelines to classification, 2019 edition	<a href="https://www.who.int/publications/i/item/9789240005662">https://www.who.int/publications/i/item/9789240005662</a>	Yes