



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

Report of the Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals on its forty-third session

held in Geneva from 7 to 9 December 2022

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I. Attendance

1. The Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals held its forty-third session from 7 to 9 December 2022, with Ms. Maureen Ruskin (United States of America) as Chairperson and Ms. Nina John (Austria) as vice-chairperson.
2. Experts from the following countries took part in the session: Argentina, Australia, Austria, Brazil, Canada, China, Finland, France, Germany, Italy, Japan, Mexico, Netherlands, New Zealand, Poland, Republic of Korea, Russian Federation, South Africa, Spain, Sweden, United Kingdom of Great Britain and Northern Ireland and United States of America.
3. Under rule 72 of the rules of procedure of the Economic and Social Council, observers from the Philippines and Switzerland also took part.
4. Representatives of the United Nations Institute for Training and Research (UNITAR) and the World Health Organization (WHO) were also present.
5. The following intergovernmental organizations were represented: European Union and Organisation for Economic Co-operation and Development (OECD).
6. Representatives of the following non-governmental organizations took part in the discussion of items of concern to their organizations: Australasian Explosives Industry Safety Group Incorporated (AEISG); Compressed Gas Association (CGA); Croplife International; Cruelty Free International; Dangerous Goods Advisory Council (DGAC); European Aerosol Federation (FEA); European Chemical Industry Council (Cefic); European Industrial Gases Association (EIGA); Industrial Federation Paints and Coats of Mercosul (IFPCM); International Association for Soaps, Detergents and Maintenance Products (A.I.S.E); International Council of Chemical Associations (ICCA); International Council on Mining and Metals (ICMM); International Organization of Motor Vehicle Manufacturers (OICA); International Petroleum Industry Environmental Conservation Association (IPIECA); Institute of Makers of Explosives (IME); Responsible Packaging Management Association of Southern Africa (RPMASA); Sporting Arms and Ammunition Manufacturers' Institute (SAAMI); and World Coating Council, Inc.

II. Adoption of the agenda (agenda item 1)

Documents: ST/SG/AC.10/C.4/85 and ST/SG/AC.10/C.4/85/Add.1 (secretariat)

Informal documents: INF.1, INF.2 and INF.11 (secretariat)

7. The Sub-Committee adopted the provisional agenda prepared by the secretariat after amending it to take account of informal documents INF.1 to INF.40.

III. Recommendations made by the Sub-Committee at its fortieth, forty-first and forty-second sessions (agenda item 2)

Document: ST/SG/AC.10/C.4/2022/13 (secretariat)

Informal documents: INF.15 (United Kingdom, Netherlands)
INF.31 (secretariat)

8. The Sub-Committee confirmed the decisions taken at its fortieth, forty-first and forty-second sessions on the basis of a consolidated list prepared by the secretariat, with the correction to 3.2.2.7.1 proposed in informal document INF.15 and the amendment to Chapter 1.2 in informal document INF.31 (see annex I). For additional amendments to texts in ST/SG/AC.10/C.4/2022/13, see paragraph 22.

IV. Work on the Globally Harmonized System of Classification and Labelling of Chemicals (agenda item 3)

A. Work of the Sub-Committee of Experts on the Transport of Dangerous Goods on matters of interest to the Sub-Committee

1. Definitions of “pyrotechnic substance” and “explosive or pyrotechnic effect”

Document: ST/SG/AC.10/C.4/2022/8 (Sweden)

Informal document: INF.40, paragraph 1 (secretariat)

9. The Sub-Committee took note of the outcome of the discussions by the Sub-Committee of Experts on the Transport of Dangerous Goods (TDG Sub-Committee) on this topic and adopted the amendments to Chapter 2.1 of the GHS in proposals 3 and 4 in document ST/SG/AC.10/C.4/2022/8 (see annex I).

2. Self-heating test N.4 for organic peroxides and polymerizing substances

Document: ST/SG/AC.10/C.4/2022/12 (Cefic)

Informal document: INF.40, paragraph 2 (secretariat)

10. The Sub-Committee took note of the decision by the TDG Sub-Committee to amend paragraph 1.2.1.4.3 and paragraph 20.2.5 in sections 1 and 20 of the Manual of Tests and Criteria as proposed in document ST/SG/AC.10/C.4/2022/12 (refer to the report of the TDG Sub-Committee on its sixty-first session, document ST/SG/AC.10/C.3/122, paragraph 14).

3. Metal powders and powders of metals or metal alloys in Test N.1

Document: ST/SG/AC.10/C.4/2022/17 (China)

Informal documents: INF.22 (United Kingdom)
INF.40, paragraph 3 (secretariat)

11. The Sub-Committee took note of the outcome of the discussions by the Sub-Committee of Experts on the Transport of Dangerous Goods (TDG Sub-Committee) on this topic and adopted the amendments to Chapter 2.7 of the GHS proposed in paragraphs 10 and 11 of informal document INF.22 (see annex I).

12. The representative of Cefic indicated that a similar approach may be needed to address pastes and granules and that a proposal to this end may be submitted during the next biennium.

B. Simultaneous classification in physical hazard classes and precedence of hazards

Document: ST/SG/AC.10/C.4/2022/9 (Germany)

Informal document: INF.40, paragraph 4 (secretariat)

13. The Sub-Committee took note of the opinions expressed by the TDG Sub-Committee in paragraph 4 in informal document INF.40.

14. Regarding issues I and II, the current differences between the provisions applicable to aerosols and chemicals under pressure in note 1 to table 2.3.1 and note 1 to table 2.3.3 of the GHS, as well as in special provisions 63 and 362 in the Model Regulations were acknowledged. While it appeared that these texts could potentially be streamlined, it was pointed out that these differences may be justified.

15. On issue IV, there was no support for the proposed wording for note 1 in paragraphs 15 and 16 in document ST/SG/AC.10/C.4/2022/9 as several experts considered it could be misinterpreted. It was pointed out that although Type G organic peroxides and self-reactive substances were exempted from some provisions in the Model Regulations, they were still subject to classification according to their hazards (including flammability). One

expert said that three options would exist: keep the notes, delete them or amend them to convey a clear message.

16. The expert from Germany took note of the comments made and indicated that the informal working group will continue to work with experts from both sub-committees to address the questions in document ST/SG/AC.10/C.4/2022/9 as appropriate.

C. Use of non-animal testing methods for classification of health hazards

1. Revision of Chapter 3.4 to incorporate non-animal testing methods for skin sensitization and consequential amendments to chapter 1.2, 3.2 and 3.3

Documents: ST/SG/AC.10/C.4/2022/14 (United Kingdom, Netherlands)

ST/SG/AC.10/C.4/2022/15 (United Kingdom, Netherlands)

Informal documents: INF.3, INF.3/Rev.1, INF.8 and INF.9 (United Kingdom, Netherlands)

17. The Sub-Committee adopted the proposals in ST/SG/AC.10/C.4/2022/14 as amended by informal document INF.8 as shown in full in INF.3/Rev.1, and the proposals in document ST/SG/AC.10/C.4/2022/15 as amended by informal document INF.9, except for paragraphs 3.4.2.2.4.3, 3.3.2.3.3 and 3.2.2.6.1, which were adopted following a meeting of the informal working group in the margins of the plenary session (see annex I).

2. Work of the informal working group on non-animal testing methods: status report

Informal document: INF.13 (United Kingdom, Netherlands)

18. The Sub-Committee took note of the status of the work and the next steps proposed by the informal working group in informal document INF.13.

D. Classification of skin sensitizers using the results of local lymph node assays test methods in accordance with OECD Test Guideline 442B

Document: ST/SG/AC.10/C.4/2022/19 (Japan)

Informal documents: INF.23 (United States of America, Canada) and INF.36 (Japan)

19. The Sub-Committee adopted the proposal in document ST/SG/AC.10/C.4/2022/19 as amended by informal document INF.23, with one additional amendment to the note to tables 3.4.4 and 3.4.5 (see annex I).

E. Classification criteria for germ cell mutagenicity

Informal document: INF.26 (European Union)

20. The Sub-Committee took note of the status of the work and the next steps proposed by the informal working group.

F. Practical classification issues (proposed amendments to the Globally Harmonized System)

1. Proposals addressing items 1, 2, 4, 5, 6, 7, 8 and 9 of the programme of work of the informal working group

Document: ST/SG/AC.10/C.4/2022/21 (United States of America)

Informal documents: INF.7 and INF.34, paragraphs 2 and 3 (United States of America)

21. The Sub-Committee adopted the amendments addressing items 1, 4, 5, 6, 7, 8 and 9 in document ST/SG/AC.10/C.4/2022/21, with the correction in paragraph 3 of informal document INF.7 (see annex I).

22. The Sub-Committee also adopted the consequential amendments to paragraphs 3.2.2.8.1, 3.3.2.10.1 and 3.3.5.3.4.2 referred to in document ST/SG/AC.10/C.4/2022/13, as proposed in paragraph 7 of document ST/SG/AC.10/C.4/2022/21 under item 2 (see annex I).

2. Work of the informal correspondence group: status report

Informal document: INF.34, paragraphs 2 and 3 (United States of America)

23. The Sub-Committee took note of the report on the status of the work of the informal working group.

G. Nanomaterials

24. As no document had been submitted under this agenda item, no discussion took place on this subject.

H. Improvement of annexes 1 to 3 and further rationalization of precautionary statements

1. Amendments to precautionary statements in Annex 3 relating to the respiratory sensitization hazard class

Document: ST/SG/AC.10/C.4/2022/16 (United Kingdom)

Informal document: INF.4 and INF.19 (United Kingdom)

25. The Sub-Committee took note of the clarification regarding sub-paragraph 8 (e) (ii) e in informal document INF.19 and adopted the amendments in document ST/SG/AC.10/C.4/2022/16 with the additional modification to A3.2.4.4 in informal document INF.19 (see annex I).

2. Work of the informal working group on the improvement of annexes 1 to 3

Informal document: INF.21 (United Kingdom)

26. The Sub-Committee took note of the report on the status of the work of the informal working group.

3. Corrections to precautionary statements addressing medical help/advice

Informal document: INF.20 (secretariat)

27. The Sub-Committee adopted the corrections to the French version of the GHS as proposed by the secretariat (see annex II).

I. Other matters

1. Classification of desensitized explosives

Document: ST/SG/AC.10/C.4/2022/10 (Germany, United States of America)

Informal documents: INF.5 (Germany, United States of America)

INF.12 (AEISG)

INF.18 (United Kingdom)

INF.35 (Germany, United Kingdom, United States of America)

INF.40, paragraph 5 (secretariat)

28. The Sub-Committee took note of the outcome of the discussions by the TDG Sub-Committee on this topic and adopted the amendments to Chapter 2.17 of the GHS in ST/SG/AC.10/C.4/2022/10 as amended by informal document INF.35, with some additional consequential editorial corrections (see annex I).

29. The Chairman of the Explosives Working Group considered that the questions raised in informal document INF.12 on Test series 3 in relation to thermal stability of nitrocellulose, as well as the consequential amendments to the Model Regulations and the Manual of Tests and Criteria (issue I in INF.12) might deserve further consideration and invited AEISG to submit a proposal for the next biennium.

2. Testing of flammable liquids: Open-cup and closed-cup testing for flash point

Document: ST/SG/AC.10/C.4/2022/11 (Germany, Chair of the working group on explosives)

Informal document: INF.40, paragraph 6 (secretariat)

30. The Sub-Committee took note of the amendments to section 32.4 of the Manual of Test and Criteria adopted by the TDG Sub-Committee and concluded that the text of paragraph 2.6.4.2.4 in Chapter 2.6 of the GHS should be amended accordingly to ensure harmonisation. The proposed text for 2.6.4.2.4 in document ST/SG/AC.10/C.4/2022/11 was adopted in accordance with the amended text adopted by the TDG Sub-Committee for section 32.4 of the Manual of Tests and Criteria, with one additional change to replace “shall” with “should” in two locations (see annex I).

31. The expert from China indicated that the text should be reorganised to avoid misinterpretations on how to proceed depending on data availability. Noting that the amendment to the Manual of Tests and Criteria had already been adopted by the TDG Sub-Committee, the Sub-Committee considered that it was preferable to keep both texts aligned at this stage to maintain harmonization between the Manual and the GHS.

3. Classification and hazard communication of hydrofluorocarbons addressed in Annex F of the Montreal Protocol

Informal document: INF.37 (Austria, United Kingdom, United States of America, European Union)

32. All experts who expressed an opinion were in favour of option 2. There was also support to extend the scope of the GHS to cover hydrofluorocarbons or all greenhouse gases as explained in paragraphs 11 to 16 in informal document INF.37. Experts interested in contributing to this work were invited to contact the authors of the proposal.

V. Implementation (agenda item 4)

A. Possible development of a list of chemicals classified in accordance with the GHS

Informal documents: INF.27, INF.27/Add.1, INF.28, INF.28/Add.1, INF.29, INF.29/Add.1 and INF.30 (Canada and United States of America)

33. The Sub-Committee took note of the results of the survey addressed to competent authorities, United Nations bodies and agencies, and non-governmental organisations, as presented in informal documents 27 to 29 and addenda.

34. The Sub-Committee also took note of the status of the work of the informal working group, expressed general support for continuation of work on this topic and agreed to the proposed workplan for 2023-2024 in informal document INF.30 (see annex II).

B. Reports on the status of implementation

35. The Sub-Committee was informed that a report of the Secretary-General on the work of the Committee and its two sub-committees during 2021-2022 would be submitted for consideration by ECOSOC at its 2023 session. Noting that the report contains a section with information on the status of implementation of the GHS, experts were invited to provide any updates on this topic to the secretariat, if possible, before end of February 2023.

C. Cooperation with other bodies or international organizations

36. Since no document was submitted no discussion took place under this agenda sub-item.

D. Miscellaneous

37. Since no document was submitted no discussion took place under this agenda sub-item.

VI. Development of guidance (agenda item 5)

A. Alignment of Annex 9 (section A9.7) and Annex 10 with the criteria in Chapter 4.1

Document: ST/SG/AC.10/C.4/2022/20 (ICMM)

Informal document: INF.6 (ICMM)

38. The Sub-Committee adopted the proposal in document ST/SG/AC.10/C.4/2022/20 with a correction to the pH range in the last sentence of footnote 6 to paragraph A9.7.2.2.4.1 (see annex I).

B. Practical classification issues

39. The Sub-Committee considered the proposed workplan for 2023-2024 in informal document INF.34 under agenda item 7 (see paragraphs 49 and 50 and annex III).

C. Practical labelling issues

40. The representative of Cefic informed the Sub-Committee of the progress achieved in the review and development of labelling examples and indicated that the informal working group intended to submit a proposal for the next session.

41. The Sub-Committee considered the workplan proposed by the informal working group for 2023-2024 in informal document INF.32 under agenda item 7 (see paragraph 49 and annex III).

D. Miscellaneous

42. Since no document was submitted no discussion took place under this agenda sub-item.

VII. Capacity building (agenda item 6)

43. The representative of UNITAR informed the Sub-Committee about outreach and capacity building activities undertaken since the last session of the Sub-Committee in support of the Global Partnership to Implement the GHS. These included:

- (a) Finalisation of a knowledge-gathering document on the GHS and trade to identify opportunities to enhance implementation from a trade perspective. It was noted that the development of a similar document on the GHS and agriculture was ongoing;
- (b) Development of implementation roadmaps in Ecuador and El Salvador (including e-Learning training and a webinar), in cooperation with the Basel and Stockholm Convention regional centre and UNEP;

- (c) Training and development of legislation related activities in Benin and Tanzania;
- (d) Participation in an inception workshop in Cote d'Ivoire, Ghana, Kenya and Nigeria to develop effective GHS-based legislation and capacities, to serve as examples for the region, and the world, and contribute significantly to global ambitions of universal adoption of the GHS. The project is funded by the European Union and ICCA.
- (e) It was noted that a project to develop secondary-level legislation on the GHS in Peru was expected to be initiated soon.

44. He also noted that the draft target on GHS implementation was gaining significant support during the negotiations of the Strategic Approach and Sound Management of Chemicals and Waste beyond 2020, held in Romania from 29 August to 2 September 2022. He informed the Sub-Committee that the next meeting was scheduled to take place on February 2023 in Kenya with the final decisions expected to be taken during the fifth session of International Conference for Chemicals Management (ICCM5), in Bonn, Germany from 25 to 29 September 2023.

45. The expert from South Africa indicated that introductory and advanced training activities for labour inspectors had been conducted in 2022, with support from the Swedish Chemicals Agency.

VIII. Programme of work for the biennium 2023-2024 (agenda item 7)

46. The Sub-Committee was informed that work on testing of oxidizing liquids and oxidizing solids was ongoing and that proposals to address this topic were expected to be submitted during the next biennium. On these grounds, it decided to keep this item on its programme of work.

47. The Sub-Committee also decided to keep an item on its programme of work for nanomaterials and to introduce a new item addressing hazard communication for gases addressed in the Montreal Protocol and other Conventions, on the basis of the proposal in informal document INF.37 (see paragraph 32).

48. In addition, as a follow-up to the review of ECOSOC subsidiary bodies conducted during 2022 and the discussions held on this matter at the forty-second session, the Sub-Committee agreed to include a standing item on its agenda for 2023-2024 on "Implementation of Agenda 2030 and the work of the Council".

Informal documents: INF.14 (Germany)
 INF.16 (United Kingdom, Netherlands)
 INF.17 (United Kingdom)
 INF.30, paragraph 12 (Canada, United States of America)
 INF.32 (Cefic)
 INF.34, paragraph 4 (United States of America)

49. The Sub-Committee expressed its appreciation and support for the work of the informal working groups. It agreed to the continuation of work on non-animal testing methods; germ cell mutagenicity; improvement of annexes 1 to 3 of the GHS; possible development of a global list of chemicals classified in accordance with the GHS; practical labelling issues; simultaneous classification in physical hazard classes and precedence of hazards; and practical classification issues, as proposed by the informal working groups in the informal documents listed above or in documents considered under other agenda items, as appropriate.

50. It was noted that the informal working group on practical classification issues had agreed to include the review of the use of human data for the classification of skin sensitizers in Chapter 3.4 on its programme of work for 2023-2024, following the proposal by Germany in informal document INF.14. It was pointed out that this work should not entail changes to the existing classification criteria. However, if changes in criteria were proposed the informal

working group should prepare a mandate for approval by the Sub-Committee to engage the OECD. It was suggested that prioritization of the work under the responsibility of the informal working group should be considered.

Document: ST/SG/AC.10/C.4/2022/18 (European Union)

Informal documents: INF.24 and INF.25 (European Union)
 INF.33 (CropLife International)
 INF.38 (ICCA)
 INF.39 (European Union, United States of America)

51. On document ST/SG/AC.10/C.4/2022/18, some delegations were of the opinion that the current state of science on test guidelines and test methods, available data and lack of consensus on how to address substances with the properties listed in the proposal from the European Union did not justify the development of new hazard classes and/or additional labelling provisions in the GHS. They considered that the hazardous characteristics targeted by the proposal were (or could be) covered by existing hazard classes in the GHS and challenged their characterization as intrinsic hazards. They pointed out that additional information on these properties could be included in the Safety Data Sheet, instead of introducing additional label elements as they felt this would not necessarily result in increased safety. It was mentioned that consensus should be achieved first at international level on how to address these properties before considering starting the work at the Sub-Committee. Concerns were also voiced regarding the additional challenge that the results of this work could represent for countries in earlier stages of implementation of the GHS as regards availability of resources and knowledge to ensure effective application at national level. They concluded that the options and considerations outlined in informal documents INF.33 and INF.38, as well as others mentioned during the discussion (e.g.: consider using Annex 11 of the GHS to address the topic) should be taken into account before taking a decision on a possible way forward.

52. Many delegations supported addressing endocrine disruptors for human health and endocrine disruptors for the environment; as well as persistent, bioaccumulative, toxic (PBT); very persistent, very bioaccumulative (vPvB); persistent, mobile, toxic (PMT); and very persistent, very mobile (vPvM) substances in the GHS. In particular, one delegation welcomed the ambitious agenda towards a higher level of protection of human health and environment and development of safer alternatives. Several other delegations considered that the approach proposed in informal document INF.39 providing more structure to the scope of the work and outlining a stepwise approach to maintaining consistency with existing hazards and hazard classes addressed in the GHS, would allow the Sub-Committee to take into account all the issues and concerns raised. In particular, it would allow involvement of experts from all disciplines; the possibility to receive feedback from all stakeholders (including industry representatives and OECD and non-OECD members, among others); and consideration of the best available scientific knowledge and data, while offering the possibility to explore other options.

53. Having heard the opinions of all those who requested the floor, the Sub-Committee welcomed the proposal from the European Union to lead an informal working group on the basis of the terms of reference and workplan contained in informal document INF.39, and decided to include a new item on its programme of work for 2023-2024. It was noted, however, that it would not be appropriate to refer to “unaddressed hazards”. Following a proposal by the expert from the United Kingdom, the Sub-Committee agreed to rename the item to read “potential hazard issues and their presentation in the GHS”. Noting in addition that the scope of the work of the informal working group addressed several endpoints, the Sub-Committee suggested that the work could be shared by other experts as co-leaders responsible for a particular endpoint, on the understanding that this would be done in coordination with the representative of the European Union as the main lead of the work of the informal working group and the overall supervision of the Sub-Committee. Interested experts were invited to contact the representative of the European Union.

Consolidated programme of work for 2023-2024

54. Based on the proposals discussed and approved under this and other agenda items during this and previous sessions, the Sub-Committee agreed to its programme of work for 2023-2024 (see annex III).

IX. Draft Resolution 2023/... of the Economic and Social Council (agenda item 8)

Informal document: INF.10 and INF.10/Rev.1 (secretariat)

55. The Sub-Committee adopted the proposed draft resolution to be submitted to the Economic and Social Council for consideration at its 2023 session.

56. On a question from the expert from the Netherlands on the possibility to continue to use hybrid meetings to facilitate participation from countries which may not be able to participate regularly in the sessions when they take place in-person, a member of the secretariat explained that the measures taken during the pandemic to ensure business continuity were to be considered exceptional. It was pointed out in particular that hybrid meetings had not been formalized and that in the absence of a decision at General Assembly or ECOSOC level to formalize them, they were considered informal meetings and therefore subject to the limitation of entitlements associated to this status, such as provision of conference and secretariat services (including interpretation and official documentation) among others. Experts were invited to contact their representatives at the General Assembly or ECOSOC to address this issue.

X. Election of officers for the biennium 2023-2024 (agenda item 9)

57. It was recalled that according to rule 68 of the rules of procedure “all elections shall be held by secret ballot, unless, in the absence of any objections, the [Sub-Committee] decides to proceed without taking a ballot on an agreed candidate or slate”.

58. In the absence of a request for a secret ballot and following the proposals by the United States of America and Germany, the Sub-Committee elected Ms. Nina John (Austria) as chairperson and Ms. Lynn Berndt-Weis (Canada) as vice-chairperson for the period 2023-2024.

XI. Other business (agenda item 10)

A. Meeting dates and submission deadlines for the forty-fourth session

59. The Sub-Committee was invited to note the meeting dates and document submission deadlines for its forty-fourth session as follows:

- (a) Meeting dates: 10-12 (morning) July 2023
- (b) Deadline for submission of official documents: 14 April 2023 (for documents submitted for consideration by the GHS Sub-Committee only) and 7 April 2023 (for documents submitted for consideration by both sub-committees, i.e.: TDG and GHS)

60. It was also noted that a provisional calendar of meetings for the period 2023-2024 had been circulated by the secretariat in document ST/SG/AC.10/49 for consideration and approval by the Committee of Experts at its eleventh session¹.

¹ <https://unece.org/info/Transport/Dangerous-Goods/events/369883>

B. Tributes

61. The Sub-Committee was informed that Ms. Maureen Ruskin, who had chaired the Sub-Committee since July 2013 would retire by the end of the year and would no longer attend the sessions. The Sub-Committee expressed its appreciation and gratitude for her work and leadership as Chair of the Sub-Committee over the last 10 years. Her capacity to ensure fair and open discussions and to direct them to find agreement through consensus was particularly highlighted.

62. The Sub-Committee was also informed that Ms. Laurence Berthet, who has been servicing the meetings of the Committee of Experts and its two sub-committees since 2007 as a member of the secretariat, had announced her intention to retire next year. The Sub-Committee expressed its appreciation for the hard work, support and dedication shown during the past 15 years.

63. The Sub-Committee wished them a happy and long retirement.

XII. Other business (agenda item 11)

64. Since no document was submitted no discussion took place under this agenda item.

XIII. Adoption of the report (agenda item 12)

65. The Sub-Committee adopted the report on its forty-third session, and its annexes, on the basis of a draft prepared by the secretariat.

Annex I

[Original: English and French]

Draft amendments to the ninth revised edition of the Globally Harmonized System of Classification and Labelling of Chemicals (ST/SG/AC.10/30/Rev.9)

Document ST/SG/AC.10/C.4/2022/14, adopted as amended by informal document INF.8 and as shown in full in INF.3/Rev.1 as follows, with an additional amendment to 3.4.2.2.4.3 as follows:

References: Replace “doi” and “DOI” with “Doi”; delete “Epub 2016 Dec 10. PMID: 27965148” at the end of the reference entry for Saito K, et al; and delete “PMID: 18498452” at the end of the reference entry for Wright ZM, et al;

Insert the following reference below the entry for Johansson H., Gradin R., et al”:

“Jowsey IR, Clapp CJ, Safford B, Gibbons BT, Basketter DA. (2008). The impact of vehicle on the relative potency of skin-sensitizing chemicals in the local lymph node assay. *Cutan Ocul Toxicol*: 27 (2); 67-75. Doi: [10.1080/15569520801904655](https://doi.org/10.1080/15569520801904655).”

Delete the references “OECD (2012)”; “OECD 2016a”; and “OECD 2016b”.

Replace “Available at [<https://doi.org/10.1787/9789264221444-en>]” with “Doi.org/10.1787/9789264221444-en” at the end of the reference entry for “OECD (2014)”.

Insert the following reference below the entry for “OECD (2014)”:

“OECD (2017), Guidance Document on the Reporting of Defined Approaches and Individual Information Sources to be Used within Integrated Approaches to Testing and Assessment (IATA) for Skin Sensitisation, OECD Series on Testing and Assessment, No. 256, OECD Publishing, Paris. Doi.org/10.1787/9789264279285-en.”

Insert the following reference below the new reference for “OECD (2017)”:

“Ryan CA et al. (2007): Extrapolating local lymph node assay EC3 values to estimate relative sensitizing potency. *Cutan Ocul Toxicol* 26(2), 135-45.”

- 3.4.2.2.1.4 Replace “weight-of-evidence” with “weight of evidence” and amend the text between brackets at the end of the paragraph to read: “(see 1.3.2.4.9 and 3.4.2.2.7.6).”
- 3.4.2.2.4.1 In the brackets of footnote “3” referenced at the end of the fourth sentence, replace “OECD 2016b” with “OECD (2017)”
- 3.4.2.2.4.2 Insert “in Tier 1 is inconclusive and thus” after the words “outcome of a defined approach”.
- 3.4.2.2.4.3 Amend to read as follows:
 “3.4.2.2.4.3 Individual evidence used within a defined approach should not also be used outside of that defined approach.”
- 3.4.2.2.5.1 Replace “see OECD, 2014” with “see OECD (2014)”.
- 3.4.2.2.5.2 Replace “non-stand alone” with “non stand-alone”; and delete the last sentence “When already... (see 3.4.2.2.7.4)”.
- 3.4.2.2.5.3 and related footnote 4 Replace “3.4.5.3.6.1” with “3.4.5.3.6.2”.
- 3.4.2.2.6.1 Delete the second and third sentences “Specific non-test methods...(see 3.4.2.2.7.4)”.
- 3.4.2.2.7.3 In the first sentence: replace “non-stand alone” with “non stand-alone”; replace “,” with “or” after “*in chemico/in vitro* methods” and delete “or low

- confidence/inconclusive results from defined approaches”. In the second paragraph, replace “weight-of-evidence” with “weight of evidence assessment”; and delete sub-paragraph (c).
- 3.4.2.2.7.4 Replace “non-stand alone” with “non stand-alone”.
- 3.4.2.2.7.5 In the first sentence, replace “non-stand alone” with “non stand-alone”; replace “;” with “and” after “international procedures”; delete “and low confidence/inconclusive results from defined approaches”; and replace “weight-of-evidence” with “weight of evidence”.
- 3.4.2.2.7.6 Replace “weight-of-evidence” with “weight of evidence assessment” in the first sentence; and “weight-of-evidence” with “weight of evidence” in the second paragraph.
- 3.4.2.2.7.7 Replace “approach” with “assessment” at the end of the paragraph.
- Figure 3.4.1 In the “Tier 2” text box, replace “non-stand alone” with “non stand-alone”; insert “(see 3.4.2.2.4.2 and 3.4.2.2.7.3)” after “Tier 1”; and delete “and/or low confidence/inconclusive results from defined approaches (see 3.4.2.2.4)”.
In the “Tier 3” text box, replace “weight-of-evidence” with “weight of evidence”.
- 3.4.5.2 Decision logic 3.4.2 for skin sensitization:
Amend the text in the central box starting with “(a) is there evidence in humans...” to read: “Is there evidence that the substance/mixture fulfils the criteria as described in 3.4.2.2.2.2 to 3.4.2.2.2.8 for substances and in 3.4.3.1 for mixtures”.
- 3.4.5.3.1 Replace “OECD, 2014” with “see OECD (2014)”.
- 3.4.5.3.2.1 In the last sentence, replace “the criteria in 3.4.2.2.2 are provided” with “the criteria in 3.4.2.2.2 is provided”.
- 3.4.5.3.2.2 In the last but one sentence, replace “clinical settings and” with “clinical settings and in general”.
- 3.4.5.3.2.3 Replace “COIMS” with “CIOMS”.
- 3.4.5.3.2.4 In the fourth sentence, replace “man and/or well documented” with “humans and/or well documented”.
- 3.4.5.3.2.6 In the last but one sentence replace “weight of evidence” with “weight of evidence assessment”.
- 3.4.5.3.2.7 In the first sentence, replace “at DSA (dose per skin area)” with “at a DSA (dose per skin area)” and “ruled” with “ruled out”. In the third sentence, replace “at DSA” with “at a DSA”. At the beginning of the fourth sentence, replace “but, while classification” with “However, while classification”.
Amend the last two sentences to read: “However, a negative test result at a concentration of 100% can justify no classification (based on this test). Nevertheless, negative results at low concentrations may be informative for mixtures containing the substance at similar and lower concentrations.”.
- 3.4.5.3.3 Replace the paragraph with the following text (the heading remains unchanged):
“3.4.5.3.3.1 The most common assays used for dermal sensitization testing in animals are the Local Lymph Node Assay (LLNA, OECD Test Guidelines 429 and 442A and 442B), the Guinea Pig Maximization Test (GMT, OECD Test Guideline 406) and the Buehler test (OECD Test Guideline 406). When evaluating the quality of the study, consideration should be given, as relevant, to the strain of the mouse and guinea pig used, the number, age, and sex of the animals, and the test conditions used (e.g., preparation of patch test site, dose level selection, chemical preparation, positive and negative test controls).

3.4.5.3.3.2 OECD test guidelines for the LLNA include the radioactive assay (OECD Test Guideline 429) and non-radioactive assays (OECD Test Guideline 442A and 442B; LLNA:DA, LLNA:BrdU-ELISA, and LLNA:BrdU-FCM). In these tests, sensitizers are characterised by increasing the group mean Stimulation Index (SI, a measure of lymph node proliferation) in treated groups vs. concurrent vehicle controls by more than a predefined critical value which is different for each form of the LLNA (e.g., $SI \geq 3$ for the radioactive LLNA, $SI \geq 1.6$ for the LLNA:BrdU-ELISA). For sensitizers, sub-categorization is performed based on the effective concentration (EC) causing an increase in SI of exactly the critical magnitude (e.g. the EC3 under OECD Test Guideline 429 is the concentration leading to an exactly threefold increase in group mean SI vs. control).

3.4.5.3.3.3 The respective OECD Test Guidelines for the different LLNA variants specify that a pre-screen test should be undertaken to determine the highest concentration to be tested. If such a test has not been performed and the LLNA was carried out with a test concentration < 100%, a rationale (e.g. based on solubility, local or systemic toxicity, see OECD Test Guidelines 429, and 442A and 442B) needs to be provided that the highest test concentration represents the maximum testable concentration. Otherwise, the reliability of a negative test result has to be considered compromised.

3.4.5.3.3.4 EC values are normally obtained by interpolation between adjacent test concentrations, i.e. between the highest test concentration causing an SI below, and the lowest test concentration causing an SI above the critical value. However, care must be taken when the EC value falls below the lowest concentration tested and can therefore only be estimated by extrapolation, which is associated with additional uncertainty. In some cases, the SI at the highest concentration tested falls only slightly below the critical SI value, which raises the question of upward extrapolation (unless the maximum testable concentration has been applied). These and other issues regarding the reliability of LLNA results are further discussed in Ryan et al. (2007) and Annex 3 of OECD Series on Testing and Assessment No. 336 (Supporting Document to OECD Guideline Document 497), which also provides a highly curated database of Test Guidelines 429 LLNA EC3 values.

3.4.5.3.3.5 Further limitations have been identified for the radioactive and non-radioactive LLNAs. For example, substances containing certain functional groups may interfere with the accuracy of the assay. These limitations as well as the possibility of borderline positive results are described in OECD Test Guidelines 429, and 442A and 442B. Variability in EC values for the same substance may also be the result of the vehicle used. For example, analysis has shown an underestimation of potency (i.e., higher EC3 values) with predominantly aqueous vehicles or propylene glycol (see Jowsey, 2008).

3.4.5.3.3.6 For OECD Test Guideline 406, the concentration of test chemical used for each induction exposure should be systemically well-tolerated using the highest dose to cause mild-to-moderate skin irritation. The concentration used for the challenge exposure should be the highest non-irritant dose. A positive result in a guinea pig test is defined as a grade above zero according to the applicable grading scale such as the Magnusson and Kligman grading scale for OECD Test Guideline 406 at one or more of the two observation time-points. A grade of 0.5, which is sometimes reported, is therefore also considered a positive result.”

3.4.5.3.5 Replace “due to the limited mechanistic coverage” with “due to their limited mechanistic coverage”; “these methods provides quantitative information,” with “these methods provide quantitative information,”; “for the purposes of subcategorization into sub-category 1A and subcategory 1B” with “for the purposes of subcategorization into sub-categories 1A and 1B”; “weight-of-evidence” with “a weight of evidence assessment”; and “non-stand-alone” with “non stand-alone”.

Delete “UN GHS”. In the last sentence, replace and amend the last sentence as follows: “Therefore, the GHS also allows a competent authority to decide that a positive result with one of these non stand-alone *in chemico/in vitro* methods, may be used on its own to classify in category 1 and whether Test Guideline 442C (Appendix III) kinetic Direct Peptide Reactivity Assay (kDPRA) can be used to differentiate between category 1A and no category 1A.”

3.4.5.3.6.1 Replace “3.4.5.3.6.1” with “3.4.5.3.6.2”; “or assessment of skin sensitizing potency” with “or the assessment of skin sensitizing potency”; and “weight-of-evidence” with “weight of evidence assessment”.

3.4.5.3.7 Replace paragraph 3.4.5.3.7 with the following text:

3.4.5.3.7 Guidance on the weight of evidence assessment for classifying substances and mixtures for skin sensitization

3.4.5.3.7.1 There may be situations where results from tests and/or non-test methods are available but disagree with each other with respect to the classification. In these situations, the tiered approach to classification for skin sensitization requires a weight of evidence assessment consistent with the principles elaborated in sections 1.3.2.4.2 and 1.3.2.4.9 on test data quality and weight of evidence, respectively. In addition, some guidance on the weight of evidence assessment specific for skin sensitisation is provided below which can be applied when the general principles do not result in a conclusion on the classification. It should be noted that human and animal results for a substance obtained at low concentrations may still be informative for classifying a mixture containing the substance at similar or lower concentrations.

3.4.5.3.7.2 Mutual compatibility of study results

3.4.5.3.7.2.1 In cases where results are in disagreement with each other (e.g., not classified vs. category 1, sub-category 1A or 1B; sub-category 1A vs. 1B), a weight of evidence assessment becomes necessary. However, less obvious situations may also occur such as where certain studies may point to not classified or sub-category 1B, while it cannot be excluded that a stricter classification might have resulted under a different dosing regime. For example, a negative HMT result at a dose per skin area of 100 µg/cm² cannot exclude that a positive result might have been obtained at e.g., 300 µg/cm² (sub-category 1A) or 700 µg/cm² (sub-category 1B). The same holds for LLNA test results obtained from tests which have not been carried out using the highest possible test concentration (see OECD test guideline 429 for details).

3.4.5.3.7.2.2 In the following ambiguous cases, study results for substances and mixtures would not be in disagreement with another study result pointing at that stricter classification:

- (a) A not classified result obtained at a lower test concentration does not exclude the possibility of a sub-category 1B outcome at a higher test concentration. Therefore, a not classified result obtained at a low concentration is compatible with other not classified outcomes, or with category 1 and sub-category 1B outcomes obtained at higher test concentrations.
- (b) A not classified result at a very low-test concentration does not even exclude a possible outcome of sub-category 1A at a higher test concentration. Therefore, a not classified outcome obtained at a very low-test concentration is compatible with all possible classification outcomes (i.e., not classified, category 1, sub-category 1A or 1B) obtained at higher test concentrations.
- (c) A sub-category 1B result at a higher test concentration does not exclude a sub-category 1A outcome at a lower test concentration. Therefore, a Category 1B classification tested at a high-test concentration is

compatible with other outcomes of sub-category 1B, or even sub-category 1A, obtained at lower test concentrations.

3.4.5.3.7.2.3 If at least one unambiguous study result allows for sub-categorisation of a substance or mixture and all other study results are not in disagreement (see above), then it can be classified into a sub-category. For example, if all study results are in the same sub-category (i.e., sub-category 1A or 1B), or with at least one study permitting sub-categorisation (i.e., either sub-category 1A or 1B) and all other studies classified into category 1 without sub-categorisation, then the substance or mixture can be sub-categorised.

3.4.5.3.7.3 Weight of evidence considerations for giving one study result more weight than another.

3.4.5.3.7.3.1 Some classifiers or competent authorities may take various approaches to evaluate study results given the required level of expert judgement (see 1.3.2.4.8) required to perform a weight of evidence assessment. Competent authorities may specify their preferred approach in their own guidance. For example, through:

- (a) Applying a precautionary approach, giving more weight to studies resulting in the stricter classification outcome.
- (b) Giving human data higher weight than animal or non-test data.
- (c) Giving certain animal data (e.g., LLNA data) more weight than other animal data (e.g., Buehler test data).

3.4.5.3.7.3.2 Often, several results (of the same or different type) may have to be considered in the weight of evidence assessment. There are no generally recognised rules for this situation, however, possible solutions to integrating several results of the same type may include, for example:

- (a) A precautionary approach where the strictest classification outcome from all studies of sufficient quality is assigned as the overall classification outcome.
- (b) Averaging the obtained dose descriptors (e.g., LLNA EC3 values) or classification outcomes (no classification, Category, 1, 1A, 1B). A detailed discussion of such approaches can be found in Annex 3 (on LLNA data) and Annex 4 (on HMT/HRIPT data) of OECD Series on Testing and Assessment No. 336 (Supporting document to OECD Guideline Document 497).²

Table 3.4.7 Replace “Method described in Annex IV ^a” with: “Method described in Annex IV Genomic Allergen Rapid Detection for assessment of skin sensitizers ^a” in row two under the column “OECD Test Guideline 442E *In vitro* skin sensitization...”.

Document ST/SG/AC.10/C.4/2022/15: adopted as amended by informal document INF.9, with an additional amendment to 3.2.2.6.1 and 3.3.2.3.3, as follows:

- 3.2.2.6.1 At the beginning of the second sentence, replace “Such methods” with “Non-test methods”.²
- 3.3.2.3.3 Amend to read as follows:
 - “3.3.2.3.3 Individual evidence used within a defined approach should not also be used outside of that defined approach.”.
 - 3.3.2.4.2 Delete the last sentence (“When already...line of evidence”).
 - 3.3.2.8.1 Delete the second and third sentences (“Specific non-test methods...line of evidence”).

² *Note by the secretariat* : The amendment to 3.2.2.6.1 refers to current text in the GHS.

Document ST/SG/AC.10/C.4/2022/13: adopted with the amendments to 3.2.2.8.1, 3.3.2.10.1 and 3.3.5.3.4.2 in document ST/SG/AC.10/C.4/2022/21 (amendments to address item 2), and the corrections to 3.2.2.7.1 in informal document INF.15 and to Chapter 1.2 in informal document INF.31, as follows:

3.2.2.7.1 Insert “using expert judgement” after “evidence assessment”.

Chapter 1.2 Insert the following definition in the alphabetical order:

“*IATA* means “Integrated Approach on Testing and Assessment”;

Document ST/SG/AC.10/C.4/2022/8: proposals 3 and 4 adopted.

Informal document INF.22: adopted as follows:

2.7.1 Add the following definition under the definition of “Readily combustible solids” “Metal powders are powders of metals or metal alloys.”.

2.7.2.2 Replace “Powders of metals or metal alloys” with “Metal powders”.

Document ST/SG/AC.10/C.4/2022/21 (amendments addressing items 1 (paragraph 4 only), 4, 5, 6, 7, 8 and 9: adopted as corrected in informal document INF.7, as follows:

In the amendments to address Item 7, under paragraph 15, replace “3.1.3.5.6” with “3.1.3.5.7” (three times).

Document ST/SG/AC.10/C.4/2022/16: adopted as amended by INF.19, as follows:

In the proposed text for A3.2.4.4, in the second to last sentence, delete “with the chemical” after “If additional information is provided”.

Document ST/SG/AC.10/C.4/2022/10: adopted as amended in INF.35, as follows:

2.17.2.1 and 2.17.2.2 In the first sentence, replace “An explosive which is phlegmatized” with “A phlegmatized explosive”, and “considered in this class” with “considered for inclusion in this class”.

2.17.2.2 (b) in subparagraphs (i), (ii) and (iii), replace “according to” with “in accordance with”.

2.17.2.2 (c) Amend the beginning of the sentence to read: “it presents no mass explosion hazard and has a corrected burning rate...” and replace “according to” with “in accordance with”.

2.17.2.2 Amend the beginning of the note under paragraph 2.17.2.2 to read: “*Phlegmatized explosives which do not meet the criteria of...*”

2.17.2.3 Replace “according to Appendix 10” with “in accordance with Appendix 10”.

Amend the note under 2.17.2.3 as follows: “**NOTE:** *Nitrocellulose mixtures containing no explosives other than nitrocellulose, do not need to meet the criterion of 2.17.2.2 (b) (ii).*”

2.17.2.4 Replace “using the test “burning rate (external fire)”” with “determined using the burning rate (external fire) test”.

2.17.4.1 In the second sentence, replace “For nitrocellulose, additional data for the stability” by “Where a mixture contains nitrocellulose, additional data for the stability of the nitrocellulose”.

Decision logic 2.17.1: Reverse the order of the boxes referring to “Test series 3” and “Test 6 (a), 6 (b)” and replace “according to” with “in accordance with” in the box leading to classification in accordance with Chapter 2.1. In footnote 2 to the decision logic, replace “no other explosives than” with “no explosives other than”.

Document ST/SG/AC.10/C.4/2022/11: adopted as amended, as follows:

The amendment to 2.6.4.2.4 should read:

“2.6.4.2.4 Amend to read as follows:

“2.6.4.2.4 If data are not available, the flash point and the initial boiling point should be determined through testing. The flash point should be determined by a closed-cup test method. Open-cup tests are acceptable for liquids which cannot be tested in closed-cup test methods (e.g., due to their viscosity) or when open-cup test data is already available. In these cases, 5.6 °C should be subtracted from the measured value because open-cup test methods generally result in higher values than closed-cup methods.”

Document ST/SG/AC.10/C.4/2022/19: adopted as amended by informal document INF.23, as amended, as follows:

Replace the note to tables 3.4.4 and 3.4.5 in paragraphs 17 and 18 with the following:

“Note: For the LLNA: BrdU-ELISA, sub-categorization criteria (1A: EC1.6 value ≤ 6%, 1B: EC1.6 value > 6%, Maeda and Takeyoshi, 2019; Kobayashi et al., 2020) have been proposed and validated by the OECD, but no sub-categorization criteria have yet been agreed internationally. Validated sub-categorization criteria may still be accepted by some competent authorities. A competent authority may decide which sub-categorization criteria, if any, should be applied for this test method.

As for the LLNA: DA and LLNA: BrdU-FCM, there are currently no validated and internationally agreed criteria for subcategorization of skin sensitizers. Therefore, these test methods can only be used to conclude on either classification in category 1 or no classification.”.

In paragraph 17, delete the following instructions for amendment:

“Under the first column “Assay”, after the row for “Local lymph node assay”, insert a new row: “Local lymph node assay: BrdU-ELISA”.

Under the second column “Criteria”, for the new row for “Local lymph node assay: BrdU-ELISA”, insert “EC1.6 value ≤ 6%”.

In paragraph 18 delete the following instructions for amendment:

“Under the first column “Assay”, after the table entry for “Local lymph node assay”, insert a new table entry: “Local lymph node assay: BrdU-ELISA”.

Under the second column “Criteria”, for the new entry for “Local lymph node assay: BrdU-ELISA”, insert “EC1.6 value > 6%”.

Document ST/SG/AC.10/C.4/2022/14, list of references: adopted as amended by informal document INF.23 as follows:

Insert the following references in alphabetical order in the references list of ST/SG/AC.10/C.4/2022/14 as proposed in INF.23:

“Kobayashi T., Maeda Y., Kondo H., Takeyoshi M. (2020) Applicability of the proposed GHS subcategorization criterion for LLNA:BrdU-ELISA (OECD TG442B) to the CBA/J strain mouse. *Journal of Applied Toxicology*. 40(10):1435-1439

Maeda Y., Takeyoshi M. (2019) Proposal of GHS sub-categorization criteria for LLNA: BrdU-ELISA (OECD TG442B). *Regulatory Toxicology and Pharmacology*. 107:104409”.

Document ST/SG/AC.10/C.4/2022/20: adopted with the following modification:

A9.7.2.2.4.1 In new footnote 6, in the second sentence, at the end, replace “8.5” with “8”.

Annex II

[Original: English and French]

Corrections to the ninth revised edition of the Globally Harmonized System of Classification and Labelling of Chemicals (ST/SG/AC.10/30/Rev.9)

Annex 3, section 2, sub-paragraph A3.2.5.4.1 (c), paragraph A3.2.5.4.1 example 2 and table A3.2.3, precautionary statement P318

The correction does not apply to the English version

Annex 3, section 3, tables for germ cell mutagenicity, carcinogenicity and reproductive toxicity, precautionary statement P318

The correction does not apply to the English version

Annex 3, section 2, paragraph A3.2.5.4.1 c)

The correction does not apply to the English version

(Reference document: informal document INF.20)

Annex III

Programme of work of the Sub-Committee for 2023-2024

1. Classification criteria and related hazard communication, including:

- (a) Tests for oxidizing liquids and oxidizing solids
Focal point: TDG Sub-Committee
Terms of reference: informal documents INF.22 (thirty-sixth session), INF.19 (thirty-fifth session) and report of the Sub-Committee on its thirty-sixth and thirty-ninth sessions (ST/SG/AC.10/C.4/72, paragraph 19 and ST/SG/AC.10/C.4/78, paragraph 13). See also paragraph 46 of the present report.
- (b) Use of non-animal testing methods for classification of health and environmental hazards
Focal points: Netherlands and United Kingdom
Terms of reference and workplan: informal document INF.16 (forty-third session). See also paragraph 49 of the present report
- (c) Classification criteria for germ cell mutagenicity
Focal point: Informal working group on germ cell mutagenicity (work organised by the Joint Research Centre (JRC) of the European Commission)
Terms of reference: ST/SG/AC.10/C.4/2021/3 as amended by informal document INF.24 (fortieth session). See also paragraphs 20 and 49 of the present report.
- (d) Practical classification issues
Focal point: United States of America
Terms of reference and workplan: ST/SG/AC.10/C.4/2022/21, paragraph 2 and informal documents INF.34 and INF.14 (forty-third session). See also paragraphs 49 and 50 of the present report.
- (e) Nanomaterials
Terms of reference: informal document INF.27 (thirty-second session) and reports of the Sub-Committee on its thirty-second, thirty-sixth and thirty-eighth sessions (ST/SG/AC.10/C.4/64, paragraph 32; ST/SG/AC.10/C.4/72, paragraph 42; ST/SG/AC.10/C.4/76, paragraph 24) and paragraph 47 of the present report.
- (f) Simultaneous classification in physical hazard classes and precedence of hazards
Focal point: Germany
Terms of reference: ST/SG/AC.10/C.4/2018/21, as amended and report of the Sub-Committee on its thirty-sixth session (ST/SG/AC.10/C.4/72, paragraph 74). See also paragraphs 16 and 49 of the present report.
- (g) Potential hazard issues and their presentation in the GHS
Focal point: European Union
Terms of reference and workplan: ST/SG/AC.10/C.4/2022/18 as amended in informal document INF.39 (forty-third session) and paragraphs 51 to 53 of the present report.

2. Other hazard communication matters, including:

- (a) Practical labelling issues
Focal point: Cefic
Background document: informal document INF.32 (forty-third session). See also paragraph 49 of the present report.

- (b) Improvement of Annexes 1 to 3 and further rationalization of precautionary statements

Focal point: United Kingdom

Terms of reference and workplan: informal document INF.17 (forty-third session). See also paragraph 49 of the present report.

- (c) Hazard communication for gases addressed in the Montreal Protocol and other Conventions

Focal points: Austria, United Kingdom, United States of America, European Union

Terms of reference and workplan: informal document INF.37 (forty-third session). See also paragraphs 32 and 47 of the present report.

3. Implementation issues, including:

- (a) Assessing the possible development of a list of chemicals classified in accordance with the GHS

Focal points: Canada and United States of America

Terms of reference and workplan: informal document INF.30 (forty-third session). See also paragraph 49 of the present report.

- (b) Facilitate the coordinated implementation of the GHS in countries and monitor the status of implementation of the GHS

- (c) Cooperate with other bodies or international organizations responsible for the administration of international agreements and conventions dealing with the management of chemicals to give effect to the GHS through such instruments

4. Guidance on the application of the GHS criteria, including:

Development of examples illustrating application of criteria and any related hazard communication issues, as needed

Focal point: United States of America

Terms of reference: informal document INF.31 (thirty-ninth session), ST/SG/AC.10/C.4/78, paragraph 27 and informal document INF.34 (forty-third session). See also paragraphs 49 and 50 of the present report.

5. Capacity building, including:

- (a) Review reports on training and capacity-building activities

- (b) Provide assistance to United Nations programmes and specialized agencies involved in training and capacity-building activities, such as UNITAR, ILO, FAO and WHO/IPCS through the development of guidance materials, advice with respect to their training programmes and identification of available expertise and resources.