

UN/SCETDG/19/INF.18 (agenda item 11 (a))
UN/GHS-SC/1/INF.6 (agenda item 6)

**INTER-ORGANIZATION PROGRAMME FOR THE
SOUND MANAGEMENT OF CHEMICALS (IOMC)**

**ILO/HC7/01.7
21.06.2001**

Global Harmonization of Chemical Classification and Labelling Systems

**7th Meeting of the ILO Working Group for the
Harmonization of Chemical Hazard Communication
Geneva, 21-24 May 2001**

DRAFT RECORD

Opening, adoption of agenda and record of the seventh meeting

1. Dr Pratt began by welcoming participants to the seventh and final meeting of the Working Group. She emphasized the progress that had been made in previous meetings and stressed the need to work constructively towards a final agreement. A list of participants is at **Annex I**. Dr Takala, Director of ILO's SafeWork Programme welcomed the participants on behalf of Dr. Somavia, Director General of the ILO.

2. Dr Takala recalled the long and distinguished history of the GHS's development and ILO's involvement. He impressed upon participants the high expectations of countries, particularly developing countries and stressed that a positive resolution from the meeting would have a dramatic effect on international chemical safety standards. He believed this was truly a historic opportunity for the ILO and the IOMC.

3. Dr Pratt thanked Dr Takala for his words of inspiration and encouragement to the meeting and read participants a letter from Dr Cavalcanti, President of the IFCS. He wished to encourage participants reach a conclusion that would enhance the safe use of chemicals on a global scale, and was honoured that Brazil was represented at the meeting and would play a part in that process. Dr Pratt asked participants to bear his words in mind throughout the meeting and recognise the importance of the agreement that lay ahead.

4. Dr Pratt recorded apologies from Michele Sullivan and noted that Peter Robson would be representing IOE in her absence. She reminded participants of the positive contribution that Ms Sullivan had made to the development of the hazard communication work over the years and asked the meeting to record its thanks to her. She then introduced the agenda (IOMC/ILO/HC7/01.1) and outlined the meeting documents. A number of room documents had been received in the week prior to the meeting which had not been posted to the web-site. These were (sorry haven't got a note of what these are!)

5. The record of the sixth meeting was agreed with two minor amendments:

paragraph 49, final sentence – change 'would' to 'could'.

paragraph 51, final sentence – 'redundancey' to 'repetition'.

Presentation of the Step 3 Document ‘Proposed harmonisation of hazard communication in the globally harmonised system’

5. Ms Wyeth presented the Step 3 document (IOMC/ILO/HC7/1.2/3/4). She began by thanking all members of the Drafting Group who had met in January 2001 in Washington to develop a basis for the Step 3 proposal and who had met extensively via teleconferences to reach consensus on a number of difficult issues. The Drafting Group had been expanded to include Roque Puiatti and Hiroshi Jonai to ensure the consensus was sufficiently wide. Ms Wyeth explained that the Drafting Group had managed to reach agreements on a number of difficult areas, particularly CBI, working definitions, precautionary statements, use of symbols and special labelling requirements. The text had been circulated to the Working Group in March and subsequent amendments made based on the feedback.

6. The secretariat had proposed a compromise Annex I concerning the allocation of label elements. This was because the Drafting Group had made considerable progress in developing the annex at its meeting in Washington, but many options had remained for certain classes. The secretariat had attempted to clarify matters as a basis for further discussion and believed the compromise was a fragile balance of interests. It hoped that further compromises would be made to strengthen this. Finally she gave examples of the areas where further refinements to the text were necessary to help reach a consensus. But she emphasised that no problems were insurmountable and an agreement was possible.

7. Dr Pratt thanked Ms Wyeth for the presentation and preparation of the documents. She drew participants’ attention to the key issues that confronted the Working Group and reminded them of the progress that had been made thus far, particularly concerning labelling. She believed the major challenges were the assignment of label elements, product identification and the content of data sheets. The meeting would ensure sufficient time was given to resolving these issues through meeting breaks where necessary to allow for informal discussion.

Part A (IOMC/ILO/HC7.01.2)

Objectives and scope

8. Mr Wright on behalf of Labour asked that the summary of principles include a reference to the right to know principle. It was agreed that this point should be included as the second point in paragraph 8.

Life-cycle

9. Mr Haas on behalf of the IOE asked for clarification on the position regarding cosmetics. Dr Pratt confirmed that the GHS would apply to cosmetics in the same way that it applied to pharmaceuticals.

Application of the harmonised hazard communication system

10. Mr Haas drew participants’ attention to the room document prepared by CEFIC (sorry forgotten this!) concerning the need for greater harmonisation. Whilst he appreciated the reasons which prevented further harmonisation, CEFIC wished to express its support for greater harmonisation in the future.

Working Definitions

11. There were two issues raised. First on the use of terminology to describe the classification criteria. Some participants were concerned that the use of hazard class to describe the nature of the hazard, rather than the division of the criteria for the hazard, was at odds with the terminology used in

the OECD and UN RTDG. Ms Wyeth clarified that the terms were not used consistently by these organisations where danger level would roughly equate to the OECD use of hazard class. The use of the term hazard level had caused some confusion because within the UN RTDG it designated severity of hazard and this was used to compare severity across different hazards. Mr Jonai was concerned that the terms category and class could not easily be translated to maintain the distinction. Following discussion it was agreed to continue using the terms hazard category and class for the purposes of the Step 3 document, but the IOMC Co-ordinating Group would be asked to consider the point further.

12. The second issue concerned the terms used for product identification. On technical names it was agreed that the definition should also include those names widely used in codes and regulations, as well as those used in commerce.

Standardisation

13. A number of participants wished to clarify the text of paragraph 27 in relation to precautionary statements and it was agreed to add the following text:

“ Whilst precautionary information was considered for standardisation, there was insufficient time to develop detailed proposals. However, there are examples of precautionary statements in Annex II of Part B, and examples of precautionary pictograms in Annex III. It remains a goal to develop them into fully standardised label elements.”

14. Mr Robson on behalf of IOE raised an issue relating to labeller discretion to add supplemental information to the hazard statement, rather than elsewhere on the label where this was more appropriate. It was agreed to add the following text:

“The labeller should have the option of providing supplementary information related to the hazard, such as physical state or route of exposure, with the hazard statement rather than in the supplementary information section on the label.”

Updating Information

15. Mr Robson on behalf of the IOE asked for clarification on how the reference to responding to information should be interpreted in relation to timescales. Following discussion it was not considered appropriate to specify a timescale, rather to allow some flexibility. It was therefore agreed to add text to clarify that information should be updated in an appropriate and timely manner.

Confidential Business Information

16. Ms Wyeth explained the background to developments since the Rome meeting. A small working party had continued to consider the principles outlined in the ILO Code of Conduct for the Use of Chemicals at Work and their application to other use-settings, particularly consumers. The working party had met in January 2001 in Washington and agreed the changes to the framework which were reflected in paragraphs 30 – 32. This had been circulated to the Working Group during the consultation exercise in March and efforts had then concentrated on getting the text finalised to accommodate the different regulatory approaches to trade secrets.

17. During the discussion the main area of difficulty was point f detailing arrangements for challenges to CBI. The difficulty here was finding a way of expressing how the different mechanisms that existed for considering their validity could be accommodated. After discussion the following text was agreed:

“Where non disclosure of CBI is challenged, the competent authority should address such challenges or provide for an alternative process for challenges. The supplier or employer should be responsible for supporting the assertion that the withheld information qualifies for CBI protection.”

Conclusion

18. Dr Pratt thanked participants for their positive contributions to the discussion of Part A. She explained that the secretariat would amend the document and provide a final version for presentation at the last session of the meeting.

Part B – Labelling (IOMC/ILO/HC6/00.3)

Annex I – allocation of label elements

19. Dr Pratt reminded participants that Annex I was a compromise proposal which had been prepared by the secretariat following the Drafting Group meeting in Washington, and subsequent telephone conferences. She hoped that progress could be made in refining it further to strengthen the consensus. She intended to take an initial exchange of views to test reactions and see where amendments and modifications would be possible.

Presentation of the classification criteria

20. A number of participants believed that the final document should not include the classification criteria and it was agreed to remove them from the tables in annex I.

Health symbols

21. Ms Sundquist referred to the proposals which had been made for a symbol to convey severe health effects. She believed that the inclusion of an exclamation mark, which was also being used for less severe health effects may lead to an underestimation of the severity of certain chronic hazards. A number of participants expressed support for a new symbol although opinion was divided on whether a suitable symbol could be developed. The US Government expressed concern about the use of more than one general warning symbol but indicated that they would consider a further symbol if it facilitated a compromise on the hazard communication system.

Acute toxicity

22. Ms Headrick referred to the room document prepared by Canada which outlining the reasons why Canada believed the skull and crossbones should be the symbol used to convey the label warning for category 4, as well as categories 1 – 3. The Labour Group shared the opinion of the Canadian Government. Ms Silk on behalf of the US Government stated that the use of the skull and crossbones in category 3 was a compromise because it was currently used for categories 1 and 2 in consumer labelling there. Other participants expressed sympathy for the Canadian position but believed that harmonisation with the use of the skull and crossbones for transport was a major consideration. Mr Roelfzema on behalf of the Netherlands Government expressed his preference for using the term 'very toxic' to describe the nature of the hazard in the hazard statement.

Skin corrosion/irritation

23. Ms Sundquist referred to a paper presented by the Governments of Finland, Sweden, Netherlands and Germany (again don't have the room document number) which advocated the use of the exclamation mark as the symbol to be included on warnings for skin irritation category 2. This was agreed. Mr Robson on behalf of the IOE believed that the hazard statement for skin irritation category 3 did not adequately describe the hazard statement. Exposure would lead to irritation, although the effects would be mild. It was agreed to amend the hazard statement to read 'Causes mild skin irritation'.

Eye corrosion/irritation

24. A number of participants wished to include the corrosive symbol on label warnings in preference to the exclamation mark. Whilst it was recognised that the effect was not corrosion, it was an appropriate message to convey to consumers to aid comprehensibility. It was also agreed that the exclamation mark should be included on labels conveying the hazard of eye irritation category 2A for consistency with skin irritation.

Respiratory sensitisation

25. Ms Kahler-Jenett expressed concern about the hazard statement. She strongly supported a reference to asthma in the statement to ensure the severity of the hazard was understood. There was some discussion about the scientific basis for this after which it was agreed to amend the hazard statement to 'May cause allergy or asthma symptoms or breathing difficulties if inhaled.' A number of participants believed the severe health hazard symbol should be used on labels in preference to the exclamation mark to convey the severity of the hazard.

Dermal sensitisation

26. Mr Fasey believed the hazard statement read better if amended to 'May cause an allergic skin reaction'. Ms Silk asked for the footnote included for respiratory sensitisation to be referenced to dermal sensitisation. This would ensure the cut-offs in the classification criteria for both hazards would be reviewed at the earliest possible opportunity.

Germ cell mutagenicity

27. Mr Robson on behalf of the IOE was concerned that the hazard statements did not accurately distinguish the severity of hazard in the classification criteria. Following discussion of a range of proposals it was agreed that use of the term 'may possibly cause' in the hazard statement for category 2 was not clear and that the phrase would be replaced with 'suspected of causing'. However, the majority of participants favoured retaining the same hazard statement for categories 1A and 1B. It was also agreed to remove the word 'inherited' from the hazard statement. Ms Sundquist proposed that the new severe health hazard symbol be used for category 1A and 1B. Mr Wright spoke on behalf of Labour in favour of using the same symbol for all categories because of the nature of the hazard. Following discussion a consensus was reached in favour of using the new severe health hazard symbol for all categories.

Carcinogenicity

28. Similar concerns to those raised for germ cell mutagenicity were expressed by Mr Robson, Ms Sundquist and Mr Wright. It was agreed that the phrase 'may possibly cause' in the hazard statement for category 2 would be amended to read 'suspected of causing', and that the new severe health hazard symbol would be used on label warnings for all categories.

Toxic to Reproduction

29. In addition to concerns about the appropriate symbol for this hazard, and about the hazard statement for category 2, there was concern that the hazard statements should specify whether the hazard was a fertility problem or one associated with foetal development. It was agreed that the symbol should be the new severe health hazard symbol. For hazard statements, it was agreed that the specific effect could be stated only where it was known that other hazards covered by the criteria did not apply. Also the phrase 'Suspected of damaging' would replace 'May possibly damage' in the hazard statement for category 2.

Target Organ Systemic Toxicity (Single and repeated exposure)

30. There was a wide range of opinions expressed about the appropriateness of including the skull and crossbones on label warnings for this hazard, because of the potential conflicts with the UN RTDG system. Some participants were concerned that the use of an exclamation mark for both categories 1 and 2 of these hazards did not sufficiently reflect its severity. It was agreed that the new severe health hazard symbol should be used for all categories of these hazards.

Aquatic Toxicity (Acute and chronic)

31. Ms Sundquist believed that signal words should be considered as appropriate label elements for conveying the severity of environmental hazards. Mr Robson on behalf of the IOE, explained industry concerns that the terminology used for the hazard statements did not adequately convey the nature of the hazard. Following discussion it was agreed that the signal word 'warning' should be included in label warnings for both acute and chronic toxicity, category 1. The hazard statements would be amended to read as follows:

Acute toxicity: category 1 – 'Very toxic to aquatic life', category 2 – 'Toxic to aquatic life', category 3 – 'Harmful to aquatic life'.

Chronic toxicity: category 1 – 'Very toxic to aquatic life with long lasting effects', category 2 – 'Toxic to aquatic life with long lasting effects', category 3 – 'Harmful to aquatic life with long lasting effects', category 4 – 'May be harmful to aquatic life with long lasting effects'.

Physical Hazards

32. A special working group was convened of experts in the classification criteria for physical hazards to consider proposals for the assignment of label elements in annex I. The chairperson of the working group was Mr Oberreuter, representative of the German Government. He reported the findings of the working group to participants. Dr Pratt thanked Mr Oberreuter for his work, recognising his specialist contribution in this area of the classification criteria. Following discussion the following amendments to annex I were agreed:

Flammable solid: The hazard statement for category 1 should read 'Flammable solid'.

Pyrophoric liquid: The hazard statement for category 1 should read 'Catches fire spontaneously if exposed to air'.

Pyrophoric and self-heating substances: The annex should contain separate tables so that one table detailed label elements for pyrophoric solids, and the other label elements for self-heating substances.

Pyrophoric solids: The hazard statement for category 1 should read 'Catches fire spontaneously if exposed to air'.

Self-heating substances: The hazard statement for category 2 should read 'Self-heating in large quantities; may catch fire'.

Substances which in contact with water emit flammable gases: The hazard statements should read as follows, category 1 – 'In contact with water releases flammable gases which may ignite spontaneously', category 2 – 'In contact with water releases flammable gases', category 3 – 'In contact with water releases flammable gases'.

Explosives: Label elements should be included for divisions 1.4, 1.5 and 1.6 as follows and a footnote included to indicate that these applied to substances and mixtures subject to UN CETDG requirements.

- Division 1.4 – the letters 1.4 should appear in a pictogram with an orange background, signal word ‘warning’ and hazard statement ‘fire or projection hazard’,
- Division 1.5 – the letters 1.5 should appear in a pictogram with an orange background signal word warning , signal word ‘warning’ and hazard statement ‘may explode in fire’,
- Division 1.6 – the letters 1.5 should appear in a pictogram with an orange background

▪
Corrosive to metal: The hazard statement should read ‘May be corrosive to metal’

Precautionary statements and pictograms

33. Ms Headrick was of the opinion that the text of paragraph 37 implied that precautionary pictograms could be used without the agreement of the competent authority. It was agreed to clarify the role of the competent authority and amend the text accordingly.

Reproduction of the symbol

34. Mr Oberreuter drew participant’s attention to the symbol for corrosion and explained that this was not an accurate reproduction of the symbol used in the UN RTDG. It was agreed to replace the symbol in the table at paragraph 38 with the correct symbol. It was also agreed to include a reference to the new symbol which would be used for certain health hazards, noting that this would be agreed by the IOMC Co-ordinating group no later than September 7, 2001.

Reproduction of the hazard pictogram

35. Dr Benassai recalled discussions in previous meetings on the shape of the pictograms and believed that further discussion was needed in the UN CETDG on the implications of using various shapes for the frame of the pictogram. Mr Wybenga speaking on behalf of the US Government referred to discussions at the ICAO Dangerous Goods Panel the previous week. He reported that a number of representatives had expressed concerns about the potential impediment to identification of transport hazards and the associated training implications if the diamond shape was used outside of the UNRTDG. Mr Oberreuter believed that harmonisation of the shape of the pictogram would facilitate identification of chemical hazards and bring significant benefits for global standards of chemical safety, and that issues concerning the identification of undeclared goods could be resolved.

36. Mr Fasey was concerned about the consequences of using separate pictograms for transport and the supply of chemical products to workers and consumers. He believed all systems would have to bear investment in training. Other Government representatives and Mr Wright on behalf of the Labour Group spoke in favour of harmonising the shape of the pictogram. Ms Silk noting the extent of support voiced at the meeting in favour of the diamond shape for all pictograms, wished to emphasise that the US Government could accept endorsement of the diamond shape for pictograms from the Working Group. However, she believed that further discussion and endorsement of this within UN CETDG was critical to the success of the harmonised system.

37. Dr Pratt thanked all participants for the positive conduct of the discussion and noted that the overwhelming sentiment of the Working Group was in favour of harmonising the shape of the pictogram and using a diamond border. However, she was sympathetic to the concern expressed by Dr Benassai and Ms Silk that those involved in the UN CETDG should discuss this issue further. The secretariat would prepare a short paper for the UN CETDG explaining that the ILO Working Group had endorsed the use of the diamond shape for all pictograms but wished to ensure issues of concern to

the UN CETDG were explored further and resolved satisfactorily. In the meantime, she believed there were some textual amendments which could be made to paragraphs 41, 42 and 43 which could improve its presentation and clarity. It was agreed to:

- refer to non UN RTDG pictograms as GHS pictograms
- use the example of a skin irritant for the GHS pictogram
- make it clear the UN RTDG pictograms could be used in other use settings where the package was not covered by the UN RTDG
- refer to packages in preference to containers

Product and supplier identification

38. Mr Stoffman on behalf of the Labour Group expressed concern at the lack of harmonisation in the interpretation of paragraph 46 which seemed to offer infinite variations for the competent authority. Ms Headrick believed the text did not accurately describe how the competent authority should take account of different cut-off limits for the classification of certain hazards of substances present in mixtures. Mr Robson on behalf of the Labour Group wished the text of paragraph 47 to be amended and clarify that CBI rules took priority over ingredient disclosure rules. It was agreed to resolve these concerns in a revised text which would be prepared by the secretariat.

Multiple hazards and precedence of hazard information

39. Mr Oberreuter explained that the working group on hazard statements for physical hazards had identified that the text did not take account of the use of the compressed gas symbol in the UN RTDG. Following discussion of the use of this symbol in other systems, it was agreed that it should be clarified that the provisions for the UN RTDG should apply to transport. Ms Sundquist proposed that the text be amended so that the exclamation mark need not be used for dermal sensitisation where the new symbol for health hazards was used to convey respiratory sensitisation. On a related issue, it was agreed that the exclamation mark need not appear when it applied to skin and eye irritation, if the corrosive symbol was also used.

Arrangements for presenting the label elements on the label

40. Dr Pratt clarified that the reference in paragraph 54 should be to Part A, paragraph 28 and not 29. Mr Fasey believed that the paragraph should also refer to precautionary information.

Special Arrangements

41. The following points were raised during the discussion:

General: Mr Hilton on behalf of the Employers Group was concerned that the special nature of alloys had not been taken into account. He believed that where alloys were supplied in the massive, non dispersible form, labelling was impracticable and this should be made clear. Ms Silk stressed that if such arrangements were to be accepted, the hazard information must be included on the data sheet.

Workplace labelling: Mr Wright on behalf of the Labour Group expressed concern that paragraph 57 did not accurately reflect the circumstances in which employers could be given the discretion to provide hazard information in an alternative format to the label. He emphasised the need for such information to be written or displayed in the workplace and for the alternative format to be as effective as a label.

Consumer Product Labelling Based on Hazard and Likelihood of Injury: Dr Pratt indicated that this had been a very difficult area of discussion at all the previous meetings and that a compromise was required by the different parties. Mr Roelfzema recognised the sensitivity of the discussion and

said his Government had deep reservations about the text and this was shared by a number of other European Governments. Ms Silk believed that there were some amendments to the text that could be made to reassure those with these views by further clarifying the role of risk-based labelling.

Step 3, Part C – (Material) Safety Data Sheets

42. Ms Wyeth explained that the secretariat had made a number of changes to the presentation of arrangements in Part C. These intention had been to improve comprehension and not to make substantive changes to the areas where the Working Group had previously agreed text. The detail of what information should be included in the data sheet was the single biggest area for discussion. The Drafting Group had continued to work on the text and paper (Room Document 2?) contained a suggested template for inclusion in Part C. There were however other points of detail which required some refinements to the text in order that a consensus could be reached.

43. Mr Wright on behalf of the Labour Group expressed support for harmonisation of terminology. There had yet to be a discussion of whether to refer to Material Safety Data Sheets, or whether to refer to 'Safety Data Sheets'. Following discussion it was agreed to refer to 'Safety Data Sheets for consistency with ILO instruments and amend the text accordingly.

When the (M)SDS is required

44. Ms Sundquist wished to extend the scope of paragraph 64 to take account of situations where the competent authority may require data sheets to be produced for mixtures which did not meet the criteria for classification as hazardous. This would cover instances where a hazardous substance was present at concentrations where the competent authority believed hazard information should be passed down the supply chain. It was agreed to amend the text accordingly.

Product Identification

45. Ms Headrick was concerned that the text did not explain the relationship between confidential business information and ingredient disclosure. It was agreed to introduce similar text to that in Part B which described the relationship between confidential business information and disclosure of ingredients on labels.

(MS)DS content:

46. Mr Robson on behalf of the IOE reported that discussions in industry indicated that they saw little benefit in developing what could be presented as a rival standard to ISO 11014. He believed that the listed information in Room Document 2 was a step towards this. A number of participants were concerned about this interpretation, emphasising that Room Document 2 essentially harmonised the information required by different Competent Authorities. Dr Pratt recalled that in previous meetings of the Working Group, there had been a clear consensus that no one single standard should be adopted and that any standards could be used which satisfied competent authority requirements for information. She asked the IOE to consider whether there were items of information in the Room Document 2 which were inconsistent with the use of ISO 11014.

47. During the discussion, it emerged that ISO 11014 provided guidance on the applicability of certain information. Mr Robson indicated IOE's willingness to work towards a compromise between the approach underpinning ISO 11014 and the development of a harmonised arrangements on the information to be included in data sheets. During the detailed discussion the secretariat was asked to consider a number of points in preparation of a redraft paying particular attention to the following:

The order in which information should be included under the headings should be amended so that hazard identification preceded composition/information on ingredients.

It would not be necessary to specify that label information should be reproduced at the head of the data sheet.

The section on transport should be complete and allow for use within transport fora.

The section on regulatory information should include a general statement advising that safety, health and environmental regulations specific to the product be included.

Where information was not appropriate or not available, the data sheet could indicate this in more than one way.

48. Dr Pratt concluded the session by thanking participants for their constructive input to the discussion. She indicated that the secretariat had a clear view of what the working group wished to see in terms of a final draft and would present this the following morning along with the amended Parts A and B.

Comprehensibility testing methodology

49. Ms Wyeth gave an update on the current state of progress by the University of Cape Town. She reminded participants of the issues which had been raised at the previous meeting, in particular the strong indications that the interview process should be reviewed to streamline the process. Professor London's team had piloted the tests and were in the process of preparing the final version of the interview guidelines. She indicated that some streamlining had proved possible in the light of the pilots. The final documentation would be ready shortly and suggested that it be referred to the Co-ordinating Group. This was agreed.

Presentation of the final Step 3 Document

50. Dr Pratt explained that the final document had been prepared and the drafting changes arising from the discussion had all been incorporated. The final versions of the documents attached to this meeting record were agreed by the Working Group to be the harmonised system of hazard communication in the globally harmonised system.

Closure of the meeting

51. Dr Pratt warmly congratulated participants for the historic agreement which had emerged from the meeting. She thanked the members of the Drafting Group who had worked tirelessly to bring the detailed points of issue to a resolution, and to Ms Wyeth and Mr Obadia for the efficient and timely preparation of the meeting documents. She confirmed that the final documents would be transmitted to the Co-ordinating Group and ILO Governing Body for endorsement and asked participants to show their appreciation to the ILO for its major contribution as a focal point. She noted that this agreement marked the end of one process and the beginning of a new chapter for the GHS in the new UN Sub Committee. She hoped participants would continue to be involved in this work and wished it every success.

52. Mr Wright moved a vote of thanks to Dr Pratt and the secretariat on behalf of the Working Group. He paid tribute to Dr Pratt's commitment to the hazard communication work and her efficient, friendly and professional conduct as the Group's chairperson which he believed had been critical in ensuring the project's success. He wished her every success for the future.

Annex 1 - LIST OF PARTICIPANTS

Mr. Benassai Sergio, Chairman UN CETDG, Agenzia Nazionale per la Protezione dell' Ambiente, Via V. Brancati 48, Roma 00144, Italy. Tel: 39 06 5007 2573. Fax: 39 06 5007 2584.

E-Mail: benassai@anpa.it

Dr. Berggren Elisabet, European Chemicals Bureau, Joint Research Centre, TP 581 21020 Ispra (VA), Italy. Tel: 39 0332 789065. Fax: 39 0332 789963. E-Mail: elisabet.berggren@jrc.it

Ms. Bernardini Francesca, Secretariat, UN/ECOSOC Committee of Experts on the Transport of Dangerous Goods, UN/ECE, Transport Division, Room 414, Palais des Nations, 1211 Geneva 10, Switzerland. Tel: 41 22 917 2463. Fax: 41 22 917 0039. E-mail: francesca.bernardini@unece.org

Mr. Cheolhong Lim, Senior Researcher, Occupational Safety and Health Research Institute, 104-8 Moonji-Dong Yusong-Ku, Taejon 305-380, Korea.

Tel: 82-42-863-8363. Fax: 82-42-863-8361. E-mail: limch@kosha.net

Dr. Clarke-Sturman Anthony, Product Stewardship, Shell International Petroleum Company Ltd, Strategy and Business Services, (CONCAWE, IPIECA), OBMF/4 Shell Centre, London SE1 7NA, UK. Tel: 44 020 7934 3443. Fax: 44 020 7934 6014. E.mail: tony.a.clarke-sturman@opc.shell.com

Mr. Cotterill Alan, Manager, Policy and Program Services Office, Product Safety Programs, Health Canada, 123 Slater St., 5th Floor, Ottawa, Ontario, Canada K1A 0L2. Tel.: 1 613 954 0170.

Fax: 1 613 946 1100. E-Mail: alan_cotterill@hc-sc.gc.ca

Ms. Di Discordia Paola, EIMAC, c/o Eurométaux, 12 Av. De Broqueville, B-1150 Bruxelles. Tel: 32 2 775 6313. Fax: 32 2 779 0523. E.mail: didiscordia@eurometaux.be

Mr. Fasey Andrew, Chemicals Policy Division, Health Directorate, Health and Safety Executive, Rose Court, 2 Southwark Bridge, London, SE1 9HS, United Kingdom. Tel: 44 207 717 6391. Fax: 44 297 717 6221. E.mail: andrew.fasey@hse.gsi.gov.uk

Mr. Galves Jose Antonio, Advogados Associados (representing Brazilian Chemical Industries), Rua Francisco Arvani, 181, Santo Amaro, S.P. Capital, Brazil. Tel: 11 246 8945 / 521 3831. E.mail:

jagalves@stivip.com.br

Mr. Haas Ulrich, (representing IOE), Manager Product Safety, Henkel, Henkelstrasse 67, D-40191 Düsseldorf, Germany. Tel: 49 211 797 9129. Fax: 49 211 798 1194. E-Mail: ulrich.haas@henkel.de

Ms. Hardeng Solvår, Senior Advisor, Ministry of Environment, P.O. Box 8013 Dep., Oslo N-0030, Norway. Tel: 47 2224 5926. Fax: 47 2224 9563. E-Mail: soh@md.dep.no

Ms. Headrick Kim, International Harmonization, Product Safety Bureau, Health Canada, Room 564, 123 Slater St., A.L: 350501, Ottawa, Ontario K1A 0L2, Canada.

Tel: 1 613 952 9597. Fax: 1 613 946 1100. E-Mail: kim_headrick@hc-sc.gc.ca

Mr. Hilton Richard, (representing IOE), Director, EHS Regulatory Affairs, INCO Ltd, 145, King Street West, suite 1500, Toronto, Ontario M5H 4B7, Canada.

Tel: 1 416 361 7863. Fax: 1 416 361 7864. E-Mail: rhilton@inco.com

Mr. Hirsh Paul, International Affairs, American Chemistry Council, 1300 Wilson Blvd., Arlington, VA 22209, USA. Tel: 1 703 741 5237. Fax: 1 703 741 6237.

E-Mail: phirsh@americanchemistry.com

Dr. How Mervyn, Chairman AISE, 31 Nursery Gardens, Bedford MK 18DU, UK. Tel: 44 12 34 21 81 19. Fax: 44 12 34 21 81 44. E-mail: mervynhow@kbnnet.co.uk

Dr. Jonai Hiroshi, Senior Researcher, Division of Research Planning, National Institute of Industrial Health, Ministry of Labour, 6-21-1 Nagao Tama-Ku, Kawasaki 214-8585, Japan.

Tel: 81 44 865 6111. Fax: 81 44 865 6116. E-Mail: jonai@niih.go.jp

Annex 1 - LIST OF PARTICIPANTS

Dr. **Kahler-Jenett Elke**, Division of Hazardous Substances, Federal Institute for Occupational Safety and Health, Friedrich-Henkel-Weg 1-25, Dortmund, D-44149, Germany.
Tel: 49 231 9071 589. Fax: 49 231 9071 611. E-Mail: kahler-jenett.elke@baua.bund.de

Mr. **Kervella Olivier**, Secretary, UN/ECOSOC Committee of Experts on the Transport of Dangerous Goods, UN/ECE Working Party on the Transport of Dangerous Goods, UN/ECE, Transport Division, Room 418, Palais des Nations, 1211 Geneva 10, Switzerland.
Tel: 41 22 917 2456. Fax: 41 22 917 0039. E-Mail: olivier.kervella@unece.org

Dr. **Koëter Herman B.W.M**, Principal Administrator, Environmental Health and Safety Division, Environment Directorate, OECD, 2, rue André-Pascal, 75775 Paris Cedex, France.
Tel: 33 1 45 24 9844. Fax: 33 1 45 24 1675. E-Mail: herman.koeter@OECD.org

Dr. **Kohrman Karen**, Human and Environmental Safety Division, General Toxicology Organization, Procter and Gamble Co., Miami Valley Laboratories, P.O. Box 538707, Cincinnati, Ohio 45253-8707, USA. Tel: 1 513 627 2670. Fax: 1 513 627 1167. E-Mail: kohrman.ka@pg.com

Ms. **Lowe Mary Frances**, EPA/Office of Pesticide Programs, Washington D.C., USA. Tel: 1 703 305 5689. Fax: 1 703 308 1850. E-Mail: lowe.maryfrances@epa.gov

Mr. **Lowe William**, Vice-President Operations, Hazardous Materials Information Review Commission, 200 Kent St, Suite 9000, Ottawa Ontario K1A 0M1, Canada. Tel: 1 613 993 5015. Fax: 1 613 993 4686. E-mail: bill_lowe@hc-sc.gc.ca.

Mr. **Lu Haiyan**, Deputy Chief, General Office for Accident Statistics and Control, State Administration of Work Safety Supervision, 21 Helpinglibei jie, Dongcheng District, Beijing 100713, P.R. China. Tel: 86 10 64 21 77 66/22 23 26. Fax: 86 10 64 23 46 62.

Mr. **Machin William**, Councillor, European Chemical Industries Council (CEFIC), Ave. E. Van Nieuwenhuysse 4, bte 1, B-1160 Bruxelles, Belgium.
Tel: 32 2 676 7277. Fax: 32 2 676 7332. E-mail: wma@cefic.be

Mr. **Nash Stephen M.**, HM/DG Consultant, Corporate Environmental Affairs, Eli Lilly and Company, Lilly Corporate Center, Indianapolis, IN 46285, USA.
Tel: 1 317 276 3537. Fax: 1 317 276 1800. E-Mail: s.nash@Lilly.com

Dr. **Nuessler H.-Dieter**, Chairman, Committee "Hazardous Materials", International Technical Committee for the Prevention and Extinction of Fire (CTIF), Stolberg Str. 155, D-52068 Aachen, Germany.
Tel: 49 241 944 1100. Fax: 49 241 944 1108. E-mail: nuessler@mail.aachen.de

Mr. **Oberreuter Gregor**, Dangerous Goods Section, Ministry of Transport, Construction and Housing, Postfach 200 100, D-53170 Bonn, Germany. Tel: 49 228 300 2754. Fax: 49 228 300 3428.
E-Mail: gregor.oberreuter@bmvbw.bund.de

Dr. **Oyama Kiyotaka**, General Manager, International Affairs Office, Japan Chemical Industries Association (JCIA), Kazan Bldg, 2-4 Kasumigaseki 3-chome, Chiyoda-ku, Tokyo 100-0013, Japan.
Tel: 81 3 3519 21 66. Fax: 81 3 3580 0764.
E-mail: koyama@jcia.net.or.jp

Ms. **Pettersson Ingrid**, National Chemicals Inspectorate, P.O. Box 1384, S-171 27 Solna, Sweden. Tel: 46 8 783 1246. Fax: 46 8 735 76 98.
E-Mail: ingrid.pettersson@kemi.se

Dr. **Plattner Edmund**, Director, Department I/3, Federal Ministry of Environment, Stubenbastei 5, A-1010 Vienna, Austria. Tel: 43 1 515 222 346. Fax: 43 1 515 227 352.
E-Mail: edmund.plattner@bmu.gv.at

Dr. **Pratt Iona**, Director of Specialists Unit, National Authority for Occupational Safety and Health, 10 Hogan Place, Dublin 2, Ireland. Tel: 353 1 614 7109. Fax: 353 1 614 7021. E-Mail: iona@hsa.ie

Annex 1 - LIST OF PARTICIPANTS

Mr. **Puiatti Roque**, Health and Safety Inspector, Regional Office/RS, Ministry of Labour, Av. Mauá, 1013 - 3º andar, Porto Alegre, RS, Brazil.

Tel: 55 51 228 6544. Fax: 55 51 226 8730/388 1036. E-Mail: rpuiatti@via-rs.net

Mr. **Roberts Alan I.**, President, Hazardous Materials Advisory Council (HMAC), 1101 Vermont Avenue, NW, Suite 301, Washington, DC 20005, USA.

Tel.: 1 202 289 4550. Fax: 1 202 289 4074. E-Mail: aroberts@hmac.org

Mr. **Robson Peter G.**, Consultant to CCPA, Kingston, Ontario, Canada

Tel: 1 613 549 1284. Fax: 1 613 549 6249. E-Mail: probson@limestone.kosone.com

Dr. **Roelfzema Henk**, Ministry of Health, Welfare and Sport, Parnassusplein 5, 2511 VX Den Haag, [Postbus 20350, 2500 EJ Den Haag], The Netherlands.

Tel: 31 70 340 6965. Fax: 31 70 340 5554. E-Mail: h.roelfzema@minvws.nl

Dr. **Sargent Edward**, Senior Director of Toxicology, Merck & Co. Inc., P.O. Box 200, WSW2-13, Whitehouse Station, New-Jersey, 08889-0200. Tel: 1 908 423 7906. Fax: 1 908 735 1496. E.mail:

edward_sergeant@merck.com

Dr. **Savard Jacques**, Director Regulatory Affairs, Transport Dangerous Goods, Transport Canada, Place de Ville, Tower C, 330 Sparks Street, 9th floor, Ottawa, Ontario, K1A 0N5, Canada.

Tel: 1 613 990 1154. Fax: 1 613 993 5925. E-Mail: savarj@tc.gc.ca

Dr. **Schwartz Charles S.**, Director Occupational Toxicology & Hazard Assessment, Legal Division, Pfizer Inc., 235 E 42nd Street, New York, N.Y. 10017, USA.

Tel: 1 212 573 7317. Fax: 1 212 573 7004. E-Mail: chuck.schwartz@pfizer.com

Mr. **Schwob Rudolf**, Corporate Safety and Environmental Protection, F. Hoffmann-La Roche AG, 4070 Basel, Switzerland.

Tel: 41 61 688 6305. Fax: 41 61 688 1920. E-Mail: rudolf.schwob@roche.com

Ms. **Silk Jennifer**, Director, Office of Technical Programs and Coordination Activities, US OSHA, 200 Constitution Ave. NW, Room N3653, Washington DC 20210, USA.

Tel: 1 202 693 2110. Fax: 1 202 693 1644. E-Mail: jennifer.silk@osha.gov

Mr. **Stoffman Larry**, Canadian Labour Congress, Director Occupational Health/Safety, United Food & Commercial Workers, 3561 W. 35th Ave., Vancouver, BC, Canada V6N 2N4.

Tel: 1 604 528 0863. E.mail: larryst@attcanada.net

Ms. **Sundquist Anna-Liisa**, Ministry of Social Affairs and Health, P.O. Box 536, FIN-33101

Tampere, Finland. Tel: 358 3 2608 443. Fax: 358 3 2608 425. E-Mail: anna-liisa.sundquist@stm.vn.fi

Mr. **Todd Phil**, Syngenta, Fernhurst, Haslemere, Surrey, UK.

Tel: 44 1428 655 139. Fax: 44 1428 657 130. E-Mail: phil.todd@syngenta.com

Prof. Dr. **Wettig Klaus**, Federal Institute for Health Protection of the Consumers, D-14191 Berlin, Thielallee 88, Germany. Tel: 0188 84125866. Fax: 0188-84123264. E-Mail: lk.wettig@bgvv.de

Mr. **Wright Michael J.**, Director of Health, Safety and Environment, United Steelworkers of America (USWA), 5 Gateway Center, Pittsburgh, PA 15222, USA.

Tel: 1 412 562 2581. Fax: 1 412 562 2584. E-Mail: mwright@uswa.org

Mr. **Wybenga Frits**, Deputy Associate Administrator for Hazardous Materials Safety (DHM-2), Office of Hazardous Materials Safety, Research And Special Programs Administration, US Department of Transportation, Room 8321, Nassif Building, 400 7th Street, S.W., Washington, DC 20590-0001, USA. Tel: 1 202 366 0656. Fax: 1 202 366 5713. E.mail: frits.wybenga@rspa.dot.gov

Annex 1 - LIST OF PARTICIPANTS

SECRETARIAT

Mr. **Obadia Isaac**, SafeWork Branch, International Labour Office, 1211 Geneva 22, Switzerland.
Tel: 41 22 799 6746. Fax: 41 22 799 6878. E.mail: obadia@ilo.org

Ms. **Wyeth Julie**, Chemicals Policy Division, Health Directorate, Health and Safety Executive,
Rosecourt, 2 Southwark Bridge, London, SE1 9HS, United Kingdom.
Tel: 44 1 207 717 6350. Fax: 44 207 717 6221. E-Mail: julie.wyeth@hse.gsi.gov.uk