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**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
Transport of Dangerous Goods

**REPORT OF THE SUB-COMMITTEE OF EXPERTS ON THE
TRANSPORT OF DANGEROUS GOODS ON ITS THIRTY-SECOND SESSION**

(Geneva, 3-7 December 2007)

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I. ATTENDANCE

1. The Sub-Committee of Experts on the Transport of Dangerous Goods held its thirty-second session from 3 to 7 December 2007, with Mr. R. Richard (United States of America) as Chairman and Mr. C. Pfauvadel (France) as Vice-Chairman.

2. Experts from the following countries took part in the session: Argentina, Australia, Austria, Belgium, Brazil, Canada, China, Finland, France, Germany, Italy, Japan, Netherlands, Norway, Poland, Russian Federation, South Africa, Spain, Sweden, United Kingdom and United States of America.

3. Under rule 72 of the rules of procedure of the Economic and Social Council, observers from the following countries also took part: Kenya, Romania, Switzerland and Tunisia.

4. The following intergovernmental organizations were also represented: European Commission and Intergovernmental Organization for International Carriage by Rail (OTIF).

5. A representative of the International Atomic Energy Agency (IAEA) was also present.

6. Representatives of the International Civil Aviation Organization (ICAO), the International Maritime Organization (IMO) and the World Health Organization (WHO) were present.

7. Representatives of the following non-governmental organizations took part in the discussion of items of concern to their organizations: Association of Hazmat Shippers (AHS); Compressed Gas Association (CGA); Council on Safe Transportation of Hazardous Articles (COSTHA); Dangerous Goods Advisory Council (DGAC); European Aerosol Federation (FEA); European Biosafety Association (EBSA); European Cosmetic, Toiletry and Perfumery Association (COLIPA); European Council of the Paint, Printing Ink and Artists' Colour Industry (CEPE); European Cylinder Makers Association (ECMA); European Industrial Gases Association (EIGA); European Liquefied Petroleum Gas Association (AEGPL); European Metal Packaging (EMPAC); Federation of European Aerosol Associations (FEA); Institute of Makers of Explosives (IME); International Air Transport Association (IATA); International Association for Soaps, Detergents and Maintenance Products (AISE); International Association for the Promotion and Management of Portable Rechargeable Batteries through their Life Cycle (RECHARGE); International Confederation of Container Reconditioners (ICCR); International Confederation of Drums Manufacturers (ICDM); International Confederation of Intermediate Bulk Container Associations (ICIBCA); International Confederation of Plastics Packaging Manufacturers (ICPP); International Council of Chemical Associations (ICCA); International Dangerous Goods and Containers Association (IDGCA); International Electrotechnical Commission (IEC); International Federation of Airline Pilots' Associations (IFALPA); International Fibre Drum Institute (IFDI); International Organization for Standardization (ISO); International Organization of Aluminium Aerosol Container Manufacturers (AEROBAL); International Paint and Printing International Council (IPPIC); International Vessel Operators Hazardous Materials Association (VOHMA); Responsible Container Management Association of Southern Africa (RCMASA); Sporting Arms and Ammunition Manufacturers' Institute (SAAMI); US Fuel Cells Council (USFCC); World Nuclear Transport Institute (WNTI).

II. ADOPTION OF THE AGENDA (agenda item 1)

Documents: ST/SG/AC.10/C.3/63 (Provisional agenda)
ST/SG/AC.10/C.3/63/Add.1 (List of documents)

Informal documents: INF.1, INF.2 (List of documents) and INF.45 (Provisional timetable)

8. The Sub-Committee adopted the provisional agenda and timetable prepared by the secretariat after amending it to take account of informal documents (INF.1-INF.57).

III. PERFORMANCE OF PACKAGINGS, INCLUDING IBCS (agenda item 2)

A. Testing of aerosol dispensers

Document: ST/SG/AC.10/C.3/2007/33 (AEROBAL)

Informal document: INF.27 (AEROBAL)

9. The representative of AEROBAL withdrew his proposal, explaining that FEA had established a task force to tackle the issue of alternative tests for aerosol dispensers and that AEROBAL would participate in that work.

B. “Re-bottling/cross-bottling” of composite IBCs

Informal documents: INF.33 (Australia, Canada, United Kingdom)
INF.51 (ICIBCA)
INF.52 (ICCR)
INF.53 (Correspondence working group)

10. It was observed that the Model Regulations already contained specific provisions concerning repaired IBCs. Re-bottling was considered as a repair, but if the replacement inner receptacle did not comply with the manufacturer’s original specifications the whole unit must be treated as a remanufactured IBC and must be recertified as meeting the required design type tests.

11. Several experts confirmed that, in practice, replacement inner receptacles that did not comply with original specifications were used in IBCs that were treated as “repaired” and not “remanufactured” IBCs. That raised the issue not only of safety, but also of the liability of users, who were not always aware that the “repaired” IBC did not comply with regulations.

12. The Sub-Committee decided to set up a correspondence working group, coordinated by the expert from the United Kingdom, which would include experts from the Sub-Committee and representatives of the non-governmental organizations concerned. The terms of reference of the working group were to examine:

- (a) Current practices of composite IBC rebottling and cross-bottling;
- (b) How the relevant provisions of the Model Regulations were applied in practice;
- (c) Information that was available on tests, accidents, guidance materials and standards;
- (d) Methods used by manufacturers, users, repairers and remanufacturers of IBCs to assure quality and production of IBCs that complied with regulations.

13. The working group would submit a report to the Sub-Committee at its next session. It could make recommendations for clarification of the Model Regulations and propose revised composite IBC marking provisions, as appropriate.

14. Those delegates wishing to take part in this work were invited to contact the expert from the United Kingdom directly and to provide him with all relevant information for analysis of the situation.

C. Permeation through the walls of plastics packagings, including IBCs, building up the hazard of an explosive atmosphere in freight containers

Informal document: INF.30 (Germany)

15. The Sub-Committee took note of the concerns raised by Germany as regards the possible formation of explosive atmospheres inside closed containers due to the permeation of flammable vapours through plastics packagings containing flammable liquids. The expert from Germany invited other delegates to provide her with comments and suggestions in this respect.

IV. LISTING, CLASSIFICATION AND PACKING (agenda item 3)

A. Allocation of substances and articles to packing instruction P099

Document: ST/SG/AC.10/C.3/2007/6 (IATA)

16. Having considered outstanding issues from the last session (see ST/SG/AC.10/C.3/62, para. 29), the Sub-Committee agreed that there was no need to amend the packing instructions for UN Nos. 3123 and 3125. At the same time, it was confirmed that there was no need to recommend in the Model Regulations the prohibition of the transport of the substances listed in paragraph 9.

B. Subsidiary risks for toxic by inhalation liquids

Document: ST/SG/AC.10/C.3/2007/39 (Belgium)

Informal document: INF.26 (Belgium)

17. The proposals from Belgium to address the issue of the subsidiary risks of substances which may pose such risks by using new UN numbers rather than special provisions were put to the vote, with separate votes for N.O.S. entries and for generic or specific entries. The proposals were adopted (see annex 1).

C. Permitting dry ice as a refrigerant

Document: ST/SG/AC.10/C.3/2007/48 (IATA)

18. The proposal to amend packing instruction P901 was adopted with some editorial changes (see annex 1).

D. Electric storage batteries containing potassium hydroxide, solid (UN No. 3028)

Document: ST/SG/AC.10/C.3/2007/45 (Germany)

Informal documents: INF.31 (Germany)
INF.39 (RECHARGE)

19. The document submitted by Germany followed a sea-transport accident in which a container that was loaded with AA-type nickel-metal hydride rechargeable dry batteries and stowed against the wall of the container vessel's engine room had exploded and caught fire. Under special provision 304, these batteries are not subject to the Model Regulations. The question therefore arose of whether, in view of the accident, this type of battery should be made subject to transport regulations, at least with regard to stowage conditions, and how. In addition, using special provision 304 to exempt these batteries might be inappropriate, since UN No. 3028 was originally intended to cover storage batteries such as car storage batteries that contain a dry corrosive electrolyte and are designed to be filled with water prior to use, and not AA-type dry batteries.

20. Some experts considered that the accident had been caused by high temperatures that did not reflect normal transport conditions. They were therefore not convinced of the soundness of the proposal.

21. Others believed, on the contrary, that it was common practice to stow containers near a container ship's machinery spaces and that, even when transported by land, containers could be exposed to high temperatures during the day. Some believed that it might be useful to discuss in greater detail the issue of safe transport of dangerous goods in containers.

22. With regard to the proposal made by RECHARGE (INF.39), several experts were of the opinion that transport conditions could not be imposed for goods that were not subject to the Model Regulations.

23. The representative of Germany said that she would take into account the various comments made and draw up a new proposal to solve the problem.

E. Reclassification of lithium batteries (UN Nos. 3090 and 3091)

Document: ST/SG/AC.10/C.3/2007/43 (IFALPA)

Informal document: INF.40 (RECHARGE)

24. After an exchange of views, which showed that most experts were not in favour of classifying lithium batteries under Division 4.3, since that division did not reflect the level of danger posed by the batteries, the representative of IFALPA withdrew the proposal, saying that he might revert to the issue.

Informal document: INF.48 (ICAO)

25. The Sub-Committee took note of the work carried out by ICAO to facilitate understanding of the provisions applying to the carriage of lithium batteries by air and the restrictions to be applied to this mode of transport. The representative of the United Kingdom suggested that this work could be used to improve the provisions of the Model Regulations.

F. Skin corrosion tests

Document: ST/SG/AC.10/C.3/2007/50 (ICCA)

Informal documents: INF.4, INF.5 and INF.6 (ICCA)
INF.49 (United States of America)

26. The Sub-Committee provisionally adopted the proposal contained in document INF.49 to amend paragraph 2.8.2.4, with an amendment indicating that corrosiveness on metals should also be taken into account (see annex 1).

27. During the discussion, the point was made that while the classification criteria for Class 8 were compatible with the GHS criteria relating to skin corrosion, they do not include the GHS criteria in their entirety, since in vitro test methods are not listed in the Model Regulations as being methods that are acceptable in place of in vivo methods.

28. It was suggested that the provisionally adopted text could perhaps be checked by the GHS Sub-Committee. The expert from the Netherlands said that the criteria and the classification procedures of the Model Regulations should be checked more thoroughly, in view of the GHS criteria, and that he would prepare a document for the next session with respect to corrosiveness.

G. Packing instructions P620 and P650

Document: ST/SG/AC.10/C.3/2007/36/Rev.1 (IATA)

29. The representative of IATA will submit a revised proposal to take account of the comments made.

H. Fuel cell cartridges

Informal document: INF.34 (ISO)

30. The Sub-Committee took note of the timetable for adoption and publication of ISO 16 111 (Transportable gas storage devices – Hydrogen absorbed in reversible metal hydrides).

I. Transport of biological materials (plant pathogens and genetically modified organisms)

Informal document: INF.32 (EBSA)

31. Some experts supported the principle of including in the Model Regulations provisions for the transport of plant pathogens, as well as revised provisions for genetically modified organisms and microorganisms to take better account of the Cartagena Protocol documentation requirements.

32. Interested experts were invited to provide EBSA with written comments, and EBSA was invited to prepare separate proposals for plant pathogens and GMOs for the next session.

J. Transition period for marking lithium batteries

Informal document: INF.41 (RECHARGE)

33. The Sub-Committee agreed that lithium ion batteries manufactured before 1st January 2009 should not be required to be marked with the watt-hour marking before 1st January 2011 (see annex 1). Modal organizations were invited to reflect this transitional measure in the next amendment to their respective legal instruments.

K. Assignment of Special Provision 274

Informal document: INF.25 (CEFIC)

34. The Sub-Committee noted with satisfaction the work undertaken under the auspices of the RID/ADR/ADN Joint Meeting to try to harmonize the assignment of Special Provision 274 in RID/ADR/ADN with that in the Model Regulations.

35. As this work was relevant for all modes of transport, the Sub-Committee agreed to address this issue at its next meeting.

L. Miscellaneous new proposals

Informal documents: INF.8 (United States) (Exceptions for certain articles containing Division 2.2 gases)
INF.14 (United Kingdom) (Ethylene oxide sterilization units)
INF.18 (Australia) (Special packing provisions for goods of Class 1)
INF.19 (Australia) (Package requirements for organochlorine pesticides)
INF.36 (United Kingdom) (Modifications to the time/pressure test for defining flash powders)

36. Several experts commented on these various informal documents. Revised proposals will be submitted at the next session. For INF.36, delegations were invited to provide the expert from the United Kingdom with comments in writing.

V. LIMITED QUANTITIES (MULTIMODAL HARMONIZATION) (agenda item 4)

Informal documents: INF.48 (submitted at the 31st session)
INF.24 (IMO)
INF.42 (Secretariat)
INF.55 (Working Group)

37. The Sub-Committee noted with satisfaction that the RID/ADR/ADN Joint Meeting and the IMO Sub-Committee on Dangerous Goods, Solid Bulk Cargoes and Containers (DSC) had expressed their willingness to find compromise solutions for the multimodal harmonization of provisions applying to the transport of dangerous goods packed in limited quantities. DSC had accepted to combine the provisions applicable to limited quantities and those applicable to consumer commodities, the use of the suggested diamond-shaped mark as well as the marking of cargo transport units with this mark. IMO would continue to require full documentation. ICAO would also consider the outcome of this work for adapting the ICAO Technical Instructions.

38. A lunch-time working group was established to discuss the issues of marking and documentation, and the Sub-Committee noted that the expert from France would prepare a proposal for the next session in consultation with the other interested delegations.

VI. ELECTRONIC DATA INTERCHANGE (EDI) FOR DOCUMENTATION PURPOSES (agenda item 5)

Informal documents: INF. 5 (31st session) (IATA)
INF. 12 (VOHMA)
INF. 50 and Adds 1-2 (Secretariat)

39. The Sub-Committee expressed general support for additional work in this area, since the use of EDI techniques instead of paper documentation would undoubtedly improve the situation of the evergrowing multimodal transport of dangerous goods in freight containers and diminish existing problems of delays and congestion nevertheless it was recognized that there will still be a number of problems to overcome: legal recognition of electronic documents and electronic signatures; non availability of standardized electronic messages for transport of dangerous goods information; availability of dangerous goods information on board means of transport when the information is transmitted electronically and is not available in paper form; confidentiality.

40. The chief of the Global Trade Solutions Branch of the UNECE Trade Development and Timber Division explained the process of standardization of messages by the UN/CEFACT. The Sub-Committee would have to define exactly the data elements to be standardized and define what to do with such data. A first approach, called document centric approach, would consist in transferring documents and data elements, as they are used currently, into standardized electronic trade documents. Another approach, more resource intensive but also more complete, would be to model the business process. It would be necessary to define the scope and boundaries of the process to be analysed, all entities which would use or could have access to the data in a transport chain, e.g. shippers, carriers, customs, emergency services, control authorities, port services, etc..., and determine requirements for security, confidentiality, etc... In that approach, the process would be documented in detail (Approach modeling). The Sub-Committee should define the work plan and resources needed, designate the Head of project, and approve the project. In case the Sub-Committee would like to draw on the resources and know how of UN/CEFACT, the approved document should be sent to UN/CEFACT via the secretariat for comments and discussion.

41. The representative of VOHMA informed the Sub-Committee of initiatives taken by this organization for identifying data elements which caused practical problems. He said he would cooperate with IATA to prepare a paper on a possible process map.

42. The Sub-Committee agreed that a plan of action could be considered at the next session in order to formalize a multiyear-phase project.

VII. MISCELLANEOUS PROPOSALS OF AMENDMENTS TO THE MODEL REGULATIONS ON THE TRANSPORT OF DANGEROUS GOODS (agenda item 6)

A. References to ISO standards in the UN Model Regulations

Document: ST/SG/AC.10/C.3/2007/35 (United Kingdom)

Informal document: INF.37 (United Kingdom)

43. The amendments proposed were adopted (see annex 1).

B. Definition of closed cargo transport unit

Document: ST/SG/AC.10/C.3/2007/40 (Belgium)

44. The proposal by Belgium was adopted with amendments (see annex 1).

C. Revision of Chapter 2.9

Document: ST/SG/AC.10/C.3/2007/41 (United Kingdom)

45. The proposal by the United Kingdom was adopted, with some amendments (see annex 1).

D. Open cryogenic receptacles

Document: ST/SG/AC.10/C.3/2007/42 (United Kingdom)

46. Most experts expressed support for the new provisions proposed. Several comments of an editorial nature having been made, the expert from the United Kingdom said that he would submit a revised proposal at the next session.

E. References to ISO standards

Document: ST/SG/AC.10/C.3/2007/49 (EIGA and ISO)

47. The first proposal to add references to ISO standards in paragraph 6.2.2.1.1 was adopted, for standards ISO 20703:2006 and ISO 18172-1:2007 (see annex 1).

48. With regard to the proposal to add standard ISO 18172-2:2007, some delegations considered that experience of refillable welded stainless steel cylinders with a test pressure greater than 6 MPa was insufficient to be able to determine the validity of the standard from a safety standpoint. The ISO representative said that he would withdraw the proposal and that he might submit another document with more detailed supporting explanations, or might consider the possibility of revising the standard.

49. The proposal to amend note 2 of paragraph 6.2.1.6.1 (d) was adopted with some changes. The option of ultrasonic examination as an equivalent method to a hydraulic pressure test was placed between square brackets for consideration for deletion from note 2. The new note 3 added to paragraph 6.2.1.6.1 concerning ultrasonic examination was also placed in square brackets (see annex 1).

F. Impact testing of portable tanks and MEGCs

Document: ST/SG/AC.10/C.3/2007/44 (Canada)

50. The aim of the proposal was to amend section 41.2 of the Manual of Tests and Criteria, on permitted design variations, in order to reflect the variations permitted under the current version of ISO 1496-3 for the corresponding test protocol. The proposal gave rise to a number of questions from experts. In the end, the expert from Canada withdrew the proposal, expressing the hope that ISO would provide the rationale for the permitted design variations in ISO 1496-3 for consideration of the Sub-Committee at a future meeting.

G. Definition of technical name

Document: ST/SG/AC.10/C.3/2007/46 (Germany)

51. The Sub-Committee adopted the proposal to amend paragraph 3.1.2.8.1.1 (adding a reference to use of a biological name), with an editorial modification. It was noted that paragraph 3.1.2.8.1 should mention not only special provision 274 but also provision 318 (see annex 1).

H. Fumigated units and cargo transport units containing dry ice as a refrigerant

Document: ST/SG/AC.10/C.3/2007/47 (United Kingdom)

52. Several experts made observations on the proposed text of Chapter 5.5. The expert from the United Kingdom requested them to submit their comments in writing so that he could draw up a new proposal.

I. Optional use of fusible elements on portable tanks with a test pressure higher than 2.65 bar for organometallic substances

Document: ST/SG/AC.10/C.3/2007/51 (ICCA)

53. The proposed amendments to paragraph 6.7.2.10.1 and addition of a new tank provision TPxx for the transport of organometallic substances in tanks were adopted, except for the reference to approval by the competent authority, which was deemed unnecessary, and for the operating temperatures, which should be between 100° C and 149° C (see annex 1).

J. Tanks with surge plates

Document: ST/SG/AC.10/C.3/2007/56 (Belgium)

54. The proposal to include the letter “S” as a required mark on the tank plate when the tank is divided by surge plates into sections of not more than 7500 litres capacity was adopted, as this would facilitate compliance with the degree of filling requirements. It was agreed to add a recommendation for the transitional measures (see annex 1).

K. UN portable tank and MEGC identification plates

Document: ST/SG/AC.10/C.3/2007/52 (Canada)

Informal document: INF.10 (Canada)

55. The Sub-Committee agreed in principle to clarify and rationalize the list of information required to be marked on the tank plate, and invited the expert from Canada to prepare a revised proposal which would take account of comments made and which would include transitional measures.

L. Provisions concerning training

Document: ST/SG/AC.10/C.3/2007/54 (DGAC, VOHMA)

Informal document: INF.15 (Canada)

56. The Sub-Committee adopted amendments to section 1.3.2 intended to clarify the training requirements (see annex 1).

M. Bottom closing devices for portable tanks for Packing Group I solids

Informal document: INF.17 (Australia)

57. After discussion, the expert from Australia withdrew his proposal and said he would prepare a revised one for the next session.

N. Definition of “Phlegmatized”

Informal document: INF.21 (Australia)

58. This document will be submitted as an official document for discussion by the Working Group on Explosives at the next session.

O. Revision of section 7.1.3.2.3

Informal document: INF.22 (Australia)

59. The expert from Australia will submit a revised proposal for the next session.

P. Clarification regarding information required on the transport document

Informal document: INF.23/Rev.1 (VOHMA)

60. The proposed amendment to 5.4.1.4.3 (b) was adopted (see annex 1).

VIII. HARMONIZATION WITH THE INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA) REGULATIONS FOR THE SAFE TRANSPORT OF RADIOACTIVE MATERIAL (agenda item 7)

Document: ST/SG/AC.10/C.3/2007/32 (IATA)

Informal documents: INF. 13 (Secretariat)
INF. 46 (IAEA)
INF. 56 (IATA)

61. The Sub-Committee noted that the IAEA planned to issue a 2009 version of its Regulations. This version would include a number of changes intended to harmonize the IAEA Regulations with the UN Model Regulations. Changes adopted so far are still subject to the IAEA Member States consultation process. A list of changes which would need to be reflected in the UN Model Regulations will be brought to the attention of the Sub-Committee at its next session, but their final adoption by the Committee in December 2008 would remain subject to the effective decision of IAEA to publish a 2009 edition of the IAEA Regulations.

62. The Sub-Committee considered the recommendations made by the IAEA Consultant Service (CS-72) on Harmonization between the UN and the IAEA Transport Regulations at its session held in Vienna from 26-28 September 2007 (INF. 13).

63. For Recommendation No 1, the Sub-Committee noted that this CS72 report had already been transmitted to the IAEA Transport Safety Standards Committee (TRANSSC) at its 15th session (1-4 October 2007).

64. For Recommendation No 2, the Sub-Committee noted that TRANSSC 15 had agreed to amend paragraph 548 as proposed and the amended text would be included in the 2009 version of the IAEA Regulations. Therefore the amendment should also be reflected in 5.3.2.1.1 (e) of the UN Model Regulations, between square brackets pending completion of the IAEA process of approval of amendments (see annex 1).

65. For Recommendation No 3, the expert from the United Kingdom said that he intended to submit a paper comparing definitions to the next session of the IAEA Consultant Service.

66. For Recommendation No 4 concerning radioactive material in excepted packages presenting other hazards, the Sub-Committee noted that other issues concerning such excepted packages would be discussed in technical meetings by IAEA in January and March 2008, and that new changes might be needed depending on the outcome of the discussions.

67. The representative of IATA, supported by the expert from Belgium, said that he did not agree with the recommendation that excepted packages containing radioactive material with other hazards in quantities below those specified in Chapter 3.5 of the Model Regulations be classified in accordance with special provision 290. He felt that, in accordance with the current practice for air transport, these excepted packages should be classified under UN No 2910 and the other hazards should be ignored.

68. The Sub-Committee agreed that the amendments proposed should be adopted provisionally (between square brackets) and invited the representative of IATA to submit a new proposal if he deemed it necessary.

69. For Recommendations Nos 5, 6 and 7, the Sub-Committee noted that the current text of 1.5.1.5 in the UN Model Regulations does not reflect the IAEA regulations and should be corrected as proposed. The corrected text had already been accepted for RID, ADR and ADN, and IMO and ICAO were invited to reflect it as well in the forthcoming editions of the IMDG Code and of the ICAO Technical Instructions, except those parts in square brackets which have still to be formally approved for the 2009 version of the IAEA Regulations.

70. For Recommendation No 8, the Sub-Committee noted that TRANSSC 15 had requested the IAEA to follow the recommended procedure.

71. For Recommendation No 9, the Sub-Committee agreed that the process of harmonization of the IAEA and UN Regulations would be facilitated if the structure of the IAEA Regulations was the same as that of the UN Model Regulations. Certain experts, noting that issuing revised editions of the IAEA Regulations every two years seemed to be problematic, suggested that the IAEA could work directly on the basis of the UN Model Regulations. Once discussed and adopted by TRANSSC and other relevant IAEA bodies, the amendments to the provisions of the UN Model Regulations concerning radioactive material could be submitted by IAEA to the Sub-Committee for direct integration in the revised editions of the UN Model Regulations.

IX. GLOBAL HARMONIZATION OF TRANSPORT OF DANGEROUS GOODS REGULATIONS WITH THE UN MODEL REGULATIONS (agenda item 8)

Informal documents: INF.24 (IMO)
INF.42 (Secretariat)

72. The Sub-Committee thanked the IMO and UNECE secretariats for their reports on the decisions taken by their organizations when they considered harmonizing the IMDG Code, RID, ADR and ADN with the 15th revised edition of the Recommendations on the Transport of Dangerous Goods, Model Regulations. These reports will allow the Sub-Committee to detect future modal deviations which could require further consideration.

X. GUIDING PRINCIPLES FOR THE MODEL REGULATIONS (agenda item 9)

A. Principles underlying the regulations of the transport of dangerous goods

Document: ST/SG/AC.10/C.3/2007/38 (IMO)

Informal document: INF.20 (Australia)

73. It was recalled that when paragraph 5 of the Recommendations on the Transport of Dangerous Goods was introduced (1986), the Recommendations had not yet been reformatted and did not contain as many operational details as in the Model Regulations. The basic principle was that the recommendations were intended to bring harmony between all national and international legal instruments applicable to all modes of transport, but it was recognised that more stringent requirements might occasionally apply to air transport, mainly because of pressure conditions in air transport. The Sub-Committee recognized that in practice, there were some differences between the IMDG Code and the UN Model Regulations notably in the Packing Instructions, but it was noted harmonization was a goal, which could not be always perfectly met, and it happened, even in land transport regulations, that more stringent or different requirements were in some instances introduced. The acknowledgement of some deviations should not call into question the objective reflected in the principle. It was agreed nevertheless to redraft this text on the basis of a proposal made by the expert from the United Kingdom (see annex 1).

74. A member of the secretariat said that some of the paragraphs contained in the recommendations, including this paragraph 5, might need further review to take account of the reformatting into Model Regulations. This could be the opportunity to make reference to the Guiding Principles.

B. Revised text for the Guiding Principles

Informal document: INF. 28 (Secretariat)

75. The Sub-Committee noted with appreciation the work carried out by the secretariat to update the Guiding Principles to take account of the revised provisions of the 15th revised edition of the Recommendations on the Transport of Dangerous Goods, Model Regulations.

76. For the two options proposed concerning Chapter 3.4, the Sub-Committee decided to adopt the second one.

77. The Chairman said that the United States delegation would check the few issues related to the texts placed between square brackets. The final version would then be circulated to all experts by the secretariat for 30 day comments, and would then be made available on the UNECE website.

XI. ISSUES RELATING TO THE GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS) (agenda item 10)

A. Classification of gas mixtures as oxidizing

Document: ST/SG/AC.10/C.3/2007/53 (EIGA)

Informal document: INF.57 (ISO)

78. The Sub-Committee agreed to add a NOTE to 2.2.2.1 (b) concerning the definition of oxidizing gas mixtures (see annex 1). This decision should be brought to the attention of the GHS Sub-Committee.

B. Systematic approach for colours and appearance of pictogrammes

Document: ST/SG/AC.10/C.3/2007/55 (CTIF)

79. There was no support for this proposal that only white symbols and numbers should appear on black, green, red and blue background.

C. Informal working group on desensitized explosives

Informal document: INF. 9 (Germany)

80. The Sub-Committee was informed that Germany would host a meeting of an informal working group on desensitized explosives in Berlin on 17 December 2007.

D. Substances having explosive properties

Informal document: INF. 35 (ICCA)

81. The Sub-Committee agreed that the decisions taken at the last session and forwarded to the GHS Sub-Committee in document ST/SG/AC.10/C.4/2007/6 needed further consideration, preferably by the working Group on Explosives which would meet at the next July session. The issue would be discussed intersessionally either at a session of an informal working group that ICCA offered to host, or during a session of the informal working group on desensitized explosives which would also be likely to be organized in early 2008 and where relevant experts would be present.

XII. OTHER BUSINESS (agenda item 11)

A. Developing and maintaining transport of dangerous goods regulations experts

Informal document: INF.11 (COSTHA)

82. The representative of COSTHA made a presentation on a project called “Enhancement of the Image of the Dangerous Goods Professional” seeking to identify the reasons for the decline in experts and to develop measures to attract qualified candidates who could become experts in this field. Statistics showed that the quality and success of the existing regulatory framework based on the UN Recommendations had entailed an excellent safety record in transport of dangerous goods, which had resulted in a decreasing political interest in governmental administrations and in the industry for the work of professionals whose work is to avoid that incidents or accidents occur, and in reduced career perspectives for these professionals despite their high qualification level.

83. COSTHA proposed a number of measures that could be implemented worldwide in cooperation with academic institutions, administrations and the private sector to overcome this problem and avoid a shortage of such professionals in the forthcoming years. The issue will be considered again at the next session.

B. Facilitation of shipment of radioactive material

Document: ST/SG/AC.10/C.3/2007/37 (IMO)

84. The Sub-Committee took note of the action taken by IMO to overcome the problem of denial of shipment of radioactive material, and recommended that other modal organizations should also consider this document.

C. Fire protection of cargo in containers

Informal document: INF.29 (IDGCA)

85. The Sub-Committee noted with interest the information provided on the possibility to equip freight containers with fire-extinguishing systems that would be activated in case of fire inside a container, and which could prevent the spreading of fire on board container ships.

86. The Sub-Committee was informed that the problem of fire inside containers was also on the agenda of the IMO Fire Protection Sub-Committee and was to be addressed in a more general manner (stowage of containers, segregation from sources of heat, fire-fighting systems on board ships).

87. The Sub-Committee noted that the system described was using halons as extinguishing agents, and bearing in mind the planned phasing out of such agents under the Montreal Protocol, invited IDGCA to provide more information on the possibility of using alternative agents.

Requiring the installation of such systems in freight containers would also be subject to a careful cost/safety benefits analysis, bearing in mind that freight containers are not usually designed for the transport of specific goods such as flammable liquids.

D. Requests for consultative status

Informal documents: INF.3 (IME)
INF.7 (British Fireworks Association)

88. The Sub-Committee agreed to grant consultative status to IME. No decision was taken as regards the British Fireworks Association which was not represented to introduce their application.

E. Schedule of meetings

Informal documents: INF.16 (Canada)
INF.43 (Secretariat)

89. The Sub-Committee discussed the proposal by Canada to replace the current schedule of meetings (twice a year, back-to-back with sessions of the GHS Sub-Committee) by a new schedule including only 3 sessions per biennium, as well as the comments made by the secretariat on elements to take into account before taking any decision (reporting to ECOSOC, implications for the secretariat, implications on the schedule of meetings of modal intergovernmental bodies, effects on implementation tools).

90. Certain experts supported the proposal, since this would reduce the travel costs related to their participation in the sessions of sub-committees, and would give them more time for preparing proposals and consulting at national level.

91. Other experts feared that such a rearrangement would result in an overall reduction of meeting time for the Sub-Committee of Experts on the Transport of Dangerous Goods, which they considered not desirable since experience showed that it was already making nearly full use of the meeting time currently allocated, except in the second session of a biennium. It was also recalled that the programme of work had increased since the Sub-Committee had to carry out the part of the programme of work of the GHS Sub-Committee concerning physical hazards.

92. Several experts insisted on the need to stick to the principle of back-to-back sessions of both sub-committees in order to ensure multisectoral cooperation and participation of transport experts in GHS activities.

93. Some experts felt that the current periodicity of sessions every six months permitted regular consultations which allowed experts to receive feedback on their proposals and make quick progress. A periodicity of eight months for three sessions per biennium might not be appropriate to maintain the current momentum.

94. It was also suggested that the second session of a biennium be reduced to five days in future, or that the dates of the sessions be changed since holding sessions in July and December seemed to cause problems to some experts.

95. The Chairman concluded that changing the existing arrangements would require careful consideration, by both sub-committees, on the basis of written documents showing the different options with the pros and cons, and consultation with other relevant organizations.

F. Biennial evaluations

Informal documents: INF.44 (Secretariat)
INF.54 (Secretariat)

96. The Sub-Committee noted that the United Nations Economic Commission for Europe (UNECE) had requested all its sectoral committees to implement biennial performance evaluations. As the Sub-Committee is a subsidiary body of the Economic and Social Council, it is not subject to this request. Nevertheless, since its activities are included in the programme budget of the UNECE, it was agreed to develop a text for the accomplishments expected in 2008-2009 and related performance indicators, for information of the UNECE (see annex 2).

G. Large-scale behaviour of fireworks

Informal document: INF.47 (Netherlands)

97. The Sub-Committee, took note of an invitation by the expert from the Netherlands to a meeting related to a research project entitled "Quantification and Control of the Hazards Associated with the Transport and Bulk Storage of Fireworks" (CHAF).

H. ECOSOC resolution 2007/6

Informal document: INF.38 (Secretariat)

98. The Sub-Committee noted that the draft resolution prepared by the Committee at its 3rd session (15 December 2006) (ST/SG/AC.10/34, annex 4) had been adopted without change by the Economic and Social Council.

I. Tributes

99. The Sub-Committee, informed that Mr. A. Johansson, expert from Norway, and Mr. H. Puype, representative of EIGA, would retire after this session, paid tribute to their long and outstanding contribution to its work. Mr. A. Johansson had, in particular, chaired numerous sessions of the Working Group on Explosives, and Mr. Puype had chaired many sessions of the Working Group on the Transport of Gases. The Sub-Committee wished them all the best for an happy and long retirement.

XIII. ADOPTION OF THE REPORT (agenda item 12)

100. The Sub-Committee adopted the report on its thirty-second session and the annexes thereto on the basis of a draft prepared by the secretariat.

Annex 1

Draft amendments to the UN Recommendations on the Transport of Dangerous Goods,
Model Regulations (15th revised edition)

Recommendation 5

Replace current second and third sentences with the following new sentence:

"Modal transport regulations may occasionally apply other requirements for operational reasons."

PART 1

Chapter 1.2

1.2.1 Add the following new definition:

"Closed cargo transport unit means a cargo transport unit which totally encloses the contents by permanent structures with complete and rigid surfaces. Cargo transport units with fabric sides or tops are not considered closed cargo transport units;"

(Replaces the definition in ST/SG/AC.10/C.3/62/Add.1, annex 1)

Chapter 1.3

1.3.1 In the first sentence, replace "shall receive training" with "shall be trained". Add a new second sentence to read as follows: "Employees shall be trained in accordance with 1.3.2 before assuming responsibilities and shall only perform functions, for which required training has not yet been provided, under the direct supervision of a trained person."

1.3.2 At the end of the introductory text, replace "shall receive the following training" with "shall be trained in the following".

1.3.2 (a) (i) Replace "shall receive training designed" with "shall be trained".

1.3.2 (b) Replace "shall receive detailed training concerning" with "shall be trained in".

1.3.2 (c) In the first sentence, replace "shall receive training" with "shall be trained".

(Replaces the amendments to 1.3.1 and 1.3.2 in ST/SG/AC.10/C.3/62/Add.1, annex 1)

Chapter 1.5

1.5.1.5.1 At the end of the introductory text, replace "may be transported under the following conditions" with "shall be subject only to the following provisions of Parts 5 to 7".

Amend sub-paragraph (a) to read as follows:

"(a) The applicable requirements specified in 5.1.2, 5.1.3.2, 5.1.4, 5.2.1.1, 5.2.1.2, 5.2.1.5.1 to 5.2.1.5.3, 5.2.1.7, 5.4.1.4.1 (a), [7.1.8.5.3 to 7.1.8.6.1, 7.1.8.5.1] and 7.1.8.5.2;"

Delete sub-paragraph (d).

1.5.1.5.2 Amend to read as follows:

"1.5.1.5.2 Excepted packages shall be subject to the relevant provisions of all other parts of these Regulations."

1.5.2.7 Replace "shall receive appropriate training" with "shall be appropriately trained".
(Replaces the amendments to 1.5.2.7 in ST/SG/AC.10/C.3/62/Add.1, annex 1)

PART 2

Chapter 2.0

[2.0.3.2 At the end, add the following new sentence: "For radioactive material in excepted packages, special provision 290 of Chapter 3.3 applies.".]

Chapter 2.2

[2.2.2.1 (b) In (ii), delete the second sentence ("The oxidizing ability... 10156-2:2005").

Add a new note to read as follows:

"NOTE: In 2.2.2.1 (b) (ii), "Gases which cause or contribute to the combustion of other material more than air does" means pure gases or gas mixtures with an oxidizing power greater than 23.5% as determined by a method specified in ISO 10156:1996 or 10156-2:2005.".]

[2.2.3 (d) In the parenthesis, insert "the Note in 2.2.2.1 (b) and" before "ISO 10156:1996".]

Chapter 2.8

2.8.2.4 At the end, after "404¹", add the following text:

"[or 435². A substance which is determined not to be corrosive in accordance with OECD Test Guideline 430³ or OECD Test Guideline 431⁴ may be considered not to be corrosive to skin for the purposes of these Regulations without further testing.]".

Chapter 2.9

Amend Chapter 2.9 as proposed in ST/SG/AC.10/C.3/2007/41 with the following modifications:

Delete the phrases in square brackets.

2.9.2 In subdivision "***Other substances or articles presenting a danger during transport, but not meeting the definitions of another class***", amend the entry for UN 2216 to read "UN 2216 FISH MEAL (FISH SCRAP), STABILIZED". Transfer this subdivision at the end of 2.9.2.

Amend the heading of subdivision "***Elevated temperatures substances***" to read "***Substances transported or offered for transport at elevated temperatures***".

Amend subdivision "***Environmentally hazardous substances***" to read as follows:

"Environmentally hazardous substances

(a) *Solid*

3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S

(b) *Liquid*

3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

These designations are used for substances and mixtures which are dangerous to the aquatic environment that do not meet the classification criteria of any other class or another substance within Class 9. These designations may also be used for wastes not otherwise subject to these Regulations but which are covered under

² OECD Guideline for the testing of chemicals No. 435 "In Vitro Membrane Barrier Test Method for Skin Corrosion" 2006.

³ OECD Guideline for the testing of chemicals No. 430 "In Vitro Skin Corrosion: Transcutaneous Electrical Resistance Test (TER)" 2004.

⁴ OECD Guideline for the testing of chemicals No. 431 "In Vitro Skin Corrosion: Human Skin Model Test" 2004.

the *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal* and for substances designated to be environmentally hazardous substances by the competent authority of the country of origin, transit or destination which do not meet the criteria for an environmentally hazardous substance according to these Regulations or for any other hazard Class. The criteria for substances which are hazardous to the aquatic environment are given in 2.9.3."

Amend the last paragraph under subdivision "*Genetically modified micro-organisms (GMMOs) and genetically modified organisms (GMOs)*" to read as follows:

"GMMOs and GMOs which do not meet the definition of infectious substances (see 2.6.3) but which are capable of altering animals, plants or microbiological substances in a way not normally the result of natural reproduction shall be assigned to UN 3245. (*last sentence unchanged*)".

PART 3

Chapter 3.1

3.1.2.8.1 In the first sentence, insert "or 318" after "special provision 274".

3.1.2.8.1.1 In the first sentence, insert "or biological name," after "recognized chemical".

Chapter 3.2

Dangerous Goods List

[For UN Nos. 1002 and 1956, delete "292" in column (6).]

For UN Nos. 3391 to 3394, 3395 to 3399 (packing groups I, II and III) and 3400 (packing groups II and III), add "TP36" in column (11).

For UN Nos. 1391, 1649, 2030, 3385, 3386, 3389 and 3390, delete "329" in column (6).

For UN Nos. 1748, 2208, 2880, 3383 and 3384, delete "313" in column (6).

Add the following new entries:

(1)	(2)	(3)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9)	(10)	(11)
3482	ALKALI METAL DISPERSION, FLAMMABLE or ALKALINE EARTH METAL DISPERSION, FLAMMABLE	4.3	3	I	182 183	0	E0	P402			
3483	MOTOR FUEL ANTI-KNOCK MIXTURE, FLAMMABLE	6.1	3	I		0	E5	P602		T14	TP2 TP13
3484	HYDRAZINE AQUEOUS SOLUTION, FLAMMABLE, with more than 37 % hydrazine, by mass	8	3 6.1	I		0	E0	P001		T10	TP2 TP13
3485	CALCIUM HYPOCHLORITE, DRY, CORROSIVE or CALCIUM HYPOCHLORITE MIXTURE, DRY, CORROSIVE with more than 39% available chlorine (8.8% available oxygen)	5.1	8	II	314	1 kg	E2	P002 IBC08	PP85 B2, B4, B13		
3486	CALCIUM HYPOCHLORITE MIXTURE, DRY, CORROSIVE with more than 10% but not more than 39% available chlorine	5.1	8	III	314	5 kg	E1	P002 IBC08 LP02	PP85 B3, B13		
3487	CALCIUM HYPOCHLORITE, HYDRATED, CORROSIVE or CALCIUM HYPOCHLORITE, HYDRATED MIXTURE, CORROSIVE, with not less than 5.5% but not more than 16% water	5.1	8	II	314 322	1 kg	E2	P002 IBC08	PP85 B2, B4, B13		
3488	CALCIUM HYPOCHLORITE, HYDRATED, CORROSIVE or CALCIUM HYPOCHLORITE, HYDRATED MIXTURE, CORROSIVE, with not less than 5.5% but not more than 16% water	5.1	8	III	223 314	5 kg	E1	P002 IBC08	PP85 B4		
3489	TOXIC BY INHALATION LIQUID, FLAMMABLE, CORROSIVE, N.O.S. with an inhalation toxicity lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀	6.1	3 8	I	274	0	E5	P601		T22	TP2 TP13

3490	TOXIC BY INHALATION LIQUID, FLAMMABLE, CORROSIVE, N.O.S. with an inhalation toxicity lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀	6.1	3 8	I	274	0	E5	P602		T20	TP2 TP13
3491	TOXIC BY INHALATION LIQUID, WATER-REACTIVE, FLAMMABLE, N.O.S. with an inhalation toxicity lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀	6.1	4.3 3	I	274	0	E5	P601		T22	TP2 TP13
3492	TOXIC BY INHALATION LIQUID, WATER-REACTIVE, FLAMMABLE, N.O.S. with an inhalation toxicity lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀	6.1	4.3 3	I	274	0	E5	P602		T20	TP2 TP13
3493	TOXIC BY INHALATION LIQUID, CORROSIVE, FLAMMABLE, N.O.S. with an inhalation toxicity lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀	6.1	8 3	I	274	0	E5	P601		T22	TP2 TP13
3494	TOXIC BY INHALATION LIQUID, CORROSIVE, FLAMMABLE, N.O.S. with an inhalation toxicity lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀	6.1	8 3	I	274	0	E5	P602		T20	TP2 TP13

Chapter 3.3

SP 188 (b) At the end of the second sentence, after "case", add the following text:
 ", except those manufactured before 1 January 2009 which may be transported in accordance with this special provision and without this marking until 31 December 2010".

[SP 290 In the first and second sentences, replace "this material" with "this radioactive material". At the end, add the following text:

"Example of information to be entered in the transport document:

UN 1993, Flammable liquid, n.o.s. (ethanol and toluene mixture), Radioactive material, excepted package – limited quantity of material, Class 3, PG II.

For the purposes of package marking in accordance with 5.2.1.1, only the UN number and proper shipping name corresponding to the non-radioactive hazard(s) need to be marked on the package in addition to the marks that may be required in 2.7.2.4.1.3 or 2.7.2.4.1.4.".]

[SP 292 Amend to read as follows: "*Deleted.*".]

SP 313 and 329 Amend to read as follows: "*Deleted.*".

Chapter 3.5

[3.5.1.1 In the first sentence, after "articles", add "and other than substances which are classified in accordance with special provision 290 of Chapter 3.3".]

PART 4

Chapter 4.1

4.1.4.1 **P901** Replace "Maximum quantity of dangerous goods per outer packaging: 10 kg." with "The quantity of dangerous goods per outer packaging shall not exceed 10 kg, excluding the mass of any carbon dioxide, solid, (dry ice) used as a refrigerant.".

At the end of the additional requirement, add the following new text:

"Dry ice

When carbon dioxide, solid, (dry ice) is used as a refrigerant, the packaging shall be designed and constructed to permit the release of the gaseous carbon dioxide to prevent the build up of pressure that could rupture the packaging.".

4.1.6.1.8 At the end, replace "the requirements of annex B of ISO 10297:1999" with "the requirements of annex A of ISO 10297:2006".

4.1.9.1.3 In the first sentence, after "package", add ", other than an excepted package,".

Chapter 4.2

4.2.5.3 Add the new special provision TP36 at the end:
"TP36 Fusible elements in the vapour space may be utilized on portable tanks.".

PART 5**Chapter 5.2**

5.2.1.7.1 Replace "ISO 780:1985" with "ISO 780:1997".

Chapter 5.3

[5.3.2.1.1 (e) Amend to read as follows:

"(e) Packaged radioactive material with a single UN number in or on a vehicle, or in a freight container, when required to be transported under exclusive use.".]

Chapter 5.4

5.4.1.4.3 (b) At the end, replace "proper shipping name" with "dangerous goods description specified in 5.4.1.4.1 (a) to (e)".

PART 6**Chapter 6.2**

6.2.1.6.1 (d) In Note 2, add the following new sentence at the end: "ISO 16148:2006 may be used as a guide for acoustic emission testing procedures.".

[In Note 2, delete ", ultrasonic examination".]

[Add a new Note 3 to read as follows:

"NOTE 3: The hydraulic pressure test may be replaced by ultrasonic examination carried out in accordance with ISO 10461:2005+A1:2006 for seamless aluminium alloy cylinders and in accordance with ISO 6406:2005 for seamless steel cylinders and tubes. Note that ultrasonic examination may also be used to check the internal conditions (see 6.2.1.6.1 (b)).".]

6.2.2.1.1 In the table, add the two following standards:

ISO 20703:2006	Gas cylinders – Refillable welded aluminium-alloy cylinders – Design, construction and testing
ISO 18172-1:2007	Gas cylinders – Refillable welded stainless steel cylinders – Part 1: Test pressure 6 MPa and below

6.2.2.3 Replace "ISO 10297:1999" with "ISO 10297:2006".

Chapter 6.4

6.4.6.1, 6.4.6.2 and 6.4.6.4 Replace "ISO 7195:1993" with "ISO 7195:2005".

Chapter 6.7

6.7.2.10.1 In the first sentence, replace "110 °C" with "100 °C". In the second sentence, replace "in no case shall they" with "when intended as the primary relief device, they shall not". At the end of the third sentence, add "unless specified by special tank provision TP36 in Chapter 3.2, Dangerous Goods List."

6.7.2.20.1 Replace "Water capacity at 20 °C _____ litres" with:
"Water capacity at 20 °C _____ litres; this indication shall be followed by the symbol "S" when the shell is divided by surge plates into sections of not more than 7500 litres capacity. When the shell was already divided by surge plates into sections of not more than 7500 litres capacity before 1 January 2012, the capacity of the shell need not be supplemented with the symbol "S" until the next periodic inspection or test according to 6.7.2.19.5 is performed."

Replace "Water capacity of each compartment at 20 °C _____ litres" with:
"Water capacity of each compartment at 20 °C _____ litres; this indication shall be followed by the symbol "S" when the compartment is divided by surge plates into sections of not more than 7500 litres capacity. When the compartment was already divided by surge plates into sections of not more than 7500 litres capacity before 1 January 2012, the capacity of the compartment need not be supplemented with the symbol "S" until the next periodic inspection or test according to 6.7.2.19.5 is performed."

Annex 2Expected accomplishments and performance indicators for 2008-2009Expected accomplishment

Development and review of recommendations, drafted in the form of Model Regulations, on the transport of dangerous goods in the light of technical progress, the advent of new substances and materials, the exigencies of modern transport systems and, above all, the requirement to ensure the safety and security of people, property and the environment. These recommendations shall represent a basic scheme of provisions to allow uniform development of national and international regulations governing the various modes of transport.

Performance indicators

1. Number of international legal instruments amended to reflect the 2007 UN Recommendations on the Transport of Dangerous Goods, Model Regulations (15th revised edition);
2. Number of governments having adopted the requirements of 2007 UN Recommendations on the Transport of Dangerous Goods, Model Regulations (15th revised edition) for regulating domestic inland transport;
3. Amendments to 15th revised edition of the Model Regulations and 4th revised edition of the Manual of Tests and Criteria adopted in 2008 and reflected in 16th revised edition of the Model Regulations and 5th revised edition of the Manual of Tests and Criteria before end 2009.
