



**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****Fifty-fifth session**

Geneva, 1-5 July 2019

Item 6 (e) of the provisional agenda

**Miscellaneous proposals for amendments to the Model Regulations
on the Transport of Dangerous Goods: other miscellaneous proposals****Proposal of amendments concerning the use of the terms
“risk” and “hazard/danger” in the Recommendations and
Model Regulations****Transmitted by the observer from Romania*****Introduction**

1. A discussion concerning the difference between the terms “hazard” and “risk” was opened following consideration of document ST/SG/AC.10/C.3/2016/16 of the International Air Transport Association (IATA) which clarified in part the use of the terms “hazard” and “risk” in the twentieth revised edition of the Model Regulations.

2. I will recall some of the paragraphs in IATA document ST/SG/AC.10/C.3/2016/16 to integrate the proposals of this document in the spirit of those already adopted:

1. *The provisions of the Model Regulations use the terms “hazard” and “risk” interchangeably in a way that the terms appear to mean the same thing. There is a difference in meaning however, with “hazard” generally being the inherent properties of a substance or article that has the potential to do harm to persons, property or the environment and “risk” being the likelihood that the harm may occur.*

2. *This difference is clearly stated in paragraph 1.1.2.6.2 of the current edition of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). In the GHS risk equates to hazard multiplied by exposure.*

* In accordance with the programme of work of the Sub-Committee for 2019-2020 approved by the Committee at its ninth session (see ST/SG/AC.10/C.3/108, paragraph 141 and ST/SG/AC.10/46, paragraph 14).

3. *In the context of consumer and workplace safety where there is the actual or potential physical exposure to the substances, this definition is entirely appropriate.*
 4. *However for transport, where the dangerous goods are typically contained in a packaging, intermediate bulk container (IBC), large packaging or tank, the potential for exposure is limited as any exposure should be prevented by the performance of the packaging, IBC, large packaging or tank. Instead, for transport, risk really equates to probability multiplied by the consequence.*
 5. *This differentiation between the use of “hazard” vs. “risk” becomes much more important as States and organisations implement a systems approach to safety. Under a safety management system (SMS), managing and mitigating risk is a fundamental principle of a SMS and therefore it becomes important the people involved in the application of a SMS within their organisation correctly understand the difference between a hazard and the potential risk presented by the hazard.*
3. In September 2017, the RID/ADR/ADN Joint Meeting established an informal working group to study and propose consequential amendments to RID/ADR/ADN concerning the use of the terms “hazard” and “risk”.
 4. The informal working group met twice¹, according to the terms of reference set up by the Joint Meeting to draft definitions of the concepts of “risk” and “hazard/danger” in the context of RID/ADR/ADN and to prepare proposals of amendments for the harmonisation of the use of the terms for the application of the Model Regulations and GHS sub-section 1.1.2.6.2.
 5. The informal working group analysed also the difference between the terms used in Chapter 1.4 of the Model Regulations for the specific goods “high consequence dangerous goods”/“marchandises dangereuses à haut risque”. The meaning is the same, but the terms are different.
 6. It is possible that this difference be reflected in other language versions of the Model Regulations.
 7. As mentioned in the report of the autumn 2018 session of the Joint meeting (ECE/TRANS/WP.15/AC.1/152):

“47. The Joint Meeting welcomed the results of the work of the informal working group. Noting that some of the amendments concerned texts from the Model Regulations, it invited the representative of Romania to bring them to the attention of the TDG Sub-Committee at its fifty-fifth session (July 2019) in an official document.”
 8. The discussion continued at the spring 2019 session of the Joint Meeting, and the report (ECE/TRANS/WP.15/AC.1/152) notes, among others, the following aspects:

“29. After an exchange of views on the rationale for some of the proposed amendments, the Joint meeting agreed that the terms “hazard” and “risk” should only be used when strictly necessary and in a consistent manner throughout the text of RID/ADR/ADN. Consistency of the terminology in RID/ADR/ADN with the Model Regulations and the GHS should also be ensured, on the understanding that any issue related to the current use of these terms in the Model Regulations, the Manual of Tests and Criteria or the GHS shall be brought to the attention of the Sub-Committee of

¹ In Valenciennes (France), from 15 to the 16 January 2018 (see report in informal document INF.13 submitted to the spring 2018 session of the Joint Meeting) and

In the Hague (Netherlands), from 11 to 13 June 2018 (see report in informal document INF.10 and Adds 1 and 2 submitted to the autumn 2018 session of the Joint Meeting).

Experts on the Transport of Dangerous Goods or the Sub-Committee of Experts on the GHS, as appropriate.”

9. In this context, we bring to the attention of the Sub-Committee the use of the terms “*hazard/danger*” and “*risk*” relevant for the United Nations Recommendations on the Transport of Dangerous Goods and its only annex – the Model Regulations.

10. For these reasons it is suggested that the alignment of the terminology should continue in the Recommendations and its annex - Model Regulations, and that the term “*risk*” should not be used where the correct term to use is “*hazard*”. This principle must be applied to all hazard classes and divisions. As a result of the proposals below, the term risk will not be completely removed from the Regulations.

Proposals

11. The Sub-Committee is invited to consider aligning the language in the Recommendations on the Transport of Dangerous Goods and its annex - Model Regulations to clarify the use of “*hazard*” and “*risk*” as set out in the following proposals (detailed in the informal document INF.4):

Proposal 1

[Original: English and French]

Amend the following paragraphs of the United Nations Recommendations on the Transport of Dangerous Goods, Model Regulations, as indicated:

Recommendations

The amendment to paragraph 8 in the French version does not apply to the English text.

Model Regulations

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| 1.3.2 (c) | Replace "risk" by "hazard". |
| 1.4.3, 1.4.3.1, 1.4.3.1.1, 1.4.3.1.2, 1.4.3.1.2 (Table), 1.4.3.1.3, 1.4.3.2, 1.4.3.2.1, 1.4.3.2.2.1, 1.4.3.2.2.2 (c) | The amendments to the French version do not apply to the English text. |
| 1.5.1.1 | Replace "risk" by "hazard". |
| Chapter 2.1 | The amendment to Note 3 under the heading in the French version does not apply to the English text. |
| 2.1.3.2.3, Note 3 | The amendment to the French version does not apply to the English text. |
| 2.1.3.3.1, Note | Replace "risk" by "hazard". |
| 2.6.2.1.2 and 2.6.2.1.3 | The amendments to the French version do not apply to the English text. |
| 2.6.3.2.3.3 | Replace "risk" by "hazard". |
| 2.6.3.2.3.4 | Replace "risk" by "hazard". |
| 2.6.3.2.3.8 | The amendment to the French version does not apply to the English text. |
| 2.8.2.2 | Replace "risk" by "hazard". |
| 3.3, SP 291 | Replace "the risk of bursting" by "the bursting". |
| 3.3, SP 296 | Replace "risk" by "hazard". |
| 3.5.3.2 | The amendment to the French version does not apply to the English text. |

- Appendix B (Glossary of terms) The amendment to the French version does not apply to the English text.
- 4.1.1.8, 4.1.3.6.4 (second paragraph), 4.1.4.1 (PP93, PP92 and P005) The amendments to the French version do not apply to the English text.
- 4.1.4.1, PP52 Replace "risk" by "hazard".
- 4.1.4.1, PP76 Replace "risk" by "hazard".
- 4.1.4.1 P200 (z, para 5), P601 (para 4 (a)), P602 (para 4 (a)) and P907 (para 3): The amendments to the French version do not apply to the English text.
- 4.1.4.2, B7, B19 and B18 The amendments to the French version do not apply to the English text.
- 4.1.5.2 (a) Replace "risk" by "hazard".
- 4.1.5.9, 4.1.6.1.8, 4.1.7.0.1, 4.2.1.6, TP 32 (a), 4.3.1.13, 4.3.1.16.2, 5.2.2.1.13.1: The amendments to the French version do not apply to the English text.
- 4.1.5.2 (c) Replace "risk" by "hazard".
- 5.4.2.1 (h) Replace "risk" by "hazard".
- 5.5.3 Replace "risk" by "hazard".
- 6.1.4.9.2 The amendment to the French version does not apply to the English text.
- 6.1.4.18.2 Replace "Where there is a danger of the substance contained reacting with moisture" by "Where the substance can react with moisture".
- 6.1.5.3.1(para 2), 6.2.1.1.6, 6.2.1.2.1, 6.2.1.3.2 and 6.2.1.3.6.2: The amendments to the French version do not apply to the English text.
- 6.2.2.7.4 (p) Replace "risk" by "hazard".
- 6.3.5.2.2, under the table The amendment to the French version does not apply to the English text.
- 6.5.3.1.5 Replace "risk" by "likelihood".
- 6.6.4.4.6, 6.6.4.5.7, 6.6.4.5.8 and 6.6.5.2.1 The amendments to the French version do not apply to the English text.
- 6.7.2.5.1 Replace "the risk of being wrenched off" by "being wrenched off".
- 6.7.2.5.8 Replace "the risk of damage" by "damage".
- 6.7.2.5.12 The amendment to the French version does not apply to the English text.
- 6.7.3.5.1 Replace "the risk of being wrenched off" by "being wrenched off" and "the danger of being wrenched off" by "being wrenched off".
- 6.7.3.5.10 Replace "the risk of damage" by "damage".
- 6.7.4.5.1 Replace "the risk of being wrenched off" by "being wrenched off" and "the danger of being wrenched off" by "being wrenched off".
- 6.7.4.5.10 Replace "the risk of damage" by "damage".
- 6.7.5.3.1 Replace "from being wrenched off" by "against being wrenched off".
- 6.7.5.3.3 and 6.7.5.3.4 The amendments to the French version do not apply to the English text.
- 6.8.3.2.1 Replace "from the risk of being wrenched off" by "against being wrenched off".

- 6.8.3.2.2 The amendment to the French version does not apply to the English text.
- 7.1.1.10 Replace "risks" by "hazards".
- 7.1.2.1, 7.1.2.3 (a), 7.1.5.2, 7.1.5.3.3, 7.1.5.4.5 (c), 7.1.5.4.5 (e) (iii), 7.2.4.2 and 7.2.4.3: The amendments to the French version do not apply to the English text.

Proposal 2

12. In the context of the work undertaken till now, a similar approach is proposed for the Manual of Tests and Criteria. However, further proposals will be presented at a later stage. The Manual of Tests and Criteria refers to risk several times in English and more often in the French version.
