

**SOME ASPECTS ON THE HARMONIZATION BETWEEN THE IAEA
„REGULATIONS FOR THE SAFE TRANSPORT OF RADIOACTIVE
MATERIAL“ AND THE UN “RECOMMENDATIONS ON THE TRANSPORT OF
DANGEROUS GOODS“**

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ABSTRACT

Since 2001 the IAEA “Regulations for the Safe Transport of Radioactive Material” are directly implemented into the UN “Recommendations on the Transport of Dangerous Goods”, Model Regulations (the so called “Orange Book”) as class 7 – radioactive material.

At the same time, consistent with the time schedule of the United Nations Sub-Committee of Experts on the Transport of Dangerous Goods and the relevant international modal organisations, a regular review process of the IAEA Transport Regulations intended to issue a revised or amended edition, as necessary, every two years was established. The last published version, the fourteenth revised edition of the “Orange Book” includes the IAEA Transport Regulations, 2005 Edition. However, the IAEA had decided not to publish a 2007 Edition of the Transport Regulations, and as a consequence did not recommend to the UN to implement the changes which had been adopted in the IAEA review cycle 2004-2005.

In the last two years further efforts have been made for better harmonization between both documents. The harmonization and assimilation with the UN Model Regulations concerning the transport of all nine classes of dangerous goods brings the class 7 “Radioactive material” in line with the other classes for a worldwide implementation into the national and international modal regulations.

The paper will discuss the benefits as well as some problems of this harmonization process.

The option to publish the 2009 Edition of the IAEA Transport Regulations with the changes from the review-revision cycle 2004 - 2005 and the harmonization changes with the UN is considered to be important to keep the leading role of the IAEA in the further development of all aspects concerning the safe transport of radioactive material based on their competence in radiation protection.

INTRODUCTION

At its twenty-first session (4-13 December 2000) the United Nations Economic and Social Council's Committee of Experts on the Transport of Dangerous Goods concluded a major initiative directed towards achieving uniform international and multimodal standards for the transport of dangerous goods. The 1996 Edition of the IAEA "Regulations for the Safe Transport of Radioactive Material" [1] was the first edition which was directly implemented into the 12th revised edition of the UN "Recommendations on the Transport of Dangerous Goods", Model Regulations ("Orange Book") [2] in 2001. In previous editions, only a reference to the IAEA Transport Regulations concerning the transport of class 7 "Radioactive Material" was mentioned in the UN Recommendations.

Parallel to this direct implementation a two year review/revision process of the IAEA Transport Regulations was initiated. This two-year cycle has been established to correspond to the review cycles of the other United Nations dangerous goods regulatory bodies

- the UN Committee of Experts on the Transport of Dangerous Goods, Geneva
- the International Civil Aviation Organization (ICAO), Montreal
- the International Maritime Organization (IMO), London and
- the United Nations Economic Commission for Europe (UN-ECE) - Inland Transport Committee, Geneva.
- Intergovernmental Organization for International Carriage by Rail (OTIF), Bern

In the 13th revised edition of the "Orange book" the 1996 Edition (As Amended 2003) of the IAEA Transport Regulations, TS-R-1, was implemented and the edition 2005 of the TS-R-1 is contained in the 14th revised edition from 2005.

HARMONIZATION PROCESS

Figure 1 contains the relationship between the UN, the IAEA and the international organizations for all modes of transport of dangerous goods.

These organizations are responsible to issue the regulations for the transport of all classes of dangerous goods (class 7 is "Radioactive Material") for the international air transport (ICAO), for the international maritime transport (IMO) and the European road, rail and inland waterway transport (UN-ECE, OTIF).

That means, each new edition of the IAEA Transport Regulation has to be implemented into the UN Model Recommendations and after publishing of the revised editions of the UN "Orange book" the regulations come into force via the international and national agreements and orders (see Figure 2). The time schedule for the IAEA activities is derived from [4] and was endorsed by TRANSSEC 15 (1 - 4 October 2007).

It would be very welcome to achieve the same implementation date worldwide, also for the national regulations, so that transitional provisions would not be necessary.

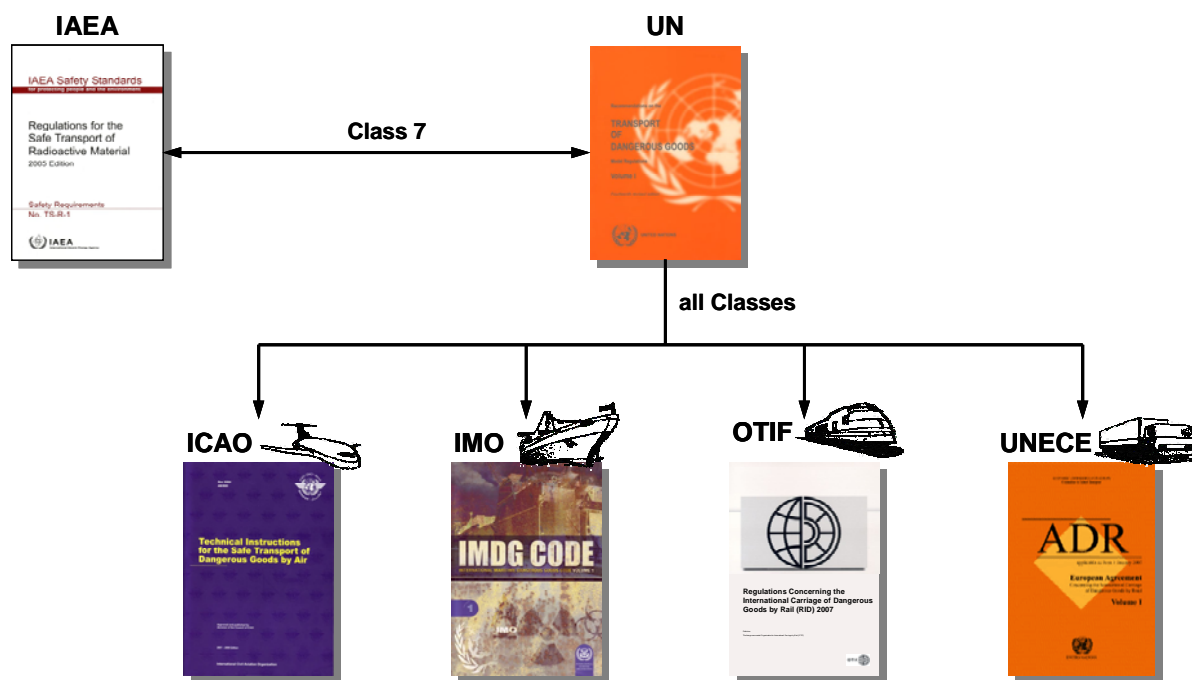


Figure 1. Relationship between UN, IAEA and modal organizations

IAEA ACTIVITIES IN DIRECTION TO THE HARMONIZATION WITH THE UN MODEL REGULATIONS

The Resolution GC (50)/RES/10 from the September 2006 IAEA General Conference [3] addressed harmonization and requested the Secretariat “to develop a dialogue with the United Nations leading to the establishment of a process in which language differences between IAEA and UN Model Regulations may be reconciled”.

In order to fulfill this request from the General Conference two meetings on harmonization between UN and IAEA Transport Regulations have taken place in Vienna with the following objectives:

- a) identification of further steps in the harmonization process by which IAEA and UN Regulations could progressively move to a fully harmonized structure
- b) to evaluate if there are any other areas where there is a need for better harmonization between IAEA/UN Regulations
- c) to address proposals for changes submitted to the UN Sub-Committee and IAEA
- d) to address newly identified issues.

Furthermore, the IAEA’s Board of Governors approved in May 2005 the new policy for reviewing and revising the Agency’s Regulations for the Transport of Radioactive Material. According to this policy the Secretariat will continue to review the Transport Regulations at intervals consistent with the schedules of the United Nations Subcommittee of Experts on the Transport of Dangerous Goods and of the relevant international modal organizations in order to remain in step with the review cycles of the other relevant international bodies. At the same time, the Director General of the Agency indicated that these regulations would be revised and published at appropriate intervals in consultation with Member States and the International Organizations concerned and invited suggestions for their improvement in the light of experience and increased knowledge.

To align with the new policy for publication of Transport Regulations, TRANSSC 12 (March 2006) developed and approved decision criteria. The primary intention was to determine if proposals for changes were sufficiently important to recommend the publication of a new edition of the Transport Regulations. Principles were identified to be used in evaluating proposed changes to the regulations stemming from the review cycle. These principles include the following

- Optimization
- Efficiency
- Practicality
- Regulatory Stability
- Compliance with Dose Limits
- Socio-Economic Considerations
- Harmonization with Regulations from Other International Organizations
- Clarification

A detailed review of each change is necessary to determine its safety importance. If a significant change to TS-R-1 is needed to maintain and assure the safety of transport, then the change is deemed to be “sufficiently important for safety to necessitate publication as soon as possible”.

Examples of changes that may warrant a revision are:

1. Consistency with other safety standards (e.g. IAEA Basic Safety Standards and UN Recommendations on the transport of dangerous goods)
2. New package and/or material type classification
3. Modified test requirements
4. Operational events / controls
5. Changes in scope to any part of TS-R-1 (e.g. definitions, A₁/A₂ values, transport controls)
6. New requirements that invalidate designs /certificates

In the resolution on transport safety the 51st IAEA General Conference, held in September 2007 in Vienna, welcomes the establishment of a process in which language differences between IAEA and UN Model Regulations may be reconciled and acknowledges differences between IAEA text and the UN text as an issue to be considered in the review of the IAEA Transport Regulations potentially leading to the 2009 edition [5].

From Figure 2 it can be seen that:

- to achieve harmonization of the IAEA Regulations and the UN Model Regulations/IMDG-Code/ICAO-TI/ADR/ADN/RID by 2009; and
- to allow effective implementation of amendments developed by IAEA in the past six years through the modal international legal instruments also by 2011

it would be necessary that the draft of the 2009 edition of the IAEA Regulations has to be approved for publication by the Board of Governors before December 2008. This means that the updated timetable discussed at TRANSSC 14 would have to be followed consistently. This would allow to have the changes from the 2004 - 2005 review-revision process as well as the harmonization changes incorporated into the 16th revised edition of the UN Model Regulations. Otherwise, harmonization and effective implementation of the said amendments could be achieved, at the earliest, by 2013.

PROGRESS IN HARMONIZATION ISSUES

In the last 2 years, recommendations for harmonization changes in the UN Model regulations, the ICAO - Technical Instructions, IMDG-Code and other international regional agreements for the transport of dangerous goods (RID,ADR,ADN) have been made, and are related to the following issues:

- Radioactive substances in excepted packages with subsidiary risk
- Marking for carriage of radioactive material under “exclusive use”
- Specific provisions for the transport of excepted packages.

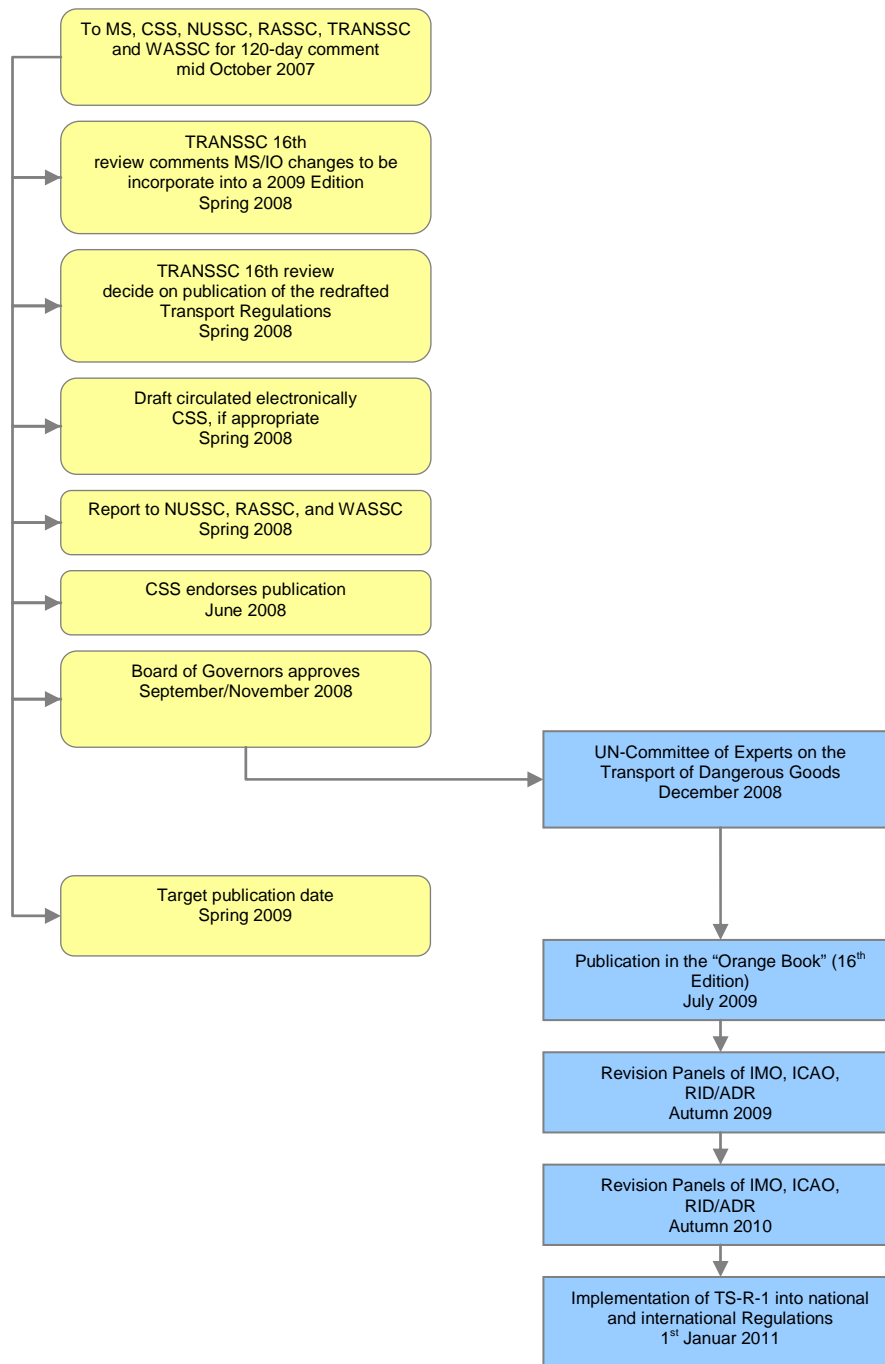


Figure 2. Time schedule for review/revision and implementation of TS-R-1, Edition 2009

Also other proposals, regarding to harmonization matters, were made for the next review cycle to the TS-R-1, Edition 2011 (or even possibly for the 2009 edition of the TS-R-1):

- Definition of small freight container
- Sequence of information in the transport document
- Definition and requirements for tanks

Considering the specific properties of the class 7 the UN – IAEA harmonization group was of the view, that the provisions of Chapter 3.5 of the UN Model Regulations for excepted quantities should not be applied to excepted packages containing radioactive material with additional hazards.

CONCLUSIONS

The harmonization procedure between the IAEA and the UN recommendations for the safe transport of radioactive material has been developed and progress has been made regarding some issues. Nevertheless, to harmonize both for formal reasons is insufficient. The specialties of the class 7 have to be kept. This is in particular of importance if harmonization proposals stemming from other classes of dangerous goods or from general definitions within the UN recommendations should be applied also for class 7 without checking all the resulting consequences within the IAEA Transport Regulations carefully.

Also it should to be discussed within the IAEA to introduce a mechanism for an easier and even faster process to revise the IAEA transport regulations, if the changes are not safety related and coming from the UN but will support better implementation of TS-R-1, like e.g. the sequence of information in the transport document. For such a harmonization change it seems not to be necessary to ask for approval by all other parties within the IAEA (NUSSC, RASSC, WASSC, CSS, Board of Governors).

The option to publish the 2009 edition of the IAEA Transport Regulations with the changes from the review-revision cycle 2004 - 2005 and the harmonization changes with the UN is considered to be important to keep the leading role of the IAEA in the further development of all aspects concerning the safe transport of radioactive material based on their competence in radiation protection.

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- [1] Regulations for the Safe Transport of Radioactive Material, 1996 Edition, International Atomic Energy Agency, Vienna 1996
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