



Consultancy Report

Analysis of the interaction and coherence between railway and dangerous goods legislation in the European Union (MOVE/D3/2011-409)

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1 Executive Summary

This study is an evaluation of EU legislation on railway safety and interoperability including the technical specifications for interoperability (TSIs) and the Regulation concerning the International Carriage of Dangerous Goods by Rail (RID) where there is a potential for the regulations to overlap. The study aims to identify potential areas of overlap and to recommend possible solutions where these occur.

The evaluation consisted of a desk based study along with a questionnaire to relevant government departments of Member States and other stakeholders - railway undertakings, infrastructure managers and trade associations. Following the analysis of the questionnaire responses, thirteen in-depth interviews with respondents selected for their knowledge of the sector and representing a cross section of stakeholders were conducted to inform the initial findings presented in the interim report.

The study presents a comprehensive overview of the main organisations responsible for rail legislation and the decision making processes of these key regulatory bodies. The questionnaire and interviews addressed these processes and asked respondents to identify specific issues that they had experienced. The analysis of the questionnaire responses along with the feedback gained from the in-depth interviews have led the consultants to believe, based on their investigations, that the areas of overlap are limited and mainly centre on construction of rail wagons and to an even more limited extent, on the operation of the railway. Most of the dangerous goods rules emanate from the United Nations and are adopted by each mode of transport with very little alteration. These rules provide standards for classification, identification, packaging marking, labelling and documentation and thus ensure safety. They also facilitate intermodal movement since dangerous goods traffic by rail often has also to be carried by another mode during its journey. This secondary mode is usually road but sea and air transport can be used as well.

The issues identified by the consultants and their recommendations are to be found in section 6 and address the following areas:

Conflicts between EU Legislation and RID – the general reaction from respondents and interviewees was that there were no major conflicts between EU legislation and RID;

Emergency Planning – railway marshalling yards have been excluded from the Seveso Directive, however RID has recognised the need for emergency planning in marshalling yards by including a chapter “Internal emergency plans for marshalling yards”

Railway Operations – generally railway operations are not included in RID. The normal approach is for railway undertakings to make their own rules for operations within criteria set by infrastructure managers, national safety authorities and the technical

specifications for interoperability. The rules are then subject to approval by the safety authorities. In practice, the statutory and regulatory framework and many years of international cooperation mean that operating rules are very similar from railway undertaking to railway undertaking.

Cooperation between ERA and RID –The involvement and attendance of the ERA at RID meetings will identify potential areas of conflict or overlap and provide a mechanism to deal with these issues including wagon technical standards.

Wagon technical standards – this is an area where there is a potential for conflict between RID requirements and European Union legislation, in particular the technical specifications for interoperability. There have been a few occasions in the past where RID groups have taken decisions to include provisions affecting wagons in order to protect the dangerous goods in the event of a serious accident.

Reporting of accidents and statistics –the RID and the Railway Safety Directive have different criteria for reporting accidents. As the intention of both systems is to learn lessons there does appear to be a case for aligning the requirements more closely.

Terminology – there are a number of terminology differences between EU legislation and RID and it would perhaps be useful to issue guidance on the different meanings.

Telematics – a relatively new concept for dangerous goods transport. The RID/ADR Joint Meeting is considering how it might be applied to such transport operations. It is important to bear in mind the interface with the TAF TSI particularly in relation to dangerous goods identifiers.

Multimodal harmonisation – it is very important that the railway rules stay closely aligned to the other modal regulations otherwise there is a potential of a serious impact on safety and trade, accidents in the past demonstrate the potential for confusion to cause accidents.

Impact assessment – it is clear that the consequences of legislation need to be thought through before it is enacted. For changes that are more than trivial, an impact assessment is desirable but it has to be recognised that formal proposals to amend RID should include the effect on safety, whether the change is feasible, whether it can be enforced, and is a transitional period required. To an extent these elements in proposals to RID along with the debates do take account of the impact.

A complete list of abbreviations is provided in Annex B.

2 Introduction

This report presents an analysis of the current legislative systems in the EU, OTIF and the UN. It is based on a desk-based study of the agencies involved or affecting EU legislation and policy on railway safety and interoperability relating to the transport of dangerous goods along with an analysis of questionnaires and interviews.

The questionnaire was circulated to some 180 organisations across the EU and EFTA regions based on lists of contacts from a number of sources including the European Commission. The questionnaire was sent by email in early April 2012 with a deadline for replies of 30 April. A reminder was sent out at the beginning of May. At the time of completing this report, 38 replies had been received (which include comments sent by two non-governmental organisations). A detailed analysis was undertaken.

The interviews took place between June and September 2012. Some took place at international meetings attended by both organisation representatives and the consultants, others through individual visits to the interviewees selected and in one case by telephone.

The organisations involved in rail dangerous goods transport legislation and potential interoperability issues include:

- The European Union and in particular the European Commission and the European Railway Agency
- OTIF
- United Nations
- OSJD (for Eastern Europe and Asia)

Within most of Europe therefore, this provides three¹ forums in which regulations may be made. This has the potential for three different solutions to a problem. The Commission has asked the consultants to consider recommendations that may prevent multiple solutions. In order to provide a context for this study, the following sections describe the history and background of rail legislation and standards relating to dangerous goods and the main organisations involved, their processes, geographical scope and areas of applicability and the stakeholders.

¹ In quoting three forums, it is assumed that the areas in which OTIF and the OSJD apply do not overlap. In a few cases however, they do overlap and in those cases, there may be four forums within which regulations may be made.

3 Background to rail legislation and standards relating to dangerous goods

This section looks at the respective roles of the identified organisations from an historical point of view.

3.1 The European Union

This section describes the development of EU railway policy – the development of EU dangerous goods policy is described in section 3.2.5 below.

National interests and national disinterest frustrated the European Community's initial attempts to develop a transport policy. Criticisms made by the ECJ (case 13/83) and the development of the Single Market made a common transport policy essential.

For rail, the first manifestation was Directive 91/440/EC², essentially an economic tool to promote competition and to require support to be properly managed. Further directives to support this ground breaking directive and ensure proper access to the infrastructure and licensing were enacted as part of the "First Railway Package". Following some years of experience with the directives in the First Railway Package, a "recast" has now been enacted³.

A second series of legislation was enacted in 2004 as the "Second Railway Package", this included setting up the European Railway Agency⁴ and the "Railway Safety Directive"⁵. This latter was intended to harmonise safety standards and processes over the whole Community.

² Council Directive 91/440/EEC of 29 July 1991 on the development of the Community's railways *OJ L237, 24/08/1991 p. 0025 - 0028*

³ Directive 2012/34/EU of the European Parliament and of the Council of 21 November 2012 establishing a single European railway area (recast) *OJ L343 14/12/2012 p. 32 – 77*.

⁴ By means of the "Agency Regulation" Regulation (EC) No 881/2004 of the European Parliament and of the Council of 29 April 2004 establishing a European Railway Agency (*OJ L164 30 April 2004 p.1-43*).

⁵ Directive 2004/49/EC of the European Parliament and of the Council of 29 April 2004 on safety on the Community's railways and amending Council Directive 95/18/EC on the licensing of railway undertakings and Directive 2001/14/EC on the allocation of railway infrastructure capacity and the levying of charges for the use of railway infrastructure and safety certification (Railway Safety Directive) (*OJ L 164, 30 April 2004, p. 44–113*)

The purpose of the European Railway Agency is summarised in recital 6 to the Agency Regulation: *simultaneous pursuit of the goals of safety and interoperability requires substantial technical work which must be led by a specialised body. That is why it is necessary to create, within the existing institutional framework and with respect for the balance of power in the Community, a European Agency responsible for railway safety and interoperability. The creation of such an Agency will provide a means of considering the safety and interoperability goals for the European rail network jointly and with a high level of expertise and in this way contributing to revitalising the railways and to the general objectives of the common transport policy.*

The purpose of the Railway Safety Directive is defined in its Article 1 as:

to ensure the development and improvement of safety on the Community's railways and improved access to the market for rail transport services by:

- a) harmonising the regulatory structure in the Member States;*
- b) defining responsibilities between the actors;*
- c) developing common safety targets and common safety methods with a view to greater harmonisation of national rules;*
- d) requiring the establishment, in every Member State, of a safety authority and an accident and incident investigating body;*
- e) defining common principles for the management, regulation and supervision of railway safety.*

The Railway Safety Directive applies to railway safety in general and therefore implicitly includes the transport of dangerous goods (see recital 14).

The Railway Safety Directive sets up common means of moving towards more consistent and higher levels of safety by common safety targets and common safety methods. The former set the targets which are to be reached in various defined fields and progress towards these targets is provided by common safety indicators. Subsequent safety regulation sets down criteria for safety standards and methods (such as the Commission Decision of 5 June 2009 and Commission Regulation (EU) No 1158/2010).

Articles 16 and 21 of the directive require Member States to set up national safety authorities and independent accident investigation bodies. The directive requires independent investigation of accidents and circulation of crucial reports (and see section 6.6 of this report). Safety authorities and accident investigation bodies are required to provide the ERA with an annual report in a prescribed format. Copies of these reports are then circulated (translated into English by the ERA). The various Member States have adopted different organisational approaches to satisfy these requirements, in some cases the safety authority is merged with an economic regulator (United Kingdom) in some cases they are deliberately separated (Germany) in some cases the safety authority is part of the ministry of transport (Italy). The rail accident investigation body is sometimes associated with the body for other modes (Austria).

The directive continues the process of harmonising operating rules with the eventual objective of “*rules based on common standards, established by TSIs*”. It might be noted that the process of alignment of operating practices has been going on for many years, for example, the railways of Ireland now have a common (international) rule book.

The directive requires infrastructure managers and railway undertakings to have safety management systems and to have their safety arrangements properly approved. Infrastructure managers require to be “authorised” and railway undertakings to be “certified”, in each case by the national safety authority. The approval processes require acceptance of the respective safety management systems; for infrastructure managers they require acceptance of his being able to design, maintain and operate the infrastructure and for railway undertakings they require acceptance of the rolling stock approval process and staff competence processes.

In addition to these initiatives, the Community has set up a framework for interoperability to be achieved by a series of technical specifications for interoperability. The objective of these specifications is to allow interworking of equipment (such as locomotives) and common practices (such as the specification for operations or telematics systems). These common standards are expected in due course to lead to significant economies of scale in equipment provision and facilitate the extension of services across frontiers, all of which would be of great benefit to the economies of the Community. The original directives setting up the framework have been overtaken by a more comprehensive directive (Directive 2008/57/EC⁶). Individual technical specifications for interoperability follow from this and cover such issues as the design and construction of wagons and operations practices. The technical specifications are particularly relevant to the design of wagons to carry dangerous goods and operational practices for the movement of dangerous goods.

The following technical specifications for interoperability currently have some bearing on conventional freight: CR WAG TSI⁷, CR NOI TSI⁸, CR LOC&PAS TSI⁹, CR OPE TSI¹⁰,

⁶ Directive 2008/57/EC of the European Parliament and of the Council of 17 June 2008 on the interoperability of the rail system within the Community (Recast) (Text with EEA relevance) (*OJ L 191, 18 July 2008, p. 1–45*)

⁷ Commission Decision 2006/861/EC of 28 July 2006 concerning the technical specification of interoperability relating to the subsystem ‘rolling stock — freight wagons’ of the trans-European conventional rail system (*OJ L 344 8 December 2006, p. 1–467*) as subsequently amended.

⁸ Commission Decision 2011/229/EU of 4 April 2011 concerning the technical specifications of interoperability relating to the subsystem ‘rolling stock – noise’ of the trans-European conventional rail system (*OJ L 99, 13 April 2011, p. 1–39*) as subsequently amended.

CR TAF TSI¹¹, CR ENE TSI¹² and CR INF TSI¹³; to transverse issues SRT TSI¹⁴ and to both conventional and high-speed CCS TSI¹⁵ and the new OPE TSI¹⁶ (using the conventional short-hand titles – full titles in the footnotes). It should be noted that this area is changing rapidly, most of the TSIs listed have already been amended and one will be wholly replaced in 2014. Other TSIs apply to passenger sub-systems and high-speed subsystems.

⁹ Commission Decision 2011/291/EU of 26 April 2011 concerning a technical specification for interoperability relating to the rolling stock subsystem — ‘Locomotives and passenger rolling stock’ of the trans-European conventional rail system (*OJ L 139, 26 May 2011, p. 1–151*) as subsequently amended.

¹⁰ Commission Decision 2011/314/EU of 12 May 2011 concerning the technical specification for interoperability relating to the ‘operation and traffic management’ subsystem of the trans-European conventional rail system (*OJ L 144, 31 May 2011, p. 1–112*) as subsequently amended, to be repealed on 1 January 2014 by the OPE TSI (below).

¹¹ Commission Regulation (EC) No 62/2006 of 23 December 2005 concerning the technical specification for interoperability relating to the telematic applications for freight subsystem of the trans-European conventional rail system (*OJ L 13, 18 January 2006, p. 1–72*) as subsequently amended.

¹² Commission Decision 2011/274/EU of 26 April 2011 concerning a technical specification for interoperability relating to the ‘energy’ subsystem of the trans-European conventional rail system (*OJ L 191, 14 May 2011, p. 1–52*) as subsequently amended.

¹³ Commission Decision 2011/275/EU of 26 April 2011 concerning a technical specification for interoperability relating to the ‘infrastructure’ subsystem of the trans-European conventional rail system (*OJ L 126, 14 May 2011, p. 53–131*) as subsequently amended.

¹⁴ Commission Decision 2008/163/EC of 20 December 2007 concerning the technical specification of interoperability relating to ‘safety in railway tunnels’ in the trans-European conventional and high-speed rail system (*OJ L 64, 7 March 2008, p. 1–71*) as subsequently amended.

¹⁵ Commission Decision 2012/88/EU of 25 January 2012 on the technical specification for interoperability relating to the control-command and signalling subsystems of the trans-European rail system (*OJ L 51, 23 January 2012, p. 1–65*) as subsequently amended.

¹⁶ Commission Decision 2012/757/EU of 14 November 2012 concerning the technical specification for interoperability relating to the ‘operation and traffic management’ subsystem of the rail system in the European Union and amending Decision 2007/756/EC (*OJ L 345, 15 December 2012 8 July 2008, p. 1–76*), repeals the CR OPE TSI (above) on 1 January 2014.

The work of drawing up TSIs is undertaken by working groups under the chairmanship of the European Railway Agency. It should be noted that many of the former, comprehensive, range of UIC leaflets are being replaced by European standards in the EN range (including some IEC standards).

Further work on setting up responsibilities for rail vehicle maintenance (creation and certification of entities in charge of maintenance), the approval of workshops and supply of supporting data is also in hand or completed. This includes Directive 2008/110/EC¹⁷.

3.2 OTIF and the UN

3.2.1 Historical Background

This section describes OTIF's general role, OTIF's role in dangerous goods policy is described in section 3.2.2 below.

OTIF had its origins at the end of the nineteenth century to fulfil the perceived need to unify conditions of carriage for international freight traffic and to create the joint and several legal concept of "railway" and its counterpart consignor and consignee. Until that time international carriage was performed as a succession of national contracts with obvious problems of proof in the event of loss and damage and less obvious but just as serious problems of transit railways being able to take action against negligent customers. In the early twentieth century scope was extended to passengers. Up until the 1999 revision, COTIF largely consisted of "Uniform Rules" for contracts for the international carriage of freight, parcels, containers and passengers. In effect these are model contracts of carriage imposed by statute on railways within the Member States. Until the 1999 revision these model contracts were highly specific and limited contractual freedom. Many railways adopted similar contractual conditions of carriage for domestic movements. The dangerous goods acceptance conditions (RID) were an annex to the CIM (Uniform Rules concerning the Contract of International Carriage of Goods by Rail).

Liberalisation meant rewriting COTIF to recognise the existence of infrastructure managers and railway undertakings and this was done in the 1999 revision. A special appendix was created to govern the relationship between them (CUI). The uniform rules for the passenger and freight contracts were rewritten to release railways from their common carrier obligation and to permit much more commercial freedom. The model contract for the movement of private wagons (RIP) was replaced by very general uniform rules (CUV) to apply by default to set the conditions for the use of wagons for international traffic. Appendices for validating the standards to apply to railway equipment (APTU) and

¹⁷ 2008/110/EC of the European Parliament and of the Council of 16 December 2008 amending Directive 2004/49/EC on safety on the Community's railways (Railway Safety Directive) (Text with EEA relevance) (OJ L 345, 23.12.2008, p. 62–67)

approval processes to commission equipment (ATMF) were also added. These latter appendices define process rather than content and consequently complement rather than conflict with the TSIs. At the same time the RID was taken out of the CIM to become a free-standing appendix (Appendix C) in its own right. Uniform rules for the carriage of parcels and containers were discontinued.

The aim of OTIF is to promote, improve and facilitate international traffic by rail in all respects. Other than the standardisation of contracts by means of “uniform rules” described above, OTIF has a committee structure to consider other problems. Amongst the committees are the “Rail Facilitation Committee” (to consider frontier issues), a “Committee of Technical Experts” (to consider the technical issues linked to standards and commissioning) and of course the RID Expert Committee. (The RID Expert Committee is normally referred to as the RID Committee of Experts). OTIF has no locus on railway operating or safety issues. OTIF has a formal process to revise the appendices and for that purpose has a Revision Committee.

Article 38 of COTIF 1999 provides for regional economic integration organisations to accede to COTIF and in this way the European Union acceded to COTIF with effect from 1 July 2011. The accession agreement defined the roles of the bodies and the interfaces (it should be noted that some states that are members of OTIF are situated in the Middle East and North Africa and therefore ineligible to accede to the EU).

In Annex C to this report is a table (reproduced by kind permission of CIT) showing the current membership.

3.2.2 OTIF’s role in dangerous goods policy

Dangerous goods transport regulations appeared in some national legislation in the early 19th Century and in 1893 international railway rules were drawn up in Europe. These became known as the ‘RID’ Regulations¹⁸ concerning the International Carriage of Dangerous Goods by Rail). Today, these regulations form Appendix C to the Convention concerning International Carriage by Rail (COTIF); applicable in most European countries. Some states in the Middle East and North Africa are also contracting parties.

The structure of COTIF, containing provisions for the acceptance, labelling and movement of dangerous goods has give OTIF a pivotal role for dangerous goods by rail.

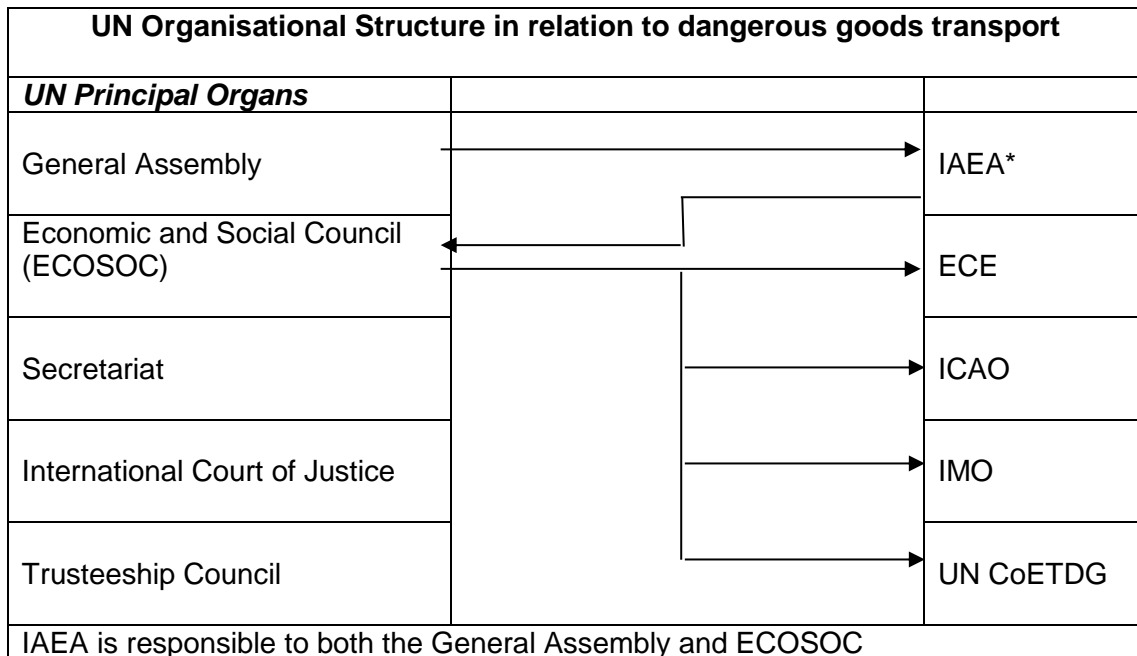
Appendix C to COTIF is the Regulation concerning the International Carriage of Dangerous Goods by Rail (**RID**). The appendix entered into force on 1 July 2006. Articles

¹⁸ The official text in the English language translation of COTIF refers to “Regulation” nevertheless the dangerous goods community (and this report) consistently refer to them as “Regulations” and this also represents normal English language practice.

1 to 6 form the RID proper, the annex to the RID contains the detailed prescriptions. The annex forms an integral part of the regulations and is updated every two years. Unlike the other appendices to COTIF, which are amended on an ad-hoc basis, the RID is updated in conjunction with the ADR and ADN.

It should be noted that the RID is almost silent on questions of railway operation, there are some instructions on train composition and some on information requirements but in general railway operation is not covered.

3.2.3 The role of the United Nations



In 1953, the Economic and Social Council of the United Nations (ECOSOC) in New York (not to be confused with the EU Council or the Council of Europe¹⁹) established an ad hoc advisory Committee of Experts on the Transport of Dangerous Goods (CoETDG). The secretariat function for this committee was delegated from New York to the UN Economic Commission for Europe (UNECE) where it has remained. This Committee produced a first set of multi-modal *Recommendations on the Transport of Dangerous Goods* in 1956. The Council adopted these Recommendations by Resolution and established the Committee on a permanent basis in Geneva in 1959. The Committee has continued to meet ever since, making a biennial report to the Council with amended and extended Recommendations, which the Council endorses. However, for many years the Recommendations made by ECOSOC were not carried through by the modal agencies for surface or air transport even though the various forums had representatives in common.

¹⁹ <http://www.consilium.europa.eu/> and <http://hub.coe.int/>

When the International Maritime Organization (IMO) was established in 1958 (originally called IMCO (the Intergovernmental Maritime Consultative Organization)) and began work on the IMDG Code, it used the UN Recommendations as a general basis but maintained or introduced wide scale variations. The IMO is an agency of the UN based in London.

The UN Economic Commission for Europe (UNECE) in Geneva, from the mid-1950s, studied road transport, including the transport of dangerous goods. The ADR 'Convention' (the European Agreement concerning the International Carriage of Dangerous Goods by Road) was opened for signature in 1957, but technical annexes specifying detailed requirements were not published until the convention came into force in 1968. The first technical annexes to ADR originally derived from the then sixty year old RID. When the road regulators began to consider the regulations that would be required for road traffic, they recognised that there was a close link to rail traffic, since both are inland transport modes. Furthermore there was benefit in aligning the road and rail regulations since road vehicles frequently take goods to or from a railhead. Thus, since the early 1960s, RID and ADR have been closely linked and the common areas of both texts are discussed in regular 'Joint Meetings' of the RID and ADR experts. In the late 1950s when the experts began to draft ADR, the work of the UN ECOSOC Committee was not considered in any detailed way for application in RID or ADR.

From the early 1980s the modes including rail began to pay more attention to the work of the UN Committee of Experts and gradually the modes adopted the UN provisions but not necessarily in a standard approach.

In many developing countries little regard has been paid to meeting international requirements until pressure has been applied by multi-national companies or developed nations receiving goods inwards. National regulations throughout the world have varied considerably. Some used the UN Recommendations directly as a basis (e.g.UK), Others apply ADR as a basis. New regions such as ASEAN (South East Asia) and MERCOSUR (South America) are adopting European regional rules using ADR as a legislative base for road transport. Although ADR includes the word "European" in its title it is the only international set of regulations relating to road transport that exists world-wide and for this reason ASEAN and MERCOSUR have used it as a basis of their regulations. Some years ago it was suggested that the word "European" was removed from the title but there was little support for the proposal.

Not until the early 1990s was there a reasonably standard set of international rules. Some significant and serious variations continue, but the principles established by the UN Committee of Experts are now broadly accepted. The principal problem had been that each set of modal regulations had been established separately and their individual layout and construction differed. This made it difficult for the various users of the regulations to identify all the variations in requirements. There is no doubt that many consignors used one set of regulations and hoped that the others were the same. For example, in the

United Kingdom, the IMDG Code was used from the 1970s for international road journeys whilst many mainland European countries used ADR for sea journeys.

3.2.4 Multimodal transport and restructuring the regulations

Domestic transport of dangerous goods (within any Member State) tends to be primarily single mode, mainly road transport, although the railways and inland waterways carry significant quantities of bulk dangerous goods cargo. Over the last 40 years, with more liberalisation introduced into the various modes of inland transport in Europe and taking account of the fact that industry does not want to hold large stocks of goods or materials, particularly if they are dangerous, new multimodal distribution systems have become more common.

In the last decade, governments and industry have acknowledged that much more traffic is multimodal - even at the domestic level.

For dangerous goods, this multimodal recognition led the UN Committee of Experts (UNCoE) to restructure its own 'Recommendations' into a logical sequence (see below) and to republish the "*Recommendations on the Transport of Dangerous Goods*" as "*Model Regulations*" that any national authority could use as a basis for its own domestic regulations. These also provided a basis for the international modal rules to be standardised. The modes had already begun to emulate the process realigning to a new common format and eventually in 2001 the basic structure used by the UN also appeared in ADR, RID and the IMDG Code. The ICAO TIs (Technical Instructions for the Safe Transport of Dangerous Goods by Air – Annex 18 of the Chicago Convention on International Civil Aviation) followed in 2003, although changes were more modest since the existing structure was already similar to the new basic structure adopted by the UN and the different modes of transport. ADN (the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways) was restructured in line with ADR in 2003.

In 2001 the UN Committee of Experts was itself restructured. This came about from the need to assign to a UN parent body the work nearing completion on the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Today, at the end of each biennium (period of two years), the UN Committee of Experts commends the changes to each of the modes and those modes normally adopt them. For RID this is carried out in conjunction with ADR and ADN through the Joint Meeting of the RID Committee of Experts and the Working Party on the Transport of Dangerous Goods. This Joint Meeting meets twice a year and in addition to looking at changes from the UN Committee it also looks at other common areas of the regulations (mainly Parts 1 – 6 of RID). This Joint Meeting, which has existed for about fifty years, provides an efficient way of working because:

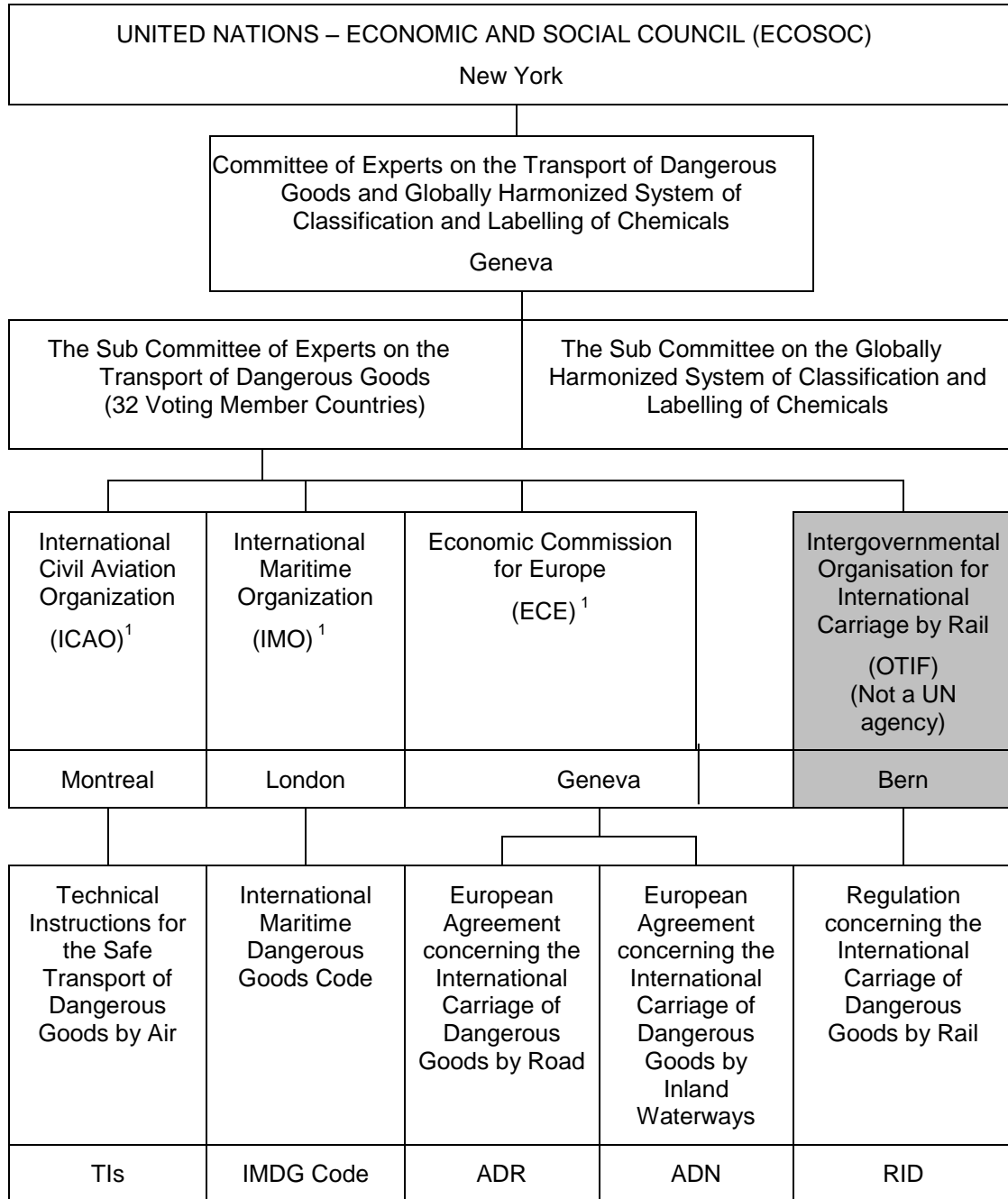
- many government officials (usually from Ministries of Transport) would always attend the separate road and rail meetings anyway,
- it ensures the same provisions are adopted in the same way minimising ambiguity and misunderstanding,
- from an industry perspective, it ensures as far as reasonably practical, a standard approach to the provisions.

It should be noted that there is no legal obligation for the individual modes to adopt the recommendations of the Joint Meeting. Normally the individual modes (road, rail or inland waterway) do adopt the recommendations unless they have specific concerns.

The standard structure of reformatted dangerous goods transport modal rules generally makes it easier to check that multimodal consignments comply with all the regulations as well as to identify remaining variations in the modal regulations. Most of these variations are necessary to address specific issues in one transport mode.

The following diagram shows the relationships between the different committees and codes/regulations.

Figure 1: Basic UN Dangerous Goods Transport Structure

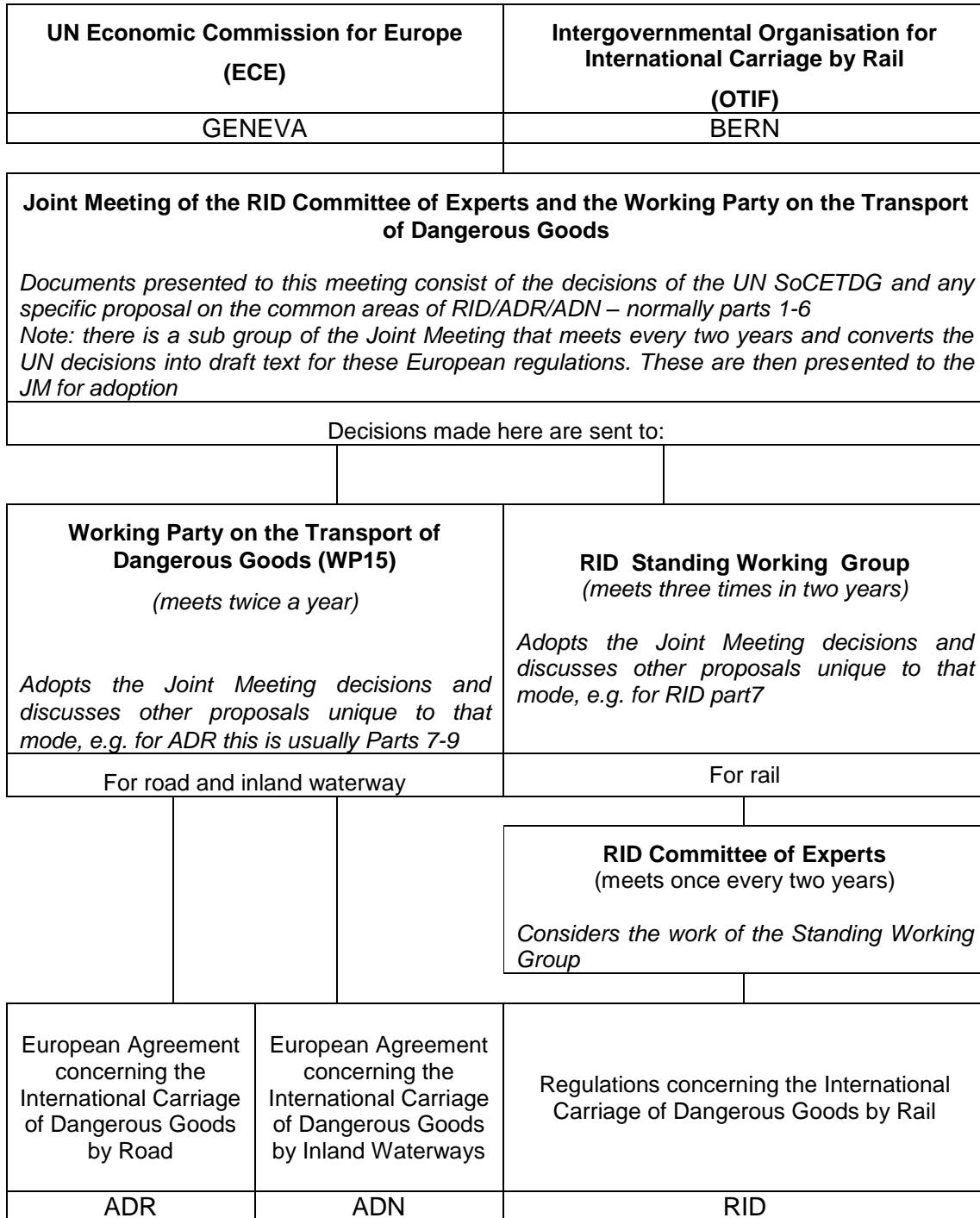


¹ These agencies have ECOSOC as their parent body. This diagram shows how dangerous goods regulations are sent to the different agencies.

Note: All dangerous goods regulations include a “Class 7” for radioactive material. The requirements for this class are prepared by the International Atomic Energy Agency (IAEA), which presents them to the UN Committee of Experts for incorporation into the Model Regulations and onward modal adoption. Like the UN Recommendations, the IAEA rules, even though described as regulations, are not mandatory in their own right.

The detailed structure for the committee work in European land transport is set out in the diagram below.

Figure 2: Text development for European Inland Transport



3.2.5 European Union interest

The European Commission interest in the subject of dangerous goods transport emanated from a debate in the European Parliament in 1984, where two draft resolutions requested the “Commission and Member States to take certain actions relating to the transport of dangerous goods and radioactive substances and wastes”.

This led to a report from the Commission “Transport of Dangerous Goods and Wastes” (COM (87) 182 Final). This report summarised the role of the UN and its agencies in the transport of dangerous goods and considered the transport of hazardous wastes.

The Commission made a number of recommendations for greater harmonisation, most related to road transport and none at that time addressed railways. However, in 1992, the Commission began negotiations on what were to become known as Framework Directives. These were:

Council Directive 94/55/EC on the approximation of the laws of the Member States with regard to the transport of dangerous goods by road (as amended). This directive applied the European Agreement concerning the International Carriage of Dangerous Goods by Road signed at Geneva on 30 September 1957, as amended “ADR”.

Council Directive 96/49/EC on the approximation of the laws of Member States with regard to the transport of dangerous goods by rail (as amended). This directive applied the Regulations concerning the International Carriage of Dangerous Goods by Rail (“RID”) which then formed Annex 1 to Appendix B (the CIM) to the Convention concerning International Carriage by Rail (“COTIF”).

These directives were subsequently replaced by:

Directive 2008/68/EC of the European Parliament and of the Council of 24 September 2008 on the inland transport of dangerous goods. This directive required application of the RID, ADR and ADN.

Both the old and the new directives provide for Member States to ask for derogations from the various conventions on their territory. A number have been granted for railway operations (17 up to November 2012) and can be found in the directive.

All the transport modes have specific requirements regarding the training of personnel whose duties concern the carriage of dangerous goods. Individual modes of transport have supplemented these requirements notably ICAO and for road transport specific driver training requirements. RID, ADR and ADN also require the appointment of Dangerous Goods Safety Advisers (DGSA) when larger quantities of dangerous goods are being carried. These people must be trained and pass an examination set by the competent authority. Once appointed they have the following duties:

- Monitoring compliance with the regulations
- Advising on the carriage of dangerous goods and
- Preparing an annual report.

To do this the DGSA must monitor the work of the company and investigate accidents and incidents.

The origins of this requirement lie in Council Directive 96/35/EC²⁰ on the appointment and vocational qualification of safety advisers for the transport of dangerous goods by road, rail and inland waterway (DGSA rules) came into force in 1999. The text was eventually adopted into RID, ADR and ADN and the directive was repealed by Directive 2008/68/EC²¹.

In 2003, the Commission appointed consultants to evaluate the EU policy on the transport of dangerous goods since 1994 (TREN/E3/43-2003). Although the report made a number of recommendations the overall view of the consultants and the Member States was that the then new Framework Directives (94/55/EC and 96/49/EC) had achieved the main objective of aligning the rules throughout the Member States.

3.2.6 Principles of the UN System

As has been explained above, the “*Recommendations on the Transport of Dangerous Goods*” or “*Model Regulations*”, also widely known as the ‘Orange Book’, establishes a basic system for safe transport of dangerous goods. These ‘Recommendations’ have been incorporated in the RID, ADR, the ICAO TIs and the IMDG Code.

Dangerous goods for the purpose of the transport rules are those substances (including mixtures and solutions) or articles that are listed in the regulations or meet the criteria for one or more of the classes. The Recommendations establish concepts to ensure that, prior to consignment, dangerous goods are properly:

- classified – according to one of nine classes,
- identified – by means of a ‘UN number’ and a ‘proper shipping name’,
- packaged – limited quantities, packagings, IBCs (Intermediate Bulk Containers), large packagings, pressure receptacles, tanks, MEGCs (Multiple-Element Gas Containers), etc.,
- marked– UN number and proper shipping name plus other marks such as those for pollutants, limited quantities and package orientation arrows

²⁰ Council Directive 96/35/EC of 3 June 1996 on the appointment and vocational qualification of safety advisers for the transport of dangerous goods by road, rail and inland waterway OJEC L145 19.6.1996 p. 10-15

²¹ Directive 2008/68/EC of the European Parliament and of the Council of 24 September 2008 on the inland transport of dangerous goods OJEC L260 30.9.2008 p. 13-59

- labelled – the diamond hazard label(s),
- documented – details of the consignment with a declaration,
- that relevant personnel are appropriately trained and
- security during transport is taken into account.
- The contents of the regulations are set out in Table 1 and Table 2²² illustrate the extra parts added by the modes.

²² Table 1 and 2 are based on those from “Evaluation of EU Policy on the Transport of Dangerous Goods Since 1994”, TREN/E3/43-2003.

Table 1: Summary of the UN principles and recommendations

Principle	Part of the UN Recommendations	Part of RID, ADR and ADN	Contents
General	Part 1	1	Definitions, training, transport security and in RID/ADR/ADN obligations of participants
Classification	Part 2	2	Detailed procedures on how to classify substances (including mixtures and wastes) and articles for all classes of dangerous goods
Identification	Part 3	3	This includes the 'Dangerous Goods List' and provides the key to most consignments of dangerous goods. This part also includes the 'limited quantity' provisions.
Use of Packagings etc.	Part 4	4	The day to day packing provisions, including tanks and pressure receptacles*.
Consignment procedures (Marking, labelling and documentation)	Part 5	5	Procedures for marking and labelling packages (and transport units) and preparing documentation. In RID/ADR/ADN it includes 'Instructions in writing' for emergency response.
Construction, testing and approval requirements for all packaging types	Part 6	6	Details the specifications for constructing and testing all packaging, tanks, MEGCS, etc. In addition it lays down procedures concerning approvals, but the detail usually remains with the Competent Authority in each government.* <u>Chapter 6.8 of RID relating to rail tank wagons includes the text of protective devices (TE 25) and crash buffers (TE 22) (see below table 2 and section 6.5).</u>

*It should be noted that although Parts 4 and 6 are mainly from the UN Recommendations at a modal level, additional text is usually included e.g. in RID and ADR there are provisions for European tank wagons, road tankers and tank containers.

Table 2: Operational requirements (Generally of modal origin)

Operational Requirement	Part of the UN Recommendations	Part of RID, ADR and ADN	Contents
Transport operations	Part 7	7	Primarily concerned with stowage and segregation of dangerous goods
Vehicle crews and equipment	-	8	ADR and ADN only, equipment for vehicles, and includes driver training ¹
Vehicle construction requirements	-	9	ADR/technical specifications and equipment for vehicles. ADN construction requirements. ¹

¹ These parts do not exist in RID

Unlike ADR which contains a section part 9 on vehicle construction, RID has no section and as construction mainly concerns tank wagons it was decided to incorporate wagon construction requirement in Chapter 6.8 under tank special provisions relating to items of equipment, for example TE 22 of RID 6.8.4 (b) .

“TE22 In order to reduce the extent of damage in the event of a collision shock or accident, each end of tank-wagons for substances carried in the liquid state and gases or battery-wagons shall be capable of absorbing at least 800 kJ of energy by means of elastic or plastic deformation of defined components of the subframe or by means of a similar procedure (e.g. crash elements). The energy absorption shall be determined in relation to a collision on a straight track.

Energy absorption by means of plastic deformation shall only occur in conditions other than those encountered during normal conditions of rail transport (impact speed higher than 12 km/h or individual buffer force greater than 1500 kN).

Energy absorption of not more than 800 kJ at each end of the wagon shall not lead to transfer of energy to the shell which could cause visible, permanent deformation of the shell.

The requirements of this special provision are deemed to be met if crashworthy buffers (energy absorption elements) that conform to clause 7 of standard EN 15551:2009 (Railway applications – Freight wagons – Buffers) are used and if the wagon body satisfies clause 6.3 and sub clause 8.2.5.3 of standard EN 12663-2:2010 (Railway applications – Structural requirements of railway vehicle bodies – Part 2: Freight wagons).”

TE 25 of RID addresses the protection of shells of tank wagons against the overriding of buffers and derailment or limiting the damage should buffers override. Special provisions TE 22 and TE 25 are considered in section 6.5.

One respondent had reservations about Part 1 of the RID because it adopted different terminology to other legislation and allocated responsibilities in a different way. It also considered that Part 1 covered issues which were not specific to dangerous goods. Those, in its view, should be covered comprehensively elsewhere. Its view was that general railway legislation (such as the Railway Safety Directive and the technical specifications for interoperability) should cover general issues, leaving specifically “dangerous goods” issues to be covered by the RID. Part 1 of the RID is highly specific and the definitions are tightly drawn whereas the Railway Safety Directive and the TSIs mainly deal with principles. Those approaches are complementary. It is to be hoped that the accession of the EU to COTIF will allow terminological and definitional issues to be resolved (and not only in the RID field). The structure of the regulations may be an important issue in deciding how to avoid possible conflicts in future. Table 3 below illustrates the origins of the majority of the text UN adopted at the modal level e.g. all the Classification rules originate. The individual modes do sometimes make small changes to reflect the style of their regulations.

Table 3: Origins of most regulatory text and changes

Part	UNCoE]	Joint Meeting	RID	ADR
1 General	✓	✓	✓	✓
2 Classification	✓			
3 Dangerous Goods list (Identification)	✓	✓ ³		
4 Packaging and Tanks (Use)	✓	✓ ¹	1	1
5 Consignment Procedures (marking, Labelling, documentation)	✓			
6 Package and tank construction/approval	✓	✓ ¹	1	1
7 Transport provisions	✓	✓	✓	✓
8 Crews equipment and Operation ²				✓
9 Vehicle construction and approval ²				✓

¹ these sections include special conditions for containment systems (including packagings, IBC, tanks etc.) unique to RID/ADR and ADN.

² Parts 8 and 9 only apply to ADR (Note there is a part 8 in ICAO but it is not the same).

³ About half of the RID/ADR dangerous goods list is completed by the Joint Meeting as it addresses operational matters (see Annex D of this report).

The UN provisions do not generally define the responsibilities of individual persons or organisations for undertaking the various concepts listed above. The RID and ADR incorporate a chapter on the “Safety obligations of the participants” whilst the ICAO TIs and IMDG Code define terms for some participants in the transport operation. The definitions in RID and ADR are the same, but the ICAO/IMO definitions for equivalent provisions are not.

Table 4 below gives a broad indication of where duties lie in the UN system:

Table 4: Responsibilities

Part	Procedure	Consignor/ Shipper	Intermediary (e.g. freight forwarder)	Carrier
1	General (duties exemptions etc.)	✓	✓	✓
2	Classification	✓		
3	Identification	✓		
4/6	Packaging	✓		
5	Marking	✓		
5	Labelling (packaging)	✓		✓ ¹
5	Placarding (transport units)	✓	✓	✓
5	Documentation	✓		
1	Training	✓	✓	✓
1	Security	✓	✓	✓
7 (8/9)	Transport operations (loading unloading segregation etc.) ²		✓	✓

1 Certain transport units have to be marked.

2 Most of the transport operational provisions are set down in the individual modal regulations.

Most duties in the transport of dangerous goods fall to the consignor or his agents' e.g. packers, loaders etc.

In the RID there are two participants that have duties which do not fit easily into the above table:

- Tank wagon operators who are responsible for ensuring that the tank is properly maintained and all inspection certificates are up to date
- Railway infrastructure managers who are responsible for emergency plans in marshalling yards and have access to all relevant dangerous goods information.

A wagon may not be placed into service or used on the railway unless the wagon has a registered “entity in charge of maintenance” (ECM) assigned to it. Each ECM has to ensure that a wagon for which it is responsible is safe to run on the railway through a system of maintenance. The relationship between the tank wagon operator and the ECM in the context of RID is currently being considered (see section 6.4).

4 The main organisations responsible for rail legislation

4.1 United Nations

The United Nations has played a pivotal role in the transport of dangerous goods since 1953 (see above) the Economic and Social Council of the UN has established a number of regional commissions and acts as a coordinating organisation for specialist bodies of which the following have a direct interest in the transport of dangerous goods:

- ECE (Regional Commission),
- IMO (Specialised agency),
- ICAO (Specialised agency),
- IAEA (Specialised agency).

In addition, the UN Committee of Experts on the Transport of Dangerous Goods (TDG) and on the Globally Harmonized System of Classification (GHS) and Labelling of Chemicals (UNCoE) is an Expert body appointed by ECOSOC. The committee has two sub committees, one responsible for TDG and one for GHS. The membership of the two committees is different and this report only addresses the TDG. The UNECE provides the secretariat for the whole body (UNCoE, TDG and GHS) on behalf of ECOSOC.

4.1.1 The UN Sub Committee of Experts (UNSCoE) on the Transport of Dangerous Goods

The UN Sub Committee of Experts on the Transport of Dangerous Goods probably generates the main changes to the various dangerous goods rules. Although this committee was established in 1953, this role of supplying most of the changes to the

transport regulations has really only become fully established in the last twenty-five years. Prior to that date, modes were known to make their own rules which caused confusion to consignors and raised a number of safety issues.

There have been a number of accidents because of different regulations (United States dangerous goods regulations (49CFR) v International Air Transport Associations (IATA) Dangerous Articles Regulations (forerunner to the dangerous goods regulations); the most infamous is probably the 1973 Boston air crash²³. Fortunately, the number of accidents is small in all modes but amongst the causes of confusion that existed for many years was that the European road and rail modes used a different classification system. Furthermore, there were no air rules and although the international sea rules did follow many UN recommendations from the outset, there were anomalies which caused problems. The different sets of rules meant that consignors of goods had to make arrangements to reclassify, repack and sometime re-label goods when they changed from one mode to another.

The UN TDG Sub Committee has thirty-two voting members, they are today appointed by ECOSOC and the membership should be regionally balanced between the UN four regions as defined by ECOSOC (UN regions are not exactly geographic e.g. the USA and Canada are regarded as Western European(!) - an anomaly since the Cold War). At present thirteen²⁴ are from the EU thus providing a sizable majority in most votes if they have a common view. Most decisions are by consensus. In the recent past when a European country has applied for membership, ECOSOC has usually invited another state from a different region as well to act as a counter balance.

Only the members can vote but proposals can be made by any body accredited by the UN. Attendees to the meetings are made up of:

- Members (M),
- Observer states (O),
- Intergovernmental Organisations (IGO) (e.g. OTIF),
- the European Union,

²³ According to the National Transportation Safety Board report (USA) contributory factors in this accident were lack of compliance with the regulations in part due to their complexity, industry and government's lack of familiarity (nobody had been trained) with them, overlapping jurisdictions and lack of surveillance. No single document covered all the regulations.

²⁴ Austria, Belgium, Czech Republic, Finland, France, Germany, Italy, Netherlands, Poland, Portugal, Spain, Sweden and United Kingdom.

- Specialised Agencies of the UN (SA) (ICAO, IMO, IAEA etc.),
- Non-governmental organisations (NGOs). (Over three thousand trade associations have accreditation at UN but only about thirty attend the transport meetings),
- The Secretariats (Sec) play an important role and occasionally make proposals to amend and correct the regulations; this usually occurs when editorial deficiencies are identified.

Official documents are those which are submitted in accordance with the timetables set down by the secretariat and will be translated for the UNSCoE into English and French. For the UNSCoE papers have to be submitted ten weeks before a meeting and these are guaranteed to be discussed. Attendees can submit Informal Documents (INF) at any time prior to or during the meeting. The latter should normally provide:

- Comments on official documents,
- Information for which no decision is required,
- Working documents following discussions in the plenary session.

In practice even informal documents often contain proposals which can be considered to be formal. Such proposals are normally treated informally initially but then treated as formal papers at the next meeting unless the change is simple, e.g. a correction.

Why are papers (official or informal) submitted?

There are probably many reasons for an organisation to submit a paper but it will usually be for one of the following:

- a correction to the existing regulations;
- a clarification of the text;
- economic interests of the proposer where his view is that the regulations are out of balance with the risks,
- new technologies being developed.

Annex E lists some of the papers discussed at the meeting held in June 2012 and attempts to explain the likely reasons, in the consultants' opinion, the papers were submitted.

Papers submitted to the UN will have originated from governments or any of the other accredited organisations who may have identified a problem themselves, or there may have been an enforcement issue. Normal practice would be to assess the issue and decide whether it has serious implications for safety and free movement of dangerous goods. If there are convincing arguments then a paper is likely to be drafted and in the case of governments consulted on with interested parties nationally. Occasionally authors from the different accredited bodies and governments may consult with each other before

a decision is made to submit a paper; sometime papers are submitted jointly to the Committee, which would indicate there is some consensus

It should be remembered that the UN Model regulations deal with safety and trade facilitation:

“They aim at ensuring a high level of safety by preventing accidents to persons and property and damage to the environment during transport and, at the same time, at providing a uniform regulatory framework which can be applied in all countries for national or international transport by any mode of transport. The harmonisation of rules and regulations at worldwide level on the basis of these recommendations is also an important factor of trade facilitation.”

Table 5 shows the number of documents considered by the TDG recently.

Table 5: Indicative¹ list of documents submitted to the UNSCoE

	Documents	M	O	IGO	SA	NGO	Sec	Total
2012 ²	Official	21	0	0	4	32	1	58
	Informal	6	0	0	0	1	1	8
2011	Official	23	0	0	4	17	2	46
	Informal	49	0	0	9	35	21	114

1 This is only indicative there are joint papers from NGOs and Members.

2 This is for the current year up to June 2012.

There are no specific requirements concerning the contents of papers such as:

- Safety,
- Feasibility,
- Impact assessment,
- Enforceability.

The only requirement is that the subject must be on the work programme developed at the end of each biennium and reproduced in the final report of the biennium. In practice the basic work programme changes very little from biennium to biennium and covers any aspect of the Model Regulations, however occasionally the UNSCoE has decided to spend specific time on particular subjects. In recent years this has included Intermediate Bulk Containers, Class/Division 6.2 (infectious substances), battery technologies and limited quantities. All of these papers are placed on the UN website and are freely available to any interested party. Occasionally specific subjects are added e.g. it is possible the UN will address articles containing dangerous goods during the 2013/14

biennium. In the past the number of articles carrying dangerous goods has been dealt with in a non-systematic manner but it is becoming apparent that more and more articles contain dangerous goods. In many cases the quantities are small and probably of little consequence in safety terms but it has become apparent that there are now items on the market place with significant quantities of dangerous goods e.g. certain lamps contain sodium and others radioactive sources; there are special pieces of equipment holding pressurised gases.

The UNSCoE works in Chinese, English, French, Russian and Spanish. The UN Recommendations are published in Arabic, Chinese, English, French, Russian and Spanish.

Many member governments hold briefing meetings with both their industry and colleagues in other departments before attending the meetings and policy lines are determined based on the consultations. Similarly, NGOs have normally agreed positions following consultations with their members. However, it is common for delegates to attend the meetings and modify their position once they have heard the debate, so briefings have to be taken as indicative guidance rather than fixed positions.

4.2 UNECE

Fifty six countries are members of UNECE, including the USA and Canada, and all members of UNECE have the right to vote in all UNECE subsidiary bodies, including the Inland Transport Committee and its subsidiary bodies such as WP.15 see below).

For electoral purposes (i.e. to ensure equitable geographical rotation of the various chairs and vice-chairs of the General Assembly and its subsidiary bodies among different regions), Member States of the United Nations have been arranged in five regional groups: African States, Asian States, Latin American States, Eastern European States and Western European or other States.

To the extent possible, when geographical repartition is required in the determination of the composition of certain UN bodies with restricted membership (such as ECOSOC itself or the TDG Sub-Committee), it is necessary to ensure that all regions are represented (which is not easy for expert bodies when certain regions cannot provide expertise).

The group of Western European and other States includes Canada, Australia, Israel, New Zealand and Turkey.

The USA do not belong to any group but attend meetings of the Western European and other States as an observer and are considered to be member of that group for electoral purposes.

This UN GA regional grouping does not correspond to the regional commissions grouping. For example, the membership of UNECE includes all Eastern European States, all Western European or other States except Australia and New Zealand, as well as some Asian States (Central Asia, such as Kazakhstan, Uzbekistan, etc, i.e. those Asian States which previously belonged to the USSR). The membership of ESCAP includes most Asian States (but not those which are members of ESCWA (e.g. Lebanon, Saudi Arabia, Yemen etc), but also some Eastern European states, e.g. Russia, or Western European or other states, of course Australia and new Zealand but also some European states that have territories in Asia (Turkey, France, UK, USA), etc.

4.2.1 WP15 Working Party on the Transport of Dangerous Goods

WP15 addresses the ADR and ADN so it is necessary to explain its role to see how the Joint Meeting (see below) works.

WP15 has been established by and reports to the Inland Transport Committee of the UNECE. The Inland Transport Committee consists of all UN European Members plus Canada and the USA and these two non-European countries can attend and vote at all meetings, this apparent anomaly is because of the way the UN has classified different states. When the UN was established the USA and Canada were categorized as part of the West European sector and there was an East European sector consisting mainly of the then Iron Curtain countries.

For ADN decisions from WP.15 go to the ADN Safety Committee which meets under the auspices of the UNECE and agrees the text for ADN. This text is then referred to the ADN Administrative Committee which is not a UN body but is self-standing set up under the ADN Treaty itself. It is up to the ADN Administrative Committee to decide on adoption of the text. The procedure is similar to that for ADR (no objection by a certain proportion of States/Contracting Parties).

4.2.2 The Joint Meeting

When ADR was being prepared in the late 1950s, rather than invent a new system, it was decided to make use of the RID as a base document. Since then, the common areas of the road, rail and inland waterway provisions (Parts 1-6 of the various regulations- see Table 1) are dealt with by the Joint Meeting. It consists of WP15 and the RID Committee of Experts meeting twice a year over each two year cycle. The decisions of the Joint Meeting are reported back to the individual modal committees WP15 for road and inland waterway and the RID Committee of Experts for rail. The parent bodies then look at those decisions and discuss matters unique to their mode and normally adopt all changes for publication.

WP15 meets twice a year to consider changes to ADR and usually once a year for ADN. Recently OTIF has decided that the RID Committee of Experts need only meet once in

every biennium and other meetings during the biennium will be as a Standing Working Group.

Membership of the Joint Meeting is open to any member (state, trade association etc.) of the UN ECE Inland Transport Committee and any member of the RID Committee of Experts. The other organisations described under the UN (above) can attend the Joint Meeting. Observers for this meeting would be from countries not in Europe (except Canada and the USA) and not party to COTIF. Whilst the statutes of OTIF permit the European Union to vote on behalf of its members, UNECE rules do not permit regional economic organisations (such as the European Union) to contract or vote and the Joint Meeting has always been accepted as working under UNECE (rather than OTIF) rules. The EU therefore acts as an observer in the Joint Meeting.

The procedure for submitting papers is based on the rules that have been adopted by WP15 and adoption of text is normally by consensus. Any formal proposal should include the following headings:

- | | |
|-----------------|--|
| Safety: | What are the safety implications? |
| Feasibility: | Which economic sector or public service is concerned by the proposed amendments? |
| | What are the consequences in terms of the advantages and disadvantages? |
| | Is a transitional period required? |
| Enforceability: | Once implemented, can the amendments be observed or monitored? ²⁵ |

In the meeting firstly the agenda is discussed and adopted; this in effect dictates the priority given to the various issues. Some may have to be postponed.

As each issue is reached, the author is invited to present the paper. He will normally simply summarise the content and emphasise those points considered important. There may be a need to explain context or background where issues have a national origin.

Discussion is then opened. It tends to be centred on the technical merits of the proposal as presented. In most cases little or no economic information is provided and discussed. Likewise societal and environmental issues do not arise frequently. However if a proposal is likely to have a significant impact more information on these issues will be presented or requested. The matter will be discussed over several meetings before a decision is taken including transitional measures to mitigate the cost (see also section 6.9 for more details).

²⁵ ECE/TRANS/WP.15/AC.1/2008/18



The chairman summarises the discussion as necessary and proposes a consensus which is normally adopted. If a consensus is not reached a decision can be taken by a vote. Alternatively if the principle of the proposal is accepted but further work is necessary the author is invited to return with a new proposal taking account of the discussions.

Table 6: Indicative¹ list of documents submitted to the Joint Meeting

	Documents	M ²	O ²	IGO ²	SA ²	NGO ²	Sec ²	Total
2011	Official	31		2	3	12	2	50
	Informal	52		5	2	16	19	94
2010	Official	38		1	4	10	4	57
	Informal	50			10	17	9	86

1 This is only indicative there are joint papers from NGOs and Members.

2 Explanation of the codes can be found in 4.1.1 of this report

Many of the official papers for the Joint Meeting suggest improvements or changes derived from UNSCoE proposals.

4.3 Intergovernmental Organisation for International Carriage by Rail (OTIF)

In accordance with COTIF Article 33 (5), the *RID Expert Committee shall take decisions about proposals aiming to modify the provisions of the Regulation concerning the International Carriage of Dangerous Goods*. (The RID Expert Committee is normally referred to as the RID Committee of Experts.) These decisions are not taken in isolation; they are influenced by the “RID/ADR/ADN Joint Meeting” – the meeting to coordinate the three land mode sets of dangerous goods regulations. The Joint Meeting is treated in more detail above.

With the accession of the European Union, a further stage has been added, a coordination process for EU Member States taking place before the Committee of Experts meeting.

COTIF Article 18 establishes the RID Committee of Experts; Article 33 (5) sets down its objectives. Article 16 sets out the method of working. Inter alia, it provides for the working languages (English, French and German), for each Member State to have one vote and the committee itself to draw up its rules of procedure (in OTIF document A81-03/501.2006/Add.3). The rules of procedure for the RID Committee of Experts are very similar to those of the UN committee; they may be downloaded from http://www.otif.org/fileadmin/user_upload/otif_verlinkte_files/02_organe/04_RID_fachaus/RI_CExp_RID_01-07-2006_E.pdf

In recent meetings, the committee has arranged consecutive interpretation into French and German and simultaneous interpretation into English.

The European Union and states that are party to the RID are entitled to make proposals and to vote. Other stakeholders, mainly the railway trade associations (such as the UIC (International Union of Railways) and CIT (International Rail Transport Committee) and wagon keepers (UIP International Union of Wagon Keepers) may also make proposals but not vote. National representation tends to take the form of a representative from the national ministry of transport accompanied by a technical adviser.

The committee insists on proposals being presented at least six weeks before the meeting, the OTIF Secretariat provides a translation into each of the working languages. These documents are available to interested parties (indeed the public at large) on the OTIF website. Decision making takes the form of presentation, discussion and an attempt to reach a consensus.

4.4 The European Union

4.4.1 EU railway legislative processes

This heavily abridged summary of the EU legislative process is included so that comparisons may be made with the process used by the UNECE and OTIF to develop dangerous goods law. Fuller details of the legislative process are given in “The ABC of European Union Law” published by the EU Publications Office.

The European Commission makes proposals for legislation but decisions are made by the Council and the Parliament. As described in Parts 3 and 4 of this report a number of pieces of EU legislation have been enacted in respect of railway safety and the transport of dangerous goods.

4.4.2 The EU consultative process

In the process of preparing proposals for legislation, the Commission consults widely usually via Permanent Representatives to the governments of Member States. At the same time trade associations with an interest are usually consulted. There are defined avenues for consultation in the railway industry: two trade bodies are nominated as formal contacts. These are the “representative bodies from the railway sector acting on a European level” as defined in Article 3(2) of Regulation (EC) No 881/2004 (the rail sector representative bodies). The Community of European Railway and Infrastructure Companies (CER) represents railway undertakings and the European Rail Infrastructure Managers (EIM) represents infrastructure managers. The International Union of Railways (UIC), the International Rail Transport Committee (CIT) and the International Union of Wagon Keepers (UIP) are not formal consultees.

Before the European Commission proposes new initiatives it is required to assess the potential economic, social and environmental consequences that they may have²⁶ by means of an impact assessment.

The Commission makes some decisions with the assistance of a committee. The decisions in question are technical and implementation measures which the Commission has been empowered to implement by a legal act adopted by the Parliament and the Council. In this way DG MOVE works closely with the 'Railways Interoperability and Safety Committee' (RISC). The committee is a standing regulatory committee and was set up by Article 21 of Council Directive 96/48/EC of 23 July 1996 on the interoperability of the trans-European high-speed rail system. The committee is *composed of the representatives of the Member States and chaired by a representative of the Commission*. Whilst the committee's scope is restricted to safety and interoperability (as defined in the directives on those subjects²⁷), there are clearly issues in the carriage of dangerous goods which impinge on those areas (such as the design and construction of tank wagons). The process is as follows:

The representative of the Commission shall submit to the Committee a draft of the measures to be taken. The Committee shall deliver its opinion on the draft within a time limit which the chairman may lay down according to the urgency of the matter. The opinion shall be delivered by the majority laid down in Article 148 (2) of the Treaty in the case of decisions which the Council is required to adopt on a proposal from the Commission. The votes of the representatives of the Member States within the Committee shall be weighted in the manner set out in that Article. (Article 21 (2) Directive 96/48/EC).

The Commission is assisted by the European Railway Agency. The Agency was set up by the "Agency Regulation"²⁸. The Regulation defines the objective of the Agency as:

... to contribute, on technical matters, to the implementation of the Community legislation aimed at improving the competitive position of the railway sector by enhancing the level of

²⁶ Quote from http://ec.europa.eu/governance/impact/index_en.htm

²⁷ Directive 2004/49/EC of the European Parliament and of the Council of 29 April 2004 on safety on the Community's railways OJEU L164 30.4.2004 p. 44 (as amended) and Directive 2008/57/EC of the European Parliament and of the Council of 17 June 2008 on the interoperability of the rail system within the Community Safety Directive

²⁸ Regulation (EC) No 881/2004 of the European Parliament and of the Council of 29 April 2004 establishing a European Railway Agency (Agency Regulation) OJEU L 164 30.04.2004 p.1 (as subsequently amended)

interoperability of railway systems and at developing a common approach to safety on the European railway system, ...

It is clear that whilst this does not specifically address dangerous goods, there are some areas which might overlap (rail tank design, operating practices for trains carrying dangerous goods, documentation and information flow, etc.). The Agency is given full freedom to initiate proposals of its own, Article 6 (2) and (3) for example provide for

2. The Agency shall recommend to the Commission, at the request of the Commission or of the committee referred to in Article 21 of Directive 96/48/EC or on its own initiative, other measures in the field of safety.

3. ... for matters concerning equipment and infrastructure not covered by the TSIs, the Agency may submit any appropriate recommendation to the Commission. ...

Significantly, however paragraph 4 requires the Agency to:

...present a detailed cost-benefit analysis in support of the recommendations which it submits pursuant to this Article.

Other articles require the Agency to adopt a proactive approach and to take initiatives, make studies, etc. in pursuing its overall objectives. The Agency said however that whilst it was staffed to react to initiatives, it was not staffed to initiate them. At the end of 2010, the Agency had 133 staff; this compares with 22 in the Single European Rail Area Unit within DG MOVE. The staff of the Agency are chosen on the basis of their technical expertise.

In carrying out its tasks, the ERA involves representatives of organised labour and consults a wider audience by means of workshops, conferences and meetings.

Most respondents hoped that there would be improved co-ordination between the various bodies involved in legislation but only the ERA suggested how this might be achieved.

Once the Commission's proposal has been consulted on, the legislative process starts.

4.4.3 Dangerous goods legislation

There are three Directives that directly impact on the transport of dangerous goods:

- (i) 2008/68/EC Directive of European Parliament and the Council of 24 September 2008 on the Inland Transport Directive of Dangerous Goods.

This Directive requires Member States to apply the provisions of the RID, ADR and ADN to all transport operations in the Community domestic and international. This is more often known as the Framework Directive and it repealed earlier Directives. The Commission has been empowered to amend the annexes to the Directive to keep it aligned with the international agreements.

The Directive also provides the Commission with powers to permit derogations from the international modal provisions after consulting the Regulatory Committee on the Transport of Dangerous Goods (TDG Committee). This committee meets about twice a year (meetings are called by the Commission) and is attended by Member States and industry representatives.. Only Members States' representatives can vote and the procedure will depend on the so-called "comitology procedure" applied.

- (ii) 2010/35/EU Directive of European Parliament and the Council of 16 June 2010 on transportable pressure equipment.

This Directive replaced an earlier version. It is not relevant to this study.

- (iii) 95/50EC Council Directive on uniform procedures for checks on the transport of dangerous goods by road.

This Directive is not relevant to this study.

4.5 The Organization for Co-operation of Railways (OSJD)

The OSJD has its headquarters in Warsaw and represents railway authorities of countries in the Baltic States, the former Soviet Union, China and Asia. The organisation is responsible for the administration of the Agreement on International Goods Transport by Rail (SMGS), an equivalent to the CIM. Currently twenty-five countries are members of the organisation:

Fourteen of the States that are party to COTIF (and with the exception of Russia thereby RID) also belong to OSJD, namely Bulgaria, Estonia, Czech Republic, Georgia, Hungary, Iran, Latvia, Lithuania, Poland, Romania, Russian Federation, Slovakia and Ukraine. Nine are EU Member States. A number of states in the former Soviet orbit have joined OTIF (Armenia, Georgia, Russian Federation and Ukraine). Azerbaijan is expected to join very shortly and it might be right to read the situation as OTIF developing at the expense of OSJD.

Rail traffic between countries that have signed up to COTIF and SMGS will be subject to both conventions and their different rules and procedures. This includes the use of the respective consignment notes. For COTIF freight traffic, the CIM consignment note must be used in all cases including those in which dangerous goods are moved. For OSJD countries a separate SMGS consignment note is used but again one design of note covers all types of goods. A common CIM/SMGS consignment note is normally made out when traffic moves from a COTIF area to SMGS, or vice versa.

There are also physical differences between track gauges. In crude terms, the former Soviet bloc has a track gauge of 1520 mm. This imposes a need to change wheelsets or tranship. Intermodal units are transferred from one wagon to another.

The OSJD uses an annex to the SMGS for dangerous goods traffic. The appendix to the SMGS is also derived from the UN model regulations and is therefore not dissimilar to the RID but differences remain (the RID has a transitional period between editions but the SMGS annex comes into effect overnight on the last day of the RID transition, for example). These differences are recognised as not being helpful for through traffic and attempts (OSJD and OTIF) are being made to align the conventions. At the RID Committee of Experts standing working group meeting in Riga (November 2012) a process has begun with OSJD to harmonise the dangerous goods rules. This should be considered a very significant development although it might take some time to achieve.

4.6 Railway undertakings and infrastructure managers

Railway undertakings and infrastructure managers have created two “mirror groups” to coordinate railway input to policy and action to reflect dangerous goods legislation. The two groups are both sub-groups of the UIC Study Group Quality.

The first is the Dangerous Goods Policy Coordination Group “which coordinates the work and studies done within UIC on safety and quality policies regarding the carriage of dangerous goods”. It also aims to influence the legislators and typical of the work done by the group was considering the railway response to the “Seveso Directive” to help ensure marshalling yards were excluded from its scope.

The second group, the “Expert Group on the Transport of Dangerous Goods” has a more technical bias. It draws up railway input on proposals to the RID/ADR/ADN Joint Meeting and the RID Committee of Experts. It also organises the railways compliance activities in so far as international coordination is required. This group manages UIC leaflet 471-3 (Inspections of dangerous goods consignments. Leaflet 471-3 (which was reissued in January 2013) defines the checks to be made on consignments, on the consignment documentation, the labelling and placarding of the wagon (and container) and the securing and sealing of the load. The leaflet acts as a basis for the handover in confidence process which allows railway undertakings to forego checks on handover in the knowledge that checks have already been made. The group also manages the process for railway undertakings to become accredited for handover in confidence.

5 Analysis of Questionnaires

The project involved sending out a questionnaire to a range of likely interested organizations. A total of 319 questionnaires were despatched and the tables below give an overview of the responses and their origin.

Breakdown of Information Sources	Number
Emails sent out (excl. 2 EU & 5 consultants)	319
Survey responses	36
Additional comments received	2
Interviews	13
Countries covered (including Switzerland)	23 out of 25 with railways

Type of Organisation	Number
Railway Undertaking	7
Government Ministry	23
Other (European Institutions, NGOs, additional comments)	8

Country breakdown by DG movement level		
Small	Medium	Large
10	5	8

Type of Organisation	Number
General railway safety bodies	7
Dangerous goods regulators	8
Both	8

The following is an analysis of the questionnaires (see Annex A) returned to the consultants. Twenty two countries from the 25 Member States with railways were represented by responses received, along with Switzerland and relevant organisations on behalf of their members.

5.1 General Information (Questions 1-5)

This section was intended to provide the consultants with some guidance on how various administrations dealt with railway policy, dangerous goods and enforcement of the rules. Practice varies from country to country, which was not unexpected. Liaison between various ministries ranged from constant to non-existent. An industry comment to this section revealed the frustration this caused when trying to communicate with the right people.

Enforcement tended to be carried out on modal lines and again the level of liaison between the various agencies varied.

An analysis of Member State legislation, based on the responses received is set out in Annex G.

This section asked for details of the national regulations in each Member State and any information regarding supplementary regulations and guidance that may have been issued. As not all Member States have replied to the questionnaire, any analysis is limited in its value.

According to the responses, supplementary documents tended to address derogations from the regulations.

The majority of Member States said that the Seveso Directives did not apply to railway marshalling yards.

5.2 RID and EU Railway Legislation (Questions 6-13)

The overwhelming majority found the RID and EU legislation compatible and no one identified any conflict between provisions apart from those that the consultants were already aware of. Where there were issues relating to the various regulations these appeared to come from interpretation of the legislation or matters of process and they could not really be described as incompatibilities.

Respondents noted that the security provisions for transport were UN based and that there was no overlap with other regulations. However a few respondents noted that the Commission, notably DG HOME, were developing security action plans for certain chemicals. At the present time these are not applied to transport operations. If separate plans were to be developed there may well be potential overlaps and conflicts.

A complaint from a number of respondents was regarding the lack of different language versions of RID despite linguistic support from the EU. This comment was one made in

the report Evaluation of EU Policy on the Transport of Dangerous Goods since 1994²⁹. A number of states mentioned initiatives to resolve terminology and linguistic issues. This included states with a common language (the German speaking states, for example) but also states with similar languages or heritage (Czech Republic and Slovakia, for example).

There was a feeling that training requirements were adequately addressed in all the regulations.



Figure 3: An example of a training aid

5.3 International relations (Questions 14-19)

These final questions provided a large number of detailed comments from respondents and the following is a summary of the views.

Member states were asked to indicate whether they attended various international meetings and the responses showed that most attended the three key meetings identified in the question 14 i-iii. There were some variances with not all Member States being represented at all meetings. Only a few interested states attended the OSJD.

EU Accession to COTIF did lead to a significant number of comments. Amongst the issues identified that the Commission should be aware of were that:

²⁹ TREN/E3/43-2003 p79

- Unless an issue was linked to general railway safety or interoperability, then RID should be the lead body,
- Coordination should be dealt with through the TDG coordination under Directive 2008/68/EC when dealing with issues not touching general railway safety or interoperability,
- The majority of decisions are made by consensus following technical debates in the meeting,
- Some respondents thought that the Commission should take account of the fact that a fully coordinated view on issues at RID could lead to non-Member States of the EU becoming very concerned. Respondents pointed out that the twenty-five EU Contracting States represent just over half of the forty-six states contracting in to the RID. Although in truth it is mainly EU Member States that attend the meetings. Those respondents feared that a too-assertive stance could lead to states (particularly to the East) being reluctant to join a system they could not influence in practice.
- Respondents also pointed out that the dangerous goods rules are worldwide and mainly derive from UN Recommendations. The RID represents a model on which non-Contracting States can base their national regulations. As such, there is value in the RID being “ecumenical” and respondents felt that should be borne in mind particularly in the context of the extension of COTIF into the Caucasus and possibly into the Indian sub-Continent.

Generally Member States did not identify any problems between the UN systems and RID.

The question relating to impact assessments (17b) did not produce any information, most respondents had not come across such work.

6 Issues identified and Recommendations

6.1 Conflicts between EU legislation and RID

Following initial investigations and a study of the questionnaires there is a general feeling that at present there is little conflict between EC legislation and RID. There is a recognition that Member States or Regional bodies can make additional rules on their territory. Generally RID has not addressed the “running gear” of wagons and trains but occasionally RID stipulates a condition which would impact on the wagon other than the tank (see below).

A key issue has been a general disagreement on the use of derailment detectors. The RID Committee of Experts agreed to postpone a decision on the mandatory fitting of derailment detectors to tank wagons carrying certain dangerous goods so that the EC and ERA could study the impacts of the proposal. As a result the EU does not support the introduction of mandatory derailment detectors at this stage. However it was agreed to allow their use on a voluntary basis provided the rules on the approval of rolling stock are respected and wagons are treated in a non-discriminatory way (this is reflected in the note to paragraph 7.1.1 in the 2013 edition of RID).

Although responses to the questionnaire show that most feel that there are no real overlaps between EU legislation and RID, a few other issues than derailment detection have been identified as a result of the study and are discussed below with any recommendation on how they may be resolved. This centres on co-operation between the ERA and the RID Committee of Experts.

6.2 Emergency Planning

Chapter 1.11 of RID requires internal emergency planning for marshalling yards and reference is made to UIC leaflet 201 as meeting this requirement. It was agreed to include this in RID to exclude marshalling yards from the Seveso Directive. It was agreed there was broad equivalence between the requirements of the Seveso Directive and RID but it was generally felt that there should be a more uniform and consistent approach for emergency planning for dangerous goods in marshalling yards. UIC leaflet 201 was drawn up using a standard for railway emergency planning and preparedness as a basis adapted to cater for dangerous goods.

Instructions in writing to drivers to cover dangerous goods incidents have also been introduced into RID. Apart from the standard additional guidance to drivers on the hazardous characteristics by class and actions subject to prevailing circumstances, the actions to be taken by a driver in the event of an accident or incident involving dangerous goods are very much based on the actions that the driver would take whether dangerous goods were involved or not.

6.3 Railway Operations

One respondent stated that “operating restrictions on safety grounds” should not feature in RID and should be dealt with in EU railway legislation. It is not clear what provisions in RID are meant by this. RID 7.5.3 deals with protective distances. It could be argued that there is an interface with section 4.2.2.5 train composition of the Operations TSI (Decision 2011/314/EU). However the provision in RID is there to ensure explosives are segregated from flammable substances on a train to limit the consequences in the event of an accident.

6.4 Cooperation between ERA and RID

Much of the basis of these meetings (ERA and RID) is to achieve a consensus over an issue. Where consensus is achieved there is much more likely to be adequate application and enforcement. Again informal arrangements also benefit the development of the regulations. A good example of this is the issue of “entities in charge of maintenance” (ECM) where at the recent meeting of the RID Standing Working Group in Riga (November 2012) the ERA was asked to assist in drafting suitable text for adoption into RID during the next biennium (2013/14). In this respect to ensure a consensus the ERA hosted a workshop on this matter prior to the RID meeting. The workshop concluded that it was necessary to clarify the obligations of the tank wagon operator and align RID with the terminology of the provisions for the ECM and the authorisation of placing into service (APS) of the tank wagon. This was agreed at the RID meeting and as the tank wagon operator must be able to rely on the instructions provided by the ECM, the ECM’s responsibilities should be covered too.

The attendance of the ERA at the RID meetings undoubtedly brings benefits and can prevent or limit the potential confusion that can arise when different regulations are made. Ever since the issue of how derailment detection devices should be dealt with arose, it has been agreed with the European Commission that the ERA attends all the meetings of the RID Committee of Experts and its Tank and Vehicle Technology Working Group. Following a request made by the Commission at the 47th Session of the RID Committee of Experts, it was decided to add a permanent new item (“Information from the European Railway Agency”) to future agendas. Thus the ERA reports information relating to railway safety and interoperability issues that have the potential to impact on carriage of dangerous goods by rail and thus have the potential to facilitate the co-ordination of work at EU and RID Committee of Experts levels. Equally with the ERA involved, issues raised in the context of RID with the potential to impact on general railway legislation will be highlighted to agree on the best method for dealing with them.

6.5 Wagon construction

A few requirements have been added to RID that affect the wagon other than the tank containing the dangerous goods (at solebar level or the running gear) and were introduced to prevent or mitigate the puncturing of the end of tanks of tank wagons in certain accident scenarios. Tank special provision relating to items of equipment TE22 of RID 6.8.4(b) and its transitional measure 1.6.3.27 require each end of tank wagons to be capable of absorbing a certain amount of energy by means of elastic or plastic deformation of defined components of the sub-frame by means of a similar procedure (e.g. crash elements such as crush buffers. Reference is made to EN15551:2009 (Railway Applications – Freight Wagons – Buffers) and EN12663-2:2010 (Railway Applications – Structural Requirements of Railway Vehicles Bodies – Part 2 Freight Wagons) as a way of meeting this requirement. Thus reference can be made to a European Standard for the technical requirements to illustrate how specific provisions can be met. This mirrors the way in which European Standards are drafted to deal with the technical detail of compliance with TSIs. Also TE25 and its transitional measure 1.6.3.32 deal with a requirement for tanks of tank wagons to be protected against buffer override and derailment or to limit damage when buffers override by at least one of four separate measures.

There are two other examples of requirements to provide protection to the ends of the tank. In 6.8.3.1.6 where tank wagons intended for the carriage of gases shall be fitted with buffers with a minimum absorption capacity of 70kJ and 6.8.2.1.29 where the minimum distance between the headstock plane and the most protruding point of the shell extremity on tank wagons for dangerous goods shall be 300mm.

A current issue is the question of handbrakes. UIC leaflets 535-3 (Equipping of wagons with devices for passing from one to the other and with screw brakes) and 573 (Technical conditions for the construction of tank wagons) require tank wagons for dangerous goods to have a handbrake operable from the platform. Neither RID nor the latest version of the wagon TSI stipulate such a requirement. It may be that the UIC requirement is based on old operating instructions that required the presence of a brakeman on the wagon while shunting. It is not clear whether such shunting procedures are still carried out and in the case of hump shunting, it is believed that humps are now fitted with retarders to regulate the speed of wagons. Consequently the handbrake may now only be used as a parking brake to stable wagons. Currently the UIC and the UIP are conducting a survey to clarify exactly why the specification came into existence and whether it is felt it should continue to exist for tank wagons for dangerous goods.

6.6 Reporting of accidents and statistics

One respondent pointed out that the criteria for reporting railway accidents and for reporting dangerous goods accidents are different. For example, the criteria in the RID include any accident in which there is personal injury which requires intensive medical treatment or a stay in hospital of at least one day or results in the inability to work for at

least three consecutive days (RID 1.8.5.3). The criterion in the Railway Safety Directive (Article 3l) is any train collision or derailment of trains, resulting in the death of at least one person or serious injuries to five or more persons (where serious injury means a stay in hospital of at least one day). There are similar differences in the criteria for damage caused. The degree of compulsion to report is also different; Article 19 of the Railway Safety Directive requires Member States to investigate and Article 23 requires them to produce and circulate an independent report. Likewise 1.8.5.1 of RID requires the party involved to produce a report to the competent authority of the country where the accident occurred. The report is likely to be made by a dangerous goods safety adviser paid by the party commissioning the report; there is no requirement for the involvement of an independent body. 1.8.5.2 RID only requires the report to be circulated “if necessary”. There would appear to be some evidence that few reports are circulated. If nothing else this distorts the statistical record.

It must be admitted that the scope of the RID and the scope of the Railway Safety Directive (the “railway system”) are slightly different; the RID can cover (for example) filling a tank container which does not form part of the “railway system” as defined in Directive 2001/16/EC. However, the purpose of these reporting processes is to be able to learn from past experience and to prepare comprehensive statistics so it would therefore seem logical to have similar criteria for drawing up the reports and also for circulating them. Within the EU, the Railway Safety Directive criteria will catch many (but not all) dangerous goods accidents but there may be lessons to learn from dangerous goods accidents outside the EU. One example where general EU rail legislation and the dangerous goods regulations complement each other is in the use of a common safety indicator (CSI) and the method used to calculate the economic impact of accidents. In relation to accidents involving the transport of dangerous goods, reference is made to any accident or incident that must be reported in accordance with RID 1.8.5.

Before recommending a complete harmonisation of reporting requirements, it might be desirable to propose an alignment. This might take the form of requiring dangerous goods accident reports to indicate whether they fulfil the criteria in the Railway Safety Directive (so that statistics can be prepared consistently) and if so would require them to be circulated. This would not increase administrative costs significantly but would build bridges between the statistics. Subsequently as a result of experience, further alignment might be considered – differing scopes will always be an issue however.

At the same time, but strictly outside the scope of this report, the consequence of alignment, consistent circulation of dangerous goods reports between all COTIF Member States might be mirrored by circulation of railway accident reports to include non-Member States of the EU.

6.7 Terminology

There a number of differences in terminology and the consultants are of the view that it would be worth considering a guidance document on the OTIF and ERA web sites. Although “carrier” usually equates to “railway undertaking”, this may not be so simple. At the time that COTIF 1999 was being drawn up it was envisaged that a single carrier could .be responsible for a multi-modal journey (say) from Yokohama to Dusseldorf and in that case the “carrier” would not necessarily be a railway undertaking. Nevertheless, the carrier in that example would have to sub-contract carriage by rail to a properly licensed railway undertaking. For the 2013 edition of RID, a new footnote to the effect that in the case of a tank wagon the term “operator” is equivalent to the term “keeper” (wagon) has been added. The next RID meeting is due to deal with the issue of “entity in charge of maintenance” (ECM) for freight wagons. Additionally the ERA is currently developing guidelines for assisting stakeholders in the correct implementation of the ECM regulation in the EU. These guidelines are likely to include references to dangerous goods transport.

6.8 Telematics

Telematics applications for freight (TAF). In the context of the development of TAF TSIs technical documents, it is considered necessary to identify dangerous goods being carried with certain identifiers. However it is important that any identifiers selected should be harmonised across all modes of transport and for dangerous goods these have not yet been agreed internationally. The RID/ADR/ADN Joint Meeting is currently looking at this subject through a working group in which the European Commission is actively involved. Set out below is a summary of their recent meeting (September 2012):

The working group discussed the possible uses of telematics in the dangerous goods context and next steps to achieve the objectives, with reference to the initiatives of the European Commission.

It was agreed that a stepped approach to introducing such telematics provisions would probably be best. This should build on existing systems and remain optional, at least in the initial period.

The first phase should focus on emergency alerts, as this was supported by all. From a rail perspective the next priority would probably be that the use of telematics statistical and other data in e.g. risk assessment processes be considered.

Even with a minimal system, the issue of mandatory requirements ensuring at least proper communication of data remains to be resolved.

The goal of paperless dangerous goods transport was seen as providing an incentive for adoption of the systems.

6.9 Impact assessment

The European Commission is required to produce impact assessments for the policy initiatives it proposes. That ensures that the initiatives that are taken forward represent advances in safety or economic and social terms. In this way, for example, an assessment of the value of the “Framework Directive” was made³⁰. No such specific requirement for an impact assessment is made of proposals for changes to the RID.

It would seem desirable to insist that there is also a systematic requirement for proposals to change RID to be justified at least with details of the safety and economic consequences. Such justification should also be required to examine alternatives, even if only to reject them. In this way there could be more certainty that proposals would provide benefits.

However it is already a requirement of proposals, other than those emanating from the United Nations Committee of Experts on the Transport of Dangerous Goods, that the proposals include the impact on safety, feasibility and enforceability. These elements would usually provide some of the data for an impact assessment and in addition most significant proposals are usually debated extensively at several meetings before being adopted sometimes in a modified form; it is at the meetings that costs and other data are considered leading to a form of informal impact assessment,. The combination of the proposal with transitional measures, and the debates usually leads to a consensus and a workable solution. It is clear however that a more formal assessment of safety and economic consequences is required.

Although under UN rules harmonisation proposals from the UN Sub Committee are not subject to impact assessment or to safety, feasibility and enforcement effects, in practice many of these issues are considered during debates on proposals.

6.10 Multimodal harmonisation

Many of the requirements in RID come from decisions taken by the UN Sub-Committee on the Transport of Dangerous Goods and the RID/ADR/ADN Joint Meeting and it is important that this link is retained to ensure harmonisation of dangerous goods requirements by all modes of transport and to facilitate safety in multimodal transport.

³⁰ Commission staff working document - Accompanying document to the Proposal for a Directive of the European Parliament and of the Council on the inland transport of dangerous goods - Executive summary of the Impact Assessment {COM(2006) 852 final SEC(2006) 1725}

Annex A – Questionnaire

Railway safety and interoperability and dangerous goods transport legislation in the EU

The Directorate-General for Mobility and Transport of the European Commission has engaged consultants from Pira International, the Europe Rail Consultancy, Environmental Scientifics Group and the UK Vehicle Certification Agency to perform a study and assess the current relationships between EU legislation on rail safety and interoperability and the Convention concerning International Carriage by Rail (COTIF) Appendix C – Regulations concerning the International Carriage of Dangerous Goods by Rail (RID).

It was agreed that an important part of this study would be to ask those involved professionally for their views. Accordingly a short questionnaire has been prepared by the consultants and agreed with the Commission. It is important that your views are heard and any points you may want to make are delivered effectively to policy makers.

Individual responses will not be revealed to the European Commission unless specifically agreed in advance. Subsequent interviews with some Member States will be confidential. However, the Commission plans to publish the results of the study but your contribution will remain anonymous (unless you indicate otherwise).

We hope, therefore, that you will be able to help us make an input into the formulation of dangerous goods policy.

We would be delighted to answer any questions you may have, they may be addressed to sheena.bassett@pira-international.com. Pira will be able to arrange explanations and discussions by telephone in English, French and German on request.

Please return questionnaires no later than **30 April 2012**.

General Information

The following questions are intended to provide the consultants with background information.

1. Which ministry is responsible for general railway safety policy?

2. Which ministry(ies) is/are responsible for the policy concerning the transport of dangerous goods by rail?

3. Which organisations in your country are responsible for enforcement of:
 (a) RID and Directive 2008/68 on the inland transport of dangerous goods

3. (b) EU legislation on railway safety and interoperability

3. (c) Are the organisations above in (a) also responsible for enforcing dangerous goods regulations in the other modes of transport? If not please list the organisations which do enforce dangerous goods regulations in all the other modes.

4. (a) What arrangements are there for formal liaison between dangerous goods enforcement bodies in your own country?

4. (b) Do you have regular meetings bilaterally or multilaterally with your neighbouring states or other Member States? If so please provide details.

5. (a) Please complete the following table:

Directive	National Regulations for rail transport (Please quote your national law or decree)	Supplementary National documents*
Directive 2008/68EC of European Parliament and of the Council of 24 September 2008 on the Inland Transport of Dangerous Goods (the Dangerous Goods		

Directive)		
Directive 2004/49/EC of the European Parliament and of the Council of 29 April 2004 on safety on the Community's railways		
Directive 2008/57/EC of the European Parliament and of the Council of 17 June 2008 on the interoperability of the rail system within the Community		
Council Directive 96/82/EC of 9 December 1996 on the control of major-accident hazards involving dangerous substances (the SEVESO II Directive)		

**Some countries have produced separate documents on derogations or transitional arrangements and any such documents should be listed here.*

5. (b) For any supplementary documents, please briefly describe their purpose e.g. "address national derogations":

5. (c) Please provide details of how the Seveso Directive impacts on railway operations in your country:

RID and EU railway legislation

The European Commission has asked us to identify present and likely future overlaps between RID requirements and those of EU law.

6. Do you consider they (RID and the EU railway legislation) are compatible? Please list any difficulties you have identified.

7. Do you see any conflicts between the provisions of RID/Dangerous Goods Directive and EU railway legislation? If so, please provide details. For example are you aware of any conflicts between RID and the Dangerous Goods Directive 2008/68, or conflicts between RID and other EU legislation (Seveso or Railway legislation)?

8. What overlaps do you think there are and how might any overlaps be harmonised?

9. RID addresses security provisions in Chapter 1.10, the European Commission has or is proposing additional security rules. Do you consider these overlap and how would you like to see them resolved?

10. Are there any significant gaps between RID and EU railway legislation?

11. Are there any changes that could be made to either RID or the EU railway legislation that you consider would benefit the railway industry? The language, construction and wording of RID and EU legislation is very different. Do you consider this a serious problem when implementing or interpreting this legislation? If so please explain and provide any examples you may have.

12. Do you find the practical provisions arising from the RID consistent with those from EU legislation?

13. Do you have additional national training requirements for railway staff? For example do you find the documentation and training requirements arising from the RID consistent with those from EU legislation? To what extent can documentation and training be organised to cover both the RID and EU requirements? Please provide as much detail as you can and provide any other examples of problems with practical provisions.

International relations

14. Is your country regularly represented at meetings of:

- i) the RID Committee of Experts _____
- ii) EC Regulatory Committee on Inland Transport of Dangerous Goods _____
- iii) the Rail Interoperability and Safety Committee (RISC Committee) _____
- iv) Organization for Co-operation of Railways (OSJD) [note this only applies to some Member States]. _____

Yes/No will do for this

15. The EU has now acceded to COTIF. What are your views on co-ordination meetings with the European Commission, what form should they take and what limitations should there be on them?

Note: the consultants would be grateful for your views which will be reported to the Commission

16. Part of the study is to look at the structures of the different organisations that produce rail regulations and whether the same results are obtained if the same proposals are put to both groups.

- a) In your country, do the same staff or different staff deal with papers presented at the RID Committee of Experts and the Rail Interoperability and Safety Committee?

- b) If different members of staff deal with issues arising at these two bodies do they have national co-ordination meetings or consultation with their colleagues?

17. a) A large part of the RID text originates from the UN Committee of Experts on the Transport of Dangerous Goods and the Globally Harmonised System of Classification and Labelling of Chemicals and has been adopted by all modes of transport. Can you identify any problems that you believe originate from this system that have an effect on railway operations?

17. b) What is your view on the analysis of safety, economic, social and environmental impact of measures adopted in the respective regulatory bodies?

Conclusions

18. What would you like to see as an end result of this study?

19. Please add any other comments you wish to make that you consider relevant to this study.

Name of person completing the questionnaire: _____

E mail address:

Phone number:

This information will be used to contact you if we should have queries or wish to arrange an interview with you.

Annex B – Abbreviations

49CFR/CFR49	Code of Federal Regulations Part 49 (105-180) (USA dangerous goods legislation)
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterway.
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road.
ASEAN	Association of Southeast Asian Nations
Basel Convention	Convention on the Control of Trans-boundary Movement of Hazardous Wastes and their Disposal
CBRN	Chemical, Biological, Radiological and Nuclear
CCNR	Central Commission for Navigation on the Rhine (Central Rhine Commission)
CEFIC	European Chemical Industry Council
CEN	European Committee for Standardization
CIM	Uniform Rules concerning the Contract of International Carriage of Goods by Rail.
CIT	International Rail Transport Committee
COTIF	Convention concerning International Carriage by Rail.
DG MOVE	Directorate General for Mobility and Transport
DGSA	Dangerous Goods Safety Adviser
DOT	Department of Transportation (USA)
EC	European Commission
ECJ	European Court of Justice
ECE	See UNECE
ECE/ADN	Administrative Committee of the ADN
ECOSOC	Economic and Social Council of the United Nations.
ERA	European Railway Agency
ESG.	Independent analytical and environmental consultancy

EU	European Union.
Framework Directive	Council Directives 2008/68/EC
GA	General Assembly of the United Nations
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
HCDG	High Consequence Dangerous Goods
IAEA	International Atomic Energy Agency.
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization.
ICAO TIs	Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO)
IMDG (Code)	International Maritime Dangerous Goods (Code).
IMO	International Maritime Organization.
ISO	International Organization for Standardization
ISPS	International Ship and Port Facilities Security Code
ITC	Inland Transport Committee of the UN ECE
DG HOME	Directorate General for Home Affairs (EU)
Joint Meeting	Joint Meeting of the RID Committee of Experts and the Working Party (WP.15) on Dangerous Goods (ADR).
MERCOSUR	Mercado Común del Sur, (Common Southern Market) Argentina, Brazil, Paraguay, Uruguay
Orange Book	The UN Recommendations on the Transport of Dangerous Goods
OTIF	Intergovernmental Organisation for International Carriage by Rail
OSJD	The Organization for Co-operation of Railways
Smithers Pira	Testing, training research and consultancy
PHMSA	Pipeline and Hazardous Materials Safety Administration (USA)
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail.
RISC	Railways Interoperability and Safety Committee Formerly known as the Article 21 Committee

SEVESO	Council Directive 96/82/EC of 9 December 1996 on the control of major-accident hazards involving dangerous substances
SOLAS	International Convention for the Safety of Life at Sea.
SMGS	Agreement on International Goods Transport by Rail (OSJD)
TDG	Transport of Dangerous Goods
TDG Committee	The Committee on the Transport of Dangerous Goods (EU).
TIs	Technical Instructions for the Safe Transport of Dangerous Goods by Air
TRANSCC	Transport Safety Standards Committee of the IAEA
TSI	Technical Specification for Interoperability
TSA	Transport Security Administration (USA)
UIC	International Union of Railways
UIP	International Union of Private Wagon Keepers
UN	United Nations.
UN Committee	The United Nations Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals
UNECE	United Nations Economic Commission for Europe
UN Recommendations	The Recommendations on the Transport of Dangerous Goods, published by the United Nations
VCA	UK Vehicle Certification Agency dangerous goods office. packaging approvals consultancy and training
WCO	World Customs Organization
WP 15	Working Party on the Transport of Dangerous Goods

Annex C – COTIF

Summary of the scope of application of COTIF and its Appendices

		CIV	CIM	RID	CUV	CUI	APTU	ATMF	Not yet ratified	Comments
AL	Albania	✓	✓	✓	✓	✓	✓	✓		
DZ	Algeria	✓	✓	✓	✓	✓	✓	✓		
AM	Armenia	✓	✓	✓	✓	✓	✓	✓		
AT	Austria	✓	✓	✓	✓	✓	✓	✓		Reservations against the CUI/AP/TU/A TMF lifted with effect from 1 July 2011
BE	Belgium	✓	✓	✓	✓	✓	✓	✓		Reservations against the CUI/AP/TU/A TMF lifted with effect from 8 February 2012
BA	Bosnia and Herzegovina	✓	✓	✓	✓	✓	✓	✓		
BG	Bulgaria	✓	✓	✓	✓	✓	✓	✓		
HR	Croatia	✓	✓	✓	✓	✓	✓	✓		
CY	Cyprus									No railway infrastructure (no OTIF membership)
CZ	Czech Republic	✓	✓	✓	✓	✓	✓	✓		
DK	Denmark	✓	✓	✓	✓	✓	✓	✓		Reservations against the CUI/AP/TU/A TMF lifted with effect from 7 July 2011
EE	Estonia	✓	✓	✓	✓	✓	✓	✓		Application on specific lines only
FI	Finland	✓	✓	✓	✓	✓	✓	✓		Reservations against the CUI/AP/TU/A TMF lifted with effect from 1 July 2011
FR	France	✓	✓	✓	✓	✓	✓	✓		
GE	Georgia	✓	✓	✓	✓	✓	✓	✓		
DE	Germany	✓	✓	✓	✓	✓	✓	✓		Reservation against the CUI lifted with effect from 1 January 2012
GR	Greece	✓	✓	✓	✓	✓	✓	✓		Reservations against the CUI/AP/TU/A TMF lifted with effect from 13 Sept. 2011
HU	Hungary	✓	✓	✓	✓	✓	✓	✓		Reservations against the CUI/AP/TU/A TMF lifted with effect from 16 February 2012
IR	Iran	✓	✓	✓	✓	✓	✓	✓		
IQ	Iraq									OTIF membership suspended
IE	Ireland								✓	
IT	Italy								✓	
LV	Latvia	✓	✓	✓	✓	✓	✓	✓		
LB	Lebanon									OTIF membership suspended
FL	Liechtenstein	✓	✓	✓	✓	✓	✓	✓		
LT	Lithuania	✓	✓	✓	✓	✓	✓	✓		Reservations against the CUI/AP/TU/A TMF lifted with effect from 10 Nov. 2011
LU	Luxembourg	✓	✓	✓	✓	✓	✓	✓		Reservations against the CUI/AP/TU/A TMF lifted with effect from 11 January 2012
MK	FYR of Macedonia	✓	✓	✓	✓	✓	✓	✓		
MT	Malta									No railway infrastructure (no OTIF membership)
MC	Monaco	✓	✓	✓	✓	✓	✓	✓		
ME	Montenegro	✓	✓	✓	✓	✓	✓	✓		
MA	Morocco	✓	✓	✓	✓	✓	✓	✓		
NL	Netherlands	✓	✓	✓	✓	✓	✓	✓		Reservations against the CUI/AP/TU/A TMF lifted with effect from 1 January 2012
NO	Norway	✓	✓	✓	✓	✓	✓	✓		
PL	Poland	✓	✓	✓	✓	✓	✓	✓		Reservations against the CUI/AP/TU/A TMF lifted with effect from 1 January 2012
PT	Portugal	✓	✓	✓	✓	✓	✓	✓		
RO	Romania	✓	✓	✓	✓	✓	✓	✓		
RU	Russia		✓							Application on specific lines only
RS	Serbia	✓	✓	✓	✓	✓	✓	✓		
SK	Slovakia	✓	✓	✓	✓	✓	✓	✓		
SI	Slovenia	✓	✓	✓	✓	✓	✓	✓		
ES	Spain	✓	✓	✓	✓	✓	✓	✓		
SE	Sweden								✓	
CH	Switzerland	✓	✓	✓	✓	✓	✓	✓		
SY	Syria	✓	✓	✓	✓	✓	✓	✓		
TN	Tunisia	✓	✓	✓	✓	✓	✓	✓		
TR	Turkey	✓	✓	✓	✓	✓	✓	✓		
UA	Ukraine	✓	✓	✓	✓	✓	✓	✓		Application on specific lines only
GB	United Kingdom	✓	✓	✓	✓	✓	✓	✓		
EU	European Union	✓	✓	✓	✓	✓	✓	✓		

CIT as of 1 May 2012

Annex D – RID Dangerous Goods List

Below are the headings from the dangerous goods list in RID (the shaded boxes). Beneath the headings the line below indicates which committee provides the majority of the data for each column. This is not to say that the other committees do not make changes e.g.:

RID has a number of extra special provisions in column 6 but also moves some UN special provisions to other parts of the regulations

UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and excepted quantities		Packaging		
									Packing instructions	Special packing provisions	Mixed packing provisions
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)
UN	UN	UN	JM	UN	UN	UN	UN	UN	UN	UN	JM

Portable tanks and bulk containers		RID tank		Transport category	Special provisions for carriage			Express parcels	Hazard identification No.
Instructions	Special provisions	Tank code	Special provisions		Packages	Bulk	Loading, unloading and handling		
4.2.5.2 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
UN	UN	JM	JM/RID	JM	JM/RID	JM	JM/RID	RID	JM

Annex E – UNSCoE papers submitted June 2012

Probable reasons for papers submitted to the UNSCoE in June 2012

The papers referred to below can all be found on the UN website:

<http://www.unece.org/trans/main/dgdb/dgsubc3/c32012.html>

Agenda Item 2 Explosives

In total there are about 30 papers for this agenda item. There was at one time a separate group of experts on explosives they became part of the UNSCoE and now meet at each summer meeting as a working group of the UNSCoE.. There is broad recognition that the various criteria and test methods for Class 1 are in need of revisions and clarification. This is partly because:

a lot of test methods have not been reviewed for a long time methods and test materials are out of date ,and,

partly because new technologies and methods of distribution are being developed by the industry world-wide which requires different test methods on the various products. A large number of the documents are from industry.

Agenda 3

2012/4 A document identifying ambiguities in the regulations. This has come about because nearly 30 years ago the UN adopted provisions for environmentally hazardous substances but did not identify anomalies that could arise once this concept had been adopted. This paper begins the process of identifying ambiguous text.

2012/5, 2012/8, 2012/33, 2012/35, 2012/36, 2012/45 New technologies not covered in the regulations

2012/19 2012/24 Ambiguous text

2012/25 Text adopted by UN from ICAO has been incorrectly transposed from the TIs

2012/34, 2012/11, 2012/26, 2012/49 Correct deviations from Guiding Principles

2012/48 Clarification of the asbestos entries (very old UN numbers invented in the 1960s and probably do not reflect current rules elsewhere)

2012/27, INF31 Proposed relaxation from all the rules for small quantities of environmentally hazardous substances

2012/31, 2012/50, INF22, INF23 Clarification of text

2012/44 Like asbestos related to very old UN numbers provisions need modernisation

INF 19 Waste packaging new proposal new concepts originally raised in the Joint Meeting referred back to UNSCoE

Agenda 4

Batteries mainly lithium relatively new technologies and have been known to be the cause of serious accidents. Various papers addressing issues not adequately covered by the regulations

The results of the June 2012 meeting can be found on the UN website:

<http://www.unece.org/fileadmin/DAM/trans/doc/2012/dgac10c3/ST-SG-AC10-C3-82a1e.pdf>

it will be seen a significant number of papers were not adopted. In many instances this was because the proposal was not sufficiently well argued or the proposed text raised consequential issues which had not been correctly addressed.

Annex F – DG TREN paper

EUROPEAN COMMISSION
ENERGY AND TRANSPORTS DG
J SECURITY- PROTECTION OF PERSONS, ASSETS AND FACILITIES

J3 Security of land transport & Protection of critical infrastructures

Brussels, 2007-11-26

TREN/J3/EL/ D(2007)

EXPLANATORY NOTE

Subject: Agenda item 11.3: AOB: Co-operation of the European Commission / ERA and the RID Committee of Experts in the future

This item was raised in the meeting of the RID Committee of Experts in Zagreb on 19-23.11.2007 in connection to an initiative regarding derailment detectors for dangerous goods wagons. After a long preparatory work Germany had submitted a proposal to the RID Committee, suggesting amending RID 2009 with provisions that prescribe to provide certain new dangerous goods wagons with a derailment detector. Beforehand it seemed likely that the RID Committee might adopt such provision.

However, the European Railway Agency, ERA, had indicated that the new provisions might be in conflict with certain their Technical Specifications for Interoperability, TSIs; this should be verified and, if necessary, adjust the provisions before their publication in RID. When such a potential conflict is foreseen, ERA proposed to organise a consultation process in the EU to make sure that the EU Member States' position in the Rail Interoperability Committee of the EU and in the RID Committee are coordinated. TREN had sent a letter to the chairman of the RID Committee, to OTIF, and to the members of the TDG Committee and the Rail Interoperability Committee of the EU, asking to suspend the decision until ERA has examined the potential conflicts.

In the Zagreb meeting a compromise solution was found to handle these kinds of sensitive initiatives in the future, which was satisfactory for the RID Committee, the ERA and the European Commission. It contained following elements:

1. The RID Committee of Experts will continue to be the organ that deals with the initiatives and provisions for dangerous goods transport by rail.
2. The RID Committee will address all initiatives that are relevant for general rail transport to ERA for its consideration.
3. In addition, ERA will attend all meetings of the RID Committee and the Working Group on tank and vehicle technology, where it is able to monitor and identify initiatives, which may cause conflicts with TSIs.
4. TREN and ERA will organise EU Consultation processes, when needed, with the help of the Rail Interoperability Committee. TREN may also bring some initiatives to the TDG Committee for the coordination of the EU position, but this should be rather exception than a rule. The duration of a consultation process is approximately 6 months. After the consultation ERA or TREN will inform the RID Committee or the Working Group on tank and vehicle technology, as appropriate, on the results and findings.
5. Points 2, 3 and 4 should ensure in the future that sensitive initiatives will be prepared in the appropriate way in good time and conflict situations will be avoided.

In the particular case of the derailment detectors the conclusion was that the German proposal will appear only in the report of the Zagreb meeting and will not be included in the RID until 2011. Meanwhile ERA will examine the potential conflicts with the relevant TSIs, carry out an EU consultation procedure together with TREN and after that inform the RID Committee in its meeting of 2009, at the latest

Annex G – Analysis of Railway Legislation

Annex G represents replies received; despite reminders, some states were unable to provide a full set of information

Country	Directives ¹	National Legislation
Austria	2004/49/EC	Railway Law
	2008/57/EC	Railway Law
	2008/68/EC	Law on the Transport of Dangerous Goods
Belgium	2004/49/EC	Loi du 19 December 2006 relative à la sécurité d'exploitation ferroviaire (et ses arrêtés d'exécution)
	2008/57/EC	Loi du 26 January 2010 relative à l'interopérabilité du système ferroviaire au sein de la Communauté européenne (et ses arrêtés d'exécution)
	2008/68/EC	Arrêté royal du 28 June 2009 relatif au transport des marchandises dangereuses par route ou par chemin de fer, à l'exception des matières explosibles et radioactives
Bulgaria	2004/49/EC	Ordinance № 59 of 5 December 2012 for the management of the safety of the railway transport
	2008/57/EC	Ordinance 57 of 9 April 2004 for reaching interoperability of the national railway network with the railway system within the framework of the European Union
	2008/68/EC	Ordinance № 46 for railway transport of dangerous goods

Country	Directives ¹	National Legislation
Czech Republic	2004/49/EC	Act. No. 266/1994 Coll., on rail systems
	2008/57/EC	Act. No. 266/1994 Coll., on rail systems
	2008/68/EC	Implementation without additional decree
Denmark	2004/49/EC	Implemented by Regulation No. 1293 of 23 November 2010.
	2008/57/EC	Implemented by Regulation No. 459 of 28 April 2010 (with later amendments).
	2008/68/EC	Railways: Implemented by order No. 601 of 26 June 2009. Road: Implemented by order No. 818 of 28 June 2011.
Estonia		
Finland	2008/68/EC	Act on the Transport of Dangerous Goods (719/1994) Government Decree on the Transport of Dangerous Goods by Rail (195/2002) Decree of the Ministry of Transport and Communications on the Transport of Dangerous Goods by Rail (370/2011)
	2004/49/EC	Railway Act (304/2011) Governmental Decree on Safety and Interoperability in Railway System (372/2011) NSA regulation on the Safety Management System of a Railway Undertaking and Infrastructure Manager (TRAFI/5223/03.04.02.00/2011)

Country	Directives ¹	National Legislation
Finland (cont'd)	2008/57/EC	NSA regulation on the Safety Report of Railway Undertaking and Infrastructure Manager (TRAFI/15772/03.04.02.00/2011) Railway Act (304/2011) Governmental Decree on Safety and Interoperability in Railway System (372/2011)
France	2004/49/EC	Loi 2006-10 du 5 January 2006 relative à la sécurité et au développement des transports decret 2006/1279 relatif à la sécurité des circulations ferroviaires et à l'interopérabilité du système ferroviaire
	2008/57/EC	decret 2006/1279 relatif à la sécurité des circulations ferroviaires et à l'interopérabilité du système ferroviaire
	2008/68/EC	Code des transports Art L 1252-1 du code des transports Arrêté du 29 May 2009 modifié dit arrêté TMD Specific texts (class 7)
Germany	2004/49/EC	General Railway Act (Allgemeines Eisenbahngesetz, AEG) Regulation on railway safety (Eisenbahn-Sicherheitsverordnung, ESiV) Regulation on railway accident investigation (Eisenbahn-Unfalluntersuchungsverordnung, EUV) Regulation on railway operations manager (Eisenbahnbetriebsleitungsverordnung, EBV) Regulation on examination of railway operations manager (Eisenbahnbetriebsleiter- Prüfungsverordnung, EBPV) Regulation on construction and operation of railways (Eisenbahn-Bau und Betriebsordnung, EBO)
	2008/57/EC	(Currently in transposition process) General railway act (AEG) Regulation on interoperability of the transeuropean railway system (Transeuropäische-Eisenbahn-Interoperabilitätsverordnung, TEIV)
	2008/68/EC	German Regulation concerning the transport of dangerous goods by road, rail and inland waterways (GGVSEB, 4 March 2011, BGBl I S.347) a) as mentioned in 2011/26/EU: RA-a-DE-2 (Combined packaging Authorization (GGAV, Ausnahme21, expiry date: 30
Country	Directives ¹	National Legislation

Greece	2004/49/EC	Presidential Decree 160 (Official Gazette of the Hellenic Republic A' 201/23 August 2007) Presidential Decree 186/2007 (Official Gazette of the Hellenic Republic 221/A'/12 September 2007) Ministerial Decision AS.4.2/οικ.26697/2422 (Official Gazette of the Hellenic Republic B' 986/22 May 2009)
	2008/57/EC	Presidential Decree 104/30 September 2010 (Official Gazette of the Hellenic Republic A' 181/12 October 2010)
	2008/68/EC	Joint Ministerial Decision 52167/4683/3 January 2012 (Official Gazette of the Hellenic Republic B' 37/20 January 2012)
Hungary		
Ireland	2004/49/EC	Railway Safety Act No 31 of 2005, as amended by SI No 61 of 2008
	2008/57/EC	SI No 419 of 2011
	2008/68/EC	SI 651 of 2010
Italy	2004/49/EC	D.Lgs. 10 August 2007, n. 162 and D.Lgs. n. 43 of 24 March 2011(adoption of Directive 2008/110/CE which modified Directive 2004/49/EC on safety on the Community's railways
	2008/57/EC	(Law) D.Lgs. 8 October 2010, n. 191, (Decree) D.M. 22 July 2011 adoption of modification related to Directive 2011/18/UE
	2008/68/EC	(Law) D. Lgs of 27 January 2010, n. 35 (Decree) D.M. 3 January 2011
Latvia		
Country	Directives¹	National Legislation

Lithuania	2004/49/EC	Law of Railway traffic safety of the Republic of Lithuania.
	2008/57/EC	Law of Railway traffic safety of the Republic of Lithuania.
	2008/68/EC	Law on transportation of dangerous goods by rail, road and inland waterways of the Republic of Lithuania.
Luxembourg	2004/49/EC	Loi du 22 July 2009 sur la sécurité ferroviaire Règlement grand-ducal du 21 September 2009 Certification et sécurité du Gestionnaire de l'Infrastructure Ferroviaire
	2008/57/EC	Règlement grand-ducal du 1 June 2010 sur l'interopérabilité ferroviaire
	2008/68/EC	RID Arrêté grand-ducal du 23 October 2011 portant publication du Règlement concernant le transport international ferroviaire de marchandises dangereuses (RID)
Malta		
Netherlands	2004/49/EC	Royal decree "Besluit spoorverkeer" and other regulations, based on the "Spoorwegwet" (Railway Act)
	2008/57/EC	Ministerial orders "Regeling indienststelling spoorvoertuigen" and "Regeling hoofdspoorweginfrastructuur", based on the "Spoorwegwet" (Railway Act)
	2008/68/EC	Ministerial order "Regeling vervoer over de spoorweg van gevaarlijke stoffen", based on the "Wet vervoer gevaarlijke stoffen" (Transport of Dangerous Goods Act)

Country	Directives ¹	National Legislation
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Poland	2008/68EC 2004/49/EC 2008/57/EC	Act of the 19th of September 2011 on transport of dangerous goods (O.J.2011.227.1367) Act of the 28th of March 2003 on rail transport (O.J.2003.86.789 with latest changes) Act of the 28th of March 2003 on rail transport (O.J.2003.86.789 with latest changes)
	2004/49/EC	Act of 28t March 2003 on rail transport (O.J.2003.86.789 with latest changes)
	2008/68	Act of 19t September 2011 on transport of dangerous goods (O.J.2011.227.1367)
Portugal	2008/68/EC 2004/49/EC 2008/57/EC	Decree-law 41-A/ 2010, of 29 April 2010 Decree-law 270/2003 of 28 October 2007, amended by Decree-law 231/2007 of 14 June 2007 Decree-law 27/2011 of 17 February 2011
Romania		
Slovakia	2004/49/EC	Act 513/2009
	2008/57/EC	Act 513/2009
	2008/68/EC	Act 514/2009
Slovenia	2008/49/EC	Railway Transport Safety Act
	2008/57/EC	Railway Transport Safety Act
	2008/68/EC	Law on Transport of Dangerous goods

Country	Directives ¹	National Legislation
Spain	96/82/EC	Decreto-Lei n.º 254/2007 of 12 July 2007 – Transposes the Directive 96/82/EC (transposed by Decreto-Lei n.º 164/2001), modified by Directive 2003/105/EC
	2008/49/EC	Decreto-Lei n.º 231/2007, of 14 June 2007
	2008/57/EC	Decreto-Lei n.º 27/2011 of 17 February 2011
	2008/68/EC	Decreto-Lei n.º 41-A/2010 of 29 April 2010
Sweden	96/82/EC	Lag (1999:381) om åtgärder för att förebygga och begränsa följderna av allvarliga kemikalieolyckor (=Act concerning the prevention and control of major chemical accidents) Förordning (1999:382) om åtgärder för att förebygga och begränsa följderna av allvarliga kemikalieolyckor (=Ordinance concerning the prevention and control of major chemical accidents)
	2004/49/EC	Järnvägslagen (2004:519) (=The Railway Act) Järnvägsförordningen (2004:520) (=The Railway Ordinance)
	2008/57/EC	Järnvägslagen (2004:519) (=The Railway Act) Järnvägsförordningen (2004:520) (=The Railway Ordinance)
	2008/68/EC	Lagen (2006:263) om transport av farligt gods (=Transport of Dangerous Goods Act) Förordningen (2006:311) om transport av farligt gods (=Transport of Dangerous Goods Ordinance) N.b. These regulations were decided under the older Directive 94/49/EC, hence the EU regulation has been taken into account. MSBFS 2011:2 (Implementation of RID into national law).

Country	Directives ¹	National Legislation
UK	2004/49/EC 2008/57/EC	The Railways and Other Guided Transport Systems (Safety Regulations) 2006 (ROGS). The Railways (Interoperability) Regulations 2006. The Railways (Access to Training Services) Regulations 2006.
Switzerland	96/82/EC	Switzerland applies its own legislation: more restrictive
	2004/49/EC	Loi fédérale du 20 December 1957 sur les chemins de fer (LCdF)
	2008/68/EC	Ordonnance du DETEC du 3 December 1996 relative au transport des marchandises dangereuses par chemin de fer et par installation à câbles (RSD)

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Council Directive 96/82/EC of 9 December 1996 on the control of major-accident hazards involving dangerous substances

Directive 2004/49/EC of the European Parliament and of the Council of 29 April 2004 on safety on the Community's railways and amending Council Directive 95/18/EC on the licensing of railway undertakings and Directive 2001/14/EC on the allocation of railway infrastructure capacity and the levying of charges for the use of railway infrastructure and safety certification (Railway Safety Directive)

Directive 2008/57/EC of the European Parliament and of the Council of 17 June 2008 on the interoperability of the rail system within the Community (Recast) (Text with EEA relevance)

Directive 2008/68/EC of European Parliament and of the Council of 24 September 2008 on the Inland Transport of Dangerous Goods (the Dangerous Goods Directive)