Evaluation of EU Policy on the Transport of Dangerous Goods since 1994

TREN/E3/43-2003

Final Report

Section One: Policy Overview

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Executive Summary

This study is an evaluation of EU policy on the transport of dangerous goods since 1994 and has employed desk research, statistical modelling and a survey with face to face interviews to gather the information contained herein.

Following the circulation of a questionnaire to the Member States, Norway and Switzerland, in the spring of 2004 and interviews with 23 Member States and Norway and Switzerland, between October 2004 and January 2005, the consultants have analysed and discussed the findings.

Overall, the consultants believe that the current set of EU Directives covering the transport of dangerous goods in land transport have proved a valuable addition to safety in the transport and trade in dangerous goods. The Directives and associated annexes provide a comprehensive coverage of all aspects of the dangerous goods regulations.

Overview

A comprehensive overview of the international legislation since the 1970s was undertaken including the range of EU Directives (See Annex D) that had been adopted in the field of dangerous goods transport, in particular those adopted in the decade since 1994. Although the brief from the Commission was to concentrate on the effect of these Directives within the Community, it has proved impossible to ignore the wider international issues because:

- the Framework Directives are based on RID and ADR
- Member States trade beyond the boundaries of the Community
- most Member States attend and play an active part in the relevant UN meetings

Statistics

An analysis of available EU statistics on the transport of dangerous goods was undertaken. Throughout the period 1990 – 2002 the total volume of dangerous goods moved annually by all modes has remained fairly constant with a slight downward trend.

Infringements

An analysis was made of the statistics provided by Member States in accordance with Council Directive 95/50EC. The returns supplied by Member States to the Commission appear to have significant distortions. Although most of the Member States have made returns of inspections, the structure of each return has been different so that making a clear analysis of inspections has proved difficult. The consultants believe that part of the problem lies in the fact that the checklist has often been amended or had supplementary questions added by individual Member States and the answers to these extra questions have then been incorporated in the returns.

Although, the new checklist is a significant improvement on the earlier form and is due to be in use from 2005, the consultants have concerns that there is still scope for the document to be misused leading to confusing results.

Industry representatives expressed concerns that enforcement staff were often not adequately trained and that enforcement of ADR could be inconsistent. This may, in part, be due to the variations in that form. It is suggested that if Member States wish to add questions for their national inspections, a separate form/sheet should be used and the data so obtained not be included in returns to Directorate General Energy and Transport.

The consultants are concerned that no analysis has been made of these inspections to identify problems and difficulties with ADR or the Framework Directive (94/55EC).
The Uniform Procedures Directive only applies to roadside checks. It was apparently argued ten years ago that an equivalent for railways was unnecessary. In the intervening period, many railway organisations in the Member States have had their legal status changed and it may be appropriate to review this decision. The current Directive is not directly appropriate to railways but the principles would be applicable.

Traffic Routes

The Commission requested data on traffic flows of dangerous goods along particular routes in the Member States. Such data are not available in the majority of Member States. Where there are, the reports are not in a standard format and are generally not maintained up to date: rather they are occasional investigations. Such comprehensive surveys can prove expensive to undertake on a continuous basis. The reports that exist have been used more as an information source than for the possible formulation of legislation. In addition, they could only be treated as indicative as transport arrangements for some markets can change regularly according to the relative cost of the modes.

Some Member States considered that although they may have statistics these could not be made available, as they were security sensitive. However, as the various SEVESO Directives require the registration of chemical sites which is publicly available, in the consultant's view this argument is difficult to sustain.

Vehicle restrictions through towns, villages, tunnels, etc., are with a few exceptions matters for local authorities in each Member State and central data are not maintained. The consultants believe this is a major practical problem for vehicle operators, particularly when they make a journey to a new destination.

Route restrictions on the railways are a separate problem. In some countries there are route restrictions, but in many cases alternative routes are not practical or even available.

Framework Directives 94/55/EC and 96/49/EC

The Directives form the foundation for all the EU Directives that have been developed since 1994. They are intended to ensure a standard application of RID and ADR to all EU traffic. These Framework Directives provide for derogations from RID/ADR, some of which are permanent and incorporated into the original Directives whilst others must be requested from the Commission.

A thorough analysis of every derogation agreed by the Commission was not possible. However, a broad analysis indicates the derogations:

- Do not generally duplicate any provisions of ADR
- Do not reduce safety
- Do not create barriers to trade
- Do not undermine the intention of the Directives

However:

- The derogation list needs constant review. It would appear that the purpose of several has been addressed in the 2005 edition of ADR and that they should be removed.
- Derogations are duplicated in intent e.g. static tanks and household waste relaxations have been granted for several Member States but the form of each is different.

The consultants are not clear why derogations, which have been adopted by more than one country e.g. for static tanks, household waste, local deliveries etc., have not been adopted by all Member States as many would seem to cover universal problems which need to be resolved. In part this may be due to interpretation of the existing RID/ADR text. However, it is recognised that a few derogations are of a special local nature.
Apparently some Member States, particularly those with federal constitutions, have derogations issued by the federal states/provinces and these have not been notified to the Commission, but details were not available and it is not possible to say that they do not breach the four points above.

A few Member States do not believe in the concept of derogation, arguing that the Joint Meeting or the UN ECE's WP15 should address the various issues or that RID/ADR Multilateral Special Agreements should be used. The consultants consider that this would be a preferable approach as long as the Commission retains a facility to assist Member States with derogations if Multilateral Special Agreements cannot be arranged.

The Joint Meeting and WP.15 have been inconsistent in their approaches to the issue of local distribution problems since the Directives were adopted. Mostly they have taken the view that such operations are not an international problem and therefore outside their remit. However, at the recent WP15 (November 2004) meeting, it was apparently accepted that perhaps ADR should deal with some of these issues, although no formal procedure of how to proceed on such a subject was agreed. It may be that the time is

now right for this to take place, as there is little doubt that the adoption of the common currency has increased the amount of local cross border traffic between some Member States as exchange rate problems are no longer.

A number of Member States stated that they would have legal problems now that the Commission no longer translates RID/ADR into all EU languages. In the view of the consultants, this argument is difficult to sustain as all Member States are party to RID/ADR and have been for many years and would surely have had to translate at some time the basic text of the rules for national use. It is not clear that translating the biennial amendments developed throughout the two years is such a burden. The consultants do recognise that a note in the Annexes to the Framework Directives does indicate that the Commission will supply copies in national languages. However, one way possibly to simplify the process of publication is for the ECE and OCTI Secretariats to consider a combined publication.

Safety Advisers

A number of countries expressed disappointment that although the DGSA Directive has been in place for 5 years, there had been little improvement in the standard of dangerous goods operations when these have been checked under Directive 95/50/EC.

It is noted that an informal RID/ADR Joint Meeting working group met in Paris in June 2004 to look at consistency of application of the DGSA Directive (and Chapter 1.8 of RID/ADR), particularly the examinations. Although there is unanimity in some areas, there is no standard examination or standard approach to one and a minimum examination standard should be considered.

Serious concerns have been expressed by a number of Member States that there are consultants offering themselves as DGSAs on behalf of companies and in some cases allegedly working for up to 100 companies at a time. Those States making this observation argue that such workloads must mean that the DGSAs cannot work adequately for any one company and that perhaps this is why improvements through the application of the Directive have not been found when roadside checks are carried out. The consultants consider that a standard format of report by DGSAs may in part help to limit the problem.

The role of the DGSA in some Member States has been widened to make it a requirement that they register with the Competent Authority and report any accidents (not only those covered in Chapter 1.8 of RID/ADR). The majority of Member States believe that this Directive should now be repealed and reliance placed on the text in RID/ADR. However, this would exclude inland waterways as ADN is not in force.

Security

The responses to the questionnaire concerning the application of RID/ADR security provisions revealed that most Member States had not made decisions on how to apply the provisions. At the interview stages in the autumn of 2004, the position had not changed. A number of Member States have legal problems applying these provisions,

as they find the text confusing in that it does not lay down specific requirements. Others observed that they did not consider their territory a threat from terrorism whilst accepting that other Member States were threatened. All indicated they would apply the provisions at domestic level, although many might not meet the July 2005 deadline. However, all Member States were of the view that it would be premature to make further additions or changes to these provisions and that the new requirements should be given time to settle.

National Legislation

All Member States, including the new ones, responding to the questionnaire provided details of their national legislation implementing the Directives and this material is set out in Annex C.

Accession to COTIF and possible accession to ADR

The Commission has acceded to COTIF and sought the consultant's views on acceding to ADR. The consultants consider the accession by the Commission to ADR would not be conducive to good relations with the Member States nor would it benefit the Community. In fact it could be a positive disbenefit. A full explanation is set out in Annex B.

Adoption of ADN

Although, the UN ECE's European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterway(ADN) is an important set of provisions for a number of Member States, a significant majority of the 25 indicated they have no interest in this Convention. At least, two Member States with waterway systems not linked to the Rhine/Danube or its tributaries indicated that they would prefer to use the IMDG Code as a basis for regulating such traffic.

It is understood that the draft ADN Framework Directive provided an exemption for those countries without international waterway links. As this is now the majority of Member States the consultants question the rationale for such a Directive which will not apply to all States.

NOTE: *A Glossary of terms and abbreviations used in this report can be found in Annex A*

Introduction

This study is an evaluation of EU policy on the transport of dangerous goods since 1994 and was commissioned by the Directorate-General for Transport and Energy at the beginning of 2004. The purpose of the study is to provide the Commission with advice on further developments necessary to enhance safety in the transport of dangerous goods and to eliminate any internal trade barriers in relation to the existing regime. The work was undertaken between February 2004 and January 2005 led by consultants from Pira International in the UK with assistance from TNO (Netherlands), BAM and BVU (Germany), DGAS (Ireland) and BAP (UK). The study covers 23 of the Member States, as well as Norway and Switzerland. No response was received from Cyprus or Greece.

The study consists of an historical overview of the development of regulations for the transport of dangerous goods at the international, European and national levels and summarises the European Directives currently in force together with derogations on a country by country basis. More specific aspects are then examined in detail; these comprise analyses of infringements based on national returns for the period 1997 – 2002, the role of safety advisers, implementation of security measures, and the modal variations and liaison between national authorities. With the exception of infringements, information was gathered through a detailed questionnaire which was completed by the relevant authority(s) for each country and then followed up with in-depth interviews conducted by the consultants. The study also includes an extensive statistical analysis covering all the transport modes and countries. The methodology (using mathematical modelling based on existing data) is explained in detail in the Appendices where the data tables are to be found. The study concludes with a summary of the current operating conditions for the transport of dangerous goods within Europe, conclusions and recommendations to the Commission.

The consultants in presenting this report to the Commission would like to express their grateful thanks to both the Commission, the Member States and sectors of industry for their help and co-operation without which the report could not have been completed.

Analysis and Results

Part 1: Dangerous Goods Regulations – An Historical Overview

Introduction

This overview has been prepared on the basis of a review of the effect of dangerous goods legislation in the European Union during the 10 years since 1994. However, some of the issues that have been identified emanate from periods before the introduction of a range of EU Directives. It is therefore the view of the consultants that a rather longer background period should be covered to set the scene.

Historical Background

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' (Regulations concerning the international carriage of dangerous goods by rail). Today, these regulations are part of the Convention concerning International Carriage by Rail (COTIF); applicable in most European countries while some in the Middle East and North Africa are also contracting parties.

Prompted by the disastrous loss of the liner **Titanic** in 1912, and following the First World War, in 1924 the maritime world agreed a first Safety of Life at Sea Convention (SOLAS), which included a chapter on the transport of dangerous goods at sea. SOLAS, has been revised on several occasions since, the first time being in 1932. However, no detailed provisions concerning dangerous goods transport were included until the first International Maritime Dangerous Goods Code (IMDG) appeared in 1965. Until then, it was left to national governments to impose requirements. Probably the most common document in use for many years was the 'Report of the Standing Advisory Committee on the Carriage of Dangerous Goods in Ships,' issued and updated by the Government of the United Kingdom and imposed in most parts of the then British Empire from the 1930s. However, the IMDG Code was not made mandatory as part of the international law of the sea until 1st January 2004.

In 1949, the Berlin Airlift focused the attention of airlines at an international level on the need for controls on dangerous goods carried in commercial aircraft. It was left to the initiative of the airlines' association, the International Air Transport Association (IATA), to produce a set of *Restricted Articles Regulations* in 1954, which that body regularly updated and re-issued.

None of these separate modal rules apparently considered what other parties were doing. There was therefore little recognition of intermodal interfaces. So the rules for classification, identification, packaging, etc. were very different.

In 1953, the Economic and Social Council of the United Nations (ECOSOC) in New York established an ad hoc advisory Committee of Experts on the Transport of Dangerous

Goods. 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, sea or air transport even though the various forums had representatives in common.

When the International Maritime Organisation (IMO) was established in 1958 and began work on the IMDG Code, it did use the UN Recommendations as a general basis but maintained or introduced wide scale variations.

The UN Economic Commission for Europe (UN ECE) 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 the issue of technical annexes specifying detailed requirements and the coming into force did not occur until 1968. The first technical annexes to ADR originally derived from the then 60 year old RID. When the road regulators began to review the work necessary, it was recognised that there was a close link to rail traffic, since both are surface transport modes and often intimately linked as road vehicles often 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 a regular 'Joint Meeting' 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.

For inland waterway traffic, the Treaty of Mannheim (1868) had established a Central Rhine Commission (CCNR) in Strasbourg, although some aspects of this regime dates back to the Congress of Vienna (1815). This Commission was to address navigation rules on the River Rhine and connected waterways, but made no provisions for dangerous goods until 1971. Then a code known as 'ADNR' was drawn up. This was in some measure based on parts of RID/ADR, although focusing on known cargoes to be carried. From the 1980s, a Danube Commission applied a similar regime in Eastern Europe. The UN ECE's 'ADN' Agreement concluded in 2000 is intended to apply to all International traffic on European inland waterways, but to date is not in force because of insufficient signatory countries.

In the 1970s, the various modes began to pay more attention to the work of the UN Committee of Experts and by the end of the decade, all the modes recognised some alignment between their rules and the UN system was necessary to avoid duplication and to facilitate international trade. The IMDG Code had used many UN principles since it was first published in 1965, but still retained some significant variations. In the case of air transport, the International Civil Aviation Organisation (ICAO) only began to take the transport of dangerous goods seriously following a fatal aircraft crash near Boston in 1973. ICAO established a Dangerous Goods Panel, which decided from the beginning to follow the UN system very closely when producing a first set of internationally

mandatory *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (TIs) in 1982.

In many developing countries little regard has been paid to meeting international requirements until pressure has been applied from multi-national companies or developed nations receiving goods inwards. National regulations throughout the world have varied enormously. 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.

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.

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 cargo. Over the last 30 years, with more liberalisation introduced into the various modes of surface transport in Europe and taking account of the fact that industry does not want to hold large stocks of goods or materials, 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 domestic level.

For dangerous goods, this multimodal recognition led the UN Committee of Experts 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, but 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 format and eventually in 2001 the basic structure used by the UN also appeared in ADR, RID and the IMDG Code. The ICAO TIs followed in 2003, although changes were more modest since the existing structure had been close to the UN format already. ADN 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 Harmonised system for Chemical Classification and Hazard Communication (GHS).

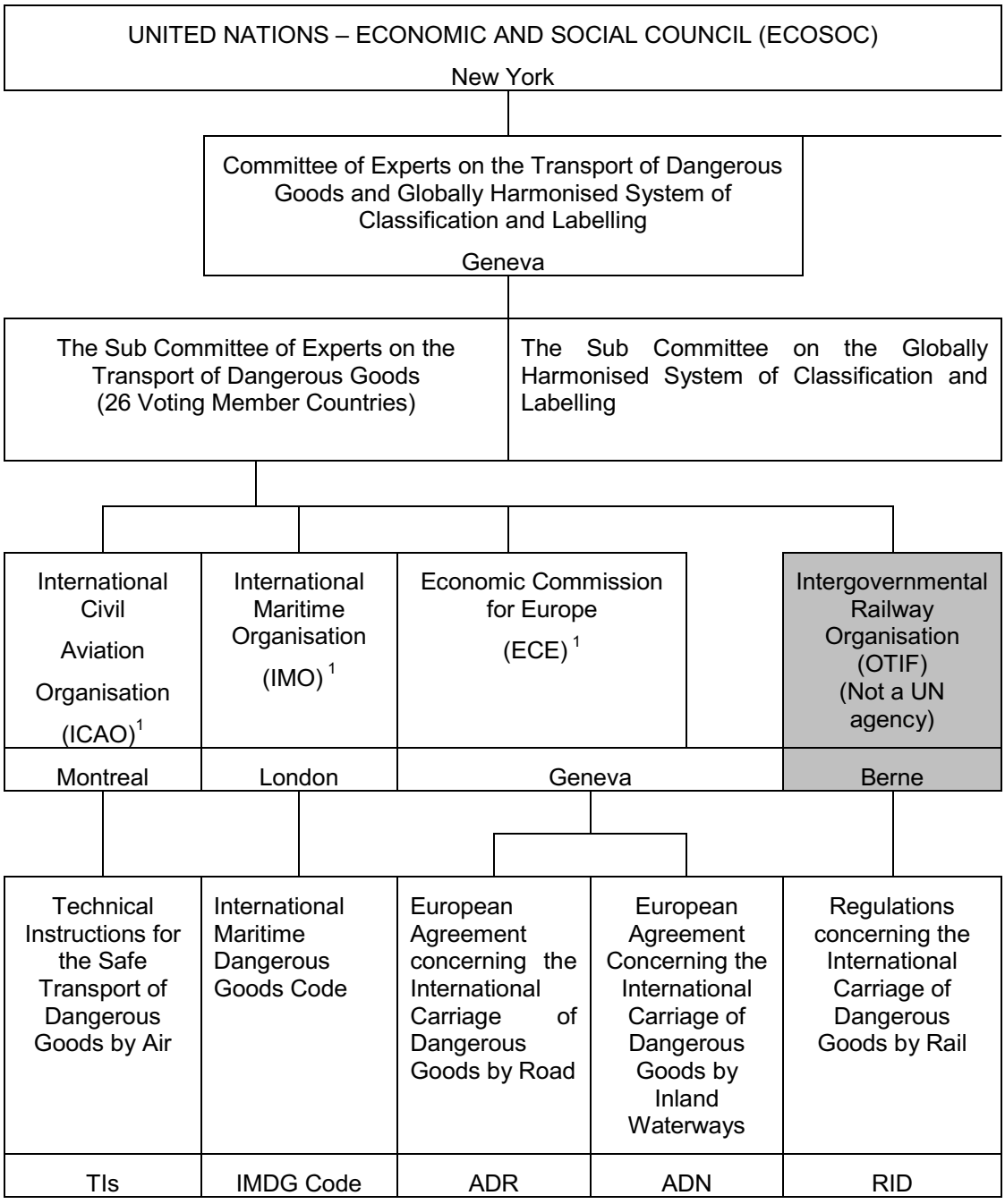
This itself arose from the Resolution adopted at the 'Earth Summit' held in Rio de Janeiro (Brazil) in 1992. UN ECOSOC thus created a new Committee of Experts on the Transport of Dangerous Goods and Globally Harmonised System of Classification and Labelling, which has two subsidiary bodies, the Sub Committee on the Transport of Dangerous Goods and the Sub Committee on the Globally Harmonised System for Chemical Classification and Hazard Communication.

The standard structure of reformatted dangerous goods transport modal rules generally makes it easier to check that consignments comply with all the regulations as well as to identify remaining variations in the modal regulations. While some of these variations are necessary to address specific problems in one transport mode, for a number of others their retention should at least be questioned (e.g. the gases Divisions in Class 2 are not reflected in RID/ADR, and permitted 'limited quantities' still vary widely from mode to mode as do documentation requirements).

Although the overall format is more standardised than previously, individual parts of the various regulations still have a different layout, wording and structure, which can be confusing for readers. This is particularly true of Part 2 of RID/ADR, which is quite different from the UN *Model Regulation*s and the other modes, even though the end results are much the same for the user.

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.

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 summarised its views as follows:

> "Accidents involving vehicles carrying dangerous goods can have potentially disastrous consequences and, even though the number of major accidents is small, there is understandable public concern about the risks involved in transporting dangerous materials. The aim of the Community policy should be to ensure that such goods are carried safely and economically, and that the risk to people and the environment is minimised.
>
> Within the Community this objective can best be achieved by greater harmonization and more effective enforcement of the regulations applying to national and international transport, and by preventing barriers to the movement of dangerous goods, subject to agreed controls"

The Commission recognised that:

> "The international agreements on the transport of dangerous materials are extremely complex documents which have taken many years to develop and it would clearly be pointless for the Commission to attempt to duplicate the work of the international organizations"

It went on to say

> "there is no comprehensive Community instrument concerning the transport of dangerous goods and Community transport operators may have to comply with different regulations for national and international journeys."

The Commission then made six recommendations for greater harmonisation. Table 1 below shows the recommendation and the outcome:

Table 1: Commission Recommendations for Greater Harmonisation

Final 1987 Recommendations	Result
i) a Community instrument requiring Member States to implement the provisions of relevant international agreements on the transport of dangerous goods by sea;	Not addressed in this report No Directive appears to have been introduced to meet this recommendation. This may no longer be necessary as most Member States appear to be contracting parties to SOLAS and the IMDG Code.
ii) a Directive on a mandatory notification system for ships carrying dangerous goods and a reporting system for incidents involving packaged dangerous goods;	Directive 2002/59/EC of the European Parliament and of the Council of 27 June 2002 establishing a Community vessel traffic monitoring and information system and repealing Council Directive 93/75/EEC (not addressed in this report).
iii) a Directive requiring Member States to accept road vehicles conforming to ADR for international transport of dangerous goods or wastes;	Council Directive 94/55/EC on the approximation of laws of the Member States with regard to the transport of dangerous goods by road *This also led to:* Council Directive 96/49/EC on the approximation of laws of the Member States with regard to the transport of dangerous goods by rail Note a similar draft Directive was developed for inland waterways but has been held in abeyance pending adoption of ADN.
iv) a Directive on the training of drivers of road vehicles carrying dangerous goods or wastes;	*Council Directive 89/64/EC on driver training, which was all subsumed into ADR Part 8 and has since been revoked*
v) a Directive on the training of road transport managers concerned with the transport of dangerous goods or wastes	Council Directives 96/35/ and 2000/18EC on the appointment and vocational qualification of safety advisers for the transport of dangerous goods by road, rail and inland waterway *Partly subsumed into RID and ADR but Directive still in force*
vi) a Directive on the enforcement of regulations on the transport of dangerous goods and wastes by road.	Council Directive 95/50EC on uniform procedures for checks on the transport of dangerous goods by road Note a similar draft Directive was developed for rail until Member States agreed it was unnecessary.

The Commission in its report said that it would study three other areas:

> "vii) The Commission intends to study how to harmonize Community classification and labelling requirements with those of the international transport agreements."

This, for land transport, is now complete. However, there has always been a degree of confusion in relation to the "supply directive" (Council Directive 67/548/EEC on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances), which requires chemical suppliers to label packages to warn purchasers of chemicals about the hazards in use. Many of the criteria are the same, but "cut off" points are different for some classifications. It is therefore possible to have a chemical labelled for 'use' that is not regulated as dangerous in transport. It is difficult to see how to overcome this problem without extending the list of chemicals regarded as dangerous for transport for no additional safety benefit. However, the new Globally Harmonised System for the Classification of Chemicals should offer some more clarity when it is adopted and applied.

> viii) The Commission will continue to support the work of the international organisations to develop an agreed classification system for wastes.
>
> ix) A study is being made of providing VTS (Vessel Traffic Service) systems with additional information on vessels carrying dangerous goods."

viii) and ix) are not addressed in this project.

The Directives and details of adoption by the Member States are set out in Appendices C and D.

Since that report in 1987, a further Directive has been proposed by the Commission and adopted by the Council of Ministers:

Council Directive 99/36/EC on transportable pressure equipment

The Pressure Equipment Directive (1997/23 EC) (PED), together with the Transportable Pressure Equipment Directive (1999/36 EC) (TPED) is intended to provide a single market for all pressure equipment. Prior to the implementation of these Directives, the approval of pressure equipment was left to each Member State. This meant that country A could approve a pressure receptacle, it could travel to country B for use but not for refilling unless approved by the competent authority of B for the purpose.

TPED applies to tanks and pressure receptacles for gases in Class 2 and to three other substances (UN1051, UN1052 and UN1790). The construction requirements for tanks and pressure receptacles are those laid down in RID/ADR. TPED applies conformity assessment to new transportable pressure equipment and permits existing equipment to be reassessed for continued use. Pressure equipment approved under the Directive shall be marked with a pi ($\prod$) mark.

As some of the construction standards required to be used with the Directive have not been completed, the Commission is only requiring the TPED to apply to that pressure equipment where standards have been included by reference in RID and ADR. Other equipment for which standards have not been made available will have to conform to TPED from 1 July 2005, but with a 2-year transitional period.

The problems addressed in TPED also applied on a world-wide basis and during the period TPED was under consideration the UN Committee of Experts was discussing the same issues. This has led to some confusion, but this is addressed elsewhere in this report.

Principles of the UN System

The *Recommendations on the Transport of Dangerous Goods* or *"Model Regulations"*, also widely known as the 'Orange Book', establish a basic system for safe transport of dangerous goods. These "Recommendations" have been incorporated in RID, ADR, the ICAO TIs and IMDG Code with some deviations especially in Class 2.

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 and package orientation marks
- labelled – the diamond hazard label(s) and orientation label
- documented – a declaration
- and that relevant personnel are properly trained.

Finally, the 2003 (13th Revised) Edition of the Recommendations incorporated new recommendations for transport security.

The UN provisions do not generally define the responsibilities of individual persons or organisations for undertaking the various concepts listed above. 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.

These principles are carried forward into the modal regulations and the various procedures can be identified in the relevant parts as follows in Table 2:

Table 2: Summary of Principles and Recommendations

Principle	Part of the UN Recommendations	Part of RID, ADR and ADN	Contents
	Part 1	1	Definitions and training, including in RID/ADR/ADN the DGSA (but not driver training); includes transport security
Classification	Part 2	2	Detailed procedures on how to classify substances (including mixture and wastes) and articles for all classes of dangerous goods
Identification	Part 3	3	This is the 'Dangerous Goods List' and provides the key to most consignments of dangerous goods. This part also includes the 'limited quantity' provisions.
Packaging	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 ADR it includes 'Instructions in writing' for emergency response
Construction and approval requirements for all packaging types	Part 6	6	Details the specifications for constructing 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

In addition, the modal regulations address operational requirements and these are found in the relevant Parts as follows:

Table 3: Operational Requirements

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
Vehicle construction requirements	-	9	ADR/technical specifications and equipment for vehicles ADN construction requirements

Training

For all modes persons engaged in the transport of dangerous goods should undergo training commensurate with their responsibilities. The types of job listed that might require a training course include personnel who undertake the following tasks involving dangerous goods:

- classify
- package, mark and label;
- prepare documents
- transport, and
- load/unload.

Training in dangerous goods carriage is not new. It has been a requirement that mariners undergo some training for many years under the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW). In the first edition of the ICAO TIs in 1982 there was a specific requirement that all personnel involved in air transport must undergo some training. During the 1980s, a driver training requirement was introduced into ADR and the Community Directive (89/64EC) was adopted which was later subsumed into ADR.

Classification and Identification

Introduction

Classifying and identifying that a substance or article is dangerous is fundamental in the UN system. Until this has been achieved, no other actions by the consignor or the carrier can take place.

Classification

There are two concepts that need to be understood to follow the UN system for classification – classes and packing groups.

Classes

Firstly, there are nine 'classes' of dangerous goods and some classes have been subdivided into divisions. The concept of "Division" is only used for Class 1 in all modes of transport. In RID/ADR and the IMDG Code only the term 'Class' is used elsewhere. The class numbers are simply a means of identification not an indication of precedence of danger.

Class/Division	Description
1	Explosives
2.1	Flammable gases
2.2	Non flammable and non toxic gases
2.3	Toxic gases
3	Flammable liquids
4.1	Flammable solids
4.2	Substances liable to spontaneous combustion
4.3	Substances which, in contact with water, emit flammable gases
5.1	Oxidising substances
5.2	Organic peroxides
6.1	Toxic substances
6.2	Infectious substances
7	Radioactive material
8	Corrosive substances
9	Miscellaneous dangerous substances

RID/ADR differs from the other modal rules in describing gases, which irrespective of properties, are all described as "Class 2". The descriptions of the properties of the gases is reflected in the use of the capital letters "A, O, F and T corresponding to "Asphyxiant, Oxidising, Flammable and Toxic"

There are detailed rules for classification into all the classes, except Class 9. These are set out in the modal regulations. The criteria for classification for the nine classes are the same for all modes of transport, except for the 'environmentally hazardous substances' in class 9 where the criteria will not be aligned before 2007.

Packing groups

Secondly, identifying that a substance is in a particular class does not indicate its relative hazard compared to another substance in the same class.

A system of 'packing groups' (PG) indicates relative degrees of danger within some classes:

Packing Group I:	high danger
Packing Group II:	medium danger
Packing Group III:	low danger.

The means of defining into which packing group a substance falls is based on the classification criteria for each class (see below). The packing group also indicates the level of performance testing that must be achieved for the packaging to contain the intended substance.

The packing group concept is not applied to explosives, gases, organic peroxides, infectious substances or radioactive material, although a 'packing group' may be allocated to some of these classes for identifying the correct performance level for the packaging.

Identification

The UN Number and Proper Shipping Name

Finally, the four digit 'UN number' makes substance identification easier by helping to overcome language barriers. Like the class the UN number does not indicate how dangerous a substance is relative to another nor does the numbering sequence have any special significance (except for Class 1 where the UN number always begins with a zero). The letters "UN" always precede the number allocated to a substance.

At present, the numerical sequence runs from 0001 to 3473, (although many have been superseded, cancelled/deleted over the years) compared with an estimated 60,000–200,000 dangerous chemicals transported and used every day. The numbers can be broken down as follows:

0004–0504 have been allocated to explosives of class 1
1000–3473 apply to substances and articles of all other classes.

'Proper Shipping Names' are assigned to UN numbers to provide a description of the substance/article and sometimes must be supplemented by additional information.

Dangerous goods commonly carried are listed in the 'Dangerous Goods List' in Part 3,Chapter 3.2.

Where an article or substance is specifically listed by name, it shall be identified in transport by the proper shipping name (PSN) shown in the Dangerous Goods List. For dangerous goods not specifically listed by name "generic" or "not otherwise specified" (N.O.S) entries are provided (and separately listed in Appendix A of the UN Recommendations) to identify the article or substance in transport. The most specific available PSN shall always be used.

A UN number characterises each entry in the Dangerous Goods List. This list also contains relevant information for each entry, such as hazard class, subsidiary risk(s) (if any), packing group (where assigned), packing and tank transport requirements, etc. Entries in the Dangerous Goods List are of the following four types:

(a) Single entries for well-defined substances or articles e.g.

1090 ACETONE
1194 ETHYL NITRITE SOLUTION;

(b) Generic entries for well-defined groups of substances or articles e.g.

1133 ADHESIVES
1266 PERFUMERY PRODUCT
2757 CARBAMATE PESTICIDE, SOLID, TOXIC
3101 ORGANIC PEROXIDE, TYPE B, LIQUID;

(c) Specific N.O.S. entries covering a group of substances or articles of a particular chemical or technical nature e.g.

1477 NITRATES, INORGANIC, N.O.S.
1987 ALCOHOLS, N.O.S.;

(d) General N.O.S. entries covering a group of substances or articles meeting the criteria of one or more classes or divisions e.g.

1325 FLAMMABLE SOLID, ORGANIC, N.O.S.
1993 FLAMMABLE LIQUID, N.O.S

Other Aspects of Identification

Substances not listed by name

Many dangerous goods carried on a regular basis are not listed by name, i.e. they do not have a UN number of their own. Either they are mixtures of various ingredients for special purposes or they are chemicals which are carried in such small volumes that no need for a specific number has been perceived. These substances take either generic names, e.g. adhesives, or class names, e.g. flammable liquid N.O.S. In the latter case, N.O.S. entries have a great many variables which will cater for many of the mixtures that a company may develop, e.g. UN1992 flammable liquid, toxic N.O.S. or UN 2924 flammable liquid, corrosive N.O.S.

For the majority of N.O.S. entries, a recognised chemical name is required to be added after the PSN. For example, caprylyl chloride has no unique UN number, as an organic corrosive liquid with no other hazard; a consignor wishing to transport it may do so by identifying it as UN2810 corrosive liquid, organic, N.O.S. (caprylyl chloride).

In class 8 there are several UN numbers for corrosive substances N.O.S. including:

UN3264 corrosive liquid, acidic, inorganic N.O.S.
UN3266 corrosive liquid, basic, inorganic N.O.S.
UN3260 corrosive solid, acidic, inorganic N.O.S.

Substances with multiple hazards: Hazard precedence

Many dangerous substances present more than one hazard, e.g. UN1098 allyl alcohol has a principal hazard of toxicity with a subsidiary hazard of flammability. Where the UN has allocated a number and therefore a classification, this presents no problem, but where a company makes up a mixture or solution of its own or needs to transport an unclassified substance with more than one hazard, there are rules to be followed.

Within the UN Recommendations is a ‘hazard precedence table’. By considering the precise properties of a particular product, the danger that takes precedence may be ascertained.

The hazard precedence table does not include every class. The following classes or divisions always take precedence: 1, 2, 4.1 (self-reactive and desensitised explosives), 4.2 (pyrophoric substances), 5.2, 6.1 PG I (if classified by inhalation toxicity), 6.2 and 7.

When selecting a UN number, the person classifying the substance must select the most chemically correct name, not the most obvious. For example, if a new substance contains butanol as the dangerous chemical, an N.O.S entry is required and the most appropriate would be UN1987 alcohols N.O.S not UN1993 flammable liquid N.O.S.

Solutions and mixtures

Special procedures are provided for mixtures or solutions containing a dangerous substance.

Waste chemicals including relationship with The Basel Convention

When chemical waste must be transported, it is subject to the provisions of Council Directive of 12 December 1991 on hazardous waste (91/689/EEC). Any waste meeting the dangerous goods criteria must additionally be classified for transport purposes in accordance with the above rules. Having identified the main dangers, the word "waste" shall be included in the selected PSN.

In 1989, the Convention on the Control of Trans-boundary Movement of Hazardous Wastes and their Disposal (the 'Basel Convention') was drawn up. This treaty addresses the cross border movement of hazardous wastes for the environmental control purposes of origin and proper disposal. A documentation system must be followed in addition to that required for transport purposes.

Environmentally hazardous substances

The UN system was devised to protect humans from dangerous goods whilst in transit. Following major incidents at sea, such as the loss of the vessels **Torrey Canyon (1967)** and **Amoco Cadiz**, **(1978),** prevention of damage to the environment has also become an international priority, particularly in maritime transport. This led originally to the International Convention for the Prevention of Pollution from Ships 1973 (MARPOL) prepared at the IMO the Convention aims to prevent or at least reduce the risks of such incidents in the future. It references substances harmful to the environment which are described as "marine pollutants."

MARPOL is not just intended for the oil or chemicals super tanker; since 1991 it has included guidance for smaller quantities of packaged dangerous goods. Marine pollutants are not necessarily dangerous goods, but many dangerous goods are also marine pollutants. When the IMO planned to introduce these new rules in 1991, it was agreed that the most practical way to do so was through the IMDG Code. Marine pollutants are so designated by an independent group of international experts - The Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection. (GESAMP) It is important to note that other IMO instruments related to liability claims reference substances designated as marine pollutants.

Two new UN numbers were agreed by UN - UN 3077 environmentally hazardous substance, solid and UN 3082 environmentally hazardous substance, liquid – for the purpose of identifying substances hazardous only to the environment in class 9 that did not also display the properties of another hazard class. These are so applied in marine transport. The UN Recommendations state:

> "2.0.1.2 Many of the substances assigned to Classes 1 to 9 are deemed, without additional labelling, as being environmentally hazardous. Wastes shall be transported under the requirements of the appropriate class considering their hazards and the criteria

in these Regulations."

In RID/ADR, certain 'aquatic pollutants' are recognised, but these are not necessarily the same as marine pollutants. The criteria are derived from the EU 'Supply' Directive (Council Directive 67/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances, as amended) amplified by substances identified by the German competent authority. Some substances do appear in both lists, but generally the RID/ADR list is less far-reaching than IMO's marine pollutants.

In the context of alignment with the recently adopted GHS criteria, the subject of substances hazardous to the aquatic environment was on the UN agenda in the last two biennium and the modal bodies will have to make a number of decisions for the 2007 editions of the various regulations. It seems likely that there will be further debate in UN in the next biennium as there is still unlikely to be alignment between the sea and land rules. Whilst there seems little dispute about adoption of the GHS classification criteria, there are concerns about marking/labelling and terminology.

Packaging and Tank Provisions

Categories of Packaging

Having classified and identified a substance as meeting the regulations, it is necessary to ensure that it arrives at its destination safely and does not cause a hazard during transport. A major means of achieving this goal is packaging (the others are marking, labelling and documentation which are dealt with later).

The UN system recognises four types of dangerous goods packaging:

1. limited quantities (Class 7 has a comparable provision for 'excepted packaging'),
2. packagings up to 400 kg or 450 L,
3. intermediate bulk containers and large packagings up to 3000 kg/3000L,
4. tanks, MEGCs etc.

The UN Recommendations define the types of package and tests/specifications that they must meet.

Suitability of Packaging

The consignor is responsible for ensuring that a suitable packaging is used. The general principles that the UN Recommendations apply to all types of packagings that the consignor may use include the following requirements:

Packagings must be suitable for the purpose and be in good condition though not necessarily new.

The consignor must consider:

- the type of journey,
- the shocks and loadings encountered during transport, including trans-shipment between transport units and/or warehouses as well as removal from pallets and overpacks
- the handling,
- the effects of temperature, pressure and vibration on the package
- Packagings must be compatible with the contents; e.g. many solvents will dissolve plastics packagings whilst many acids will attack metal drums.
- Packagings must have closures that are secure and generally will not permit the escape of the liquid or vapour; those intended to contain liquids must have resistance to internal pressure that may be developed during transport.
- Inner packagings, e.g. bottles in boxes, must be packed in such a way that they are unlikely to break or leak.
- Whether new, reused or reconditioned, packagings must be capable of passing the UN tests.
- Every 'single' packaging for liquids must undergo a leak-proofness test before filling.

Packagings must be used in accordance with the test report/certificate. The general rules apply on every occasion a dangerous consignment is transported.

The UN tests which are described in detail in part 6 of the various regulations **DO NOT** address all the hazards described here and the consignor is responsible for full compliance with the regulations for the whole of the prospective journey/voyage.

New, Reconditioned or Reused Packagings

Packagings do not have to be new. The UN Recommendations and the modal regulations recognise three broad types of packaging: 'new', 'reconditioned', and 'reused'.

Legally the onus is on the consignor to ensure that every packaging to be used must be capable of passing the tests, and each time a package is filled the consignor must assess the capability of the package and whether it is fit for the purpose of the intended journey/voyage.

The use of any packaging is the responsibility of the user (usually the consignor), who will be required to make a 'dangerous goods declaration that the goods have been correctly packaged. If a consignor chooses to reuse a packaging or to purchase a reconditioned packaging, it is essential to be satisfied that the packagings still meet the general requirements and are capable of passing the tests.

Limited Quantity Packaging – Exemptions

The UN Committee recognised that certain 'small' quantities of designated dangerous goods - often for 'consumer use', did not create a significant hazard during transport.

The result was a set of 'limited quantity' recommendations. The principal purpose of these is to reduce the amount of UN packaging performance testing required. The documentary requirements are not changed in UN, but there are variations from mode to mode. RID/ADR limited quantity provisions differ from the other modal regulations in that documentation is not required and the package sizes can be larger. This area of the regulations is one of the most complex and widely misunderstood, and is still far from harmonised notwithstanding the UN work elsewhere.

Certain substances are never permitted in limited quantities, including:

- explosives,
- organic peroxides, except very small quantities in repair kits,
- radioactive material,
- most Packing Group I substances.

Packing and Tank Instructions

Packaging, IBCs and Large Packagings

The packing instructions for all classes, except class 7, follow a standard layout in the regulations. These were standardised by the UN in 1998 and are largely the same between RID/ADR/IMDG. The packing instructions for air transport in the ICAO TIs are currently not the same, but are undergoing revision to attempt to align more closely with the other modes. The general aim of the UN packing instructions is to enable the user of the regulations to find out from the Dangerous Goods List which packaging is required for the substance to be transported multimodally.

UN Portable Tanks
The UN portable tank instructions are standard in the land and sea modes.

RID/ADR Tanks
These tanks are confined to the road and rail mode in Europe and tank instructions for these are completely different from the UN tank instructions.

Pressure receptacles
A packing instruction for gases is incorporated into the packing instructions but the structure is different because of the nature of different gases and types of pressure receptacle that exist.

Construction and Testing of Packagings, IBCs and Portable Tanks

Part 6 of the various regulations contains the technical standards for the manufacture and testing of the various means of containment from packagings up to the size of tanks and MEGCs.

Packaging Chapters

For packagings, IBCs and large packagings, the structure of the chapters is very similar. Each sets down broad specifications for each packaging type and the test procedures. Each chapter requires the national 'competent authority' to establish a scheme to approve packaging design types. However, approval systems have not been standardised and national practices can vary greatly.

Packagings for infectious substances of class 6.2 are subject to more stringent testing requirements.

Tanks and MEGCs

The chapters again set out standards and require approvals from a competent authority.

Pressure receptacles (Cylinders, pressure drums etc)
The majority of pressure receptacles at the present time are subject to national competent authority approval. Until either the TPED comes fully into force or UN cylinders become available, the refilling of cylinders between Member States is restricted.

Consignment Procedures – Marking, Labelling and Documentation

Once dangerous goods are classified and packaged, the next stage is to apply marks and labels for the purpose of identification. Following this, a document has to be prepared to accompany the physical movement. The purpose of this information is to ensure that those handling the goods are aware of the hazards.

Marking

Marking is the application of the UN number and the PSN to a package, IBC or tank. As explained above, the PSN is that shown in the Dangerous Goods List with any technical name added as necessary: e.g.:

UN2257 potassium
UN3265 corrosive liquid, acidic, organic N.O.S. (acetopolysilanes)

Except for classes 1, 6.2 (Category A) and 7, only the UN number preceded by the letters "UN" is required as the mark in RID/ADR.

The UN Recommendations and the transport modal rules normally require that this information is applied to every package.

Marking can include the addition where appropriate of a Marine Pollutant mark under the IMDG Code.

In addition, orientation arrows are required to be applied to some packagings.

Labelling

Packages

Diamond-shaped (more accurately described as 'square-on-point') labels are used to indicate the hazards. This is a simple system of identifying the hazard from a distance by the use of symbols, numbers and colour. It aids segregation and helps to overcome language and literacy barriers when packages arrive in any part of the world. Display of words on labels, e.g. flammable, corrosive, toxic, etc. is optional but is not encouraged.

Generally, only one primary label is required for packages, but for IBCs the labels must be displayed on two opposite sides.

Large labels (placards) with dimensions of 250mm x 250mm are usually required on at least two opposite sides of a road vehicle, tank vehicle or container to identify the hazard(s). This is the UN minimum recommendation, but the modes have other requirements for more labels and other information.

Placarding of vehicles carrying packages is not required under ADR where a standard orange plate (see below) is used, except for the carriage of goods of class 1, material of class 7 and carriage using freight containers.

ADR – Orange plates

Road vehicles carrying dangerous goods meeting defined quantity thresholds must be marked by means of orange plates. For vehicles carrying packages including IBCs an orange reflectorised plate, 400mm x 300mm, is required to be displayed at the front and rear of the vehicle when certain load limits are exceeded. All road tank vehicles must have the plates and they must bear a "hazard identification number" together with the UN number to identify the goods being carried. There are a number of options as to the location of these plates on vehicles/tanks.

Overpacks

The packaging provisions explained above are intended to provide a safe means of transporting a product from the chemical company to its customer without risk under normal conditions of transport. Packages may be small or difficult to handle singly, and consignors may prefer to pack a number of small packages into a larger method of containment for delivery to a break-bulk point or to put packages on pallets. In UN terminology for dangerous goods, this is an overpack. It does not need to be tested to the UN performance standards. (Sometimes this is called a unit load device)

Where overpacks are used, they must be marked "Overpack", and in addition they must also bear all the labels and marks on the UN tested packagings inside, if such marks cannot be seen through shrink- or stretch-wrapping. The fact that goods have been packed in this way should be made clear on the declaration.

Documentation

Declarations

One of the primary aims of the UN system is to convey information to the transport operator (carrier) and, where necessary, to emergency services and enforcement agencies. This means that paperwork is essential in order that everyone is aware of what is being carried. During transport, the packages and paperwork are often separated: the goods go into the hold, container or vehicle, whereas the paperwork goes into the ship/aircraft 'bag' or in the driver's cab.

Documentation is essential in order to know:

- what is being carried,
- where it is stowed,
- how it is packed,
- how to deal with emergencies.

The UN Recommendations include a declaration as follows;

"I hereby declare that the contents of this document are fully and accurately described above by proper shipping name and are classified, packaged, marked and labelled, and are in all respects in proper condition for transport by [sea, air, rail or road] (delete as appropriate) according to applicable international and national government regulations."

Under RID/ADR a 'transport document' is required but a signed declaration is not.

There is no standard format for a document in any mode of transport. Examples of a multimodal dangerous goods form are shown in the various regulations, but they are not mandatory. The rules set down the minimum requirements that must be included in a document.

At the very least, the following information is required to be included in the documentation:

- PSN (this must include technical names when special provision 274 appears in column 6 of the Dangerous Goods List,
- class and, where appropriate the division and compatibility group,
- subsidiary risk which should be shown in parenthesis
- UN number preceded by the letters UN and, where assigned, the packing group.

The order of information on the document can at present be either:

UN1098 allyl alcohol 6.1 (3), I
or
allyl alcohol 6.1 (3) UN 1098, I.

(The second option will cease to be available from 2007.)

A container packing certificate is a statement by the loader of packaged goods (this could be the same person who is consigning the goods or it could be a completely separate body) of ISO containers, swap bodies, vehicles and rail wagons, that the:

- container is fit to receive the goods,
- the goods themselves have been inspected and are free from damage,
- the goods are correctly marked and labelled.

This is only applicable when the transport unit is to go on board a ship.

Transport Operations

Part 7 incorporates provision for loading, unloading, stowage and segregation of transport units. It includes elements from the UN Recommendations that are common across the modes, supplemented by specific modal (RID/ADR/ADN) requirements.

Requirements for Vehicle and Crew

Part 8 is unique to ADR and ADN and covers duties of operators and drivers for ADR and "Experts" for ADN including training.

Requirements Concerning Vehicle and Barge Construction

Part 9 is unique to ADR and ADN and specifies construction standards for motor vehicles and barges.

Radioactive Material

The carriage of radioactive material of class 7 is the responsibility of the UN International Atomic Energy Agency (IAEA) in Vienna and although some types of packaging for these materials would at first glance appear similar to chemical packaging, the criteria for package performance are different. The UN package marking system is not used for class 7, except as stated below.

There are five levels of packaging for radioactive material:

1. *Excepted packages* – these packages usually contain small quantities of low-hazard material and although packagings must be safe and not deteriorate there are no performance standards.

2. *Industrial packages* – these are used to transport material of a low specific activity or surface-contaminated objects. This material has little activity per unit of mass. These packages have to meet all the requirements for excepted packages and in addition have to meet certain temperature and pressure requirements. Some of these packages must also pass a drop and stack test. In some circumstances the use of

UN-marked steel drums is permitted for use as this type of package, otherwise such packages are not permitted.

3. *Type A packages* – these are used to carry small quantities of radioactive material. They are expected to maintain their integrity under normal conditions of transport.

4. *Type B packages* – these are used to carry larger quantities of radioactive material, including high-level irradiated nuclear fuels. They have to be able to withstand the effects of severe accidents.

5. *Type C packages* – these have been newly introduced and are designed to withstand severe aircraft crashes.

Part 2: Transport Statistical Summary

Accurate statistics concerning the transport of dangerous goods have been difficult to obtain. The statistics included in this study are a combination of international trade and transport data. Where data were available from other sources (e.g. national governments), a comparison was undertaken and the most reliable source was selected. The analysis was carried out for the three surface modes of transport - road, rail and inland waterway

Within the 15 Member States of the EU in 2002 (EU-15) and based on tonne – kilometres, road transport has the largest share of the dangerous goods traffic (58%) while rail transport and inland waterway represent 25 % and 17 %, respectively.

Eurostat data forms the basis of the study with national data taken into account for validation. For the EU-15 data was available and validated for the years 1990 to 2002. For Norway and Switzerland and for the ten accession countries of 2004, the same analysis was limited to the year 2000, as data prior to this date were not available.

Using the tonne-kilometre measure, analysis of the 12 years showed that the growth in dangerous goods transport was less dynamic than the development of goods transport volumes. Overall growth was 31% but dangerous goods was only 13%. Dangerous goods as a proportion of all goods fell from 9.1% in 1990 to 7.8% in 2002. A pure tonnage measure also reflects this decline with the proportion of dangerous goods falling from 6.8% in 1990 to 6% in 2002.

For 2002 flammable liquids (class 3) are the largest single class and include petroleum products (accounting for about two-thirds of the total traffic in 2002 - EU-15 countries). Gases (class 2) are second with a share amounting to about 16%; corrosive substances (class 8) are third.

The quantities of goods in classes 5.2, 6.2 and 7 are difficult to identify, as they are not adequately recorded, either in trade or transport statistics. However, these classes figure significantly in waste statistics. Therefore the analysis was based on the available results from both transport and waste statistics.

The share of dangerous goods analysed by country depends on their role within the European transport system. Countries with main ports have significantly higher proportions of dangerous goods within the total for all goods transported. There is no reason to suppose that the important routes for dangerous goods transport differ from those for other goods. Nevertheless, the ports and the centres of petroleum storage and refinement show higher than average levels of dangerous goods transport.

The trend of moving chemical production to the Far East does not reduce transport of dangerous goods in Europe significantly, but shifts their origins and destinations from the traditional centres of chemical industries to the ports leading to changing distribution patterns. Furthermore, moving chemical production does not primarily affect petroleum products which represent most of transport of dangerous goods, as pointed out above.

Part 3: Infringements

Transport Enforcement Statistics in the EU 1997 – 2002

The following assessment is based on the reports filed with the Commission in compliance with Council Directive 95/50/EC on uniform procedures for checks on the transport of dangerous goods by road. It is divided into four sections:

- Background
- Analysis of the reports sent by Member States to the Commission
- Amendments to Directive 95/50/EC and their likely effect
- Conclusions

Background and General Observations

Council Directive 95/50/EC requires Member States to collect statistics on vehicle checks carried out in their jurisdiction. The reporting includes details of whether the vehicle was a national vehicle, one from another EU country, or one from a country outside the EU. Offences according to the Directive are divided into 13 categories, but most Member States added a 14th "Other". A section summarising the enforcement actions taken completed each report.

Over the period in question the response by Member States was varied:

- One Member State failed to supply any returns to the Commission;
- Two Member States only managed one return in the period;
- One Member State managed two returns in the period.

One Member State recently supplied reports covering the period 1998 to 2002 and another 2000 to 2002. Complete returns are only available for 60% of the Member States. Where returns have been made they have been variable in presentation. Future returns are more likely to conform to the Directive. The variable quality of returns makes analysis difficult; data have to be reassigned to the required headings, which in turn leads to errors of interpretation.

In a significant number of the returns, there were mathematical anomalies, numbers of infringements recorded by type did not agree with the total number of infringements. In some cases totals changed between the Annex II and the Annex III parts of the returns.

During the interviews with the Member States; it emerged that one of the main reasons for the poor response to making the reports to the Commission was the lack of any consequential recommendations/feedback on possible improvements to the transport of dangerous goods as a result of this enforcement action.

There is no clear relationship between the infringements reported and the enforcement action taken. The sum of the infringements for each of the sub-divisions is shown, but

there is generally no correlation offered between the offences by type and the penalties imposed. It is likely that some of the offences classified as "other" and were not related to dangerous goods but to other driver and vehicle issues since inspectors in some countries are performing checks in accordance with a number of different regulations. e.g. drivers' hours.

Tables 4 and 5 below are a summary of the 2002 reports available and illustrate the on-going variability of the information being provided. They also highlight the generally poor response to the Directive and at this stage suggest that any conclusions from these statistics should be treated carefully.

Table 4: Summary of the 2002 Reports Available

Number of Member States reporting	Number of Member States not reporting	% reporting.
12	3	80%

Table 5: Summary of Reporting Category

	Member States reporting as per Directive	Member States not reporting as per Directive	% of all 15 Member States reporting as per Directive
Presentation of data on the number of vehicles checked broken down as national, other EU and non-EU	9	3	60
Allocation of infringements by country of vehicle registration as above	8	4	53
Recording of infringements using the 13 headings in the Directive	3	9	20
As above, but including a 14th "Other infringement / Not known"	5	7	33
Reporting of penalties imposed as per Directive	3	9	20
Additional information regarding the volume of dangerous goods moved / length of journey	1	11	6

Detailed Analysis of Reports

The Directive calls for the provision of statistics covering a number of areas. One area involves an analysis by the vehicle's State of Registration. The information is reported in 3 registration groups:

- National vehicle (of the Member State making the return);
- EU vehicle (vehicle from another Member State);
- Non – EU vehicle

Some Member States have added a fourth column "Not known".

The objective of this requirement is to ensure that all vehicles are treated equally irrespective of State of Registration. Overall individual States appear to have a consistent approach concerning the different categories of vehicles. However there were significant variations between States. This was explained by looking at the nature of transport operations in each country.

Analysis of the returns revealed that Member States could be grouped into three broad types:

- Member States whose inspection returns include a high proportion of vehicles with registrations in other Member States and in non-EU states e.g. Austria and Belgium; referred to in Table 6 as Transit States
- Member States whose inspection returns do not consistently fall into either the Transit grouping or Fringe grouping as described above, e.g. Spain, referred to in Table 6 as Intermediate States.
- Member States whose inspection returns include a low proportion of vehicles with registrations in other Member States and in non-EU states e.g. the UK, referred to in Table 6 as Fringe States;

Table 6: % of Non-national Vehicles of all Vehicles Inspected

	% of Non national Vehicles of all Vehicles inspected				
	1997/8	**1999**	**2000**	**2001**	**Average**
Transit state*	47	48	48	46	47.25
Intermediate state*	13	10	18	13	13.5
Fringe state*	1	3	3	5	3

* For an explanation of these groupings please see above.

The Directive requires the number of infringements noted during the check to be reported according to the type. The infringements are also apportioned using the same breakdown as for vehicles inspected i.e. national; other EU; and non-EU. The poor reporting of these figures using this breakdown suggests that there are a number of potential problems:

- Differing methods of inspection;
- Multiple inspection bodies each of which may have different objectives;
- Differing methods of reporting in detail i.e. different weighting of facts.

These variations can make proper interpretation of the figures difficult. There is a significant difference between one vehicle having ten infringements and ten vehicles each having one. In addition, the Directive requires the number and type of penalties imposed to be reported. There is no relationship between the penalties and the infringements reported.

Annex II of the Directive requires 13 headings to be reported to the Commission. Analysis of the returns revealed that many reports did not use these headings. This has led the consultants and previously the Commission to make judgements as to where particular types of infringement are allocated, thus making the analysis unreliable.

Many member States have not only failed to use the 13 headings set down in Annex II, but have also introduced a heading "Other" which was not provided for in the legislation and in many instances this heading accounts for 50% of the reported infringements.

Table 7: % Proportion of infringements

	% Proportion of infringements				
	1997/8	1999	2000	2001	Av.
1. Goods not authorised	0.3	0.49	0.40	0.96	0.54
2. Absence of consignor's declaration	0.7	1.42	0.40	1.77	1.08
3. Leaks	0.3	0.17	0.27	0.39	0.29
4. No type-approval certificate	3.4	3.91	2.71	2.98	3.25
5. No orange panels	11.6	9.11	10.19	10.43	10.33
6. No safety instructions	3.0	1.61	3.74	3.82	3.05
7. Inappropriate vehicle or packaging	4.5	3.67	6.64	10.78	6.40
8. No vocational training certificate	2.9	2.71	2.32	2.24	2.55
9. No fire extinguishers	6.2	2.89	3.82	4.58	4.37
10. No danger labels	3.6	1.77	2.94	3.41	2.93
11. No transport document or incorrect	19.6	11.62	16.32	14.41	15.49
12. Not covered by agreement	0.1	0.29	0.18	0.3	0.22
13. Overfilling of tank	0	0.17	0.21	0.2	0.15
14. Other	43.4	60.17	49.87	43.72	49.29

The table shows that there is some consistency in the relative proportions of infringements found. However individual results fluctuate quite widely for some infringements over the period. For example:

Category 3 in Table 7 "Leaks" (which are not defined).

In 1997/8 leaks were 0.3% of infringements but this fell by nearly 50% in 1999 and rose back to 0.4% in 2001. There is no explanation for such fluctuations.

A number of the headings in Table 7 reflect serious problems in the transport of dangerous goods, notably:

- Transport documents;
- Orange panels;
- Fire extinguishers;
- Inappropriate vehicle or packaging.

Transport documents and orange panels account for at least 20% of the infringements. The consultants were able to consider some statistics gathered by the IMO in relation to shipments by sea. It is understood that documentation failures in the sea mode accounted for at least 20% of infringements. This is perhaps in part caused by the lack of standardisation in documentary requirements (see part 7 of this report). The orange panel infringements raise the question whether the vehicle thresholds in 1.1.3.6 of ADR are fully understood.

Individual Member State figures for particular infringements often fluctuate quite widely from year to year. This may be attributable to targeting areas of enforcement or training being given in particular aspects of the regulations. Fluctuations overall are usually balanced out by the returns of the other Member States. There is no evidence that any Member State can influence the overall results. Despite the fluctuations in the infringements found, Table 8 illustrates that the level of checking has been consistent Member State by Member State. The table is based on the returns submitted for each Member State. It can be reasonably accepted that this is an understatement, as it is known that some Member States are carrying out checks but have not returned the data to the Commission, or have made incomplete returns which could not be used.

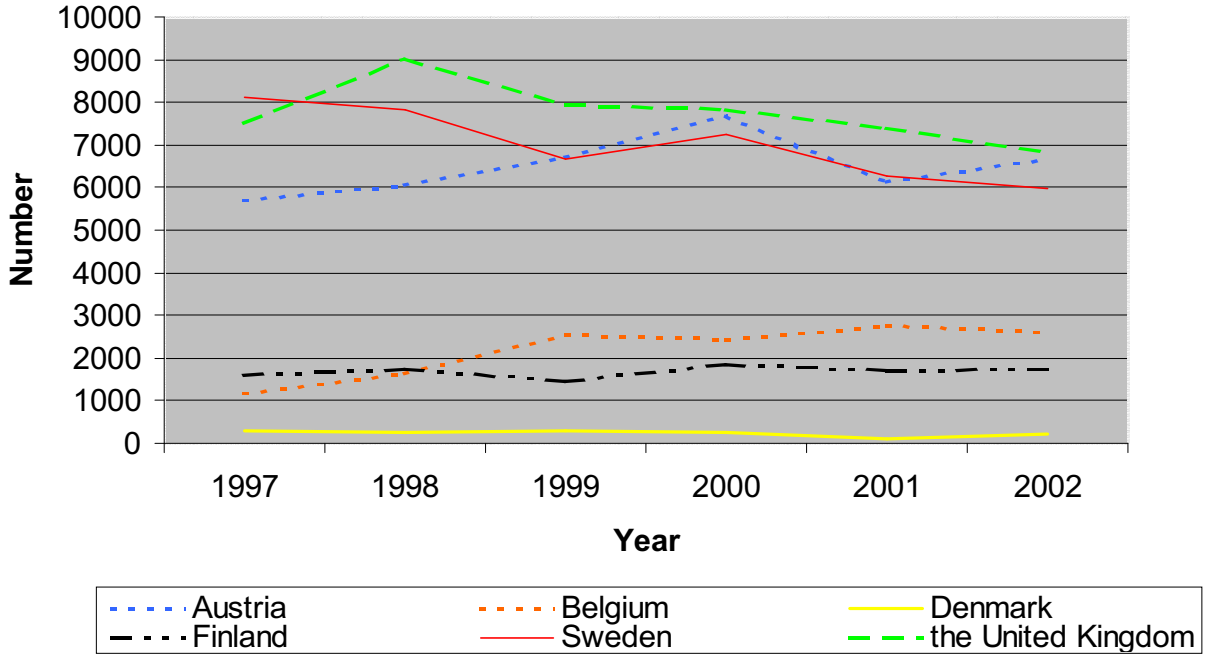
Table 8: Vehicle checks by Member State per year

Total number of vehicle checks reported by State per year							
Year	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	
Member State							**Average**
Austria	5,690	6,062	6720	7,666	5,940	6,671	6,458
Belgium	1,163	1,624	2,544	2,582	2,762	2,594	2,184
Denmark	275	251	274	242	94	203	223
Finland	1,602	1,723	1,437	1,849	1,690	1,739	1,673
France	19,561						19,561
Germany	126,533	129,758	131,161	115,786	98,005	93,247	115,748
Greece							
Ireland						989	989
Italy		1,797	2389	2,459	2,514	2,528	2,337
Luxembourg	203	286					245
The Netherlands	3,521	2,266	2,416	3,145	1,429	2,237	2,502
Portugal				135	150	78	121
Spain	23,900	28,037	32,849	38,759	40,013	34,423	32,997
Sweden	8,125	7,839	6,669	7,263	6,283	5,995	7,029
The United Kingdom	6,011	9,016	7,928	7,087	6,782	4,979	6,967
Total	**196,584**	**188,659**	**194,387**	**186,805**	**165,662**	**155,683**	**199,034**
Slovenia						*6,770*	

Figure 2 illustrates graphically the level of inspections carried out by some Member States over the period 1997 – 2002. The level of inspections within each Member State is fairly constant. Germany has been excluded from the illustration as the number of checks carried out each year has been significantly higher (in excess of 100,000) than the other Member States, and inclusion would mask the small scale variations found between the other Member States.

Figure 2: Number of checks done 1997 – 2002

Complete series only (excluding Germany)



Finally in this section there is a representation of all the available data on checks and infringements over the period (Figure 3). Despite the absence of some reports and the variability of the data, Figure 3 confirms that for the first 4 years just under 200,000 checks were being reported. 2001 and 2002 show a decline. 2002 shows a marked fall in the number of checks reported. Initially this was thought to be due to slow reporting by some Member States but 2001 should now be complete. The decline in responses may be due to Member States deciding that the effort required to produce the reports was not worthwhile as no action had been taken on the previous returns. There is no evidence to suggest that checks were not made, only that the returns were not sent to the Commission.

The infringement figures do not appear to be directly proportional to the number of checks made. The maximum proportion of vehicles with an infringement would appear to be about 1 in 4. This, however, is an overstatement of the "fail rate". The

infringements shown are the total numbers found and in many cases multiple infringements are found on a single vehicle. The figures for 2001 in Table 8 further illustrate this point by comparing the number of infringements found by each Member State with the number of checks made and, where given, the number of vehicles with infringements.

Figure 3: Reported checks and infringements 1997 – 2002

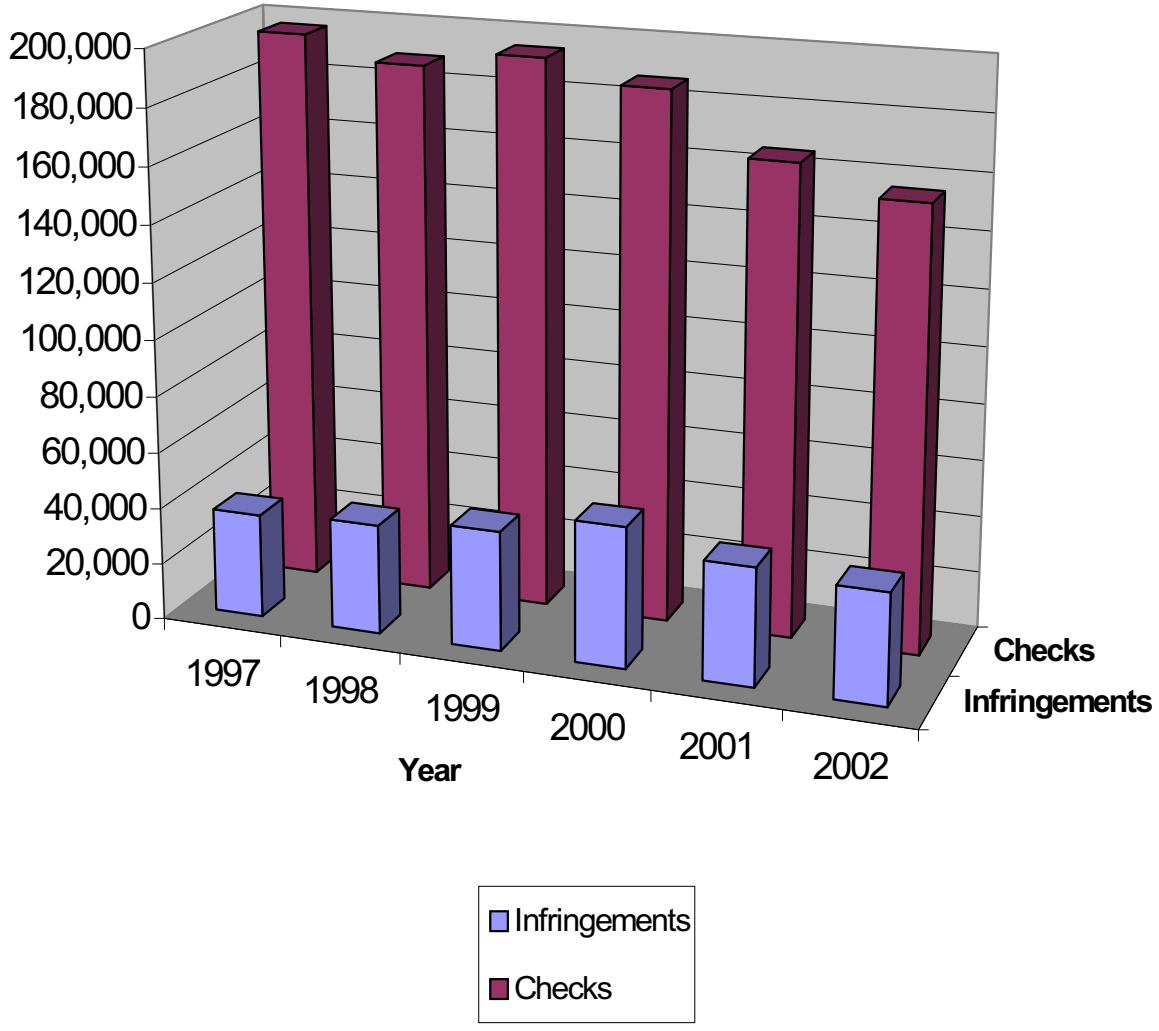


Table 9: Proportion of infringements to checks/vehicles for 2001

Member State	Infringements	Vehicles checked	Vehicles with infringements	Proportion of infringements to vehicles checked	Proportion of vehicles with infringements to vehicles checked
Austria	6,923	5,940	-	1 in 1	-
Belgium	2,582	2,762	1,337	1 in 1	1 in 1.83
Denmark	47	94	-	1 in 2	-
Finland	637	1,690	544	1 in 2.7	1 in 3.11
Germany	18,279	98,005	-	1 in 5.4	-
Italy	296	2,514	-	1 in 8.5	-
The Netherlands	1,985	1,429	-	1 in 1	-
Portugal	116	150	69	1 in 1.3	1 in 2.2
Spain	6,319	40,013	-	1 in 6.3	-
Sweden	3,447	6,283	1,515	1 in 1.8	1 in 4.2
The United Kingdom	972	6,782	729	1 in 6.8	1 in 7
Total	**41,783**	**165,172**	**4,194**	**1 in 3.95**	**1 in 4.1**

The overall figures in Table 9 are clearly influenced by the large number of checks carried out in Germany and Spain. The 165,172 checks reported in 2001 revealed 41,783 infringements an average "fail rate" of nearly 1 vehicle in 4. However, since more than one infringement can be found on a single vehicle, the real failure rate is likely to be closer to 1 vehicle in 8. In addition, taking into account "other" infringements which represent nearly 50% of all infringements, the level of vehicle failure could be 1 vehicle in 15. (6.67%).

- The two Members States undertaking the greatest number of checks have relatively low "failure" rates, this may be due to operators working harder to ensure compliance, or because there is no targeting of vehicles to check;

- Member States with a small number of checks may be targeting vehicles that look likely to be in breach of the regulations;

- Some Member States' enforcement officials having found one or two infringements may terminate the inspection, whilst others may continue a complete inspection thereby increasing the number of infringements found.

Amended Uniform Procedures

Introduction

Member States have been applying the Directive for at least 8 years. Whilst returns may not have been made regularly to the Commission, it is clear that Member States have carried out the inspections and have identified a number of practical problems using the current checklist.

In an attempt to deal with some of the problems and improve the comparability of the data collected, the Member States agreed in 2004 to amend the Directive on which inspections were based. During the interviews, Member States were asked if they had prepared new paperwork in line with the revisions to the Directive Annex. The response varied:

- Some produced new forms
- Others would wait until legislation was updated and
- Others were awaiting an official translation of the amendments from Brussels

The amending Directive gives the Member States one-year to implement the changes from signature on 13th December 2004. Set out below is an analysis of the new provisions using the requirements of the current Directive as a basis for comparison.

Annex I

This revised Annex contains a modified checklist for the inspections to be undertaken. The old checklist had 38 headings, but the new one, although numbered to 41, only has 34. (There are no items 32 to 38 inclusive on the new checklist.) The majority of items

have not changed except in wording to clarify meanings. Some of the new items are the result of splitting existing items. The general concept of the Annex has not altered with a simple requirement to indicate which items on the checklist have been done and to indicate if there was an infringement.

The new checklist does not include any space for "Other" so it is confined to the transport of dangerous goods; Offences under other regulations should not to be included in checklist returns. At the end of the annex is a requirement to indicate the most severe risk category applicable for any infringement found: this relates directly to Annex II.

Annex II

Major changes have been made to this Annex. An original list of 13 items considered as infringements has become 34 in 3 new risk categories. As noted elsewhere in this report, the problem with the old Annex II reports was the lack of correlation between the checklist and infringements. The new Annex attempts to improve this area of weakness by splitting infringements into 3 risk categories. Within each risk category are a number of "failures". Risk category I has 19 items, category II a further 12 and category III only 3. However, this results in 19 checking items having 34 different places where they can be reported. Some infringements have the potential to be reported in all risk categories, whilst others appear to have no relationship to the checklist and will presumably not be recorded. The consultants consider this to be very confusing.

For example, an infringement of tank/vehicle marking could be reported in any of the categories:

- Risk category I "Carriage of dangerous goods without any indication of their presence (e.g. documents, marking and labelling of packages, placarding and marking on the vehicle)" or as "Carriage without any placarding and marking on the vehicle";

or

- Risk category II "Incorrect labelling, marking or placarding";

or

- Risk category III "The size of placards etc."

The consultants expected to find a relationship between the checklist and the infringements. This was not the case in risk category I there are nine items that do not appear to have any direct relationship with the checklist items. For example in Table 10 below, three examples of risk group I infringements are detailed, with the checklist items from Annex I covering Transport Operations (the other headings being documents and other equipment). The checklist failures are operational, but which checklist item from the Transport Operations list would result in these risk category I items being reported?

Table 10: Extract from Annex I (checklist) and Annex II (infringements)

Annex I Check list item	**Annex II Infringement**
Transport Operation	Risk category I item:
18 Goods authorised for transport	12 The permissible degrees of filling of tanks or packages have not been complied with
19 Vehicle authorised for goods carried	
20 Provisions related to mode of transport (bulk, package, tank)	
21 Mixed loading prohibition	18 Fire or an unprotected light is being used
22 Loading securing the load and handling	
23 Leakage of goods or damage to package	19 The ban on smoking is not being observed
24 UN packaging marking/tank marking	
25 Package marking (e.g. UN No.) and labelling	
26 Tank vehicle placarding	

Where more than one infringement is found, only the most severe has to be reported. However there is scope for interpretation. The Annex allows enforcement staff to use discretion. Such discretion inevitably works against uniformity, as different Member States and individual staff will have different tolerance thresholds to the same infringement. This was confirmed when industry representatives were asked for comments and their common criticism was the inconsistent approach by enforcement staff not only within a Member State but also between Member States. It is difficult to see easy solutions to this when many of the individual provisions of ADR provide for options, are open to some interpretation or do not clearly indicate tolerances.

The listing of infringements in the risk categories may compound reporting problems. For example the check list includes:

"23. Leakage of goods or damage to package" and would cover;

"A leakage of dangerous substances from a packaging".

Leakage of dangerous substances is classified in risk category I.

Risk category I is introduced with the following:

"Where failure to comply with the relevant ADR provisions creates a high-level risk of death, serious personal injury or significant damage to the environment such failures would normally lead to taking immediate and appropriate corrective measures such as immobilisation of the vehicle".

Leakage could be a stain on one corner of a fibreboard box containing four 5 litre inner receptacles or it could be from the valve of a 25,000 litre tanker. Both would be reported as risk category I (failure 2). Risk category I includes a requirement to immobilise the vehicle. Such action with a leaking package on board, may not necessarily be consistent with "high risk" or "significant damage".

There appears to be little scope in the guidance above for discretion. If risk category I is not applied the Annex gives no indication how the infringement should be recorded. There are no "leakage of dangerous substance" headings in the other risk groups. If discretion is applied then the fibreboard box in the example is unlikely to be recorded as a risk category I. However, even if the box does not present a risk category I infringement shouldn't such leaks be reported? Leaks in any type of containment system may well indicate problems of use, design or manufacture. This will almost certainly result in non-reporting of infringements where a discretionary decision has been taken. Such non reporting leaves no evidence that problems may exist

Part of the dilemma facing enforcement staff is in the inclusion of different appropriate corrective measures as part of each risk category definition. Risk category I noted above includes immobilisation of the vehicle. Such action with a leaking package on board, may not necessarily be consistent with "high risk" or "significant damage", for example, when a leaking package has a small volume and contains a packing group III (low risk) substance. If discretion is not applied, all vehicles with a leakage of substance will be reported as risk category I.

Other infringements shown in risk category I could be treated similarly. For instance, the use of non-approved packaging does not automatically make it unsafe, nor does using the wrong type of vehicle. However both of these inappropriate actions could raise serious safety issues. Since more than half the failures are listed to risk category I, it is likely that a similar proportion of all infringements would be thus reported. This could produce future reports that suggest the transport of dangerous goods in the EU is endemically unsafe.

Some of the items under the heading "Transport operation" on the checklist are not likely to carried out very often. For example item 22 Loading, securing of the load and handling. This may be a practical problem such as physically examining a load in a sealed container. Some of the check items require detailed specialist knowledge and access to back-up material not readily available at the roadside. It is likely that the roadside checks will continue to concentrate on those items that can be readily

checked, such as paperwork and equipment, rather than the packaging and its physical condition during transport. However, if more inspections were directed to premises, a better overall assessment of dangerous goods operations could be made.

Annex III

The Annex III report has only undergone minor modification and has a direct link to Annex II by asking for summary data for each risk category. There is also an expansion on the types of penalties imposed. However there is a subtle change in the report which is likely to have a significant effect. The old report required the Member States to give the number of infringements noted according to type of infringement. (detail required by Annex II). Member States generally supplied Annex II to complete the report. The new report simply requires the number of infringements noted according to risk category. There is no breakdown of the infringements required and a footnote says, "In the event that there are several infringements per transport unit, only the most serious risk category shall be applied".

The detailed picture of the infringements will be lost. Any statistics that are forthcoming will be very general and will not be useable as the basis for making changes or taking further decisions. This is likely to exacerbate the poor reporting if Member States decide that the reports are a lot of work for no results. During the interviews, a number of Member States were looking for more to be done with the statistics collected and some sort of positive action or a lead to be taken by the Commission. It was also clear that some Member States were concerned about the continued inadequacy of the required reporting.

For example, checklist item 17 covers the driver training certificate. An infringement is established, if a driver has no certificate, or is qualified for "in tanks" but is transporting packaged goods, or the driver is not qualified for the class of goods being transported, or his training certificate has expired. It could even be more than one of these reasons. Item 17 of Risk category I "Driver does not hold a valid vocational training certificate" would determine the level of the infringement whilst masking the actual problem. The report would simply show that a check was done and that the most severe infringement found was allotted to risk category I. There is no requirement to indicate the nature of the infringement or the most serious offence.
.
The main data split between the Member State checking, other EU Member States, and third countries remains. Some Member States have been unable to give this breakdown in the past, but this revision of the Annexes should improve this part of the reporting. The expansion of the EU will mean that for many Member States the numbers of third country owned vehicle checks will drop substantially. The distinction between EU and non-EU vehicles remains as this is still a requirement of the Directive.

Conclusions

In relation to the period 1997 – 2002:

- Because not all Member States have filed the reports required under the Directive, a true picture of compliance cannot be established;
- The lack of correlation between the various Annexes of the Directive meant that common information that was collected was reported differently making comparison difficult;
- Member States who have been collecting and reporting on checks and infringements are becoming discouraged and complained about the lack of follow up by the Commission.
- One of the original objectives of the Directive was to improve transport safety, but it is not possible to determine from the reports available whether the checks have helped to meet this objective or if it has been achieved.

In relation to the amended Directive

- The new uniform procedures documentation and reporting requirement does not give any improvements over the old system.
- It fails to address the lack of correlation between checks and reports
- It does not address the practicalities and limitations of roadside checks
- It makes no distinction between checks made at premises and the roadside
- The new reports will be summaries and as such all the detail will be lost making comparisons and meaningful conclusions impossible
- It does not make it clear that infringements other than those in the Annex are not to be included.
- The Uniform Procedures Directive has the potential to help to fill the gaps in government and industry knowledge, but the current and amended versions fail to exploit this potential.

The Commission should consider suspending the implementation of the amended Directive when it is due later this year and set some clear objectives regarding what information it would like to collect and particularly what it will do with it. New Annexes to the Directive should then be drafted, which would address the issues above, and as a minimum have different checklists for roadside and premises checks.

Europe produces very few statistics on incidents involving the transport of dangerous goods. The Uniform Procedures Directive has produced very little meaningful data, but it has the potential to identify problems with ADR. It is perhaps worth noting that the USA is able to produce statistics as justification for many of its proposals to the UN Committee of Experts on the Transport of Dangerous Goods. Although accuracy can be questioned the US are able to produce the sources of its data; Europe generally has nothing to support or counter those from the USA.

The collection of statistics is a controversial issue as industry complains that too many are produced already for the Commission. To establish a further requirement would probably not be acceptable, but this Directive could go some way to having similar data for Europe as in the USA with additional information from DGSAs recording the smallest incidents in their annual reports (see Part 6). A database to collate this information could be constructed.

Part 4: Derogations and Exemptions

Types of Derogation

There are three types of derogation in the RID and ADR Framework Directives, under Article 6; they can be summarised as follows:

1. Permanent derogations (e.g. Emergency Action Codes for the UK 6(8), old packaging 6(6)).
2. Derogations under article 6(10) for one off journeys within a Member State.
3. Derogations agreed by the article 6(9) Committee

The first two do not appear to present serious problems for the Commission as they form a permanent part of the legislation. They do not themselves present any significant burden on Commission resources nor do they raise safety issues as this aspect was discussed during the original negotiations. Perhaps some in this first category should be reviewed after nearly 10 years since the Directives were made.

During the interviews with Member States, there was some evidence to suggest that the exemption for one off journeys had a wide interpretation in some States. This appeared to be a particular issue with those States that had federal constitutions where it was reported that powers for such derogations were the responsibility of the province and details were not held centrally.

The third type of derogation is the main problem addressed in this part of the report. ach of these derogations needs to be agreed by the Article 6(9) Committee and then needs to be translated and published in the Official Journal as a Commission Decision.

Article 6(9) Derogations

In 1994-95 when the Council agreed the Directives, it was probably hoped that derogations for emergency use would only be occasional. However, in 1995-96 a number of Member States identified to the Commission difficulties that could not be easily addressed in RID or ADR, in particular common practices used for local distribution e.g. opening packages to make deliveries, of smaller quantities. At the time, it was accepted that these were not appropriate for inclusion in ADR.

These included:

- the breakdown of packages during the final stages of distribution
- the movement of uncleaned static tanks
- a short journey on a public road

The Commission sought explanations why these problems could be not addressed in RID/ADR. Since the 1980s, a number of proposals to the Joint Meeting from Contracting Parties have attempted to deal with simple issues relating to local

distribution of dangerous goods, but most have failed. The most successful was the addition of a new paragraph 1.1.3 which offered some limited help to domestic local transport.

The Joint Meeting has said on a number of occasions that it did not see it had a role to deal with simple domestic issues. However, at a recent meeting of WP15 (November 2004) it was acknowledged that they might have to address the problem (TRANS/WP15/181). The issue of local distribution is no longer straightforward, as in many countries it can involve cross border traffic. This has probably become more common since the introduction of the single currency in most Member States. Thus it can no longer always be argued from an international point of view that RID and ADR cannot be used to deal with some of these issues.

If the Joint Meeting were to agree to consider "domestic distribution" issues, the question arises of how to indicate such variations within RID /ADR. One concept that was discussed with Commission officials during the negotiations on the Framework Directive (94/55/EC) was for a Community "Annex C" to ADR and a special Annex for RID.

The Initial Derogations

Following discussion with the Commission, Member States submitted lists of derogations in 1996-97. The original intention was to analyse these submissions, rationalise them and consolidate. This never happened mainly because of a lack of resources within the Commission which continues to be the case. The Commission does not have the resources to analyse these applications and the meetings of the TDG Committee are not held frequently enough to allow sufficient debate on the merits of each one. Discussions between the Member States and the Commission has been very limited so there has been no comprehensive review to decide whether the derogations are:

- really domestic issues or could be adopted in RID/ADR
- duplicated (had Member States asked for the same or very similar derogations that could be consolidated into a single derogation).
- based on an interpretation of RID/ADR which was not accepted by the Commission or other Member States.

If resources had been available to do this work, it is very likely that many of the derogations currently listed could have been rationalised or made into RID/ADR Multilateral Special Agreements.

Consultants Review of the Derogations

The consultants were asked to carry out a brief survey of the current derogations to identify examples where possible rationalisation could take place. A further criterion has now been identified:

- Derogations which may be out of date in that provisions have adopted in RID/ADR to address the particular issue.

Commission Decisions 2005 – Road (2005/26EC) Rail (2005/180EC)

The structure of the Commission Decisions, which appear to be based on Article 6(9) is rather confusing.

Annex I is entitled “Derogations for Member States for small quantities of certain dangerous goods”.

This is unusual because RO-SQ 7.5 (Ireland), 13.2 (Finland) and 15.6 (UK) refer to tanks, whilst RO-SQ 13.3 refers to 1,000 Kg of explosives and RO – SQ 15.8 to 5,000 Kg of explosives.

It is not clear what is meant by “small quantities”. This term is not used elsewhere and was deliberately left undefined in the original negotiations to allow for future use.

Annex II is described as "Derogations for Members States for local transport limited to their territory".

This title is also confusing as surely all the derogations are limited to national territory otherwise the change could be made to RID/ADR.

Structure of Individual Derogations

Each Derogation has been drafted and submitted by a Member State, they are not in a standard format and it has proven difficult to comment on their use or value. Some of them provide extensive detail of the planned use and include justification for the application e.g. RO-SQ 2.2, RO-SQ 15.8 whilst, others are extremely vague, e.g. RO-SQ 13.1 which appears to apply to all classes and all packing groups.

Some Derogations still quote old references e.g. RO-SQ 3.1 RO-LT 1.3 making an analysis almost impossible.

These difficulties make an analysis complicated, but the following general comments are based on this study and any additional comments received during the interviews.

Expired Derogations

A number of Derogations would appear to be no longer necessary once the 2005 editions of RID/ADR come into force:

RO-SQ 1.2, 3.5, 15.1 15.3, RQ-LT 3.2, 6.1, 7.4, RA-SQ 3.1, 15.1 RA-SQ 3.1, 15.1, RA-LT 3.1.

Two derogations appear to duplicate ADR Multilaterial Special Agreements, RO-SQ 15.3 (UK) and RO-LT 3.2 (Germany) and are unnecessary from 2005.

A number of derogations appear to address the same issue, but use different references. For example, RO-LT 1.2, 6.3, RO-SQ 7.5, 14.8, 15.6 and RA- SQ 15.2 all address the movement of static storage tanks.

Reference		Country	ADR References
RO - LT	1.2	Belgium	1.1.3.2 (f)
	6.3	France	No reference. But it may be unnecessary as worded as it in seems to only address gas tanks which are already covered in RID/ADR 1.1.3.2 (f)
	7.5	Ireland	6.7 and 6.8
	14.8	Sweden	Reference 5.4.1.1.1, 6.8, 8.2.2.8.1
	15.6	UK	No reference, but part 5, 7, 8 and 9 covered.
RA-SQ	15.2	UK	Parts 5 and 7

Each of these derogations appears to be authorising the movement of uncleaned static tanks by referencing different parts of ADR. It is a requirement of ADR that any tank on the road carrying dangerous goods meets the construction standards of Part 6. Only the Irish derogation exempts static tanks from Chapters 6.7 and 6.8, the UK's appears to exempt them from all of Parts 5, 7, 8 and 9 of ADR. France and Belgium claim exemption from 1.1.3.2.(f), which is an existing exemption for gas tanks, and the consultants do not understand how this affects other classes.

The consultants have concluded that:

- There should be provisions to move static tanks that have held dangerous goods.
- The tanks should be exempted from the construction requirements of Part 6 of ADR.
- A consignment note should be carried listing the last contents
- The vehicles moving these tanks should display orange plates and meet all the relevant requirements of Part 8 of ADR

In most Member States there are storage tanks in use for chemicals and heating oil etc. From time to time they must be moved and it may not be practical or safe to clean them on site before being transported.

In addition, it is known that some static tanks for chemicals have to be moved across international boundaries and it is recommended that RID/ADR be amended to address this particular problem.

Another example from the list concerns household waste. Three countries have a Derogation to exempt household waste collections, but is this not a wider issue affecting all Member States? The answer to this question and no doubt it applies to other derogations is that this derogation is dependent on an interpretation of RID/ADR. Some countries argue that this traffic is outside the scope of the regulations.

Multilateral Special Agreements (MSA)

The use of Multilateral Special Agreements is often an alternative method of derogating from RID/ADR.

For example, it was noted that ADR MSA 140 concerns the use of the Dutch language for national transport, waiving the requirement that transport documents must also be in English, French or German. A similar MSA exists for Scandinavia. In this instance the consultants question the need for either as Article 6(2) of the Framework Directives appears to give an automatic exemption from the RID/ADR language requirements.

Although these two MSAs may not be needed, there are about forty on the UN web site for ADR and a number of these are probably addressing mainly domestic issues of the signatories. Most MSAs have less than 5 signatures (there are 40 Contracting Parties to ADR) and many have the signatures of countries where there can be no international benefit e.g. one MSA contains the signatures of Austria and Spain but none of the countries between them.

The MSA may be a preferable route for obtaining derogations as they:

- don't need the agreement of all 25 Member States
- don't need to wait for the Commission to call a TDG Committee meeting
- only need two signatures to bring them into force

The disadvantage of the MSA is that they are only valid for 5 years. This time limit is for administrative reasons in the UN Secretariat, and it is for the initiator to alter and justify a renewal. The five year time limit for MSAs was introduced by the UN Secretariat some years ago when it became apparent that the then list of MSAs were numbered to 4 figures. It became apparent to the UN Secretary that many were out of date in that ADR had addressed the issues relevant MSAs had never been cancelled. In addition the restructuring of ADR made many MSAs meaningless as the relevant references were no longer applicable.

Conclusions

The Commission should consider advising Member States to use MSAs rather than derogations. However, the facility for derogations remains essential. If the Joint Meeting and WP15 decide that it is within their remit to deal with local transport operations then the number of derogations could be significantly reduced. However, the Joint Meeting must define parameters before any reduction in the number of derogations could be considered.

There is no evidence to suggest any of the derogations are unsafe. In many instances, they continue practices that national Governments had in place before the adoption of the Directives. However, a detailed assessment has not proved possible as the wording of many derogations is not clear as to intentions.

The Commission should consider carrying out a full analysis of the derogations:

- What are they intended to achieve
- For which provisions of RID/ADR an exemption is sought
- Whether they could become MSAs

They should be in standard format:

Application for a derogation Article 6(9)	
Country making application	
Subject	
References: Directive Annexes – (RID/ADR references)	
National Legislation	
Description of the intended derogation	

Example:

Application for a derogation Article 6(9)	
Country making application	
Subject	Static tanks
References: Directive Annexes – (RID/ADR references)	Annex (ADR) Part (5) 4.3, 5 (except 5.3.x.x placards and 5.4), 6.7 – 6.10, 7, 8 and 9.
National Legislation	
Description of the intended derogation	Empty uncleaned static storage tanks may be carried to a place of cleaning, disposal or repair and are exempt from the provisions of ADR. Such tanks(vessels) shall be placarded in accordance with the provisions of Chapter 5.3.X.X and the vehicle drivers shall carry a transport document in accordance with the provisions of 5.4.Y.Y, detailing consignor, consignee and the contents including the UN number.

Table 11: Road Transport Derogations

Summarises the current road derogations. It includes a brief description of the derogation together with easily identified similar derogations and the C comments.

Annex I "Derogations for Member States on small quantities of certain dangerous goods"

Member State	Number RQ-SQ	Description	Similar provisions	Consultant comments
Belgium	1.1	Class 1 1.1.3.6 >20kg Load limit exemptions	See 15.7	
	1.2	All Classes 5.4.1.1.6 empty packagings (2005)		This may be out of date from 1.1. 2005
Denmark	2.1	Household Waste	See 10.1 – 10.12	
	2.2	Class 1 Mixed loading of class 1		
Germany	3.1	Class 1 Mixed packing and mixed packing.		
	3.2	No transport document, if below 1.1.3.6 limit	(see UK 15.2 +6.1)	
	3.3			Revoked
	3.4	Fuel pump measuring equipment for weights and measures use		
	3.5	Private use of dangerous goods 50Kg inner packaging only	(see 13.1)	All classes, all PGs Isn't this covered in ADR 1.1.3.1
	3.6	Mixed Packing: Aerosols with 1.4S, 2, 3 & 6.1		Retail delivery?
France	6.1	Class 7 in equipment		

	6.2	UN3291 clinical waste < 15Kg		What does it mean? Probably exemption for users
	6.3	Dangerous goods on passenger vehicles		Is it needed? (see 1.1.3.1)
	6.4	Own account transport < 1.1.3.6 no transport document	(see 3.2 – 15.2)	
Ireland	7.2	Pesticides less than 1.1.3.6 thresholds but greater than limited quantities in 3.4		
	7.4	Expired pyrotechnics to barracks		Probably a common problem
	7.5	Empty uncleaned storage tanks	(see SQ6.3, 7.5 15.6 LT1.2)	
	7.6	Gas cylinders on brewery drays		Probably a common problem
	7.7	Not ADR cylinders e.g. US		
Finland	13.1	Private Cars 200 Kg	(see 3.5)	Is it needed 1.1.2 Not well defined, what classes.
	13.2	Empty uncleaned for UN1202, UN1203		May be unnecessary from 2005
	13.3	Class 1 ≤100 Kg, Class 1 placard no orange plate		
UK	15.1	Low hazard radioactive material		Why is this required?
	15.2	No document <1.1.3.6	(see 3.1, 6.4)	
	15.3	Hot air balloons MSA		Could be withdrawn. ADR 2007 addresses issue.
	15.4	No fire extinguishers for low level radioactive material		Why?
	15.5	Breakdown of inner packagings	(see 3.6, 3.5)	
	15.6	Static tanks	(see 7.5, LT12,	

			SQ6.3, LT14.8)	
	15.7	Class 1 load limits	(see 1.1)	
	15.8	Ex II vehicles		
	15.9	Class 1 supervision		
	15.10	Class 1 and other dangerous goods		
	15.11	No orange plates for toxic level Class 7 material		

Annex 2 "Derogations for Members States for local transport limited to their territory".

Member State	Number RO-LT	Description	Similar provisions	Consultant comments
Belgium	1.1	Local transport on public roads	See 14.3	
	1.2	Static empty storage tanks	(see RO SQ15.6, 6.3)	
	1.3	Driver training 1202, 1203 & 1223		May duplicate M151
	1.4	UN3130 use tanks LB3H instead of L10		
	1.5	Waste for disposal not in UN packagings		
	1.6	LT 14.5		
	1.7	LT 14.6		
	1.8	LT 15.2		
Denmark	2.1	UN1202, UN1203, UN1223 & Class 2 delivery or sale. No transport document		
Germany	3.1	Transport document concession similar to air	See 15.2	
	3.2	PCB movement in bulk		Can be withdrawn from 2005
	3.3	Packaged waste use EU (Basel) waste groups		Intention not clear
Greece	4.1	Old tanks/old packagings		Probably unnecessary under ADR. Chapter 1.6 and Directive 94/55/EC.
Spain	5.1	Anhydrous Ammonia		
France	6.1	Use of IMDG document for short trips		Why?1.1.4.2

	6.2	Class 1 and other dg)	(see SQ15.10	
	6.3	Static tanks	(see SQ15.6, LT1.2, SQ7.5 LT148)	
	6.4	Driver training agricultural vehicles		
Ireland	7.1	UN1223, UN1202, UN1965 transport accounts for load	(LT2.1)	
	7.2	Empty uncleaned old transport documents	(see LT3.1, 2.1)	
	7.3	Load/unloading in public place CV1		
	7.4	UN3375 Emulsion in tanks		(check UN)
	7.5	Mixed loading Class 1 with other Classes		(see SQ3.1, 15.10)
	7.6	Hoses not empty		
	7.7	Ammonium Nitrate waive documentation		
Netherlands	10.1	Household waste		(see SQ2.1 not needed 1.1 ADR LT1.5?)
	10.2	Domestic hazardous waste local rubbish collection		Why separate derogations for each part of ADR?
	10.3	Domestic hazardous waste local rubbish collection	See DK2.1	
	10.4	Domestic hazardous waste local rubbish collection	See DK2.1	
	10.5	Domestic hazardous waste local rubbish collection	See DK2.1	
	10.6	Domestic hazardous waste local rubbish collection		
	10.7	Domestic hazardous waste local rubbish collection		

	10.8	Domestic hazardous waste local rubbish collection		
	10.9	Domestic hazardous waste local rubbish collection		
	10.10	Domestic hazardous waste local rubbish collection		
	10.11	Domestic hazardous waste local rubbish collection		
	10.12	Domestic hazardous waste local rubbish collection		
Finland	13.1	Transport document for Class 1		
	13.2	See 14.2		
	13.3	See 14.7		
Sweden	14.1	Waste for disposal based on EU waste	(see LT3.3)	
	14.2	Consignor not for empty uncleaned		
	14.3	Local transport	(see LT1.1)	
	14.4	Goods for Government		
	14.5	Dangerous in close proximity to Ports		
	14.6	Inspectors ADR training certificate		
	14.7	Local deliveries of UN1202, UN1203 UN1223 documents	See DK21	
	14.8	Static tanks	(SQ15.6, LT1.2, SQ7.5, SQ6.3)	
	14.9	Local transport Agric/Construction/old tanks		(is it necessary?)
	14.10	Tanks of explosives		

	14.11	Driving Licence not clear		
UK	15.1	Crossing public roads	(see 1.1)	
	15.2	Opening packages by drivers		

Table 12: Rail Transport Derogations

Summarises the current rail derogations. It includes a brief description of the derogation along with easily identified similar derogations and the C comments.

Annex 3 Derogations for Member States for small quantities of certain dangerous goods

Member State	Number RA-SQ	Description	Similar provisions	Consultant comments
Germany	3.1	Private use maximum 50kg per transport unit	RO-SQ 3.5	Derogation limited to 31.12.2004 (covered by RID/ADR 1.1.3.1 (a))
	3.2	Combined packagings of Classes 1.4S, 2, 3 & 6.1	RO-SQ 3.6	
France	6.1	Express parcels provisions apply to luggage		
	6.2	DGs in luggage for personal / professional use	RO-SQ 6.3	
	6.3	Transport of DG for use by carrier needs no load declaration obligation if below 1.1.3.6	RO-SQ 6.4	
	6.4	Exemption from placarding mail wagons carrying less than or equal to 3te		
	6.5	Exemption from placarding wagons carrying small containers		
	6.6	Exemption from placarding wagons used for piggyback transport	15.5	
Sweden	14.1	Exemption from placarding carriages carrying express parcels		Misunderstanding? Only wagons need placarding not carriages carrying express parcels

UK	15.1	Low hazard radioactive material in consumer products exempt from regulations	RO-SQ 15.1	Covered by RID/ADR 2.2.7.1.2 (d) and so can be withdrawn
	15.2	Nominally empty storage tanks exempt from regulations	RO-SQ 15.6 etc.	
	15.3	Permitting certain mixed loading of explosives	RO-SQ 15.10	
	15.4	Maximum total quantity per transport unit for Class 1 different from 1.1.3.6	RO-SQ 15.7	
	15.5	Exemption from placarding wagons used for piggyback transport	6.6	

Annex 4 Derogations for Member States on local transport limited to their territory

Member State	Number RA-LT	Description	Similar provisions	Consultant comments
Germany	3.1	Sealed bulk container/swap bodies carrying PCB-contaminated material	RO-LT 3.2	Derogation limited to 31.12.2004 (now in 2005 RID 7.3 VW 15)
	3.2	Packaged hazardous waste of Classes 2 to 6.1, 8 & 9	RO-LT 3.3	
Sweden	14.1	Relaxation of requirements for hazardous waste from public recycling site to end disposal plant		

Part 5: Security

Introduction

Since 2001, changes in the approach to security have affected people in all walks of life. The UN and the European Commission soon recognised that chemicals in transport had the potential to be a weapon for terrorists. There have been many terrorist acts throughout Europe in the last few years. None to date has involved the seizure of dangerous goods but this cannot be ruled out in the future.

UN Security provisions

In December 2002, a new Chapter was adopted in the UN Recommendations to set out security provisions for the transport of dangerous goods. The Chapter adopted at the UN is a compromise between those countries that believed they were in a position to introduce sophisticated control systems and others who saw no threat and had no methods in place to address such provisions. When the proposals were made there were divergent opinions about the type of provisions that should be adopted. Some States were of the view that there should be detailed prescriptive provisions whereas others felt a lighter touch setting down general provisions should apply

The final text was the minimum that could be agreed at that stage. It provides general principles which can be applied in different ways. At some future date, the UN may feel it is necessary to refine and build on these provisions, but it is probably better to leave the provisions for a few years to settle down.

The Chapter has been adopted in all the modal regulations and appears in the 2005 editions. However the method of adoption has been different in the different modes. If this chapter had not been adopted, there is every likelihood that separate rules would have been established for different parts of the world, e.g. Europe and North America, which at the very least could have caused serious trade barriers. Alternatively another international body with an interest in terrorist activities, e.g. NATO, could have taken an initiative.

For RID and ADR the equivalent Chapter 1.10 must be applied, at the latest, by 1 July 2005. The questionnaire circulated to Member States in the summer of 2004 for this project included questions on how they would implement the security provisions. The majority of responses revealed that such decisions had not been made.

Application by Member States

In early September 2004, the UK hosted an informal meeting on the security provisions. Some 20 countries, 7 trade associations and the European Commission attended. It is clear from the notes that there are differing interpretations of the requirements of Chapter 1.10 and perhaps some minor modifications to the text - particularly in 1.10.1.2 may be needed. The London meeting produced a range of divergent views concerning both the need for and the detail required for full compliance. This divergence generally reflected the perceived level of

threat from terrorism. Some Member States considered the threat to them was quite high whilst others felt there was no real threat to their State. Such positions lead to different interpretations of the provisions.

The application of this Chapter of RID/ADR is further complicated by the fact that Member States have to consider the interface between land and sea transport and land and air transport.

The IMO has adopted the provisions from the UN into the IMDG Code but in practice apply them through a new International Ship and Port Facilities Security Code (ISPS) whilst ICAO applies the provisions through Annex 17 of the Convention on International Civil Aviation (Chicago Convention).

Finally, there are Community instruments such as the "Seveso" Directives (Council Directive 96/82/EC of 9 December 1996 on the control of major-accident hazards involving dangerous substances) that primarily address dangerous chemicals within factories and warehouses. The scope of these Directives excludes transport, although some years ago the Commission agreed with Member States that the IMO Guidelines for port areas and the UIC leaflets for railway marshalling yards were satisfactory for these operations. There is a possibility that the debate about “Seveso” and transport could be reopened with the introduction of the security chapter into RID/ADR, in particular concerning the loading and unloading of vehicles at “Seveso” sites. RID/ADR contain provisions for loading and unloading and defines duties of loaders and unloaders that may be a t variance with “Seveso” requirements.

During the interviews, it became clear that there had been little progress in developing the action individual States intend to take.

Comments ranged from:

- the text in RID/ADR is rather vague and therefore difficult to apply
- decisions have not been made
- it is not a priority
- there are legal problems

A number of countries said that they do not regard themselves as subject to a terrorist threat and therefore did not put this as a high priority. In response to questions about the application of RID/ADR, the response was that industry would be advised that it had a duty to comply with the provisions.

This subject was given a high priority at the UN Sub Committee of Experts’ meetings in 2002 and the European Commission supported the adopted text. It must be a matter of some concern that more effort has not been made to implement the requirements established by the UN in 2002. It must also raise the possibility that some countries may declare unilateral action if they felt other Member States were not taking adequate measures to introduce such requirements.

The text in RID/ADR is general and sets down principles that Member States can use as the basis of simple Codes of Practice or Guidelines. Rigid regulation would be almost impossible considering the wide variety of chemical companies likely to be affected by the provisions.

Conclusions

The Commission should:

- ensure Member States have made provision in national legislation to address the subject,
- remind Member States that they must advise industry of the international obligations under RID/ADR,
- assist in the resolution of any problems with the impact of RID/ADR vs. the “Seveso” Directive,
- then leave the provisions to settle down for a few years.
- provide guidance for Member States to assist in the application of these provisions. In that respect it is noted that some governments (France, Germany and the United Kingdom) have produced advice and guidance, together with some international trade associations. (AISE, CEFIC, CEPE, CLECAT, ECTA, EFMA, FECC and IRU)

Part 6: Safety Advisers

Introduction

Council Directive 96/35/EC 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.

At least one Member State, Germany, had founded the concept of safety advisers prior to the introduction of the Directive.

At the time of the current study, the scheme had been operational in 15 Member States for nearly 5 years, whilst the new Member States were only required by the Directive to apply the provisions from May 2004. In practice, with the exception of Malta and Cyprus, the DGSA rules already affected eight of the new States as the requirements of the Directive had also been included in a new Chapter 1.8 of RID/ADR in 2001, with a 2 year transitional arrangement.

Interpretation of Article 3(c)

Article 3(c) of the Directive states:

> the main or secondary activities of which are not the transport or the related loading or unloading of dangerous goods but which occasionally engage in the national transport or the related loading or unloading of dangerous goods posing little danger or risk of pollution.

The interpretation of this provision is extremely variable. Some Member States require the appointment of DGSAs in all cases except where the provisions of provisions of Chapter 3.4 and the load limit thresholds in Chapter 1.1.3.6 of ADR indicate that the appointment of a DGSA is not required.

However, other Member States have made a more generous interpretation. In one State for example, if the consignor/carrier does not transport more than 50 tonnes per annum and no single load exceeds 900Kg/L in packing group II, 3000kg/L packing group III, they are exempt.

These two levels of interpretation are very wide.

RID/ADR Variations with the Directive

The Directive and the provisions in RID/ADR set down the rules for qualifying as and the duties of a DGSA. There are two differences in wording between the two requirements.

These are:

1. The Directive refers to" transport and the related loading and unloading" whilst RID/ADR refers to packing, loading, filling and unloading"
2. RID/ADR requires the DGSA to consider security plans

It is the first of these differences that is the cause of some concerns where the requirements to appoint a DGSA are more extensive than originally agreed in the Directive.

The second variation is logical in RID/ADR as it is an addition since 1996.

The consultants recommend that the Commission give guidance on the interpretation of Article 3(c). They consider that packing group II substances and articles in quantities greater than those specified in 1.1.3.6 should not be exempted. There is scope for an annual exemption limit for packing group III but at a much reduced figure from 50 tonnes, say to 5 tonnes.

DGSA examinations

In June 2004, an informal meeting was hosted by France to look at the examinations and the role of the DGSA. Some 21 countries replied to a questionnaire on the examination. Eighteen of the respondent countries to the French survey are covered in this report. Some general points can be drawn from their replies.

- 11 countries approve trainers,
- All countries agreed that examination bodies should be independent.
- The cost of examination ranges from nothing to over 400 Euros
- Pass marks that candidates must achieve vary between 45% - 100%
- Most countries require candidates to use the relevant regulations (both national and international) during the examination.
- Most questions appear to be multiple choice
- Examinations last from 1 hour to 5 hours
- A minority of countries offer special class examinations

The approval of trainers is left to each State. It is not clear what the criteria are for approved trainers and if this were to become the standard practice minimum requirements would have to be established. Such criteria would have to define minimum qualifications for the trainer, possibly both in education terms and in a knowledge of the regulations that he/she is teaching. Such a system although offering credibility to trainers would not in the view of the consultants improve safety in the transport of dangerous goods and any approval scheme is likely to increase the costs of training.

Independent examination bodies (whether educational institutions or government departments) appear to be the norm. Being independent these bodies allow industry to judge the abilities of trainers.

The pass mark range of 45 – 100% would appear to suggest that the quality of the examination and the candidates is very variable. There is probably very little that can be done about the quality of candidates. To set a minimum level of academic achievement for candidates would restrict the numbers able to apply. Such a policy would exclude people who may not have achieved high academic standards but are interested and well versed in the subject of the transport of dangerous goods. Employers should perhaps ensure that

candidates selected for the examination will be capable of not only passing the examination, but also carrying out the functions of an adviser e.g. being capable of preparing a written annual report.

The use of copies of the regulations (both the RID/ADR and the national implementing regulations) during the examination is essential as DGSAs have to be able to advise companies on the content of the regulations. Memory tests would not achieve the desired effect of satisfying an employer or competent authority that the candidate understood the regulations.

The duration of the examination is of some concern. RID/ADR applies in all Member States. It contains over 1000 pages of text and the examination is intended to satisfy a competent authority that a candidate shows a reasonable understanding of those regulations. A one hour examination in the view of the consultants needs to be studied carefully as it may not give sufficient depth of knowledge. In addition, it is difficult to see how the requirements of the Directive, as amended in 2000/18/EC, can be achieved in one hour i.e. 20 questions and a case study.

In the consultants' survey, it was noted that one or two countries permitted oral examinations for DGSAs. Whilst it could be accepted that this may be appropriate in certain circumstances for driver training, it is not considered suitable for DGSAs, who are expected to be able to read and interpret the regulations and provide written advice. Although as part of the examination an oral element could be considered appropriate.

The original Directive set down provisions for a single examination, but the amendments made in 2000/18/EC, following comments from some sectors of industry, provide options for specialist classes. Many Member States have not adopted this option and those countries that have done so have had had relatively few applications making them economically non-viable.

In one area, they appear to give a particular problem. There is an option for candidates to take a paper in classes 3, 4.1, 4.2, 4.3, 5.1, 5.2, 6.1, 6.2, 8 and 9. It is understood that this paper was requested for the general haulage industry, which argued that there was no need for knowledge of classes 1, 2 and 7. This is reasonable, but it can equally be argued that the carriage of classes 5.2 and 6.2 is very specialist and need not to be covered for general haulage. However, at the same time, some 10 billion aerosols along with a wide range of small gas receptacles are manufactured and moved each year in Europe. Aerosols are classified in Class 2, which is not covered by this examination. Therefore a candidate who is to advise a company that needs to carry aerosols and small gas receptacles that are not within the limited quantity provisions must either take the full examination or an additional one for Class 2.

The consultants question the value of these optional examinations.

Conclusions on the examinations

- The consultants do not see the need to approve trainers. If the examination is set, marked and administered by an independent body, the results will indicate the effectiveness of trainers.

- The consultants recommend that all examinations should be open book – at least the current copy of RID/ADR. In addition, candidates should be able to show that they know how the provisions are implemented in their own national legislation.
- If it is accepted that the examination is open book, there should be a minimum overall pass rate of at least 65%. This figure appears to be the type of pass mark used in other professions where candidates are permitted to take text books into the examination.
- It is suggested that the Commission considers publishing some model examination paper(s) to indicate the level of paper that is required.

The Role of the DGSA

The DGSAs' duties are set down in the Directive and in Chapter 1.8 of RID/ADR. An overall intention of this legislation was to improve safety which would be reflected in the Uniform Procedures Directive (95/50/EC) statistics.

Some Member States have raised a number of problems/views

1. In general, they believe that there is a greater awareness of the regulations and attempts to comply with them by industry, although this is not always reflected in enforcement statistics.
2. Some qualified DGSA consultants are advising a large numbers of companies. An example quoted is that one consultant acted for over 100 companies.
3. A lack of standard reporting systems.

The lack of improvement in enforcement statistics is difficult to assess because of the limitation of the data from the Uniform Procedure Directive (95/50). However, it seems to be borne out by the limited analysis undertaken of the statistics supplied by the Commission. No significant improvement has been reflected in the checks that have been carried out.

What is the probable cause of the apparent lack of improvement in the statistics in relation to DGSAs?

1. It must be noted that the statistical data are not reliable.

2. DGSAs may not be given sufficient resources to carry out their duties. In most Member States the responsibility for ensuring this is done rests with the employer not the individual DGSA. One Member State puts the duty on the DGSA which would appear rather onerous.

3. A number of countries believe that they have an insufficient number of DGSAs in relation to the size of their chemical industry. However, definitive statistics in this area seem to be difficult to come by. Most Member States have details of the numbers of approved DGSAs, but exact details of which companies need to appoint them is not available.

4. Some countries indicated that they were in the process of requiring some form of registration to indicate when a company should appoint a DGSA and then who that person

is. Others considered that perhaps returning the annual report to the competent authority might encourage better compliance.

5. The Directive places duties on the DGSA, but provides little detail of how the work should be undertaken. Setting such guidelines would be extremely difficult as companies and industries work in different ways. For example, a DGSA might be required for a propane delivery man, who owns a single vehicle, drives himself and deals with his own paperwork. Such a person may take a DGSA examination but equally he might appoint a consultant. A consultant would probably only need to work 1 or 2 days a year for such an operation and such a consultant could have a large number of clients in similar positions. At the other end of the scale, there are companies with large operations where a full time DGSA is required.

A number of Member State officials expressed serious concerns about DGSA consultants having large numbers of clients. It is difficult to identify a simple way to limit such developments. The DGSA Directive has been a cost burden to industry with only limited evidence that safety has been improved. To impose rigid restrictions such as limiting the number of consultancies per DGSA would only add to these costs.

Europe produces very few statistics on incidents involving the transport of dangerous goods. Although, a requirement for reporting accidents has been introduced into RID/ADR, it is intended for the larger more significant events. This reporting system does not address daily minor occurrences such as, small leaks on packagings, failure to close valves on tanks correctly etc. Such minor incidents form the basis of determining whether RID/ADR is providing society with an adequate level of safety. As stated elsewhere in this report, the USA is able to produce such statistics as justification for many of their proposals to the UN Committee of Experts on the Transport of Dangerous Goods. Although, one can question the accuracy of such statistics the US are able to produce the sources of their data Europe generally has nothing to support or counter those from the USA.

The collection of statistics is a controversial issue, industry complains that it has to produce too many already for the Commission. To establish a further requirement would probably not be acceptable.

It is a requirement that a Dangerous Goods Safety Adviser produce an annual report. Included in that report is a requirement to detail and analyse any accidents/incidents. There may be merit in having a standard DGSA report (a list of minimum requirements, not necessarily a standard form) and included in this a list of incidents, including details possibly based on the Uniform Procedures Directive. In addition, make it a requirement that reports are sent to the Competent Authority annually. Such returns, could, where, appropriate be considered by the EU TDG Committee.

Conclusions on the role of the Safety Adviser

The Commission should consider:

- A standard Annual Report or at least a list of elements that the report should contain in a specific sequence. (See attached)
- All reports should be completed within 3 months of the end of the agreed annual period - which may not be the calendar year. A copy of each Annual Report should be submitted to the competent authority
- Consider requiring the DGSA to provide data on the quantity and class of dangerous goods moved in the period
- Using Council Directive 95/50/EC to check that such reports are available through more site visits rather than roadside checks.
- Perhaps where a roadside check requires an employer to provide information to the enforcement team, that information should be recorded by the DGSA in the Annual Report with comments on any necessary corrective actions that were taken. (However, many vehicles stopped at the roadside are from companies that are not required to appoint a DGSA.)
- A majority of Member States were content with the proposal that the Directive should be revoked.

Extending the Directive to Sea and Air Transport

Two Member States (Germany and Sweden) have widened the requirements of the Directive to sea and air transport. Other Member States were asked during the interviews whether this was a useful idea. There was some support for extending the requirement to sea and air transport, although there was a feeling that such extension should be justified on safety grounds. A number of countries did recognise that some problems arise from the fact that many transport operations within or between Member States are now multimodal and there was a tendency for companies to rely on the regulations for a single mode of transport without recognising that there are still modal differences even though many have been eliminated.

There is the question of Commission competence in the area of sea and air transport. In the case of sea transport, Directive 2002/59/EC establishing a community vessel traffic monitoring and information system would appear to provide the basis of competence. For air transport the recent establishment of the European Air Safety Agency would appear to establish competence.

If the Commission and Member States agreed that such an amendment were desirable there would have to be some consequential changes to the existing system and probably in turn to RID/ADR. Much of the text in all the regulations is now the same and it would be unnecessary to examine for each mode such things as classification, package/tank design and testing. A combined examination should let candidates answer questions from any of the texts but should allow for any significant variations.

Suggested Draft **DGSA Annual Report**

COMPANY DETAILS

NAME
ADDRESS
BUSINESS

DGSA DETAILS

NAME		
DATE OF APPOINTMENT		CERTIFICATE NUMBER
VALID TO	CLASSES	MODES

DANGEROUS GOODS DETAILS

Insert here details of all dangerous goods carried in past 12 months. This should include the quantity per Class. A Spreadsheet in an Appendix could alternatively be referenced here.

PACKAGING/TANK TYPES

Give details of packaging types used. For tanks indicate any periodic inspections or leak-proofness tests carried out during the year if tanks are owned or managed by your Company.

FLEET DETAILS

If the Company owns vehicles used in the carriage of dangerous goods, give summary of vehicle types and details of ADR vehicle tests performed during the year.

AUDITS PERFORMED

Give details of the types of audits carried out and, if appropriate, the number. Include main recommendations as a result of the audits.

ACCIDENTS

Give details of any accidents of the type mentioned in 1.8.5 of ADR/RID involving the carriage of dangerous goods that occurred during the year

TRAINING

Include here details of Awareness Training, Driver Training and DGSA Training given during the year

INFRINGEMENTS

Give details of any checks carried out by the enforcement authorities including any fines imposed.

SUMMARY AND RECOMMENDATIONS

PROGRAMME OF WORK FOR FOLLOWING YEAR

Signature

Date

Part 7: Overall Dangerous Goods Transport Conditions

Introduction

The historical overview (Part 1) shows the development of the international rules over the last 50 years. It can be seen that in the decade since 1994, fundamental changes to the system have taken place.

Until the mid 1990s, the various regulations had been developed independently. Although, all the modal agencies had followed the UN Recommendations from the 1980s, the structure of each regulation was different.

In 1996 a programme began to align the regulations in a standard format and this came to fruition in 2001. The legal texts now follow a standard format and thus it becomes far easier to identify variations. Variations exist in all modes of transport. Many may be justified, e.g. small quantities for air carriage, but others have to be questioned as to their safety value, e.g. different documentation requirements.

Overall the dangerous goods rules could be judged as mature and have settled down, there are very few fundamental technical issues to be addressed. The Framework Directives form a good basis for the future as they refer to these standard rules. This part of the report looks at the conditions at an international, national and Community level. In most instances the observations made here have to be solved at the modal level or at a domestic national level. Direct action by the Commission may not be possible.

International rules

Although the structure of the international rules is based on the UN Recommendations, there are modal variations as explained above. This section of the report highlights some of these issues.

Rail/Road - RID/ADR

Amongst the variations for rail and road are:

- A few UN numbers have not been adopted
- The tank classification system is different from the system adopted for UN portable tanks
- RID/ADR permits light gauge metal packaging to be used for dangerous substances with a lower level of testing than UN type approved packagings.
- Specific tests are laid down as means of assessing chemical compatibility for plastics packagings
- Mixed packaging provisions (the placing of two different chemicals in the same packaging) are more prescriptive than for other modes.
- Limited quantities tend to be more generous than in the UN Recommendations or the IMDG Code

Railways - Intergovernmental Organisation for International Carriage by Rail (OTIF) and The Organisation for Co-operation of Railways OSZhD

The organisation diagram shown in Part 1 shows that the railway regulations (RID) are the responsibility of OTIF and this implies that they are applicable to all international dangerous goods transport by rail. Unfortunately this is not the case. There are two organisations with overlapping membership, which does appear to be causing some problems for some of the new Member States, particularly at the frontiers between the two systems.

OTIF

There are currently 42 States of OTIF who are signatories to COTIF. These States of OTIF are from Europe, North Africa and the Middle East.

Currently RID is an annex to CIM (Uniform Rules concerning the Contract for International Carriage of Goods by Rail.) which in turn is Appendix B to COTIF.

When the new COTIF is ratified by the required number of States and comes into effect (anticipated early 2005), RID will be free standing like ADR (divorced from CIM but still under the COTIF umbrella).

OSZhD

The OSZhD has its headquarters in Warsaw and represents railway authorities of countries in the Baltic, 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 COTIF. Currently 25 countries are members of the organisation: -

Azerbaijan, Belarus, Bulgaria, China, Czech Republic, Estonia, Georgia, Hungary, Iran, Kazakhstan, Korea, Kyrgyzstan, Latvia, Lithuania, Moldova, Republic of Mongolia, Poland, Romania, Russian Federation, Slovakia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan, Vietnam.

There are 10 States that are party to COTIF (and thereby RID) and also belong to OSZhD, namely Bulgaria, Estonia, Czech Republic, Hungary, Iran, Latvia, Lithuania, Poland, Romania, Slovakia and Ukraine. Seven are EU Member States.

Rail traffic involving 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 consignment notes. For COTIF freight traffic, the CIM consignment note must be used including for dangerous goods both now and when the new COTIF comes into effect. For OSZhD countries a separate SMGS consignment note is used. It is understood that typically the new consignment notes for CIM or SMGS are made out at the border station/crossing when trains move from a COTIF area to SMGS, or vice versa.

There are also physical differences between track gauges, e.g. on the Hungary-Ukraine border products are pumped or transferred from one tank wagon or wagon respectively to another, occasionally bogies are changed. Intermodal units are transferred from one wagon to another.

The OSZhD uses a version of RID 2001 for dangerous goods traffic at present. It is known that they are in the process of updating these rules to align with the 2005 RID, but no timescale has been announced.

Sea – The IMDG Code

Since its beginnings in 1965, the IMDG Code has generally aligned with the UN Recommendations. However there are variations:

- Transport documentation requires the declaration of flashpoint of the substance where necessary
- Stowage and segregation is more prescriptive than in other modes
- Segregation groups ensure incompatible chemicals of the same class are not stowed together.
- Marine Pollutants are not necessarily the same as the corresponding RID/ADR provisions

Air – The ICAO Technical Instructions

Like the IMO, ICAO has followed the UN system but retains perhaps the most modal variations. In the main these can be justified on safety grounds, they include:

- Different rules for passenger and cargo aircraft
- Consumer commodities of dangerous goods not recognised by the other modes
- Excepted quantities unique to the air mode present problems in surface transport. These small quantities of dangerous goods that comply with the relevant provisions are totally exempt –no labels, no documents and no recognisable marks
- Definitions unique to the air mode are prescribed for inner packagings

Dual regulation

The air mode is more complicated because two sets of rules are published:

- The Technical Instructions for the Safe Transport of Dangerous Goods by Air – the legal text made under the Chicago Convention,
- The IATA Dangerous Goods Regulations - described as a “Field Document”.

The IATA rules supplement the ICAO provisions with additional requirements (such as a specific transport document) imposed by the airlines individually and as a group through IATA.

Few people see the ICAO Technical Instructions (worldwide sales of the IATA book are in the region of 50,000 copies, whilst the ICAO Technical Instructions sell a few thousand). Although this does not cause too many problems on a day to day basis, enforcement action can cause difficulties and misunderstandings.

There is a perception amongst some sectors of the dangerous goods community (consignors, carriers and forwarders) that if a company complies with the air transport rules it has met all the other modal requirements (land and sea) relevant to a particular journey. The air rules tend to be the most restrictive, but there are exceptions – excepted quantities being one example.

Another example concerns some Class 3 flammable liquids in limited quantities with more generous treatment than in surface transport. Some other substances strictly controlled in surface transport have no equivalent controls in the air mode.

Implementation dates of modal regulations

At present, each mode changes to its regulations in January of odd numbered years, 2005, 2007, etc. This was a major alignment adopted about 15 years ago prior to this agreement the pattern was erratic. Although new regulations were introduced from 1st January 2005, the exact arrangements for mandatory application vary:

	In force	**Mandatory**
ADR	1.1.2005	1.7.2005
RID	1.1.2005	1.7.2005
IMDG Code	1.1.2005	1.1.2006
ICAO	1.1.2005	1.1.2005

The standard implementation date was a significant move forward, but the lack of a transition in the air mode can cause serious problems.

For example: at the end of December 2004/January 2005, a major multinational company wished to send by air a consignment of UN1805 (phosphoric acid). It is a requirement in air transport that the proper shipping name is marked on the package and on the document the company entered “Phosphoric acid, liquid”. The airline refused to carry the consignment because it would travel over the changeover period and in 2005 UN1805 became “Phosphoric acid solution”. It is understandable that the accepting airline rejected the package because during the journey it would be carried by another airline and they had to check the consignment before accepting it and that would be in January. One would have hoped that a pragmatic approach could be taken to such a trivial matter, but the air rules are habitually applied in a very prescriptive manner by airline staff.

Transitional arrangements allow stock to be moved that has been prepared under the old years’ rules, it gives time to change production and most important, considering the regulations are not always available in good time, to train and update staff

ICAO gives no transitional period and tends to publish its Technical Instructions very late in the years’ e.g. November/December is not unknown, leaving industry no time to adjust to changes. The IATA ‘regulations’ tend to be published sooner, but even so there is little opportunity to anticipate changes.

Industry has little opportunity to become conversant with all the changes that are taking place and a transitional period of even a month or two would be sensible to allow traffic in the system to get to its destination and permit industry to move marked stock without paperwork changes.

The RID/ADR transition would appear to be the most sensible in that 6 months provides governments, who need to translate the text, about 12 months in total from the date the final

text was agreed to complete the necessary work. It provides time to train enforcement staff and for industry to have a reasonable period to resolve problems.

Access to regulatory changes

If the decisions of the regulators were more readily available to industry in advance, the problem with transitional periods may not be as serious. However, at present only the UN ECE Secretariat provides a fully open web site for everyone to view what is being proposed and what is decided. The OTIF (OCTI), ICAO and IMO web sites are not available to industry or to all regulators or other interested parties. This subject does not address state secrets, it is written rules to impose upon industry and affects the safety of everyone. It is rather strange that such web sites are protected by passwords and approval systems. It would appear that international regulators should be prepared to welcome any constructive comments on proposed changes in advance in order not to have to reverse a change once a mistake has been identified.

An example of a failure to consult properly was the adoption by ICAO of a so called 'air validation' mark in the 2003-04 edition of the Technical Instructions. Within twelve months of publication, it became necessary to reverse this decision as impracticable and unworkable following concerns by regulators, carriers and industry.

A UN General Assembly resolution requires the UN and its agencies (IMO, ICAO, etc.) to make documents publicly available. It is to be hoped this happens soon.

The modes RID/ADR/IMO have open meetings and countries, which are members, may attend. ICAO, on the other hand, has a more restrictive approach through expert panels and working groups. Such meetings usually require the attendance of an expert nominated by his or her country but said to be acting independently in his/her own right. Whilst this approach may be suitable for many aspects of air transport operations, it would seem to be inappropriate to let individual experts attend such meetings in their own right where they could (and have) ignored multinational decisions adopted by the UN Committee of Experts for multimodal application and adopted by the other modal bodies.

Official Languages

The UN or its agencies publish the international rules, they are normally available in at least two languages English and French (OTIF published RID, in French and German only, until English became an official language in 2005). Comment from a number of Member States during the interviews was that the books were not available in their national languages and it is difficult to apply ADR or RID under a Directive when there was not a copy in the national language. The Framework Directives state that they will be made available in the official languages of the Community. A few countries said that they preferred to carry out their own translations

The majority of Member States signed the ADR Agreement and RID before the Community made any legislation in the area of the transport of dangerous goods. Most Member States have indicated that they applied the provisions before the Directives were made (see Annex C). If they signed the conventions then the question arises how did they apply them without

national translations. In fact many made national translations long before the Framework Directives and preferred their translations. The question arises as to whether they had translations in their national languages then.

However translation is very expensive especially when the regulations are updated every two years. Perhaps the following should be considered by the appropriate bodies:

- A contribution from the Community to the cost of translation
- Much of the text in all the regulations is repetitive. The UN Committee of Experts on the Transport of Dangerous Goods could consider moving common parts that are not used on a daily basis e.g. Parts 2 and 6 on classification and package and tank specifications could be moved to the separate Manual of Tests and Criteria. Such a move would reduce the size of RID/ADR by about 300 pages. It would only mean that some text needed to be translated once for RID/ADR/ADN. This point may well be discussed at the UN when the debate resumes in July 2005.
- To assist in translation and considering now standard formats, the changes to a particular edition could be highlighted by suitable marking in the text. This is done by ICAO/IATA in their publications and in the past has been done by IMO.
- Combine RID and ADR in one publication. The majority of the text is the same and variations between road and rail could be suitably highlighted.
- Referencing RID/ADR rather than making them Annexes to the Directives

Mutual recognition

There are concerns about the way various competent authorities implement relevant functions required by RID/ADR. The issues apply not only within the Community but beyond its boundaries and this is explained in Part 8.

Regional Rules – The Baltic Memorandum

RID/ADR applies to all the countries around the Baltic Sea, but simple road or rail journeys particularly between:

- Norway and Denmark
- Sweden and Denmark
- Sweden and Germany

mean that vehicles and rail wagons have to be carried by ship for part of the journey. The IMDG Code applies to ships in the Baltic Sea just as elsewhere in the world. The IMDG Code does not recognise the provisions of RID/ADR although RID/ADR do accept the provisions of the Code.

Many years ago it was recognised that applying two different conditions of transport could cause difficulty. Recognising that certain parts of the Baltic have low wave heights the respective Maritime and RID/ADR authorities of Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland and Sweden entered into a Memorandum of understanding for the Transport of Packaging Dangerous Goods in the Baltic Sea. The basis of the Memorandum is that

certain parts of RID/ADR would be accepted on Ro/Ro routes in the low wave height area of the Baltic. The recognition by the various Maritime authorities include:

- RID/ADR light gauge metal packages
- RID/ADR transport unit marking

Rules concerning stowage and segregation of dangerous goods continue to apply in accordance with the IMDG Code but with some relaxations.

This facility has been in existence for over 20 years and has proved useful for industry and governments.

No other such local agreements have been identified. However, UK industry has from time to time tried to persuade the UK, France and Belgium to consider a similar arrangement on the short sea crossings in the English Channel (e.g. Dover – Calais, Dover – Zeebrugge). The argument against such an arrangement has been that the waters on such ferry routes do not fall into the definition of low wave height used in the Baltic. Whilst this might be technically correct sea conditions in the Baltic can be as severe as the English Channel.

The use of the Baltic Memorandum has become less important over the years as the various modal regulations have become more closely aligned. However, total alignment particularly in relation to stowage and segregation is unlikely to be achieved and the Baltic Memorandum will always be a useful concession.

National rules

Within each Member State there are three issues:

- Liaison between modal authorities
- Enforcement of the regulations
- Liaison between governments and industry

The Competent Authorities for the transport of dangerous goods in the Member States are of varying sizes, ranging from 1 person up 20 or more. In part this reflects the size of the national chemical industry or the importance of transport to an economy. In addition, size does not appear to be an indicator of efficiency. However, those States with only one or two persons will always have difficulty meeting obligations under the Framework Directives and their International obligations.

Liaison between national Modal Agencies

As has been illustrated in this report, many consignments of goods are moved within national territory by several modes of transport for a single delivery. It is therefore important that there is liaison between the respective modal authorities to ensure a common approach to enforcement. The lack of liaison has led to various anomalies and problems.

An illustration of some liaison problems include:

- A Member State argues that anyone can classify any substance/article in every Class including Class 1. It is generally acknowledged that classification of explosives has to be approved by National Authorities.
- A Member State has in the past established two regimes for UN package testing one for sea (IMDG) and another for RID/ADR/ICAO under different arrangements and authorities.
- A Member State will only test UN packages in accordance with RID/ADR and will not recognise any variations that other modes require.
- A Member State allows anyone to perform UN tests as long as a government official is present to witness such tests.

Different interpretations within Member States add to the confusion both for government and industry.

At the international policy level, the lack of co-ordination means that one modal authority of a Member State may take a different view from his colleagues on a particular subject. This may be necessary and correct for certain specific modal safety issues but much of the UN system is standardised and generally the more standardisation the less chance of a dangerous goods incident being caused by a consignor.

National enforcement of the rules

At the day-to-day level how the respective modal rules are enforced is not standardised.

Translations

A majority of Member States do not always have translations of each of these regulations. The lack of translation can lead to enforcement difficulties. During the debate on a World Convention in December 2004 at the UN Sub Committee of Experts, a delegate pointed out that as his country did not have official translations of the ICAO Technical Instructions enforcement under the Constitution is very difficult. If consignors of goods were found to be in breach of the air rules, enforcement would normally have to be attempted by applying ADR provisions. In other words the offence would have to be identified as one in ADR and prosecution taken out under the road convention. If an airline had breached the dangerous goods rules the Civil Aviation Authority would have to take action against it under the aircraft licensing laws.

Multimodal traffic

It has been stated several times in this report that much traffic even within national territories is multimodal e.g. a package might be picked up in Hamburg for delivery tomorrow in Munich by an express parcel carrier. The consignor may have no idea how the package will travel, it could go by road all the way, and part of the journey could be on a train or an aircraft. There have been recent incidents where consignors' packages have been found at an airport incorrectly marked and labelled for the air mode. When an attempt has been made to prosecute, the defence has been that they did not know it would travel by air. In fact, it's possible the carrier does not know that the package would travel by air when it is collected.

The situation happens in reverse. Excepted quantities of dangerous goods by air are not permitted in surface transport, but still arrive allegedly by the 1000s at airports for onward delivery by road.

These two scenarios highlight a problem for many Member States, although they may be parties to the modal Conventions. Because of the way they have been adopted, each enforcement action has to be left to the respective modal agency and if action fails in one mode it will often fail in the others without better co-ordination.

Liaison between government and industry

If industry has to use the various modal regulations, it is essential that governments should consult to ensure better understanding of the requirements.

Most Member States do have liaison with industry through meetings and seminars, but the type of liaison is variable and it is clear that if only one modal authority has a consultation process, different policies can be applied by one country at different modal meetings.

The European Commission

There is a need for better co-ordination within the European Commission concerning dangerous goods regulations. At the moment it would appear that Directorate General for Energy and Transport, Directorate General for Enterprise and Industry (e.g. aerosols, GHS) and Directorate General for Environment (e.g. class 7) and Directorate General of Fisheries and Maritime Affairs all play roles in dangerous goods regulations. Closer co-operation is needed for the benefit of both regulators and industry.

It is really unacceptable to say the Community will adopt REACH and GHS provisions for supply and use of chemicals in say 2008, when the international transport modes make their changes in the odd numbered years i.e. 2007 and 2009 and have done so for more than 20 years. This may be a small detail but the impact on classification, labelling and marking could be enormous in cost terms to industry and have safety implications in trying to comply with two non aligned systems

It is not only REACH/GHS. The Environmental Directorate of the Commission is apparently considering having separate rules dealing with Class 7 transport provisions without taking into account the provisions that are already in RID/ADR and covered by the Framework Directives. If the Commission were to propose separate Class 7 transport legislation, what is the legal position concerning the Framework Directives? What is the position concerning international transport outside the Community when IAEA rules have been use?

Council Directive 75/324/EEC on the approximation of laws of the Member States relating to aerosol dispensers is another example of the Commission not keeping pace with either the developments in industry or the industry regulations. The Directive requires a waterbath test for all aerosols, whereas the UN transport regulations are about to introduce flexibility to the system.

Commission adoption of ADR

In the detailed objectives set by the Commission for this study, the consultants views were sought on the future of Dangerous Goods Transport policy in the enlarged EU. The Commission drew particular attention to the forthcoming accession of EU to COTIF and asked the consultants to consider whether accession to ADR would improve safety and security.

The consultants have considered this issue carefully and do not recommend the Commission accede to ADR. The arguments are set out in Annex B of the report.

Part 8: Dangerous Goods Issues Beyond Europe

Introduction

There is a significant trade in dangerous goods between Europe and other continents notably North America and Asia. The rules for transport of dangerous goods originate at the international level of the United Nations and there is universal acceptance of the system. When individual countries or regions have adopted the UN Recommendations, it has not been uncommon for changes to be made without informing the UN Sub-Committee of Experts.

Such variations, whether on sound safety grounds or not, can cause:

- Disruption to the movement of goods,
- Confusion amongst consignors and enforcers, and
- Invisible trade barriers.

The level of such differences has been very much reduced since the various regulations were aligned in 2001, but some continue to exist.

International variations

Although the UN Model Regulations provide the basic structure to the rules and all the modal regulations use this format, within individual sections there can be important differences.

Receptacles for gases

Pressure receptacles for gases manufactured in the USA are subject to approval by the US Department of Transportation (DOT). The standards used in the USA are not the same as those used in RID/ADR or in Member States national legislation. Thus if US pressure receptacles are to be used in Europe, they would have to be re-approved in the Member State of intended use, but filled pressure receptacles are being sent to Europe for use by industry making prior approval difficult. An ADR MSA has been adopted by a number of Member States to permit DOT pressure receptacles containing gases to be delivered to the European end user.

The MSA does not provide for redistribution from a warehouse nor for refilling, both of which according to industry do occur. Redistribution would in terms of RID/ADR mean a new journey subject to the full provisions of ADR, whilst to refill pressure receptacle would have to be approved by the appropriate RID/ADR national authority.

It is perhaps worth noting that in the US regulations pressure receptacles arriving under the ICAO Technical Instructions or the IMDG Code are allowed to be redistributed within the USA without a need for further approval.

This issue illustrates a wider problem with some aspects of the dangerous goods regulations that are unable to keep up with technological developments. Many of these pressure receptacles are for special purposes and are not available in Europe.

Packaging issues

Plastics compatibility

An exporter from North America, for example, is sending chemicals in plastics drums to a European Union customer. RID/ADR recognises that goods shipped under the provisions of the IMDG Code or the ICAO Technical Instructions may travel under the provisions of RID/ADR in accordance with 1.1.4.2. This provision provides for a journey that began outside Europe to be completed without the need to repackage and re-label the consignment. However if the drums have their journey interrupted e.g. they are stored in a warehouse for later distribution then a new RID/ADR journey begins and the drums must now be labelled and marked fully in accordance with RID/ADR. RID/ADR sets down additional compatibility rules for plastics drums, which have not been adopted, in the other modal regulations. The drums may have a UN packaging mark that was authorised outside the Community (even outside an ADR country), so there may not be any evidence that have been achieved the compatibility requirements for plastics drums and jerricans set down in RID/ADR have been achieved. Problems have arisen in this field with non-European packaging arriving in RID/ADR countries

Pressure differential

For UN packaging approved in accordance with ADR and sent by air; if the package is a box containing bottles of liquid the packaging must be capable of withstanding an internal pressure test of generally 95kPa. This is not a standard UN requirement and is often forgotten.

Light gauge metal packaging

This is a system of packaging that exists in RID/ADR/ADN only and not permitted in other modes, but examples have been found at airports and seaports over the years.

Modal disharmony

At a multi-modal level, perhaps the most significant area where there is a lack of harmonisation concerns the transport of dangerous goods as limited quantities. The rules for these small quantities have significant variations between the modes to cause difficulties in multimodal transport; these include differing requirements for marking, labelling/placarding and documentation.. The UN Sub-Committee has had the subject on the agenda for the last two years, and a number of attempts to rationalise the provisions were made before that, but without success.

Limited quantities form a significant and important part of the dangerous goods market. They include many items used by the consumer, such as aerosols, paint, cleaning materials, perfumes etc.

One of the most significant variations within the limited quantity concept is "Excepted Quantities" in the ICAO TIs, these provide total exemption for some small amounts of dangerous goods, including packing group I substances. The amounts are normally very small (about 30ml/30g) with a maximum package size of 1L/Kg and the packaging requirements are substantial. These are very small quantities of dangerous goods e.g. tubes of glue and paints. Companies often need to send small samples of their products to customers for testing or analysis.

This facility does not exist in the other modes, yet such goods having arrived by air as excepted quantities have to travel by surface transport for final distribution. In practice, it seems unlikely such goods are being repacked for surface transport. There is no knowledge of any accidents or incidents concerning this concession which has existed for over 20 years.

A further issue is transport documentation and the differing requirements between the modes not only in the data to be recorded but also the forms to be used (the airlines insist on their document). This produces difficulties for consignors, carriers and enforcement staff. In the Infringements section of this report it was highlighted that documentation is a regular source of infringements and this is not surprising when there are many differing requirements.

Mutual recognition

Much of the UN system is based on trust. There are many duties imposed on competent authorities and it is expected that each respect the other's decisions. A number of countries expressed concern that the approval systems in other countries concerning:

classification of substances and articles,
packaging approvals
tank approvals

is not always being applied in a diligent and consistent manner.

The problem was sometimes made more complex because it could be difficult to identify the appropriate competent authorities in some countries outside Europe.

The consultants recognise that solving this problem is outside the Commission's remit, but believe it should be noted as a concern in some Member States.

This problem is not unique to relations with other countries outside the European Union. Concern was expressed that some national differences of interpretation in these areas apply within the twenty-five Member States.

National regulatory issues

There are provisions in most international and national regulations that do not align with the current UN system. This is because of a desire to retain old provisions, particularly when there is expensive equipment with a long life involved e.g. tanks. RID and ADR both have Chapters containing transitional measures to allow old tanks, pressure receptacles etc to continue in use to the end off their useful lives.

There are also a few instances of keeping provisions that the State(s) believe are safer practices/procedures and have been rejected by the UN e.g. the USA has special regulations for substances that they regard as toxic by inhalation.

Two areas of difficulty have been highlighted to the consultants:

Portable tanks

The USA implemented the harmonised UN provisions for multimodal portable tanks. However, a dispute during the development of the provisions resulted in the USA retaining a few highly significant differences in their national regulations (49CFR) for the second generation of portable tanks. The dispute concerns the issue of pressure vessel codes.

Traditionally, the USA has insisted that all portable tanks be designed and constructed in accordance with the ASME Pressure Vessel Code. The USA was prepared to abandon this position for most liquid tanks. In return they asked the UN Portable Tank Working Group to endorse the ASME Pressure Vessel Code as the sole Code to be used anywhere in the world for the design and construction of portable tanks for certain highly dangerous liquids and all portable tanks for gases. In addition the USA was insisting that the manufacturers of such tanks should hold an ASME U-Stamp qualification (a form of quality assurance certification indicating the manufacturer's ability to use the Code for design as well as in assuring the quality of the output). Had the wishes of the USA been acceded to all other Pressure Vessel Codes including several national Codes of EU Member States would have been ruled out. Further, by insisting on the U-Stamp qualification, rights of enforcement would have passed from national Competent Authorities to ASME inspectors appointed by a USA-based organisation. Such provisions could not be included in the United Nations Recommendations

The USA has imposed the following variations to the UN Recommendations in implementing Chapter 4.2 and 6.7:

- Most of the second generation of liquid portable tanks for dangerous goods shall be constructed in accordance with the ASME Pressure Vessel Code but without the need for manufacturers to acquire the renewable U-Stamp qualification
- Alternatively, these tanks may be constructed in another State in accordance with another Pressure Vessel Code *providing that States competent authority recognises the ASME Pressure Vessel Code as well as an equally valid alternative.*
- All second generation gas portable tanks and those for certain specified liquids must still be constructed in accordance with the ASME Pressure Vessel Code for use either in national or international trade crossing its borders. Manufacturers must hold the U-Stamp qualification.

Certain of these tanks must be insulated with a specified minimum insulation value of the insulating material. (The aim of the insulation is to reduce heat input into the consignment to reduce the risk of pressure rise and therefore the risk of the pressure relief valve opening.)

At one time it is understood that Japan had rules that required the inspection of tanks containing certain dangerous substances. With the help of the Commission some years ago a system of mutual recognition was established. It now appears that China may be imposing a similar requirement.

Pressure receptacles (pressure receptacles, pressure drums etc.)

Prior to the adoption of the UN pressure receptacles system and TPED, there was no widescale mutual recognition scheme for pressure receptacles. Both the UN system and TPED are not fully developed at present and the benefits they may produce cannot therefore be assessed.

If TPED is retained by the Member States there is a possibility that it could present serious trade problems. Where pressure receptacles are manufactured outside the European Union there appears to be no facility to deal with them under TPED except for the manufacturers to bring their pressure receptacles to Europe for approval. However, it is not clear how quality assurance can be assessed, for example.

A World Convention

This report was intended to concentrate on the impact of the various Directives on the transport of dangerous goods that had been introduced over the last decade. Throughout this report there have been references not only to RID/ADR, which are within the EU intrinsically linked to the Directives, but also to the different requirements in the other modal regulations of IMO and ICAO.

It is not possibly to address all the issues without such references. All the regulations are broadly aligned in structure and most of the contents. Considerable amounts of text are repeated but differences remain. This can be confusing to regulators and industry.

Some 30 years ago ECOSOC passed a resolution suggesting that the UN Sub-Committee consider a World Convention (ST/SG/AC.10/C.3/2004/32 Italy). The proposal in the 1970s was considered but at that time the modal regulations were so different in almost every aspect that such a prospect was impossible.

Restructuring during the last ten years has raised the question of a World Convention again. The subject is now back on the UN agenda for some consideration during the next biennium 2005-06). Whilst such an objective may be very optimistic there is no doubt that the great strides in alignment have made regulators and industry recognise that there is a prospect of further simplification. However, if there is a lack of national co-ordination many of the outstanding problems will not be adequately addressed. If some parts of the UN Recommendations that are now copied into the modal regulations were replaced by a simple cross-reference from the modal provisions to the Recommendations, there could be significant simplification.

Whether there is World Convention or some other method of simplification is going to be a medium to long-term project. The Commission is recommended to support the work the UN Sub Committee will begin in July 2005.

Part 9: Country Analysis

Introduction

The questionnaires that were sent out to all countries of the EU (as well as Norway and Switzerland) were completed and received from all countries, except Greece. In addition interviews were held in all countries, except Cyprus and Greece.

The information obtained from the questionnaires and the interviews was used not only to make observations and conclusions concerning the transport of dangerous goods in the EU, but it also to gave insight in the way individual countries are dealing with the safety issues related to the transport of dangerous goods.

This evaluation clearly shows, that the approach of the countries of the European Union in regulating a safe transport of dangerous goods can vary. This is understandable as the position of the countries varies in a number of relevant aspects, e.g. geography, economics, social conditions and legal system.

Examples of differences are:

- In a country like Sweden, where there is only one main road to transport dangerous goods to the north of the country, there are no possibilities to restrict the transport of dangerous goods.
- In a country with very densely populated areas like The Netherlands a risk analysis approach is followed in order to take additional infrastructural measures and thus control the risk near roads or railways for the transport of dangerous goods.
- In a country like Norway where it is common practice that construction works are carried out with the aid of explosives, it is necessary that many licenses are issued for individual companies to transport class 1 substances.
- In countries in the east of the European Union which have a border with Russia and strong economic ties with this country, the SMGS Convention of the OSZhD has much more importance than RID.
- Countries which are islands, like the United Kingdom, have always to deal with international regulations other than RID/ADR for international transport of dangerous goods.
- In Spain and Ireland the use of propane/butane gas for cooking and heating in the home means that special distribution systems have been established to cater for this market.

Key factors

The analysis has shown that at least the following factors which influence the approach of the countries of the European Union in regulating a safe transport of dangerous goods can be identified.

Geography

The physical size of the country and its population size and distribution can have a major effect on how goods are delivered and the options available. For example Norway and Sweden have large land areas and small populations whilst Belgium and The Netherlands are the exact opposite. Such factors can play a major part in distribution and logistics.
In many countries there exist transport restrictions, but the exact formulation of the restrictions depends on specific aspects like density of population and infrastructure. The examples given show that the way transport restrictions are imposed is strongly influenced by the geography of a country.

The location of a country also influences the importance of the different modes of transport. Sea transport will be more important for countries with sea borders. This means that the relative importance of the regulations and directives related to land transport of dangerous goods can vary.

This is also true for countries with borders to non-EU countries, which have other regulations or other interpretations of regulations for land transport of dangerous goods. The example given for the rail transport in Eastern European countries illustrates this.
Countries with no or only limited inland waterways do not show much interest in signing the ADN Agreement.

Economics

The economic situation of a country strongly influences the importance of the transport of dangerous goods in that country. In this respect the size of the chemical industry and the magnitude of the seaports and airports are of primary importance in determining the amount of dangerous goods transported in a country. The interest of a government towards the transport of dangerous goods is related to this economic importance. This is also reflected in the resources made available in individual countries for policy making and enforcement.

Social conditions

These conditions can play a significant part that must be taken into consideration. For instance, some countries do not have a pipeline gas delivery system for heating purposes, but have a distribution system with gas cylinders or fuel cans. The example of the distribution of explosives in Norway also illustrates this factor.

Legal system

The legal systems of Europe are broadly divided in two types: the Common law system applicable in the UK and Ireland and the Roman law system in most other Member States. The implementation of ADR through these systems has an effect on the way it is enforced. Also there is an influence from the legislative and administrative structure of a government in a country. This is specifically noticeable when the State has a federal structure; in this case there is a major federal instead of national responsibility for subjects like enforcement and organisation of testing.

Implementation of legislation

The policy of individual countries of the European Union can thus be different, but in all countries the RID/ADR regulations for the transport of dangerous goods by road and rail form the basis for the legislation. Through the European Directives 94/55/EC and 96/49/EC, these regulations have been implemented into the national legislation in each country. (see Annex C)

Derogations are required in order to be able to apply the RID/ADR regulations in all individual countries of the European Union. Some of these derogations will be specific for a country; others will have relevance for all countries of the EU.

For most countries of the EU, other international regulations than RID/ADR (IMO for sea transport, ICAO for air transport and SMGS for rail transport in Eastern Europe) are at least as important. Fortunately there is harmonisation to a great extent among at least ADR, RID, IMO and ICAO, as they are all based on the UN Recommendations on the Transport of Dangerous Goods. This means that in most countries there is a strong interest in the activities of the UN Committee on the Transport of Dangerous Goods and that activities among the competent authorities for the various modes are co-ordinated.

Many countries implemented RID/ADR many years ago, before the Directives were operative. However, this is not the case in all countries, especially the new Member States. For these countries implementation of RID/ADR will need attention. A special problem is that each country has to take care of a translation for which resources must be made available.

In order to ensure that the legislation is followed in the countries of the EU, the Directives on the Safety Advisers and Enforcement are of importance. These Directives have also been implemented into the legislation. Uniform Procedures implementation of the Directives in practice has not always been done in a harmonised way in the EU countries. There are a number of differences, examples are:

- enforcement: is it by specially trained inspectors or by the police
- authorising bodies for testing and approval

The analysis shows that security is approached in different ways in the countries of the EU. In some this subject does not have a high priority, while in most countries implementation of the ADR requirements has just started. There are still a lot of aspects to be clarified in implementing the security provisions.

TPED

The questionnaire and the subsequent interviews revealed that most Member States were confused in various respects about the use and application of the Directive. Industry is also confused. What was intended as a relatively simple system of mutual recognition has proved very complicated and confusing.

Part of the confusion arises from the terms Notified bodies, Competent bodies and competent authority functions. It is further confused because there are different modules for different types of cylinder.

In addition, as reported in Part 8 of this report, the Directive raises potential trade issues with non-Member States, particularly North America.

As reported in the historical overview whilst the Directive was being developed, the UN Committee of Experts developed a system for UN marked cylinders addressing the same issues. As Member States are party to the international conventions and trade with the rest of the world, it would appear to the consultants preferable to have a single system of approval. It is noted that at the meeting of the TDG Committee on 24 November 2004, a paper to consider such actions was tabled by the Commission.

Part 10: Main Conclusions

Framework Directives

The main purpose of this report was to review the impact of the various Directives that have been implemented by the Commission to standardise the rules for the transport of dangerous goods within the Member States. The main Directives are the two Framework Directives for RID/ADR. Member States are content with the two Framework Directives. They do not consider that any new Directives are required in this area. In principle, they are content to see the Directives merged and provisions for Inland Waterways included. However, those States with no international inland waterways carrying freight or waterways solely within in a national territory or no railways (Malta and Cyprus) require safeguards to ensure that they do not have to apply waterway or railway provisions in their territory. Several countries observed that they were content to apply the IMDG Code – suitably adapted – to the few commercially navigable waterways in their territory.

It is noted that the TDG Committee met on 24 November 2004 and agreed in principle to a single Framework Directive for road, rail and inland waterway. Any change should not impose unnecessary administrative burdens on the Member States.

Only about one third of Member States have stated that they would become contracting parties to the ADN Convention. The rest have indicated no interest and wish to be excluded from any Directive that addresses inland waterways. Considering that Central Rhine Commission and the Danube Commission already duplicate most of the work of ADN, the consultants question the added value of an EU Inland Waterways Directive which does not apply to all Member States.

Statistics

Tonnages and Movements

Accurate statistics concerning the transport of dangerous goods have been difficult to obtain. The statistics included in this study are a combination of international trade and transport data. Where data were available from other sources (e.g. national governments) a comparison was undertaken and the most reliable source was selected. The analysis was carried out for the three surface modes of transport - road, rail and inland waterway

Within the 15 Member States of the EU in 2002 (EU-15) and based on tonne - kilometres road transport has the largest share of the dangerous goods traffic (58%) while rail transport and inland waterway represent 25 % and 17 %, respectively.

Eurostat data form the basis of the study with national data taken into account for validation. For the EU-15 countries complete and consistent data for the years 1990 to 2002 all available and could be validated. For Norway and Switzerland and the ten accession States, the same analysis was limited to the year 2000, as data prior to this date were not available.

The growth in dangerous goods transport over the 12 years analysed in terms of tonne-kilometres is much less dynamic than the development of total goods transport volumes with regard to tonne-kilometres. This is reflected the proportion of dangerous goods in the total for all transport which fell from 6.8 % in 1990 to 6.0 % in 2002 as tonnage, and from 9.1 % in 1990 to 7.8 % in 2002, in tonne-kms. Over the same period the total transport grew by 31% (tonne-kms), while dangerous goods transport only represents an increase of 13%.

Flammable liquids (class 3) are the largest single class and include petroleum products (accounting for about two-thirds of the total traffic in 2002 - EU-15 countries). Gases (class 2) are second and its share amounts to about 16%; corrosive substances (class 8) are third.

The quantities of goods in classes 5.2, 6.2 and 7 are difficult to identify as they are not adequately recorded, either in trade or transport statistics. However these classes figure significantly in the waste statistics. So the analysis was based on both the available results from transport and from waste statistics.

The share of dangerous goods analysed by country depends on their role within the European transport system. Countries with main ports have significantly higher proportions of dangerous goods within the total for all goods transported.

Traffic routes

Traffic route data were generally not available and where it was this was general in nature and usually not up to date. Member States carried out occasional surveys.

There is no reason to suppose that the important routes for dangerous goods transport differ from those for other goods. Nevertheless, the ports and the centres of petroleum storage and refinement attract and emit dangerous goods transport more than average.

The trend of moving chemical production to East Asia does not reduce movement of dangerous goods in Europe significantly, but simply shifts their origins and destinations from the centres of chemical industries to the ports leading to changing distribution patterns. The movement of chemical production does not affect petroleum products, which represent most of the dangerous goods moved.

Infringements

The data from the Uniform Procedures Directive (95/50/EC) are incomplete. Inconsistent returns from Member States have made analysis very difficult.

The new form and reporting system may improve the quality, but Member States must be urged not to incorporate additional questions or if they do to ensure that they are specifically excluded when making returns to the Commission.

The Commission should plan to analyse the results and discuss the findings with the Member States at the TDG Committee with a view to considering whether any further action is required.

Consideration should be given to a Uniform Procedures Directive for railway traffic as in the last decade the structure of railways companies has changed.

Derogations

The system of derogations is necessary because RID/ADR at present has no facility to address all the domestic issues relating to local deliveries and operations. Derogations are also required because of geographical, demographic, cultural and social variations between countries. However, the system of derogations has some unsatisfactory features, notably:

- The current list is written in different styles and the individual purpose is often difficult to ascertain.
- It would appear a number of countries have derogations that have not been submitted to the Commission. Those countries with a federal constitution delegate powers to state/provinces and in some instances derogations issued at these local levels have not been registered. Some Member States view these as constituting possible trade barriers.

The consultants are of the view that the majority of the derogations could be turned into Multilateral Special Agreements under RID or ADR. However, there has to remain a facility for derogations approved by the Commission.

The method of presentation of derogations to the Commission needs to be revised. As a first step existing derogations need to be reviewed in detail to determine that they are still required. Once this has been done the remaining derogations should be clarified and all presented in a standard format. An approval procedure should be established which provides for a technical assessment of proposals.

Security

Security is of great concern. Most Member States have not yet fully established the system to put the new provisions of RID/ADR into force arguing that in many cases they do not need to comply until July 2005, but in some instances that they have constitutional problems in applying the provisions.

The consultants consider that there is need for the Commission to:

- Carefully watch the development especially for the road mode
- Remind Member States and industry that they have a duty to apply all the provisions of RID/ADR on security
- Support a “platform” for sharing best practice among the Member States

Safety Advisers

A majority of Member States believe that the DGSA Directive could be revoked as the provisions for the DGSA are incorporated into Chapter 1.8 of RID/ADN and ADN. However, it has to be noted that the wording of the Directive and the RID/ADR/ADN provisions are not exactly the same, which should be considered by the TDG Committee before a final decision is made.

The general view of the interviewees and the consultants is that the DGSA Directive has improved safety awareness and general knowledge of the regulations. In that context, it is generally viewed that the Directive should be extended to sea and air transport. The question arises whether the Commission has competence in these areas.

If the Commission decided to take such action the syllabus and examination options would have to be reconsidered because much of the text of the individual modal regulations is the same and duplicating the examination in certain areas would provide no safety benefits.

Overall transport conditions

Implementation and Enforcement Harmonisation

All Member States who responded to the questionnaire, have made necessary regulations to implement the Directives.

All countries provide a competent authority function, but the number of staff in the national competent authorities ranges from a single person up to 20 persons providing equivalent functions. To some extent, this reflects the size of the chemical industry in their country

The capacity to implement and enforce the regulations is extremely variable. It is not only related to the functions of staff but also to their relative skills and comprehension of both of the Framework Directives and ADR and RID.

The Commission should consider whether to assist countries who have difficulties performing the role of the competent authority because of a limited understanding of the regulations. Offering some special training courses for regulators to give them a comprehensive understanding of the regulations could do this.

Incident data

Europe produces very few statistics on incidents involving the transport of dangerous goods. The Uniform Procedures Directive has produced very little meaningful data. Although, RID/ADR now include a requirement for reporting incidents, it is intended for the larger more significant events. There should be a reporting system that addresses daily minor occurrences, such as small leaks from packagings, failure to close valves on tanks correctly etc. Such minor incidents form the basis of determining whether RID/ADR is providing society with an adequate level of safety

It is a requirement that a Dangerous Goods Safety Adviser produce an annual report. Included in that report is a requirement to detail and analyse any accidents/incidents. There may be merit in having a standard DGSA report (a list of minimum requirements, not necessarily a standard form) and including in this a list of incidents, including details possibly based on the Uniform Procedures Directive (95/50/EC). In addition, make it a requirement that reports are sent to the competent authority annually. The analysis of such returns, could, where, appropriate, be considered by the TDG Committee. A European database on incidents should be considered.

Beyond Europe

Interface with CIS States

The majority of the 10 new Member States that joined the Community in May 2004 are very close to or have frontiers with the Russian Federation and some of the Commonwealth of Independent States (CIS Republics) of the former USSR. Based on the interviews there are a number of problems which form not only barriers to trade but could raise basic safety issues. The OSZhD has separate dangerous goods rules based on the 2001 RID. Ten Member States of the European Union belong to both RID and the OSZhD system.

Road transport does not seem to fair any better. Although, the Russia Federation has signed ADR, actual application within the various states does not appear to have taken place.

The Commission via trade contacts should consider assisting the standardisation of the dangerous goods transport rules between Europe and the Russian Federation and the CIS republics.

Country analysis

TPED

Council Directive 99/36/EC on transportable pressure equipment (TPED) appears to have given rise to confusion. The Directive has not yet been applied in most Member States and there is every likelihood that many of its provisions are addressed in the UN Model Regulations for UN approved cylinders. It is perhaps worth considering revoking a regional system in favour of the international multimodal system of the UN, provided certain saving clauses permitting mutual recognition are retained.

Again it is understood that this was considered by the TDG Committee on 24 November 2004, although no decision was made

Co-ordination

Many Member States need to co-ordinate better at the national level between the modal agencies in their countries.

Role of the European Commission

The European Commission team responsible for the transport of dangerous goods is small and the available resources, in the view of the consultants, is limited. Therefore the role should be to ensure that Member States:

- implement and apply the Directives in a standard and consistent manner,
- promote projects that would be of benefit to all Member States that the Commission could oversee, such as risk analysis and research into the problems such as harmonised limited quantities, and

- act as a point for liaison and analysis of problems. In this respect the consultants consider that the number of meetings held each year (normally two) and their duration is insufficient to consider all the issues. This is highlighted by the fact that the derogations have not been analysed, an informal group developed the new form for Uniform Procedures, and the security provisions are presenting difficulties.
- ensure greater co-operation in the fields of enforcement particularly at a multimodal level. Such co-operation should attempt to set down standard enforcement regimes. In addition the co-operation should extend to ensuring standard application of testing and approval schemes for items such as packagings, tanks etc. Most member states felt that there should be more co-operation and the Commission could assist in this area.

There is a need for better co-ordination within the European Commission concerning dangerous goods regulation. At the moment it would appear that Directorate General for Transport and Energy including the Directorate dealing with Class 7, DG Enterprise and Industry and DG Environment all play roles in dangerous goods regulations. Closer co-operation is needed both for the benefit of regulators and industry.

It is not recommended that the Commission become a party to ADR.

Annex A: Glossary of Terms

49CFR	Code of Federal regulations Part 49 (US dangerous goods legislation)
ADN	European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway.
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road (initials based on the French title).
AETR	European Agreement concerning the Work of Crews of Vehicles engaged in International Road Transport
ASEAN	Association of Southeast Asian Nations
ASME	American Society of Mechanical Engineers
Basel Convention	Convention on the Control of Trans-boundary Movement of Hazardous Wastes and their Disposal (Basel Convention)
CCNR	Central Rhine Commission
CEFIC	European Council of Chemical Manufacturer's Federations.
CEN	European Standards Organisation.
CFR49	Code of Federal Regulations Part 49 (USA).
CIM	Uniform Rules concerning the Contract for International Carriage of Goods by Rail.
CIS	Commonwealth of Independent States (Former republics of the USSR)
CIT	International Railway Transport Committee.
CN	Combined Nomenclature for Trade Statistics
Comext	Eurostat Data Base for international Trade Statistics (cf. Intrastat)
COTIF	Convention concerning International Carriage by Rail.
DGSA	Dangerous Goods Safety Adviser
DOT	Department of Transportation (USA)
EC	European Community
ECE	See UNECE
ECOSOC	Economic and Social Council of the United Nations.
EU	European Union.
Framework Directives	Council Directives 94/55EC and 96/49EC See Annex D
GESAMP	The Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection

GHS	Globally Harmonised system for Chemical Classification and Hazard Communication.
IAEA	International Atomic Energy Agency.
IATA	International Air Transport Association.
IBC	Intermediate Bulk Container.
ICAO	International Civil Aviation Organisation.
IMCO	Abbreviation of former name for IMO.
IMDG	International Maritime Dangerous Goods (Code).
IMO	International Maritime Organisation.
Intrastat	Eurostat Data Base for International Trade Statistics (cf. Comext)
ISO	International Standards Organisation.
ISPS	International Ship and Port Facilities Security Code
Joint Meeting	Joint Meeting of the RID Safety Committee and the Working Party (WP15) on dangerous goods (ADR).
MERCOSUR	Treaty Establishing a Common Market between the Argentine Republic, the Federal Republic of Brazil, the Republic of Paraguay and the Eastern Republic of Uruguay
MARPOL	International Convention for the Prevention of Pollution from Ships 1973, as modified by the Protocol of 1978.
MEGC	Multiple-Element Gas Containers
MSA	Multilateral Special Agreement (RID/ADR)
New Cronos	Eurostat Data Base concerning socio-economic and Transport Statistics
N.O.S	Not otherwise specified.
NST/R	Goods classification for Transport Statistics
Orange Book	The UN Recommendations on the Transport of Dangerous Goods
OCTI	Central Office for International Carriage by Rail (Usually known as Central Office for International Rail Transport) – the parent body for OCTI
OTIF	Organisation Intergouvernmental pour les Transports Internationaux Ferroviaires (name will replace OCTI when COTIF 1980 comes into force)
OSZhD	The Organisation for Co-operation of Railways
PSN	Proper shipping name
REACH	Registration, Evaluation and Authorisation of Chemicals
Ro/Ro	Roll on / Roll off – Feries
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail.

SEVESO	Council Directive 96/82/EC of 9 December 1996 on the control of major-accident hazards involving dangerous substances
SOLAS	The Safety of Life at Sea Convention.
STCW	International Convention on Standards of Training, Certification and Watchkeeping for Seafarers
SMGS	Agreement on International Goods Transport by Rail (OSZhD)
TDG	Transport of Dangerous Goods
TDG Committee	The Committee on the Transport of Dangerous Goods (EU).
TIR	The Customs Convention on the International Transport of Goods under Cover of TIR Carnets
TPED	Transportable Pressure Equipment Directive
TIs	Technical Instructions for the safe Transport of Dangerous Goods by Air
UIC	International Union of Railways
UN	United Nations.
UN Committee	The United Nations Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonised 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
WP15	Working Party on the Transport of Dangerous Goods

Annex B: Signing of Dangerous Goods Conventions by the Commission

In the Invitation to Tender for TREN/E3/43-2003 paragraph 2.2 (12) the Commission identify that they have signed COTIF on behalf the European Union. They asked the Consultants to comment on the possibility of doing the same with ADR and ADN.

It is noted that the Commission has ratified at least seven conventions at the UN relating to transport matters. Most of the Conventions relate to either Customs requirements or to free movement of vehicles e.g. TIR, AETR.

This document is not making any recommendations but sets out the possible implications of this course of action.

Background - The Member States position with Dangerous Goods

RID and subsequently ADR and in the future ADN are all dealing with transport regimes between the Member States joined by the land. RID began over a hundred years ago in the Austro-Hungarian Empire, it spread to France and other countries adjoining the Empire. The UK and other states where sea crossings were involved joined RID much later. Much of the original text was looking directly at land transport without addressing the impact of a sea journey.

Countries like the UK, Ireland, Norway, Sweden etc along with the new Member States of Cyprus and Malta have probably had as much interest in the sea regulations because they were not just for international journeys but for journeys to local islands. More recently air movements of dangerous goods have become Important at a domestic level as well as internationally.

This has meant that the philosophical approach to the transport of dangerous goods in many countries has been different.

These different approaches to the basic philosophy are often reflected in the way countries vote on particular issues at the UN Meetings.

In recent years there have been active attempts by some countries to recognise that the multimodal aspects of transport are far more important at a domestic level than they once were.

Finally there are different legal philosophies between the Member States as set out in the Consultants proposal.

Legal Situation Regarding Signing ADR

Article 6 of the ADR Convention states that "Countries members of the Economic Commission for Europe and countries admitted to the Commission in a consultative capacity under paragraph 8 of the Commission's terms of reference may become Contracting Parties to this Agreement". This would seem to exclude the possibility of the EU Commission becoming a Contracting Party.

Commission Competence in the area of Dangerous Goods Transport

Commission competence within the EU in the area concerning the transport of dangerous goods has been established through the ADR and RID Framework Directives (94/55 AND 96/49). When ADN is in force and the ADN Framework Directive is adopted the competence will be extended to inland waterways.

The RID and ADR may take precedence for international journeys over the Framework Directives – although this is apparently a matter of some debate with Member States. The Commission signing ADR would enable them to have competence for international transport.

Effect of signing ADR by the European Commission

If the Commission is legally entitled to become a contracting party to ADR and signs it, what is the effect?

1. Is it to simply have a vote in the decision making process along with the Member States themselves? If so, there is one extra vote for members of the EU as a whole but this seems to assume that

   a. Member States are in a minority at the meetings or
   b. Members States vote as a block

   1.1 There are 39 contracting parties to ADR; it is rare that there are more than 20 countries in total to take part in a vote and not all of those are EU Member States. So it is doubtful that a Commission vote will have a significant impact.

   1.2 Member States rarely vote as a block at UN meetings; not only are there the historic reasons but also legal reasons (the "Anglo Saxon" v "the Roman" law approach), commercial reasons (countries supporting local industry). Again a Commission vote does not seem to offer any benefit. In practice, Non-Member States could view a Commission signature as unfair.

2. Is it to remove the individual votes of the Member States and have a single vote?

   The effect would be to remove the limited powers that the current Member States have at WP15 and the consequence would mean that Non-Member States could easily out vote the EU Members.

In addition, how will the Commission establish a position on proposals made to WP15 and the Joint Meeting? At present, many countries get briefings from other government departments and domestic industry. How would this take place if the Commission took the lead?

3. The effect of signing ADR may change status vis-à-vis the ADR Framework Directive.

   At the present time there are provisions in the ADR Framework Directive that permit Member States to retain old tanks and pressure receptacles until the end of their useful life, under certain conditions. If the Commission signs ADR is the whole European Union a single national territory permitting say an Irish national tank to operate in Germany? If this were to be the case it is very likely there will be strong objection from Member States.

4. If the 25 Member State block is to become “one Country” for ADR purposes will the Commission take on the Role of Competent Authority with all that entails? Many national governments have significant numbers of staff directly involved in day to day matters such as national competent authority approvals and approvals of competent bodies. In addition they also rely on colleagues in other departments with specific expertise in certain areas e.g. classification of explosives, organic peroxides etc. This work can require specialist skills such as that of a chemist or engineer along with a good knowledge of ADR. All such services would have to be duplicated or replaced by the Commission.

5. Finally it should be noted that 12 EU Member States have voting status at the UN Committee of Experts on the Transport of Dangerous Goods. If one of these Member States did not support a Commission position made at the Joint Meeting or WP15 then they could try and get their preferred position adopted at the UN CoE. As the majority of UN CoE decisions are adopted automatically the change could be accepted without Commission support.

Annex C: Member States Legislation

Application of Directives into National Legislation				
Country	**Directive**	***National legislation reference and date***	**Ratified ADR**	**Ratified RID (COTIF 1980)***
AUSTRIA	94/55	Act on the Transport of Dangerous Goods (Gefahrgutbeförderungsgesetz-GBGB) Ordinance on the Transport of Dangerous Goods (Gefahrgutbeförderungsverordnung-GBGV)	1973	1983
	96/49	Act on the Transport of Dangerous Goods (Gefahrgutbeförderungsgesetz-GBGB) Ordinance on the Transport of Dangerous Goods (Gefahrgutbeförderungsverordnung-GBGV)		
	95/50	Act on the Transport of Dangerous Goods (Gefahrgutbeförderungsgesetz-GBGB) Ordinance on the Transport of Dangerous Goods (Gefahrgutbeförderungsverordnung-GBGV)		
	96/35	Act on the Transport of Dangerous Goods (Gefahrgutbeförderungsgesetz-GBGB) Ordinance on the Transport of Dangerous Goods (Gefahrgutbeförderungsverordnung-GBGV)		
	99/36			
BELGIUM	94/55	A.R. 09.03.2003 relatif au transport de marchandises dangereuses par la route	1960	1983
	96/49	A.R. du 11.12.98 relatif au transport de marchandises dangereuses par chemin de fer, à l'exception des matières radioactives, comme modifié par l'AR du 707.10.2002.		
	95/50	A.R. 19.10.1998 concernant les procédures uniformes en matière de contrôle de transports de marchandises dangereuses par route		
	96/35	A.R. 01.07.1999 relatif à la désignation des conseillers à la sécurité		
	99/36			
CYPRUS	94/55		2004	
	96/49			
	95/50			
	96/35			
	99/36			

CZECH. REP.	94/55	Act No.111/1994 Coll., as last amended	1993	1993
	96/49	Act No. 266/1994 Coll., on rail systems, as last amended Regulation of the Government No. 1/2000 Coll., on the Rules of Carriage for the Public Rail Freight Transport, as last amended		
	95/50	Act No. 111/1994 Coll., as last amended Act No. 64/1987 Coll., as last amended Act No. 552/1991 Coll, as last amended		
	96/35	**Road** – Act No. 111/1994 Coll., as last amended **Rail** – Regulation of the Government No. 1/2000 Coll., on the Rules of Carriage for the Public Rail Freight Transport, as last amended **Inland waterways** – Act No. 114/1995 Coll., on inland waterways as last amended and also Ministerial Decree No. 222/1995 Coll., on inland waterways, waterway transport and transport of dangerous goods.		
	99/36			
DENMARK	94/55	Order no. 729 of 15/08/2001 concerning transport of dangerous goods by road as amended by order No. 583 of 24/06/2003.	1981	1981
	96/49			
	95/50	Order no. 729 of 15/08/2001 concerning transport of dangerous goods by road as changed by statutory order No. 583 of 24/06/2003 (+cirk. No. 151 of 04/10/1996)		
	96/35			
	99/36			
ESTONIA	94/55	Road Transport Act Law 07.06.2000 Regulation of the Minister of Transport and Communications No 118 of 14 December 2001 on “Rules for transport of dangerous goods by road” Law 14.12.2001	1996	
	96/49	Railway Transport Act Law 31.03.2004 Law of accession to the Convention concerning International Carriage by Rail (COTIF)		
	95/50	Regulation of the Minister of Transport and Communications No 118 of 14 December 2001 on “Rules for transport of dangerous goods by road” Law 14.12.2001		
	96/35	Regulation of the Minister of Economic Affairs and Communications No 56 of 3 April 2003 “Curriculum for the training, requirements for professional qualification and certificate model for safety adviser” Law 03.04.2003		
	99/36			

FINLAND	94/55	Laki vaarallisten aineiden kuljetuksesta (719/1994, 1596/1995, 124/2001) Valtioneuvoston asetus vaarallisten aineiden kuljetuksesta tiellä (194/2002, 283/2003) Liikenne- ja viestintäministeriön asetus vaarallisten aineiden kuljetuksesta tiellä (277/2002, 313/2003)	1979	1984
	96/49	Laki vaarallisten aineiden kuljetuksesta (719/1994, 1596/1995, 124/2001) Valtioneuvoston asetus vaarallisten aineiden kuljetuksesta rautatiellä (195/2002, 307/2003) Liikenne- ja viestintäministeriön asetus vaarallisten aineiden kuljetuksesta rautatiellä (278/2002, 314/2003)		
	95/50	Liikenneministeriön päätös vaarallisten aineiden tiekuljetusten valvomiseksi suoritettavista tarkastuksista 705/1996, 1190/2001)		
	96/35	Asetus vaarallisten aineiden maakuljetusten turvallisuusneuvonantajasta (274/2002)		
	99/36			
FRANCE	94/55	Arrêté du 1er juin 2001 modifié relatif au transport des marchandises dangereuses par route (dit arrêté ADR)	1960	1982
	96/49	Arrêté du 5 juin 2001 modifié relatif au transport des marchandises dangereuses par chemin de fer (dit arrêté RID)		
	95/50	Arrêté du 5 décembre 2002 modifié relatif au transport des marchandises dangereuses par voies de navigation intérieure (dit arrêté ADNR)		
	96/35	Circulaire du 20 octobre 1997		
	99/36	Article 11bis de l'arrêté ADR Article 14bis de l'arrêté RID Article 11bis de l'arrêté ADNR		
GERMANY	94/55	"Gefahrgutbeförderungsgesetz – GGBefG" (Dangerous Goods Transportation Act) together with "Gefahrgutverordnung Straße und Eisenbahn – GGVSE" (Ordinance on the Transport of Dangerous Goods by Road and Rail) and "Gefahrgut-Ausnahmeverordnung –GGAV" (Ordinance on the Exemptions for the Transport of Dangerous Goods)	1969	1985
	96/49			
	95/50	"Gefahrgutbeförderungsgesetz – GGBefG" (Dangerous Goods Transportion Act) together with "Verordnung über die Kontrollen von Gefahrguttransporten auf der Straße und in den Unternehmen –GGKontrollV" (Ordinance on the Checks on the Transport of Dangerous Goods by Road)		
	96/35	„Gefahrgutbeförderungsgesetz – GGBefG" (Dangerous Goods Transportation Act) together with together with "Gefahrgutbeauftragtenverordnung – GbV" (Ordinance on Safety Advisors for the Transport of Dangerous Goods) and "Gefahrgutbeauftragtenprüfungsverordnung – PO Gb" (Ordinance on the Examination of Safety Advisors for the		

		Transport of Dangerous Goods)		
	99/36			
GREECE	94/55		1988	1986
	96/49			
	95/50			
	96/35			
	99/36			
HUNGARY	94/55	Act № 19 of 1979. on Hungary's joining the ADR Agreement; decree of the transport minister № 20/1979.(IX.18.)KPM on the implementation of the provisions of ADR in domestic road transport of dangerous goods, last amended by ministerial decree № 48/2003.(VII.24.)GKM (ADR 2003)	1979	1982
	96/49	Act № 2 of 1986. on COTIF Agreement; decree of the transport minister № 4/1987.(V.13.)KM on the implementation of the provisions of RID in domestic rail transport of dangerous goods, last amended by ministerial decree № 47/2003.(VII.24.)GKM (RID 2003)		
	95/50	Government decree № 1/2002.(I.11.)Korm. On uniform procedures for checks on the transport of dangerous goods by road		
	96/35	Government decree № 2/2002.(I.11.)Korm. On the appointment and vocational qualification of safety advisers for the transport of dangerous goods by road, rail and inland waterway; № 8/2002.(I.31.)KöVíM on the examinations of DGSA (corresponding to directive 2000/18/EC)		
	99/36			
IRELAND	94/55	Carriage of Dangerous Goods by Road Regulations 2004. S.I. 29,2004		1986
	96/49	S.I. No. 701 of 2003 European Communities (Transport of Dangerous Goods by Rail) Regulations, 2003.		
	95/50	Carriage of Dangerous Goods by Road Regulations 2004. S.I. 29,2004		
	96/35	European Communities (Safety Advisers for the Transport of Dangerous Goods by Road and Rail) Regulations, 2001 (S.I. No. 6 of 2001		
	99/36			
ITALY	94/55	Decree 4 September 1996 (EEC Directive 94/55) as amended by the Decree 20 June 2003 (EEC Directive 2003/28) of the Ministry of Infrastructure and Transport.	1963	1985
	96/49			
	95/50	Decree 4 February 2000		
	96/35			

	99/36			
LATVIA	94/55	Law on road carriage; Regulations of CoM Nr 435 “On carriage of dangerous goods by road” (05.08.2003); Code of administrative Infringement, special article; Regulations of CoM No.466 “ Regulations about vehicle state technical inspection and technical control on roads(29.04.2004.) – part about vehicle technical requirements and the procedure for receiving ADR vehicle certificates	1996	2000
	96/49	Law on railway carriage Regulations of CoM NR 226 “On carriage of dangerous goods by railway”(29.04.2003); Code of administrative Infringement, special article		
	95/50	Regulations of CoM NR 222 “On control in the field of road transport (20.06.96), with amendments 14.03.2000.		
	96/35	Regulations of CoM NR 546 “On the appointment, professional qualification and activities of safety advisers in the field of transport of dangerous goods (27.12.2001); Code of administrative Infringement, special article		
	99/36			
LITHUANIA	94/55	Resolution as concerns the rules of transportation of dangerous good by road within teritory of Lithuania (Government Resolution No. 337 on Transport of Dangerous Goods by Road, adopted on 23 March 2000)	1995	1995
	96/49	Resolution as concerns the rules of transportation of dangerous good by rail within teritory of Lithuania (Government Resolution No. 84 on Transport of Dangerous Goods by Rail, adopted on 22 January 2002)		
	95/50	Resolution as concerns the inspection system on the transport of dangerous goods (Government Resolution No. 1778 on Inspection of Transport of Dangerous Goods by Road, Rail and Inland Waterway, adopted on 13 November 2002)		
	96/35	In 2002 Minister of Transport and Communications of Lithuania issued orders: No. 3-343 on the appointment of safety advisers for the transport of dangerous goods by road, rail and inland waterway, issued 4 July 2002; No. 3-274 on the vocational training and examination of safety advisers for the transport of dangerous goods by road, rail and inland waterway.		
	99/36			
LUXEMBOURG	94/55	Règlement grand-ducal modifié du 31 janvier 2003 sur les transports par route de marchandises dangereuses	1970	1987
	96/49	Règlement grand-ducal modifié du 3 juin 2003 sur les transports par rail de marchandises dangereuses		

	95/50	Règlement grand-ducal modifié du 31 janvier 2003 sur les transports par route de marchandises dangereuses		
	96/35	Loi du 24 décembre 1999 relative aux conseillers à la sécurité pour le transport par route, par rail ou par voie navigable de marchandises dangereuses Règlement grand-ducal du 24 décembre 1999 relatif aux fonctions et au certificat de formation du conseiller à la sécurité pour le transport par route, par rail ou par voie navigable de marchandises dangereuses		
	99/36			
MALTA	94/55	Motor Vehicles (Carriage of Dangerous Goods by Road) Regulations Subsidiary Legislation 65.22 Legal Notice 211.2003		
	96/49	No railways in Malta		
	95/50	Motor Vehicles (Carriage of Dangerous Goods by Road) Regulations Subsidiary Legislation 65.22 Legal Notice 211.2003		
	96/35	Motor Vehicles (Carriage of Dangerous Goods by Road) Regulations Subsidiary Legislation 65.22 Legal Notice 211.2003		
	99/36			
NETHERLANDS	94/55	Regulations on the transport of dangerous goods by land (VLG)	1963	1982
	96/49	Regulations on the transport of dangerous goods by rail (VSG)		
	95/50	The regulations on the implementation of Directive 95/50/EC on uniform procedures for checks on the transport of dangerous goods by road, implemented in Annex III VLG.		
	96/35	Regulation Safety Adviser (“Regeling Veiligheidsadviseur”)		
	99/36			
NORWAY	94/55	Forskrift an 11 November 2002 onn transport an farlig gods pa reg og jennbane	1976	1984
	96/49			
	95/50			
	96/35			
	99/36			
POLAND	94/55	The Law dated 28 October 2002 on the carriage of dangerous goods by road (Dz.U. 2002 r. Nr 199, poz. 1671); Regulation of the Minister of Infrastructure dated 20 December 2002 on refresher training courses for drivers of vehicles carrying dangerous goods (Dz.U. 2002 r. Nr 236, poz. 1987); Regulation of the Minister of Infrastructure dated 23 December 2002 on the certificate of approval for vehicles carrying certain dangerous goods (Dz.U. 2002 r. Nr 237, poz. 2011); Regulation of the Minister of Infrastructure dated 31 December	1975	1985

		2002 on dangerous goods the road carriage of which shall be reported (Dz.U. 2002 r. Nr 241, poz. 2085).		
	96/49	The Law dated 31 March 2004 on the carriage of dangerous goods by rail (Dz.U. 2004 r. Nr 97, poz. 962)		
	95/50	The Law dated 28 October 2002 on the carriage of dangerous goods by road (Dz.U. 2002 r. Nr 199, poz. 1671); Regulation of the Minister of Infrastructure dated 23 December 2002 on the control check list form (Dz.U. 2002 r. Nr 237, poz. 2014); The Law dated 6 September 2001 on the road transport (Dz.U. 2001 r. Nr 125, poz. 1371).		
	96/35	The Law dated 28 October 2002 on the carriage of dangerous goods by road (Dz.U. 2002 r. Nr 199, poz. 1671); Regulation of the Minister of Infrastructure dated 23 December 2002 on granting the training certificates to safety advisers in the scope of the carriage of dangerous goods by road (Dz.U. 2002 r. Nr 237, poz. 2013); Regulation of the Minister of Infrastructure and the Minister of Internal Affairs and Administration dated 31 December 2002 on the format of the annual report on carriages of dangerous goods by road and procedure of completing such format (Dz.U. 2002 r. Nr 240, poz. 2072). Act of 21 December 2000 on inland water navigation (Dz.U. 2001 r. Nr 5, poz. 43 ze zm.).		
	99/36			
PORTUGAL	94/55	Decreto-Lei nº 267-A/2003, de 27 de Outubro (amended the former legislation)	1967	1986
	96/49	Decreto-Lei nº 124-A/2004, de 26 de Maio (amended the former legislation)		
	95/50	Decreto-Lei nº 267-A/2003, de 27 de Outubro (amended the former legislation)		
	96/35	Decreto-Lei nº 322/2000, de 19 de Dezembro		
	99/36	Despacho nº 1643/2002 in our official journal (DR, IIS, nº 169, 24.7.2002).		
SLOVAK REP.	94/55	Act Nr 168, in force since 1996	1993	1994
	96/49	Act Nr 164, in force since 1996		
	95/50	Act Nr 168, in force since 1996		
	96/35	Act Nr 164, in force since 1996 – rail Act Nr 168, in force since 1996- road		
	99/36			

SLOVENIA	94/55	Transport of Dangerous Goods Act, OJ 79/99	1992	1992
	96/49	Transport of Dangerous Goods Act, OJ 79/99		
	95/50	Not Applicable		
	96/35	Transport of Dangerous Goods Act, OJ 79/99		
	99/36	Transport of Dangerous Goods Act, OJ 79/99		
SPAIN	94/55	Mercancías Peligrosas por Carretera. Real Decreto 230/1998, de 16 de Febrero, sobre aprobación del Reglamento de Explosivos. Real Decreto 948/2003, por el que se establecen las condiciones mínimas que deben reunir las instalaciones de lavado interior o desgasificación y despresurización, así como las de reparación o modificación de cisternas de mercancías peligrosas por Carretera y por Ferrocarril Real Decreto 749/2001, de 29 de Junio, por el que se establecen las características mínimas que deben de cumplir las bocas de hombre e inspección de las cisternas de carburantes (gasolinas, gasóleos y fuel-oils ligeros), así como combustibles de calefacción doméstica u otros combustibles de uso industrial que están clasificados en el ADR como materias de la Clase 3 y que además tengan una presión de cálculo de la cisternas de 0,75 kg/cm2 de presión manométrica. Orden Ministerial CTE/964/2004, de 31 de Marzo, por la que se actualiza el Anexo 3 y se modifican el Anexo 4, el Anexo 6 y diversos apéndices del Anexo 5, del Real Decreto 2115/1998, sobre transporte de mercancías peligrosas por carretera.	1972	1982
	96/49	Real Decreto 412/2001, de 20 de Abril, sobre Transporte de Mercancías Peligrosas por Ferrocarril. Real Decreto 230/1998, de 16 de Febrero, sobre aprobación del Reglamento de Explosivos. Real Decreto 948/2003, por el que se establecen las condiciones mínimas que deben reunir las instalaciones de lavado interior o desgasificación y despresurización, así como las de reparación o modificación de cisternas de mercancías peligrosas por Carretera y por Ferrocarril		
	95/50			
	96/35	Real Decreto 1566/1999, sobre Consejero de Seguridad		
	99/36			
SWEDEN	94/55	Statens räddningsverks föreskrifter om transport av farligt gods på väg och i terräng SRVFS 2002:1	1974	1985
	96/49	Statens räddningsverks föreskrifter om transport av farligt gods på järnväg SRVFS 2002:2		
	95/50	Not implemented		

	96/35	Rikspolisstyrelsens föreskrifter om tillsyn over farligt gods RPSFS 2000:11 FAP 338-1		
	99/36	Statens räddningsverks föreskrifter om säkerhetsrådgivare för transport av farligt gods SRVFS 2003:2		
SWITZERLAND	94/55	Ordonnance relative au transport des marchandises par route (SDR) 29 Novembre 2002	1972	1983
	96/49	Ordonnance du 3 décembre 1996 relative au transport des marchandises dangereuses par chemin de fer (RSD, SR 742.401.6)		
	95/50	Art. 17, 18, 25 Abs. 2 und 27 SDR		
	96/35	Ordonance du 15 juin 2001 sur les conseillers à la sécurité pour le transport de marchandises dangereuses par route, par rail ou par voie navigable (Ordonnance sur les conseillers à la sécurité, OCS, SR 741.622)		
	99/36			
UK	94/55	Statutory Instrument 2004/568 (ISBN 0110490630) 'The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2004'. This is consolidated legislation for road and rail for Great Britain (Northern Ireland are finalising similar legislation for road and rail including explosives and radioactive materials, currently main legislation is Statutory Rule 2002/34 (ISBN 0337941513) – 'Carriage of Dangerous Goods (Amendment) Regulations (Northern Ireland) 2002' which details related current legislation with explosives covered by other current legislation). 2) SI 1996/2095 (ISBN 0110629264) 'The Carriage of Dangerous Goods by Road Regulations 1996'. Relevant parts of SI 1996/2095 also apply for road as detailed in SI 2004/568. 3) Radioactive Materials by road for Great Britain – SI 2002/1093 (ISBN 0110422481) 'The Radioactive Material (Road Transport) Regulations 2002 amended by SI 2003/1867 (ISBN 0110470230) 'The Radioactive Material (Road Transport) (Amendment) Regulations 2003	1968	1983
	96/49	Statutory Instrument 2004/568 (ISBN 0110490630) 'The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2004'. This is consolidated legislation for road and rail for Great Britain including radioactive materials by rail (Northern Ireland are finalising similar legislation). 2) SI 1996/2089 (ISBN 0110629191) 'The Carriage of Dangerous Goods by Rail Regulations 1996'. Relevant parts of SI 1996/2089 also apply for rail as detailed in		

		SI 2004/568.		
	95/50	This was introduced by administrative means rather than legislative means, the EC was informed accordingly. It is enforced by the Health and Safety Executive (HSE), a Department for Transport (DfT) agency, the Vehicle and Operator Services Agency (VOSA), and the police.		
	96/35	Statutory Instrument 2004/568 (ISBN 0110490630) 'The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2004'. This is consolidated legislation for road and rail for Great Britain including radioactive materials by rail Relevant parts of SI 1996/2089 also apply for rail as detailed in SI 2004/568.		
	99/36	Statutory Instrument 2004/568 (ISBN 0110490630) 'The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2004'. This is consolidated legislation for road and rail for Great Britain including radioactive materials by rail Relevant parts of SI 1996/2089 also apply for rail as detailed in SI 2004/568.		
* COTIF has been revised several times since 1893 and the dates in this column relate to the current convention. A majority of the States above were party to the earlier versions				

Annex D: Community Legislation

No	*Title*
	ADR Framework Directive
94/55	Council Directive 94/55EC on the approximation of laws of the Member States with regard to the transport of dangerous goods by road
96/86	Commission Directive 96/86EC adapting to technical progress Council Directive 94/55EC on the approximation of laws of the Member States with regard to the transport of dangerous goods by road
1999/47	Commission Directive 1999/47/EC of 21 May 1999 adapting for the second time to technical progress 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
2000/61	Council Directive 94/55EC on the approximation of laws of the Member States with regard to the transport of dangerous goods by road
2001/7	Commission Directive 2001/7/EC of 29 January 2001 adapting for the third time to technical progress 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
2002/886	Commission Decision of 7 November 2002 amending Council Directive 94/55/EC as regards the time-limits within which pressure drums, cylinder racks and tanks for the transport of dangerous goods by road must comply with it (Text with EEA relevance) (notified under document number C(2002) 4344)
2003/28	Commission Directive 2003/28/EC of 7 April 2003 adapting for the fourth time to technical progress 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
	Commission Decision authorising Member States pursuant to Directive 94/55EC to adopt certain derogations with regard to transport of dangerous goods by road (C(2003) 3027)

No	*Title*
	RID Framework Directive
96/49	Council Directive 96/49EC on the approximation of laws of the Member States with regard to the transport of dangerous goods by rail
96/87	Commission Directive 96/87EC adapting to technical progress Council Directive 96/49EC on the approximation of laws of the Member States with regard to the transport of dangerous goods by rail
2000/62	Council Directive 96/49EC on the approximation of laws of the Member States with regard to the transport of dangerous goods by rail
2001/6	Commission Directive 2001/6/EC of 29 January 2001 adapting for the third time to technical progress Council Directive 96/49/EC on the approximation of the laws of the Member States with regard to the transport of dangerous goods by rail
2002/885	2002/885/EC: Commission Decision of 7 November 2002 amending Council Directive 96/49/EC as regards the time-limits within which pressure drums, cylinder racks and tanks for the transport of dangerous goods by rail must comply with it (Text with EEA relevance) (notified under document number C(2002) 4343)
2003/29	Commission Directive 2003/29/EC of 7 April 2003 adapting for the fourth time to technical progress Council Directive 96/49/EC on the approximation of the laws of the Member States with regard to the transport of dangerous goods by rail
	Commission Decision authorising Member States pursuant to Directive 96/49EC to adopt certain derogations with regard to transport of dangerous goods by road (C(2003) 3026)
	Dangerous Goods Safety Advisers (DGSA)
96/35	Council Directive 96/35EC on the appointment and vocational qualification of safety advisers for the transport of dangerous goods by road, rail and inland waterway
2000/18	Directive 2000/18EC on minimum examination requirements for safety advisers for the transport of dangerous goods by road, rail or inland waterway

No	*Title*
	Uniform Procedures
95/50	Council Directive 95/50EC on uniform procedures for checks on the transport of dangerous goods by road
2001/26	Directive 2001/26EC of the European Parliament and of the Council amending Council Directive 95/50EC on uniform procedures for checks on the transport of dangerous goods by road
	Transportable Pressure equipment directive (TPED)
99/36	Council Directive 1999/36/EC of 29 April 1999 on transportable pressure equipment
2001/107	2001/107/EC: Commission Decision of 25 January 2001 deferring for certain transportable pressure equipment the date of implementation of Council Directive 1999/36/EC (Text with EEA relevance) (notified under document number C(2001) 139**)**
2001/2	Commission Directive 2001/2/EC of 4 January 2001 adapting to technical progress Council Directive 1999/36/EC on transportable pressure equipment (Text with EEA relevance)

Appendix E: Survey Questionnaire

EU Project Questionnaire

PLEASE RETURN BY 21 May 2004 To:

By post:	**By fax**	**By email**
Martin Castle Pira International Randalls Road Leatherhead Surrey KT22 7RU	44 1372 802241	martinc@pira.co.uk

For queries concerning this questionnaire please feel free to contact:

	Email	**Phone**	**Fax**
Martin Castle	martinc@pira.co.uk	44 1372 802082	44 1372 802241
Keith White	keithw@pira.co.uk	44 1372 802084	44 1372 802241
Markus Wesoly	markus.wesoly@bam.de	49 (30) 81041301	49 (30) 81041317
Ton Schilperoord	a.schilperoord@ptc.tno.nl	31 15 269 6480	31 15 269 6280
Michael O'Hart	mohart@eircom.net	353 71 9160892	
Concerning statistics:			
Walter Schneider	walter.Schneider@bvu.de	49 761 47930 22	49 761 47930 40

The following questions relate to all classes of dangerous goods including Class 1 (explosives) and Class 7 (Radioactive Materials).

1 Please pass copies of this questionnaire to colleagues who have responsibility for Class 1 and Class 7.

2 For EU accession states please answer the questions as if you are a full member.
3 Where a question asks for detail the consultants are seeking a brief explanation of the procedure(s).
4 If necessary, please continue answers on a separate sheet and attach to the end of this document.

General

1. Please list the national regulations and any supplementary guidance material that you publish to support the Directives listed below.

Directive	National regulations	Supplementary documents issued
Council Directive 94/55EC on the approximation of laws of the Member States with regard to the transport of dangerous goods by road		
Council Directive 96/49EC on the approximation of laws of the Member States with regard to the transport of dangerous goods by rail		
ADNR		
Council Directive 95/50EC on uniform procedures for checks on the transport of dangerous goods by road		
Council Directive 96/35EC on the appointment and vocational qualification of safety advisers for the transport of dangerous goods by road, rail and inland waterway		

2 (a) Do you collect national statistics concerning the transport of dangerous goods by:

i) Road Yes/No

ii) Rail Yes/No

iii) Inland waterway Yes/No

(b) If so

i) Is the information published if so where or if not are you able to supply the detail to BVU for this project

_____

_____

_____

_____

ii) How is such data collected and who coordinates the information?

_____

_____

_____

_____

iii) Does the data provide the volume of dangerous goods load/unloaded per year by (tonnes and tonne/kilometres).

Yes/No

iv) Do the statistics differentiate between classes?

Yes/No

(c) Do you have a statistical reporting system for dangerous goods, which goes beyond the EC transport statistics directives? If so please provide details?

_____

_____

_____

_____

3 In relation to accidents involving dangerous goods for the last 5 years

i) Please complete the following table:

	Road				**Rail**				**Inland Waterway**			
	No	No. of deaths	No. of serious injuries	Environmental damage	No	No. of deaths	No. of serious injuries	Environmental damage*	No	No of deaths	No of serious injuries	Environmental damage
Total accidents												
Accidents involving dangerous goods												

* Environmental damage includes material damage to infrastructure and buildings

ii) How is accident data collected and who co-ordinates the information

4 Please identify the person(s), agency or government department who is responsible for

i) marine carriage of dangerous goods

ii) air carriage of dangerous goods

iii) for representing/monitoring the work of the UN Committee of Experts on the transport of dangerous goods

_____

_____

_____

_____

5 Council Directive 67/548EC on the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances is currently under review for the purposes of harmonizing with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) in conjunction with REACH. The target date is 1 July 2006.

i) Are you aware of the changes?
Yes/No

ii)
Has there been liaison between the national competent authority for supply and use of chemicals with national transport representatives.
Yes/No

6 i) Do you intend to accede to ADN in the near future? Yes/No

ii) Are you party to the ADNR agreement?

Yes/No

iii) What are the problems in acceding to ADN if you are part of ADNR?

_____

_____

_____

_____

7 Do your national regulations implement the Basel Convention on the Control of Transboundary movements of Hazardous waste and their disposal (1989) and make reference to the need for compliance with the Framework Directives.

Yes/No

Council Directive 94/55EC on the approximation of laws of the Member States with regard to the transport of dangerous goods by road
and
Council Directive 96/49EC on the approximation of laws of the Member States with regard to the transport of dangerous goods by rail

8 Please provide a general assessment of whether the application of ADR/RID to national transport by Directives has been useful

_____

_____

_____

_____

9 A number of national derogations have been published in Commission Decision C2003(3027) for ADR and C2003(3026) for RID.

i) Are any of the derogations you requested no longer required? If so which ones.

Yes/No

ii) Are there any derogations given to other Member States that you are using or intending use. Have you informed the Commission? Please provide details.

iii) Are you likely to apply for any more national derogations you might consider necessary. Please provide details.

iv) For Accession states only. Are you likely to adopt any of the derogations, if so, which and are you likely to apply for any additional derogations, if so, please give details.

Note: The decisions above are under revision in the EC Committee on the transport of dangerous goods. Please do not include in your answers above the proposals that you have already submitted to the next Committee meeting of 1 April 2004; you can assume that they are included in the (revised) Decisions.

10 Within the scope of Chapter 1.9 of RID/ADR dealing with transport restrictions such as routing or tunnel limitations.

i) Do you have any restrictions, please supply details e.g. maps. Please post any maps or other details.

Yes/No

ii) Have these been notified to the ECE (OCTI) Secretariat

Yes/No

iii) Considering such restrictions on what basis have they been made has there been a risk analysis in these restrictions, if so can you supply details.

Yes/No

iv) In view of land use planning are there safety zones i.e. restrictions in distance between vulnerable buildings and transport routes for dangerous goods. If so how are these determined for road, rail and inland waterway

Yes/No

11 The Driver Training Directive which originated as Directive 89/64EC and was fully incorporated into ADR has improved safety

i) are there sufficient drivers trained in accordance with the provisions of Chapter 8.2 of ADR (sometimes known as the vocational driver training certificate) for the volume of traffic in your territory?

Yes/No

ii) ADR will extend to the scope of driver training to vehicles below 3.5 tonnes have you any data to indicate the number of additional drivers that will be affected by this change?

Yes/No

iii) In relation to the examinations the Directive required member states to submit questions to the Commission, did you supply this information and have you updated it?

Yes/No

iv) How many questions does the bank hold at the present time?

v) What type of exam is given to the drivers:

(a)	Oral	Yes/No
(b)	Written	Yes/No
(c)	Written and oral	Yes/No

vi) How many questions are given to the driver during his examination (ADR lays down a minimum) and what is the pass mark (percentage)?

12 In relation to ADR/RID please provide details of the following bodies in your territory.

i) packaging approval organisation (ADR/RID/ADN 6.1, 6.2, 6.5 and 6.6)

ii) Tank approval organisation(s) (ADR/RID/ADN 6.7, 6.8 and 6.9)

iv) ADR vehicle inspection (9.1)

iv) Vehicle type approval organisation for ADR vehicles

v) tank inspection bodies

13 Can you provide the following data for the years 1999 - 2003:

	ADR Vehicles	ADR Tanks	National Tanks
Inspection Certificates Total number issued			

14 Article 6(3) of the Directives permits the continued use of existing vehicles not meeting ADR/RID construction requirements, provided that they are maintained to required safety levels.

i) What provisions are in place to ensure that vehicles constructed before 1 January 1997 are maintained to the required safety standards?

ii) Is a special test/inspection scheme in place for such vehicles if so please provide details.

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_____

_____

_____

iii) Is a certificate issued following a pass of this test or inspection? Yes/No

15 Article 6(4) of the Directives permits the continued use of existing tanks and receptacles of class 2.

i) Are these tanks examined at the same interval as corresponding ADR/RID tanks and receptacles? If not please explain the procedure.

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_____

_____

ii) Are examinations of such tanks/receptacles carried out by experts approved by the competent authority? I

Yes/No

16 In relation to the classification of substances and articles for the transport of dangerous goods. Please identify who is responsible for:

i) Class 1

ii) Class 2 – 6, 8 and 9

iii) Class 7

17 There are increasing references to CEN/ISO Standards in RID/ADR/AND does the national Competent Authority participate in technical groups?

i) If they do NOT please explain the reasons

_____

_____

_____

_____

ii) Do you support the approach adopted by the RID/ADR Joint Meeting?

Yes/No

iii) Do you participate in the Joint Meeting Working Groups that review the standards?

Yes/No

18 Are there any detailed provisions of

i) the current Directives
ii) the current provisions of RID/ADR

that are of concern to you would you like to see them changed or improved.

_____

_____

19 A Future amendment of framework Directives will include security provisions

i) Who will be responsible for implementation

ii) Will you be applying RID/ADR/ADN security measures as national legislation or will you be adding more.

iii) Who will be responsible for enforcing, security how will it be monitored?

iv) Have you applied any interim security measures? Yes/No

v) How will you ensure security of dangerous goods entering the EU from 3rd countries

vi) Should the Commission do more i.e. more than in Chapter 1.10. Yes/No

vii) Are you willing to share experiences should there be an EC working group to develop standard methods and procedures for transport security?

Yes/No

Council Directive 95/50EC on uniform procedures for checks on the transport of dangerous goods by road

20 In relation to the Uniform Procedures Directive (95/50)

i) Who is responsible for providing the information in Annex 3?

ii) Should there be more emphasis on the control at premises?

Yes/No

ii) How do you see today the possible integration of all enforcement regulation under one Directive

21 i) Are there further reports or reviews on the enforcement activities for TDG or other instruments, which you use for the observation of the dangerous goods transport market?

Yes/No

iii) Which entities are responsible for the control and enforcement of the TDG regulations during transport (for the different modes)?

iv) How many employees in these entities have a special qualification in the area of dangerous goods? Are there personnel, specialized for dangerous goods, at the customs authorities?

v) How is the training on dangerous goods organized within these enforcement institutions?

vi) What are the co-ordination activities between different (regional) enforcement entities?

vii) Are there common enforcement activities with other member states? Should these activities be increased on a European level?

Council Directive 96/35EC on the appointment and vocational qualification of safety advisers for the transport of dangerous goods by road, rail and inland waterway (DGSA Directive)

22 In relation to the DGSA Directive

i) How do you approve training courses?

ii) Do you approve examinations? If so, please explain how this is carried out

iii) Does the Competent Authority keep a record of DGSAs appointed by undertakings? If you don't, please explain why.

iv) How do you assess undertakings that need DGSAs?

v) In relation to revalidation are DGSAs required to:

a) repeat the initial exam ❑

b) undertake a refresher course ❑

c) other methods, if so please explain ❑

vi) Are there any circumstances when you wouldn't accept a DGSA certificate from another Member State?

Yes/No

vii) Do you find that the Directive should be repealed, as the provisions are now incorporated in ADR/RID/AND?

Yes/No

23 Article 3(4) of Directive 2000/18 which amends 96/35 requires that a compendium of questions are included in your DGSA question bank

i) How many questions are included in your question bank? Yes/No

ii) Do you use:

a) multiple choice questions Yes/No
b) Oral questions Yes/No
c) Subjective questions Yes/No

iii) Has an examination board been established to ensure impartiality of the examinations? Yes/No

24 By what further means do you support the compliance activities of your industry (e.g. information material and campaigns, round tables etc)

Council Directive 99/36EC on transportable pressure equipment (TPED)

25 TPED requires cylinders to be approved by notified bodies how many bodies have been approved and how many type approvals for cylinders have been issued to date

26 Do you have the figure of approved bodies in your national legislation? Are they also allowed to assess conformity of equipment for the placing on the national market and to perform in the future periodic inspections of tanks?

27 What are the procedures and requests you use to notify and approve bodies in the scope of TPED?

28 Should TPED be replaced with the RID/ADR provisions now that they have been updated with UN material?

Yes/No

General comments

If you have comments on any other aspects of RID/ADR/AND or the various Directives that have not been covered in this questionnaire the consultants would be pleased to receive them.