



# Bulletin

**OTIF** Organisation intergouvernementale pour les transports internationaux ferroviaires  
Zwischenstaatliche Organisation für den internationalen Eisenbahnverkehr  
Intergovernmental Organisation for International Carriage by Rail

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# EDITORIAL

Dear Readers,

Like any other international organisation, OTIF relies heavily on the active support of its individual Member States. OTIF was able to experience this support in a particular way in the United Kingdom in October this year.

The Department for Transport of the United Kingdom had invited participants of the 3<sup>rd</sup> meeting of the ad hoc Committee on Legal Affairs and International Cooperation to London. At the Queen Elizabeth II Conference Centre, right in the political heart of London, the Committee was able to take important decisions with great involvement from the sector. In particular, the decision on the “Guidelines on the application of procedures for the modification of COTIF” marks a turning point in the treaty-making practice of the Revision Committee and the General Assembly.

The meeting in London also provided a deeper insight into the current work on the comprehensive restructuring of the British railway system. The article in this Bulletin highlights these measures.

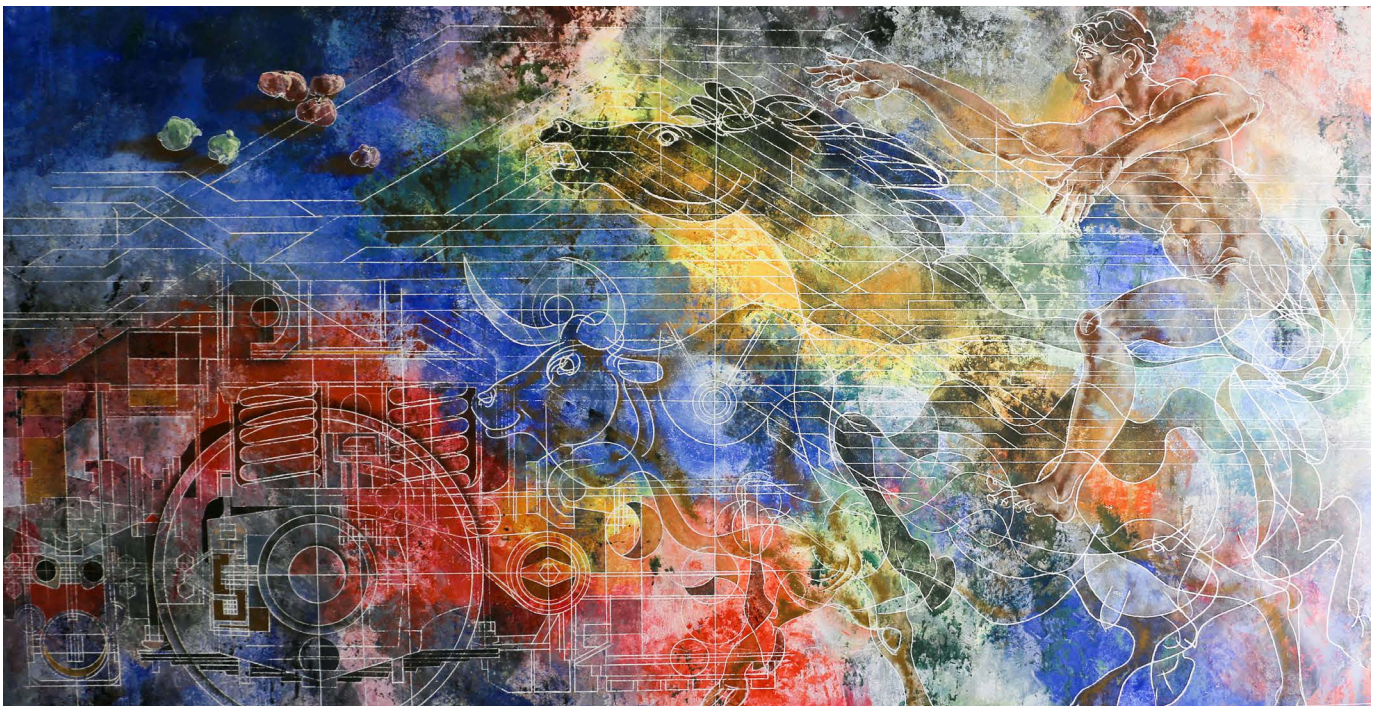
Many thanks to our hosts in the United Kingdom and to the authors for their commitment and support.

Some OTIF Member States have shown particular appreciation for OTIF by setting up a Permanent Representation in Berne. One of these - still few - Member States is Belgium, whose newly appointed Ambassador and Permanent Representative I had the pleasure of welcoming to OTIF.

More details on these topics and on other interesting matters can be found in this new edition of the Bulletin. I would like to draw your specific attention to an article on the carriage of dangerous goods in the context of international humanitarian law, an important topic that – despite the current geopolitical situation – will hopefully never become reality.

I hope you enjoy reading this issue of the Bulletin.

**Wolfgang Küpper**  
Secretary General



Hans Erni, mural, approximately 20m<sup>2</sup>, 1965, entrance to the Secretariat

## LONDON: HIGH-LEVEL VISIT AND MEETING

On 29 September 2022 in London, OTIF's Secretary General, Mr Wolfgang Küpper, met the Permanent Secretary of the United Kingdom Department for Transport (DfT), Dame Bernadette Kelly.

They discussed the UK's railways and ongoing structural reform. They shared their views on the importance of developing international rail transport and the DfT Permanent Secretary also stressed that international rail transport via the Channel Tunnel was of great interest to the UK.

The following day, the UK Department for Transport organised a visit to St Pancras International station.

The Secretary General of OTIF welcomes this high-level meeting and warmly thanks Dame

Bernadette Kelly for the quality of their discussions.



*Ms Andrea Pearson, Dame Bernadette Kelly, Mr Wolfgang Küpper, Mr Aleksandr Kuzmenko*

## COOPERATION: WORLD MARITIME DAY 2022

At the invitation of the Secretary-General of the International Maritime Organization (IMO), Mr Kitack Lim, the Secretary General of OTIF, Mr Wolfgang Küpper, attended the World Maritime Day reception on 29 September 2022 in London.

The Secretary General of OTIF is committed to developing international cooperation, promoting rail transport, multimodality and the interconnection of international transport.



*Mr Wolfgang Küpper, Mr Kitack Lim*

# 3<sup>rd</sup> SESSION OF THE AD HOC COMMITTEE ON LEGAL AFFAIRS AND INTERNATIONAL COOPERATION

The third session of the ad hoc Committee on Legal Affairs and International Cooperation was hosted in London in a hybrid format with the support of the UK Department for Transport, which took charge of organising the event.

Chaired by Germany, the session took place over three days with the participation of more than 50 delegates in total, 21 of whom attended in person. 28 Member States were represented. The European Union was also present.

International organisations such as the Organisation for Cooperation between Railways (OSJD), the United Nations Commission on International Trade Law (UNCITRAL) and the World Customs Organization (WCO) participated in the meeting on the second day. This second day was also open to the participation of registered stakeholders, such as the International Rail Transport Committee (CIT), the Community of European Railways (CER) and Rail Net Europe (RNE), as well as Mr Rainer Freise, academic and researcher, and Mr Steve Davey, expert.

At this session, the ad hoc Committee adopted the draft guidelines on cooperation with international intergovernmental organisations and the draft guidelines on the application of

procedures for the modification of COTIF (see articles on p. 12 and p. 15 of this Bulletin).

In addition, many of the presentations attracted a great deal of interest.

Ms Andrea Pearson, a delegate from the UK, presented an overview of the railways in the UK, reforms, recent investment programmes and the decarbonisation policy.

Ms Clio Liégeois, the delegate from Belgium, informed the meeting of a question submitted to the Belgian Ministry of Transport by a rail freight company concerning the application of the CIM Uniform Rules to national freight transport.

Mr Vilius Varjas, from the European Commission's Directorate-General for Mobility and Transport, presented EU Regulation No 2020/1056 on electronic freight transport information.

Together with Forum Train Europe, UNCITRAL, WCO, CIT and RNE also presented their recent ongoing projects.

The third session of the ad hoc Committee on Legal Affairs and International Cooperation was a success with constructive discussions. The OTIF Secretariat would like to thank the DfT for its support and for organising the event.



# NEW PERMANENT REPRESENTATIVE OF BELGIUM

On Tuesday 18 October, His Excellency Pascal Heyman, Belgian Ambassador to Switzerland, visited the headquarters of the Intergovernmental Organisation for International Carriage by Rail (OTIF) in Berne. He presented the Secretary General of the Organisation, Mr Wolfgang Küpper, with his letter of appointment from the Prime Minister of Belgium.

His Excellency Ambassador Pascal Heyman has been appointed as Belgium's Permanent Representative to OTIF, replacing Mr Willy Debuck.

During this courtesy visit, the Secretary General of OTIF welcomed this appointment, which will enable a continuous connection between Belgium and OTIF to be

maintained.

The Secretary General of OTIF renews to His Excellency,

Ambassador Pascal Heyman, the assurances of his highest consideration.



*His Excellency Pascal Heyman, Mr Wolfgang Küpper, Mr Aleksandr Kuzmenko*

# EUMedRail FINAL CONFERENCE

On 15 November, the Secretary General of OTIF, Mr Wolfgang Küpper, took part in the EUMedRail Final Conference organised by the European Union Agency for Railways.

The main objective of this final conference was to assess implementation of the EUMedRail project, particularly the results achieved in 2022. The event was also an opportunity to highlight future progress and challenges in rail safety and interoperability.

The Secretary General spoke at the opening session. He emphasised the role of OTIF: a bridge between EU Member States and non-EU Member States, particularly Mediterranean countries. OTIF

and its Convention, COTIF, ensure consistency of regulations between OTIF Member States, whether they are EU Member States or not, particularly with regard to technical interoperability. The Secretary General added that the work carried out by the European Union Agency for Railways and OTIF was

complementary. He concluded that this complementarity was of great interest to the Mediterranean countries: "In order to benefit fully from this complementary work, it is very important that those countries that are not planning to become members of the EU become members of OTIF".



## DEPOSITARY NOTIFICATIONS

Since 17 September 2022 ([Bulletin 3 2022](#))

<a href="#">NOT-22044</a>	25.11.2022	Depository notification. Corrections of the modifications to RID adopted by the 57 <sup>th</sup> session of the RID Committee of Experts
<a href="#">NOT-22043</a>	03.11.2022	Entry into force of the modifications to RID adopted by the 57 <sup>th</sup> session of the RID Committee of Experts
<a href="#">NOT-22042</a>	23.11.2022	Modifications to the ATMF UR (Appendix G to COTIF) adopted by the Revision Committee using the written procedure
<a href="#">NOT-22041</a>	01.12.2022	Entry into force of the decisions taken by the Committee of Technical Experts at its 14 <sup>th</sup> session

## DANGEROUS GOODS DAY IN HANOVER

The Dangerous Goods Day (*Gefahrguttag*) took place in Hanover on 21 September 2022 as part of the “IAA Transportation” International Motor Show. The event entitled “Current developments in dangerous goods law and improving the safety of dangerous goods vehicles” was organised by the German Association of the Automotive Industry (*Verband der Automobilindustrie – VDA*) and the German Federal Ministry for Digital and Transport (BMDV).

After a few words of welcome from the organisers, Mr Jochen Conrad, Head of OTIF’s Dangerous Goods Department, was the first speaker of the day. He presented the 2023 amendments to the Regulation concerning the International Carriage of Dangerous Goods by Rail (RID) and the 2023 amendments to the Agreement

concerning the International Carriage of Dangerous Goods by Road (ADR). He also provided a preliminary overview of the upcoming 2025 amendments. The transport of dangerous goods is constantly increasing and correlates with technical innovations that make it possible to carry more goods and improve safety further. Consequently, the various regulations governing the transport of dangerous goods must be regularly and frequently updated to take account of these technical innovations and provide the best possible framework for them, with a view to ensuring safe transport.

A number of speakers then took the floor throughout the day, including Ms Gudula Schwan, Head of the BMDV’s Dangerous Goods Department, who supplemented Mr Conrad’s presentation by presenting

some of the 2023 amendments to RID and ADR relating to the rules on the mutual recognition of inspections, tests and approvals for tanks. Ms Anita Schmidt and Mr Georg Mair from the Federal Institute for Materials Research and Testing (BAM) presented their recent work on the safe transport of lithium batteries, including the transport of damaged vehicle batteries, and on the safe transport of hydrogen, which were of particular interest for the future work on the 2025 amendments to RID and ADR.

With over 300 participants, the Dangerous Goods Day was very successful. The Head of OTIF’s Dangerous Goods Department therefore appreciated the opportunity to present the latest 2023 amendments to RID to a large audience.

# DANGEROUS GOODS PACKAGINGS. A RICH EXCHANGE OF EXPERIENCE

Organised by the “Dangerous Goods Packaging Department” of the Federal Institute for Materials Research and Testing (BAM) and moderated by Ms Anita Schmidt, the biennial “*Erfa Verpackungen*” symposium was held on 22 September 2022 in Berlin in a hybrid format. The Head of OTIF's Dangerous Goods Department, Mr Jochen Conrad, was invited to present the latest 2023 amendments to the Regulation concerning the International Carriage of Dangerous Goods by Rail (RID) and the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), and more specifically the amendments concerning the

packaging of dangerous goods.

The symposium is intended to provide time to discuss and share experience of current developments in the field of packaging for the transport of dangerous goods. The aim is firstly, to inform packaging manufacturers and secondly, to promote mutual understanding between companies and authorities concerning the testing, manufacture and use of dangerous goods packaging.

One of the important topics discussed was the safe transport of lithium batteries. Tests carried out at BAM have shown that cooling damaged batteries (e.g. with liquid

nitrogen) is an effective way of preventing thermal runaway of the battery. This type of information is particularly useful and interesting in terms of developing and keeping up to date the provisions of RID, ADR and more broadly all the regulations governing the transport of dangerous goods.

Lastly, information was provided on the industry's efforts to use more recycled materials in the manufacture of plastics packagings for reasons of waste prevention, sustainability and climate protection. This information is also very useful for the development of dangerous goods regulations.

## “RAILWAY DAYS” IN BUCHAREST

The 17<sup>th</sup> “**Railway Days**” was held in Bucharest, Romania, on 18 and 19 October 2022. It included two days of conferences and exhibitions bringing together a diversity of players in the railway sector. Ms Maria Price, an expert in OTIF's Technical Interoperability Department, was invited to take part in the event. She spoke at the first panel discussion of the conference cycle together with Mr Alberto Mazzola, Executive Director of the Community of European Railways (CER), Mr Giorgio Travaini, Head of Programme at Europe's Rail Joint Undertaking (EU-Rail), Mr Ralf-Charley Schultze, President of the International Union for Combined

Road-Rail Transport (UIRR), Mr Mihai Frumosu, Senior Transport Expert at the European Investment Bank (EIB), and Mr Petrișor Peiu, Director of the Department of Economic Studies at the Black Sea University Foundation.

Ms Price gave a presentation on the Intergovernmental Organisation for International Carriage by Rail (OTIF) and the Convention concerning International Carriage by Rail (COTIF). In reply to the question “What is required for the railways to become the leading mode of transport?”, Ms Price replied that rail transport should be truly international. In order to achieve this, she emphasised three key

factors: firstly, the need to intensify harmonisation and technical interoperability so that trains can physically run on different networks; secondly, the need to harmonise digitalisation and the international exchange of operational data, for example; and thirdly, the need to harmonise safety requirements and conditions of access to the networks so that railway undertakings are allowed to run their trains as well as to use their locomotives, coaches and wagons on different networks. Lastly, Ms Price concluded that COTIF offered an appropriate framework for the legal development of these key factors to ensure consecutive international transport operations.





# “SPOTLIGHT ON RAILWAYS IN THE UNITED KINGDOM”

Author: United Kingdom Department for Transport (DfT)

The United Kingdom hosted a successful hybrid 3<sup>rd</sup> session of the ad hoc Committee on Legal Affairs and International Cooperation in London from 4 to 6 October 2022. The meeting brought together representatives of 40 OTIF Member States, as well as representatives of international intergovernmental organisations and other stakeholders. The head of the UK delegation, Ms Andrea Pearson OBE, Deputy Director for International Rail and Rail Freight at the United Kingdom Department for Transport, considered it a privilege to welcome the Secretary General, Wolfgang Küpper, OTIF delegates and so many Member States to London in person.

The ad hoc Committee adopted several new legal instruments which are of major importance for the development of OTIF's, and hence its Member States' international cooperation and international railway law. The ad hoc Committee discussed and made progress on other issues of major importance, such as the development of a long-term strategy. This also provides an opportunity to put the UK railways and its international rail links in the spotlight for a special entry in the OTIF Bulletin.

## Structure of the rail market in the UK:

Following privatisation in 1993, British Rail was divided into two main parts: one part being the national rail infrastructure (track, signalling, bridges, tunnels, stations, and depots) and the second being the operating companies whose trains run on that network. Rail infrastructure in England, Scotland and Wales is owned, maintained,

and operated by Network Rail, with the exception of the High Speed route through Kent and the Channel Tunnel, which are maintained and operated by private companies as part of concession agreements. Rail services in Great Britain are run by privately-owned train operating companies and freight operating companies.

The system is different in Northern Ireland, where rail is a devolved matter and publicly owned. Rail services are operated by Northern Ireland Railways.

## Plan to transform the railways in Great Britain (England, Scotland & Wales)

The United Kingdom is currently in the process of the biggest change to the domestic rail network in 25 years, which promises to make the railways easier to use, deliver more punctual, efficient, reliable services, continue to maintain safe, secure railways, ensure the ability to grow the network and recover from the impacts of the pandemic.

The United Kingdom's new Plan for Rail was published in May 2021, setting out the plans for the future of British rail. A new rail body, Great British Railways (GBR), will oversee the rail network by bringing the whole system under single, national leadership. The new model will take the very best of the private sector and fuse it with a single guiding mind that can drive benefits and efficiencies across the system as a whole. The aim is to drive a competitive market for rail, bringing in innovators aiming to compete for every contract. The United Kingdom continues to welcome investment into the UK rail network from foreign

companies and the many positives that this brings.

One of the changes that the United Kingdom is working towards is a shift to zero carbon modes of transporting goods and services, including greater use of rail and domestic maritime transport, which will make the freight system net zero before 2050. By 2030, larger zero emission road freight vehicles will be on the roads in increasing numbers. The last mile will be largely decarbonised through new delivery models, supported by accurate data and digital innovations driving greater efficiencies. Ending transport's damaging contribution to climate change will create better places to live and work, with quieter and less congested streets.

## International rail links in the United Kingdom

The United Kingdom is also proud of and celebrates the transport links it has with its European neighbours. The UK shares the unique Channel Tunnel with France, an undersea rail tunnel system linking the South of England with the North of France. Traffic through the tunnel includes Eurostar foot passengers, Eurotunnel HGV and passenger shuttles, and rail freight services. Prior to the pandemic, it is estimated that the Channel Tunnel carried over 20 million passengers and 1.7m HGVs a year, which represented circa 25% of all UK trade between the UK and the European Union.

The UK also shares a rail link with Ireland which carries passengers between Belfast and Dublin. Before the pandemic, this service facilitated around 950,000 passengers a year.

## Potential for growth for international rail in the United Kingdom

The United Kingdom is fully committed to the future growth and success of its international rail links, including both rail freight and passenger services, given the social, economic and environmental benefits they provide for its citizens and businesses, and those of its European neighbours. The United Kingdom Government is happy to engage with other partners and current or potential private operators to help facilitate potential new routes and services.

## The impact of Covid and recovery of international rail services

As with the rest of the world, the coronavirus pandemic had a devastating impact on the United Kingdom, including for our

domestic and international rail services. However, throughout 2022 there has been an encouraging and significant recovery in demand for a return to domestic and international travel, which is encouraging.

The pandemic did highlight the critical importance of the rail freight network to the United Kingdom's economy. Despite the disruption caused by the pandemic, the United Kingdom was able to keep critical goods flowing in and out of the country through the Channel Tunnel by rail.

## Quote from Huw Merriman the United Kingdom minister for rail

*"The UK was privileged to host OTIF and the 3<sup>rd</sup> session of the ad hoc Committee on Legal Affairs and International Cooperation in London. It was also a pleasure*

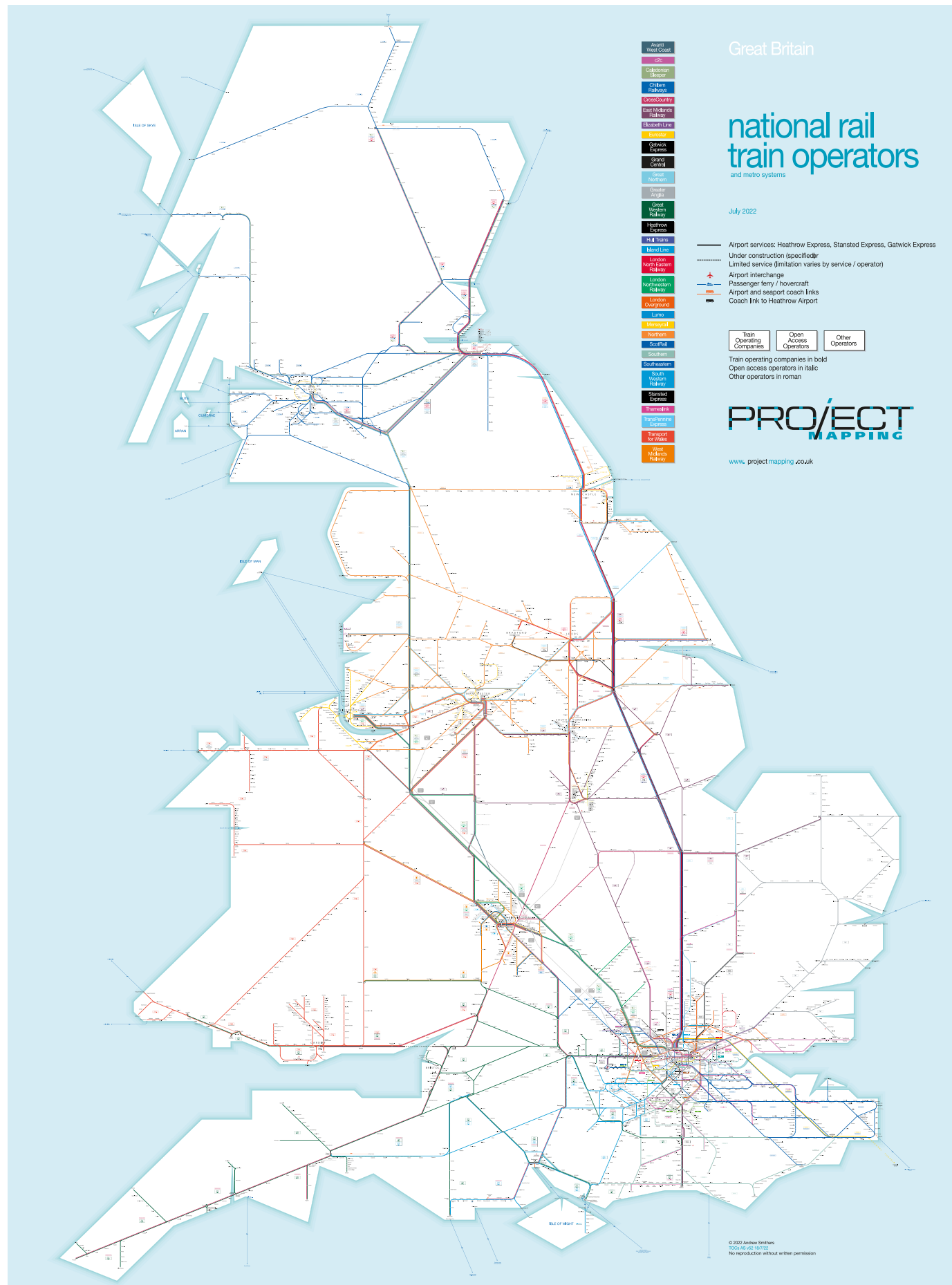
*to meet the Secretary General, Wolfgang Küpper, prior to the Committee and discuss OTIF's importance to the UK.*

*OTIF is a really important avenue for its Member States to enhance, promote and facilitate seamless rail connectivity between our nations, which inevitably leads to sustainable economic growth for both people and businesses.*

*The UK is committed to working closely with OTIF and its Member States to improve and celebrate the connections we already have, whilst also identifying further opportunities for collaboration to help grow our sustainable passenger and freight routes. This is a vital shared goal for all of us, as we work together to help mitigate the devastating effects of climate change."*

## FIVE FACTS ABOUT THE UK RAILWAY:

- 1) The UK has one of the safest rail networks
- 2) UK Rail employs approximately 240,000 people
- 3) In 2019, almost two-thirds of rail journeys started or ended in London
- 4) The Channel Tunnel is one of the biggest engineering projects ever undertaken in the UK and is 50.45 km long (equivalent of 169 Eiffel Towers)
- 5) The longest UK rail station name goes to Llanfairpwllgwyngyllgogerychwyrndrobwlllantysiliogogoch in Anglesey, Wales



# GUIDELINES ON COOPERATION WITH INTERNATIONAL INTERGOVERNMENTAL ORGANISATIONS

At its 3<sup>rd</sup> session in London, the ad hoc Committee on Legal Affairs and International Cooperation (ad hoc Committee) adopted 'Guidelines on cooperation with international intergovernmental organisations'. The purpose of these guidelines is to streamline OTIF's activities and ensure that they are coherent, particularly the activities of its organs and the Secretariat in connection with cooperation with international intergovernmental organisations.

## Background

OTIF and OTIF law interface with various actors and legal instruments both at international and national level. Consequently, the effective and efficient achievement of OTIF's aim depends, among other factors, on close cooperation with relevant stakeholders.

The ad hoc Committee decided to develop an inclusive and transparent stakeholder involvement policy by means of two non-legally binding instruments targeting different groups of stakeholders:

- A recommendation on involving stakeholders in OTIF's work;
- Guidelines on cooperation with international intergovernmental organisations.

The non-legally binding nature of the above instruments ensures that each OTIF organ retains sufficient leeway in terms of how (or whether) it wishes to apply the relevant legal instrument, taking into account each case individually.

At its 2<sup>nd</sup> session in Berne, the ad hoc Committee adopted a 'Recommendation on involving stakeholders in OTIF's work' (OTIF-22002-JUR 2). The recommendation addresses the involvement within OTIF of international associations, academic institutions, academics, researchers and experts ([see Bulletin of International Carriage by Rail, No. 1-2 2022, p. 18](#)).

At its 3<sup>rd</sup> session in London, the ad hoc Committee adopted 'Guidelines on cooperation with international intergovernmental organisations' (OTIF-22008-JUR 3). The main provisions of these guidelines are presented below.

## Purpose

The purpose of these guidelines is to streamline OTIF's activities and ensure that they are coherent, particularly the activities of its organs and the Secretariat in connection with cooperation with international intergovernmental organisations. These guidelines should also be taken into account, to the extent possible, for:

- the purpose of cooperation with international bodies that do not have international legal personality, such as treaty bodies and trans-governmental networks;
- for the purpose of concluding written agreements with international associations representing the interests of the railway sector.

## Competencies

COTIF does not lay down general rules on cooperation or relations with other international intergovernmental organisations. It only contains a few special rules on this. However, unlike other organs, the list of functions of the General Assembly defined in COTIF is non-exhaustive. Consequently, within the general competence of OTIF, the General Assembly has all the powers which COTIF does not expressly attribute to other organs. In particular, it may decide or determine rules on cooperation with international intergovernmental organisations;

The General Assembly may delegate some of its powers to other organs. It is important to note that as 'a parent organ', the General Assembly can always revoke delegated powers.

The OTIF organs referred to in COTIF Article 13 § 1 organise their working arrangements by laying down their own rules and procedures, subject to any provisions laid down in COTIF. In principle, the same applies to committees established by the General Assembly in accordance with COTIF Article 13 § 2, although this is also subject to any rules and procedures laid down by the General Assembly.

COTIF Article 21 § 3, letter b) stipulates that the Secretary General must represent OTIF externally. It should be noted that in accordance with COTIF Article 21 § 1, the Secretary General shall assume the functions of Secretariat. Consequently, the Secretary General and the Secretariat

represent OTIF in relations with international intergovernmental organisations. Such representation is ensured through:

- participation in bilateral or multilateral meetings;
- participation in meetings of other organisations;
- establishing cooperation at inter-secretariat level;
- negotiating agreements at inter-organisation level.

### Forms and level of cooperation

Cooperation with international intergovernmental organisations can be organised in the following forms:

- formalised in written, legally binding or non-binding agreements. Such agreements may be enshrined in a single instrument or in two or more related instruments. Such agreements may be designated as an “agreement”, “joint statement”, “exchange of letters”, “memorandum of understanding” or as “administrative arrangements”, etc.;
- non-formalised, and thus based on unwritten agreements, arrangements, practice or ad hoc contacts, etc.

Cooperation with international intergovernmental organisations can be organised at the following levels:

- inter-secretariat level. Within the OTIF legal framework, this level is in the competence of the Secretary General;
- inter-organisation level. Within the OTIF legal framework, this

level is in the competence of the General Assembly or other organs to which the General Assembly has delegated powers on cooperation with international intergovernmental organisations and only to the extent to which such powers have been delegated.

The selected form and level of cooperation should be pragmatic and proportionate and must comply with COTIF and/or decisions of the General Assembly or other competent organs. To the extent possible, formalised and non-formalised cooperation with international intergovernmental organisations should be flexible and adaptive. As a general rule, cooperation should be initiated in a non-formalised form at inter-secretariat level. Depending on requirements and the results achieved by initial cooperation, further cooperation should be strengthened and enhanced.

### General Principles

The following general principles should guide OTIF’s organs and the Secretariat in the organisation and conduct of cooperation with international intergovernmental organisations:

- compliance with constituent instruments, in particular COTIF, decisions of organs, institutional structures and decision-making rules;
- mutual respect of the legal status, reputation and credibility, in particular without compromising OTIF’s legal status as an independent intergovernmental organisation;
- contribution to the achievement of OTIF’s aim;
- clear delineation of responsibilities, financial and human resources and

ownership of joint products;

- mutual respect and integrity;
- effective and results-oriented;
- effective use of financial and human resources;
- transparency, without prejudice to institutional confidentiality;
- creating synergies, complementarity and policy coherence;
- avoid duplication of work.

### Methods of cooperation

Depending on the actual requirements and taking into account applicable procedures and other legal requirements, the methods of cooperation may vary and may be of varying intensity, for instance:

- ad hoc or regular meetings between secretariats at the level of executive heads (Secretary General, Executive Director etc.), senior staff (heads of department, divisions etc.) and/or at operational level;
- consultations and/or assistance upon request;
- exchange of information and documents, including best practices, legal instruments;
- coordination of work programmes and/or activities;
- reciprocal representation at meetings of each organisation;
- joint bodies or joint meetings with the active involvement of Member States;
- development of recommendations, common positions or other joint non-legally binding instruments.

Whenever formalised or non-formalised cooperation has been established with an international intergovernmental organisation, the Secretary General should, by virtue of COTIF Article 14 § 7 or Article 16 § 5, request the members of a particular OTIF organ to grant standing observer status to that international intergovernmental organisation.

### **Procedure for concluding written agreements at inter-organisation level**

The Secretariat should prepare and, if appropriate, carry out preliminary negotiations on an

initial draft written agreement. Afterwards, the Secretariat should submit the initial draft written agreement to a competent OTIF organ for consideration and to provide negotiating guidelines. The Secretariat should then inform the competent OTIF organ of the progress of negotiations. The final version of the draft written agreement should be submitted to the competent OTIF organ:

- for approval and
- to authorise the Secretary General to sign the agreement on behalf of OTIF.

The competent OTIF organ may

authorise the Secretary General to conclude supplementary agreements implementing the primary agreement, as long as they do not create substantive budgetary implications and do not create new obligations for OTIF. The Secretary General should inform the competent organ of the intention to conclude supplementary implementing agreements and of the conclusion of such agreements.

**Aleksandr Kuzmenko**

# GUIDELINES ON THE APPLICATION OF PROCEDURES FOR THE MODIFICATION OF COTIF

At its 3<sup>rd</sup> session in London, the ad hoc Committee on Legal Affairs and International Cooperation (ad hoc Committee) adopted 'Guidelines on the application of procedures for the modification of COTIF'. The purpose of these guidelines is to provide non-legally binding guidance with the aim of streamlining, standardising and ensuring consistent application of the procedures within the competence of the General Assembly and the Revision Committee for the modification of COTIF established by COTIF and the relevant Rules of Procedure.

## Background

In application of the 'Decision on the monitoring and assessment of legal instruments', the ad hoc Committee on Legal Affairs and International Cooperation monitored and assessed the relevant OTIF law and practice with regard to COTIF on amendments, language versions, publication of the authentic text, corrections to the authentic text and the Explanatory Report. As a result of the monitoring and assessment, it was concluded that there were significant differences between the practices of the General Assembly and the Revision Committee and the sessions of these two organs, which, in reality, amount to ad hoc approaches. These practices are not fully transparent and sometimes lead to significant legal uncertainty. As a follow-up action, it was decided that guidelines must be developed that will set out the procedures to be followed by the General Assembly and the Revision Committee regarding the modification of COTIF.

The adopted guidelines (OTIF-22009-JUR 3) were prepared on the basis of COTIF and the rules and practices established by the General Assembly and the Revision Committee, taking into account the general rules of the law of treaties and international practices. These guidelines address issues and provide practical examples at the following treaty-making stages of the procedures for the modification of COTIF:

- initiation;
- drafting and negotiation;
- adoption;
- authentication;
- registration and publication.

The main provisions of the guidelines are presented below.

## Initiation

By virtue of COTIF, the Rules of Procedure and other decisions of the General Assembly and the Revision Committee, the following have a formal right to initiate modifications to COTIF:

- Member States and regional economic integration organisations which have acceded to COTIF;
- the General Assembly;
- the Administrative Committee;
- the Revision Committee;
- the Committee of Experts for the Carriage of Dangerous Goods;

- the Rail Facilitation Committee;
- the Committee of Technical Experts;
- the Secretary General;
- Committees established by the General Assembly in accordance with COTIF Article 13 § 2, in particular, the ad hoc Committee on Legal Affairs and International Cooperation.

Registered stakeholders in accordance with the 'Recommendation on involving stakeholders in OTIF's work', international intergovernmental organisations with standing observer status in accordance the 'Guidelines on cooperation with international intergovernmental organisations' or other observers in relevant OTIF organs may also suggest modifications to COTIF. However, such suggestions should be considered as formal proposals only if they are officially supported or taken over by a Member State, a regional economic integration organisation which has acceded to COTIF or a competent OTIF organ.

A proposal to initiate modifications to COTIF should:

- assess existing OTIF law and, where appropriate, relevant national, regional and international law;
- describe the problems to be resolved and objectives to be achieved;
- provide basic regulatory principles or draft modifications.

As a general rule, with regard to existing COTIF provisions, monitoring and assessment in accordance with the ‘Decision on the monitoring and assessment of legal instruments’ are necessary before a proposal to modify them is submitted.

### **Examination of a proposal to initiate modifications to COTIF**

An OTIF organ competent to consider a particular proposal should first examine the proposal and decide whether to commence formal negotiations if these have not yet taken place in accordance with the ‘Decision on the monitoring and assessment of legal instruments’. The general aim of the examination is to determine whether the proposal is necessary and feasible, what priority it has and whether it is likely to be supported.

By virtue of COTIF Article 21 § 3, letter e), the Secretary General must carry out background studies and surveys and make necessary arrangements for the examination and discussion of proposals to initiate modifications to COTIF.

### **Extent of modifications**

Modifications to COTIF may be:

- substantive, when previously adopted modifications are consolidated into a single instrument, or when most provisions are modified or supplemented;
- partial, when only some provisions are modified or supplemented.

The legal effects and applicable procedures are the same for partial and substantive modifications. However, the form in which modifications are presented should be different.

### **Negotiation**

The General Assembly and the Revision Committee usually convene for only a few days. Consequently, there is not usually sufficient time for in-depth negotiations or to draft modifications. It is therefore essential to ensure that any modifications are carefully drafted and discussed by the other competent OTIF organs before they are submitted to the Revision Committee and, if necessary, subsequently to the General Assembly.

### **Drafting and editorial check of provisions**

Throughout the drafting, negotiation and adoption of provisions modifying COTIF, it is important to ensure that they are clear, precise and have the same meaning in all the working languages. In particular, the use of terms that are appropriate to one language only must be avoided. As changes to draft provisions may be made ‘on the spot’ and ‘at the last minute’ during their formal adoption, it is essential to ensure legal and linguistic clarity and concordance of the different language versions, not only during the drafting and negotiation stage, but also when the final editorial check is carried out after provisions have been adopted.

In order to ensure that provisions are legally and linguistically clear, precise and that they are consistent in the working languages of OTIF, the OTIF organ that prepares and/or discusses the adoption of draft provisions:

- may, at the negotiation stage of modifications, establish a drafting committee or working group to prepare texts in OTIF’s working languages, subject to any general instructions agreed;

- should, once the modifications have been adopted, establish an Editorial Committee or Working Group to make any necessary editorial corrections without modifying the substance of the modifications adopted.

### **Form and presentation of modifications to COTIF during negotiations**

Modifications to COTIF during negotiations should be presented in a form that allows changes to be tracked (text deletions, insertions, repositions) in relation to the existing COTIF provisions.

### **Form and presentation of substantive modifications to COTIF for adoption**

Substantial modifications to COTIF should be presented in the form of a protocol modifying and replacing COTIF as a whole, the Convention itself or a specific Appendix.

### **Form and presentation of partial modifications to COTIF for adoption**

Partial modifications to COTIF should be presented in the form of a separate legal instrument for the Convention itself and each specific Appendix.

### **Adoption of the text of modifications to COTIF**

The adoption of modifications to COTIF is a formal decision of the General Assembly or the Revision Committee, which establish the form and content of modifications. The procedure for adopting modifications is governed by:

- COTIF Article 14 § 4 (quorum), §§ 5 and 6 (vote) when the General Assembly is



competent. Article 6 of the Rules of Procedure of the General Assembly lays down requirements with regard to the delegations' powers;

- COTIF Article 16 § 4 (vote) and Article 17 § 2 (quorum) when the Revision Committee is competent. The Revision Committee's Rules of Procedure do not make any substantive additions to the above rules. In particular, there are no requirements concerning the delegations' powers. However, the possibility of adopting modifications by a written procedure is expressly provided for.

The General Assembly is solely competent to adopt substantial modifications to COTIF in the form of a protocol modifying and replacing COTIF as a whole, the Convention itself or a specific Appendix.

The adoption of modifications does not amount to their authentication or consent to be bound by them. In other words, at the time of adoption, Member States and regional organisations express only their consent to the text of modifications. The text of adopted modifications can still be altered in cases of material error or purely formal corrections, but cannot be modified in substance. The text of adopted modifications becomes definitive after authentication.

The text of adopted modifications in all their authentic linguistic versions should be subject to a final editorial review by an Editorial Committee or Working Group in order to correct typographical errors, numbering and cross-references and any differences between the various language versions. Corrections made by an Editorial Committee or Working Group should be recorded as an addendum to the Final Document of the General Assembly

or the Decisions of the Revision Committee as soon as they are finalised and effected.

Decisions of the General Assembly should be recorded in the Final Document. Decisions of the Revision Committee should be recorded in a legal instrument entitled 'Decisions'. In order to clarify the legal difference between the text of adopted modifications as annexed to a document recording the results of a session and the corresponding authentic text established by the Depositary, some explicit clarification should accompany the corresponding decisions of the competent organs.

### **Authentication of the text of modifications**

COTIF does not refer expressis verbis to the authentication of modifications. However, in accordance with COTIF Articles 34 § 1 and 35 § 1, the modifications to the Convention adopted by the General Assembly or the Revision Committee must be notified to the Member States by the Secretary General. The aim of this notification is to submit the authentic text of adopted modifications for the purpose of incorporation into internal law and international treaty acts, such as approvals, objections, etc.

The Secretary General should establish the authentic text of adopted modifications on the basis of the text as adopted with the editorial corrections made by the Editorial Committee or Working Group. The Secretary General retains custody of the original. Notification of the authentic modifications by the Depositary triggers the procedures for their entry into force.

### **Explanatory Report**

Established practice has been to prepare an explanatory report

to COTIF. In substance, the Explanatory Report has always served two purposes: an official commentary and a summary of preparatory work ('travaux préparatoires'). An official commentary is an agreement relating to COTIF which was made within a competent OTIF organ in connection with the adoption of modifications. It therefore constitutes the context for the purpose of their interpretation. Preparatory work ('travaux préparatoires') for modifications constitutes supplementary means of interpretation.

At the time of adoption of modifications to COTIF, the General Assembly and the Revision Committee should also approve modifications to the Explanatory Report to COTIF, the Convention itself or a particular Appendix. The objective is to establish an official commentary to facilitate the understanding and application of the provisions. Like the modifications to COTIF, modifications to the Explanatory Report should also be subject to editorial review by an Editorial Committee or Working Group. Corrections made by an Editorial Committee or Working Group should be recorded as an addendum to the Final Document of the General Assembly or the Decisions of the Revision Committee as soon as they are finalised and effected.

At the time of adoption of modifications to COTIF, the General Assembly and the Revision Committee should also mandate the Secretary General to prepare a summary of the preparatory work ('travaux préparatoires') for modifications for the Explanatory Report. The objective is to describe the history of negotiations on the modifications, including in the preparatory organs, based on an official report of the relevant meeting.

At the time of adoption of modifications to COTIF, the General Assembly and the Revision Committee should also mandate the Secretary General to prepare a consolidated version of the Explanatory Report for COTIF, the Convention itself or a separate Appendix containing all the modifications for the Explanatory Report approved by a competent organ and a summary of the preparatory work. If necessary, the Secretary General may consult OTIF members before finalising the consolidated version.

### **Registration and publication**

The Secretary General should

- register COTIF and all modifications to it within OTIF using the acronym 'COTIF' in the registration code;
- register COTIF and all modifications to it with the Secretariat of the United Nations;
- register consolidated Explanatory Reports on the base Convention, Appendices and Protocols using the acronym 'COTIF' in the registration code;
- if there is no official consolidated version of the base Convention or Appendices, including modifications, prepare

unofficial consolidated versions for practical use;

- publish on OTIF's website all authentic and unofficial consolidated versions of COTIF and modifications to it and all consolidated explanatory reports.

**Aleksandr Kuzmenko**

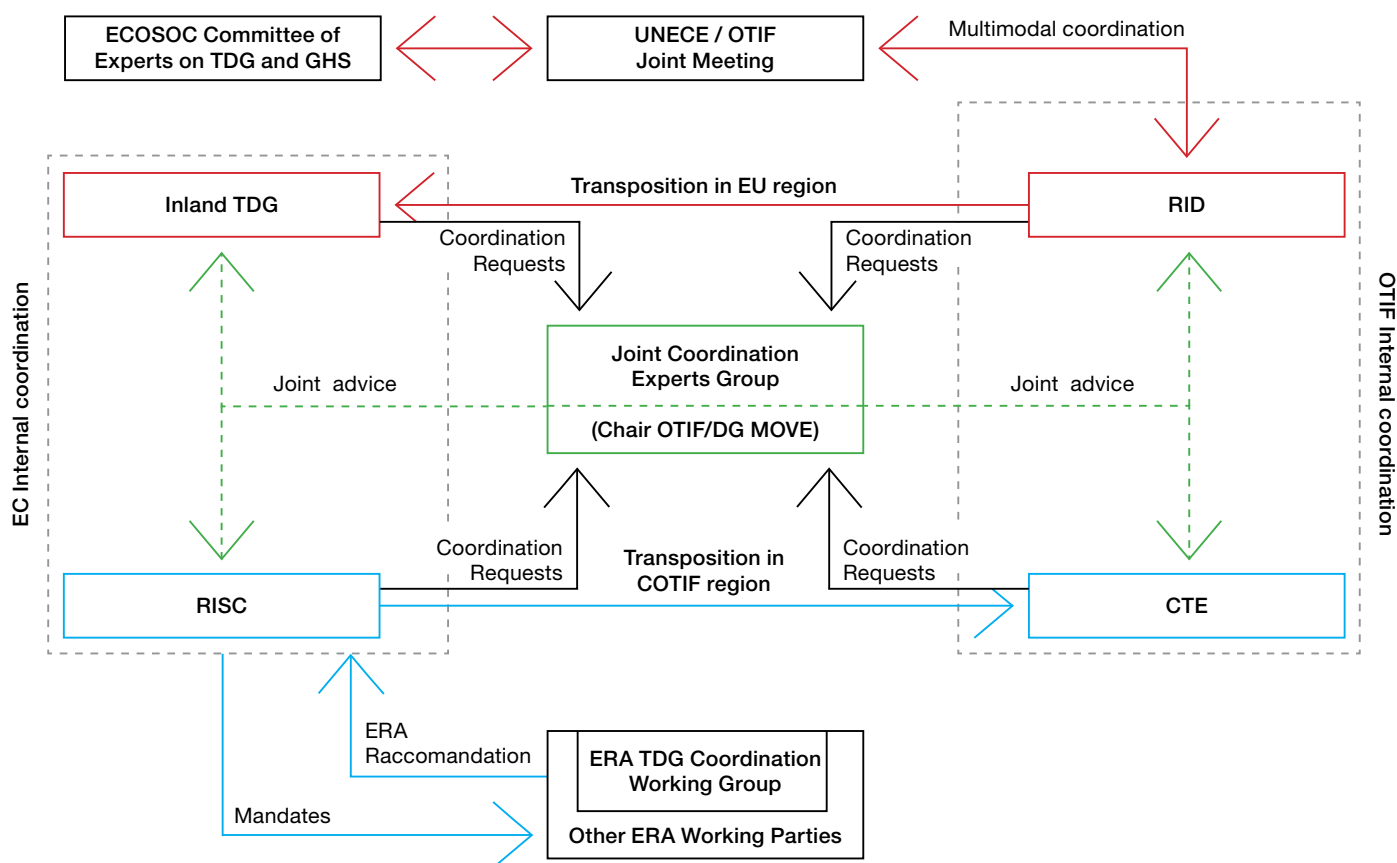
# 5<sup>th</sup> SESSION OF THE JOINT COORDINATING GROUP OF EXPERTS (JCGE)

The coordination of legislation concerning the transport of dangerous goods and railway legislation on technical interoperability and safety is complex and involves different bodies. The two sets of law are continuously developing and they touch on topics that sometimes overlap or influence each other when they concern the assessment of compliance with technical

interoperability, safe integration, and the transport of dangerous goods. Following a series of meetings in 2016 and 2017, the RID-ATMF working group at the time concluded that a Joint Coordinating Group of Experts (JCGE) should be established.

JCGE is a working group that, through a coordinated process, offers advice or makes requests

to the RID Committee of Experts, Committee of Technical Experts (CTE), the EC Transport of Dangerous Goods (TDG) Committee, and the EC Railway Interoperability and Safety Committee (RISC). JCGE is not a decision-making body. The defined JCGE working structure is shown in the following diagram



Proposed process with establishment of a 'Joint Coordinating Group of Experts' (JCGE)

The JCGE held its 5<sup>th</sup> session in Berne on 6 September in the form of a hybrid meeting. The following OTIF Member States participated: Albania, Austria, Azerbaijan, Belgium, Finland, Georgia, Germany, Hungary, Italy, Jordan, Latvia, Netherlands, North Macedonia, Norway, Poland, Romania, Spain, Switzerland, Türkiye and the United Kingdom.

The European Commission (DG MOVE) and the European Union Agency for Railways were represented. DG MOVE hosted the session on behalf of the JCGE Secretariat, which is provided jointly by OTIF and DG MOVE.

The sector was represented by the following stakeholders: Community of European Railway and Infrastructure Companies (CER), European Chemical Industry Council (CEFIC), NBRail, International Union of Railways (UIC), the International Union of Wagon Keepers (UIP) and the European Rail Industry Association (UNIFE).

Mr Rainer Kogelheide from UIP was nominated and elected as the Chair of this session.

The topics high on the agenda for this meeting came from a previously defined and agreed priority list and were as follows:

### 1. Wagon specific requirements for tank-wagons to withstand stresses under the maximum permissible load

Requirements concerning the stresses that tank-wagons must be able to withstand are laid down both in RID and in the TSI/UTPs. The TSI/UTPs refer to standard EN 12663-2. For the purpose of RID, specific tank parameters, such as the maximum working pressure, wall thickness and operating temperature ranges have to be taken into account. This

is not currently reflected in the standard. The recently amended application guide for the Wagon TSI takes the specific RID requirements into account. In addition, the application guide for the UTP WAG is currently being revised and will be proposed for adoption at the forthcoming CTE meeting in June 2023. The standard EN 12663-2 has been undergoing revision since April 2022 and is expected to be finalised in the next year or two. This lengthy process is explained by the need to assess the standard in the different situations for freight and passenger vehicles, interfaces between the wagon and the load in modular systems and intermodal transport, and specific requirements according to RID. Until the EN standard is finalised, the TSI/UTP application guides should be used as a reference.

### 2. Implementation of DAC and solution for shock buffers and energy absorption of tank-wagons and battery-wagons to reduce buffer override and the potential risk of penetration

RID special provisions exist under TE 22 (energy absorption elements/crash buffers) and TE 25 (protection against the overriding of buffers) and apply to wagons with buffers and draw gear. There are not yet any defined requirements in the TSIs and UTPs. In 2017, the RID-ATMF working group had already concluded that the RID requirements would focus on the high-level safety objectives, while the TSIs and UTPs would include the detailed technical requirements. With the introduction of Digital Automatic Couplers (DAC), technical requirements would

have to be agreed, while the safety level would be maintained. As a consequence, TE 22 and TE 25 have to be re-assessed and revised in light of these new developments.

### 3. Extra-large tank-containers and how to deal with shunting risks

The TE 22 and TE 25 provisions do not deal with the shunting risks for extra-large tank-containers. In RID, "extra-large tank-container" is defined and the requirements for the shell thickness and manlifts have been updated. Further studies will be carried out to analyse whether any modifications to RID and the TSIs/UTPs are necessary.

### 4. A proposal from ERA on Risk Control Measures

The discussion on safety objectives provided an opportunity to introduce a new topic related to "Common Safety Methods on Assessment of Safety Level and Safety Performance (CSM-ASLP)". ERA proposed a method called "Risk Control Measures" (RCM) that could help to identify and describe the safety risks and the technical and operational measures to manage these risks.

### 5. Implementation of eFTI Regulation, Telematics Applications for Freight, and RID

The EU Electronic Freight Transport Information Regulation of 2020 (eFTI) requires that Member States exchange information digitally on the transport of any goods across different modes of transport. The exchange of information is between Business and Administration (B2A). Although the Regulation

does not prescribe how this should be achieved from the technical point of view, institutions, national authorities and stakeholders have since worked together through the Digital Transport and Logistic Forum (DTLF) to find a common solution to electronic documents, harmonised data models and high-level requirements for the architecture. The TAF TSI Technical Document, which is also included in the UTP TAF, already contains a data message model on consignment and the dangerous goods information, harmonised with the information required in RID. RID already allows the use of electronic data exchange to satisfy the documentation requirements of RID Chapter 5.4. For this purpose, guidelines are published on the OTIF website.

#### **6. Safety responsibilities of actors as defined in the EU Safety Directive 2016/798 and RID 1.4**

The sector drew the European Commission's and ERA's attention to the possible differences of interpretation of EU Directive (EU) 2016/798 of the European Parliament and the Council of 11 May 2016 on railway safety and the provisions of RID 1.4 on the relevant actors and the safe operation of trains, which may impact the Safety Management System of Railway Operators and Infrastructure Managers, and liabilities and obligations based on contractual arrangements. There may be differences in practices at national level, which might require further analysis and solutions.

#### **7. National rules and the possibility of harmonising or removing them**

DG Move reported on its work on removing national rules in the European Union, and reminded the meeting that all notified national rules relating to the authorisation of wagons could be found in the EU's Reference Document Database (RDD) and Single Rule Database (SRD). In future, RDD will be merged with SRD. The meeting discussed the need for more clarity with regard to national rules that may relate to the acceptance of vehicles transporting dangerous goods.

The next JCGE meeting is scheduled for 6 September 2023 in Berne, Switzerland. It will be held in a hybrid format.

**Maria Price**

# THE TRANSPORT OF DANGEROUS GOODS IN THE CONTEXT OF INTERNATIONAL HUMANITARIAN LAW<sup>1</sup>

Accidents involving means of transport carrying dangerous goods can have devastating consequences, even in peacetime. Not only are the affected means of transport and parts of the infrastructure destroyed, but depending on the type of dangerous substances, the quantity being carried and the geographical conditions of the accident site, people can be injured or killed and buildings damaged. In addition, contamination of the natural environment, agricultural land, drinking water and groundwater resources or even the destruction of entire ecosystems can occur.

However, dangerous goods are not carried only in peacetime. Even during armed conflicts, supply chains, industrial production and resources must be maintained, and not just for civil purposes. The military needs to be supplied with ammunition and fuel and the arms industry with various dangerous substances necessary for the production of weapons and ammunition. This then raises the question of whether and under what conditions means of transport carrying dangerous goods may be attacked by the parties participating in the armed conflict. What rules of international humanitarian law apply to this type of transport and how are they applied? What aspects need to be considered in a planned attack on dangerous goods transport

operations?

This article addresses these questions from the perspective of three fundamental principles of international humanitarian law: the principle of distinction, the principle of proportionality and the principle of the application of precautionary measures during the attack. It draws mainly on the Fourth Geneva Convention of 1949<sup>2</sup>, the two 1977 Additional Protocols<sup>3</sup> to the Geneva Conventions and the International Committee of the Red Cross online database on customary international humanitarian law (ICRC database)<sup>4</sup>.

## Principle of distinction between civilians and combatants and between civilian objects and military objectives

Article 48 of Additional Protocol I codifies one of the most important principles of international humanitarian law, namely the principle of distinction. According to this principle, “the Parties to the conflict shall at all times distinguish between the civilian population and combatants and between civilian objects and military objectives”. Attacks may only be carried out on military objectives, combatants or civilians directly participating in hostilities. Attacks on civilian objects and other civilians are prohibited. This principle has also

been included in the ICRC database as Rules 1 and 7 and is applicable to international as well as non-international armed conflicts. When applying the principle of distinction to the situation of a planned attack on a means of transport loaded with dangerous goods, the attacker must first assess whether the object is civilian or military. If, for example, the means of transport concerned is a military vehicle and is operated directly by the military, it is clearly a military target and is therefore legitimate.

However, the distinction is not always so obvious. Under certain conditions, civilian objects can also become military objectives. According to Article 52 of Additional Protocol I, “civilian objects are all objects which are not military objectives [...]”. To fall under the definition of a military objective, the concerned objects must fulfil two conditions. They must be:

- a. objects which by their nature, location, purpose or use make an effective contribution to military action; and whose
- b. total or partial destruction, capture or neutralisation offers a definite military advantage.

In conclusion, the answer to the question of whether or not an object is a legitimate military objective will depend to a large extent on the

<sup>1</sup> This article is a greatly abridged and slightly modified version of the diploma thesis “Transport of Dangerous Goods in the Context of International Humanitarian Law - Selected Aspects of the Application of International Humanitarian Law to the Transport of Dangerous Goods” by Katarina Burkhard, submitted to the Faculty of Law of the University of Bern in August 2022.

<sup>2</sup> Geneva Convention of 12 August 1949 relative to the Protection of Civilian Persons in Time of War.

<sup>3</sup> Protocol of 8 June 1977 Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts (Additional Protocol I) and Protocol of 8 June 1977 Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of Non-International Armed Conflicts (Additional Protocol II).

<sup>4</sup> Available under <https://ihl-databases.icrc.org/customary-ihl/eng/docs/home>.

conditions prevailing at the time of the attack.

Military trucks carrying dangerous goods are military targets by their very nature (inherent characteristics) and, like all other military equipment, devices, installations and facilities, effectively contribute to military actions.

The purpose of an object is always future-oriented and denotes its intended use. This means that if, on the basis of reliable information, it can be assumed that civilian tank-vehicles, tank-wagons or barges to be loaded are to be used to supply military units, this fact could make them a legitimate military target.

“Use” refers to the current function of the object. An object that is not a military objective by its nature becomes a military objective when used by the military, but only during the period of such use. A civilian lorry or train normally used for civilian transport may be attacked as military targets if, exceptionally, they are being used by the military and are carrying military material at the time of the attack.

However, effective contribution to military action is only one of the two conditions that must be met for an object to become a legitimate military target. The attack on the object, its destruction, capture or neutralisation must also offer the attacking party a definite military advantage. A potential, speculative or undetermined advantage would not be sufficient. Definite military advantages include, for example, gaining ground for the attacking party or reducing the opponent’s military strength.

### Specially protected objects in international humanitarian law

In connection with attacks on the

transport of dangerous goods, it is important to note that according to Additional Protocol I, some civilian objects are under special protection. Among these objects are medical facilities, cultural objects and places of worship, objects indispensable to the survival of the civilian population, the natural environment and works and installations containing dangerous forces. These objects may not be used for military action by the party to the conflict under whose control they are, and for this reason should never become military objectives. However, even if they are actually used for military purposes and satisfy the two conditions of Article 52 of Additional Protocol I listed above, they may only be attacked under restricted conditions and the attacker must take additional precautions when attacking.

Although means of transport carrying dangerous goods do not belong to specially protected objects in international humanitarian law, an attack on them is very likely to cause damage to specially protected objects. Most at risk are the natural environment and objects indispensable to the survival of the civilian population, such as agricultural land or drinking and groundwater supplies. As shown below, for planned attacks on the carriage of dangerous goods, these considerations must be taken into account when assessing the proportionality of these attacks.

### Principle of proportionality

Even if a target is considered a legitimate target under international humanitarian law, applying the principle of proportionality may deter a party to the conflict from attacking such a target.

Article 51 of Additional Protocol I, which defines, inter alia,

indiscriminate attacks, which are prohibited under international humanitarian law, also designates as indiscriminate, and thus prohibited, an attack “which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated.”<sup>5</sup>

Any violation of the principle of proportionality is described in Additional Protocol I as a serious violation of the Protocol and thus of international humanitarian law. The Rome Statute of the International Criminal Court (ICC) classifies the act of intentionally launching an attack in the knowledge that such attack will cause collateral damage in clear violation of the principle of proportionality as a war crime. This also includes attacks which, as collateral damage, will cause widespread, long-term and severe damage to the natural environment.

In the case of military attacks on the transport of dangerous goods, depending on the degree of danger of the substances being carried and the interplay of various factors, much greater collateral damage is to be expected than in the case of attacks on means of transport loaded with goods not classified as dangerous.

An attack on a means of transport loaded with dangerous goods not only leads to direct loss of life of the crew and material damage to the means of transport and parts of the infrastructure, such as rails or road, but usually has more far-reaching consequences, such as:

- direct loss of life among the civilian population within a given perimeter,
- reversible or irreversible damage to the health of the

<sup>5</sup> The principle of proportionality in attack is also integrated into the ICRC database as Rule 14.

civilian population (with varying degrees of severity),

- total or partial destruction of civilian buildings and infrastructure within a perimeter,
- environmental damage, damage to ecosystems,
- damage (destruction or rendering unusable by contamination) to objects indispensable to the survival of the civilian population, such as agricultural land, drinking water installations and supplies, contamination of groundwater.

It is essential to draw attention to the specifics of a military attack on dangerous goods transport operations when instructing decision-makers among military personnel and in military manuals. It should be emphasised which information is to be taken into account as a basis for an assessment. The following list contains various influencing factors which, individually or in combination, determine the extent of collateral damage.

#### Factors influencing the assessment of the consequences of a military attack on means of transport carrying dangerous goods

When assessing the consequences of a planned military attack on means of transport carrying dangerous goods, the following factors, among others, should be taken into account:<sup>6</sup>

- intrinsic properties of the dangerous goods being carried (explosive, flammable, toxic, radioactive, corrosive, environmentally hazardous, etc.),

- quantity being carried,
- possible dangerous interaction between different dangerous goods being carried by the same means of transport,
- characteristics of the area where the means of transport is located at the time of the attack, in particular:
  - o population and building density,
  - o proximity to busy civilian facilities (schools, shopping centres, etc.),
  - o proximity to high-risk operations, such as chemical plants where there is a risk of chain reactions, or to other plants or facilities that contain hazardous forces, such as dams, dikes and nuclear power stations,
  - o existence of vulnerable ecosystems (surface and underground water, soil, fauna, flora, etc.),
  - o proximity to objects indispensable to the survival of the civilian population, such as agricultural land or drinking water installations and supplies,
  - o proximity to cultural objects and places of worship that are part of the cultural and spiritual heritage.

#### Principle of the application of precautionary measures during the attack

One of the main principles of international humanitarian law is that “[i]n the conduct of military operations, constant care shall be taken to spare the civilian

population, civilians and civilian objects” (see Art. 57 (1) of Additional Protocol I). Even if a military attack affecting, among others, civilians and civilian objects respects the principles of distinction and proportionality, the opposing parties are obliged to take all possible precautions to avoid or minimise the negative impact of the attack on the civilian population and civilian objects. According to Additional Protocol I, the duty to take precautionary measures is incumbent on both parties to the armed conflict: the party planning or carrying out an attack and the party suffering an attack under whose control civilian persons or objects are located. The first case refers to so-called “active precautions” and the second case to so-called “passive precautions”.<sup>7</sup>

The question of whether both parties to the conflict have the same duty to take precautions is controversial. While some authors, as well as state practice and the context of Additional Protocol I, would suggest that the primary responsibility for taking precautions lies with the attacking party, other authors are of the view that Additional Protocol I does not introduce a fundamental imbalance between the obligation to take active precautions by the attacker and the obligation to take passive precautions by the party under whose control civilians or civilian objects are located.

#### Duty to take active precautions

Article 57 of Additional Protocol I prescribes the following precautions for the attacking party:

- A. Those who plan or decide upon an attack shall:

<sup>6</sup> Based on the hazard risk analysis in the event of a transport accident involving dangerous goods, see “Dangerous goods accident rail” and “Dangerous goods accident road”, hazard dossiers of the Swiss Federal Office for Civil Protection, 2020, p. 3.

<sup>7</sup> In the ICRC database, the duty to take precautions is set out in Rules 15 to 24.



1. Do everything feasible to verify that the objectives to be attacked are legitimate targets, i.e. that they are neither civilians nor civilian objects and are not subject to special protection but are military objectives;
2. Choose, to the extent feasible, means (weapons) and methods of attack with a view to avoiding or to minimising civilian losses;
3. Refrain from any attack which breaches the principle of proportionality.

B. Those who carry out an attack shall:

1. Cancel or suspend an attack that is underway if it becomes apparent that it is in breach of one or more of the three conditions listed above;
2. Provide effective advance warning of attacks which may affect the civilian population, unless circumstances do not permit.

In addition, when a choice is possible between several legitimate targets for obtaining a similar military advantage, the target to be selected shall be the one on which the attack may be expected to have the least impact on the civilian population and civilian objects.

In the practical application of active precautions for the carriage of dangerous goods, the following rules in particular will play an important role:

- Refrain from attacks that violate the principle of proportionality;

This rule is also linked to the obligation to stop attacks that are already taking place and that violate the principle of proportionality.

As already shown above, when assessing the possible negative

consequences of a planned attack on means of transport loaded with dangerous goods, various influencing factors must be taken into account that reflect the special features of such transport operations. As a rule, the consequences of such an attack are much more serious than in the case of an attack on means of transport carrying non-dangerous goods. This could often lead to the collateral damage caused by the attack being disproportionate to the military advantage gained. In such a case, the attacking party would have to refrain from attacking.

- Choosing methods of warfare that avoid or minimise civilian losses;

In the case of attacks on dangerous goods transport operations, the timing and resulting location of the attack has a huge influence on the extent of the negative impact on the civilian population and civilian objects. For example, if the attacker plans to attack a particular train carrying dangerous goods for military purposes of the opposing party, the consequences of the attack will be very different depending on whether the attack takes place while the train is travelling through a city or through a sparsely populated area or through an area with vulnerable ecosystems. The decision on how, i.e. at what time, the attack should be carried out is guided, among other things, by applying the principle of proportionality.

- In the case of several legitimate targets whose destruction provides a comparable military advantage, selection of the target with the least impact on the civilian population and civilian objects;

If the attacker has a choice of several means of transport carrying dangerous goods as legitimate targets that would give him a similar military advantage, he must, if possible, choose to attack the means of transport that is likely to cause the least collateral damage. Based on the above example, if there were a choice between attacking a dangerous goods train that is currently at the station of a densely populated city and one loaded with the same dangerous goods that is passing through an unpopulated area, the attacker would have to choose the second.

- Provide effective advance warning of attacks where there is a risk of impact on the civilian population;

In attacks on means of transport carrying dangerous goods in particular, major negative effects on the civilian population are to be expected. Even if the attacker uses precision-guided weapons to destroy the transport unit, the release of dangerous substances and the possible dangerous reactions that might result have an effect in the immediate vicinity of the target attacked, as well as within a perimeter of varying size, depending on the properties of the dangerous substance and the meteorological conditions prevailing at the time of the attack. For this reason, it is vital that the attacker provides efficient advance warning before imminent attacks on transport units carrying dangerous goods in more or less densely populated areas, so that the civilian population can be brought to safety in a sufficiently large perimeter and other measures can perhaps be taken to mitigate the effects of the attack.

As means of transport carrying dangerous goods are moving targets, not stationary ones, it is important to give timely advance warning for an area where the planned attack is to take place, even though the target of the attack is not yet in the affected area.

Even in the case of a planned attack on a means of transport loaded with dangerous goods, it must first be checked of course whether it is a legitimate target at all. In order to do this, the attacking party must, as far as possible, collect and assess relevant information. If it only becomes clear during the attack, based on new information, that the target is not legitimate, the attack must be stopped.

### Duty to take passive precautions

For the party to the conflict under whose control civilian population and objects are located, Article 58 of Additional Protocol I prescribes the following:

It shall, to the maximum extent feasible:

1. Endeavour to remove the civilian population and civilian objects from the vicinity of military objectives;
2. Avoid locating military objectives within or near densely populated areas;
3. Take other necessary precautions to protect the civilian population and civilian objects under its control.

When carrying dangerous goods, one of the most important passive precautions taken by the party to the conflict under whose control the civilian population and civilian objects are located will be the selection of the transport route.

If a means of transport carrying dangerous goods is a legitimate target for the attacking party, the defending party must, as far as possible, select the transport route so that it does not pass through densely populated and built-up areas, areas with vulnerable ecosystems, with objects indispensable to the survival of the civilian population or cultural objects and places of worship, and does not come close to high-risk facilities. The intrinsic hazardous properties of the goods being carried and the risks they pose must be taken into account when selecting the transport route. As not all dangerous goods have the same negative effects on people, nature and material objects, it is essential for the defending party in the conflict to assess all the information available to it about the dangerous goods being carried, the risks involved and the possible transport route options, and to select a route where the negative effects on civilians and objects can be avoided or kept as small as possible.

Sometimes, it is impractical or problematic to take passive precautions. In small, densely populated states, it can be particularly difficult to separate military objectives and civilians and civilian objects by a sufficient distance. Unfavourable economic conditions may also mean that for some states, it is simply not possible for them to build their industrial plants and communications and transport facilities away from densely populated areas. As transport routes depend on the existing infrastructure facilities, especially in rail and road transport, the possibility of choosing alternative transport routes is also influenced by the degree of development of the rail and road infrastructure.

In order to avoid or minimise damage to the civilian population and civilian objects in the event

of an attack on dangerous goods transport operations, states should already develop appropriate plans of action during peacetime. Many states have plans of action to deal with an accident during the carriage of dangerous goods or a terrorist attack on dangerous goods transport, which could also be applied in the event of an attack in the context of an armed conflict.

### Prohibition of the misuse of civilians as human shields

The prohibition of the misuse of civilians as human shields is closely linked to the obligation to take passive precautions. Article 51 (7) of Additional Protocol I states that the presence or movements of the civilian population shall not be misused to protect legitimate military targets “or to shield, favour or impede military operations”. It is therefore prohibited to mix the civilian population with combatants or other legitimate targets in order to get the attacking party to call off the attack for reasons of proportionality.

The misuse of civilians and other protected persons as human shields is also theoretically possible in the military transport of dangerous goods in trains, lorries, ships and other means of transport if the party to the conflict under whose control civilians or protected persons are placed them on board or near the means of transport with the intention of protecting its own military or military material. This would clearly fall under the definition of human shields and would thus be prohibited under international humanitarian law.

### Conclusion and outlook

As explained in the article, all attacks on dangerous goods transport during armed conflict must be guided by three of the most important principles of

international humanitarian law: the principle of distinction, the principle of proportionality and the principle of the application of precautions during attack. The article does not deal with the application of another fundamental principle of international humanitarian law, i.e.

the principle of military necessity. As the negative effects of an attack vary greatly depending on the mode of transport affected (land transport, maritime transport, air transport) and the corresponding framework conditions and possibilities for taking precautionary

measures also differ greatly, it might also be interesting to examine the special features of the individual modes of transport in more detail.

**Katarina Burkhard**

# 60<sup>th</sup> SESSION OF THE UN SUB-COMMITTEE OF EXPERTS ON THE TRANSPORT OF DANGEROUS GOODS

## Geneva, 27 June to 6 July

The 60<sup>th</sup> session of the UN Sub-Committee of Experts was the third session in the 2021/2022 biennium. The decisions of the UN Sub-Committee of Experts are incorporated into the 23<sup>rd</sup> revised edition of the UN Model Regulations and form the common basis for all the mode-specific dangerous goods regulations. In the context of harmonising RID/ADR/ADN with the UN Recommendations on the Transport of Dangerous Goods, these decisions will later be carried over into the 2025 editions of RID, ADR and ADN.

The 60<sup>th</sup> session of the UN Sub-Committee of Experts was held as a hybrid meeting from 27 June to 6 July 2022. It was chaired by Mr Duane Pfund (United States of America) and 25 states, 6 governmental organisations and 28 non-governmental organisations were represented at it. As all the decisions of the UN Sub-Committee of Experts have repercussions for the dangerous goods provisions of the various modes, the Intergovernmental Organisation for International Carriage by Rail (OTIF) was represented as a modal organisation.

### Opening of the session

The UN Sub-Committee of Experts was informed that the UNECE and OTIF Secretariats were in the process of finalising the publication of the new 2023 editions of RID, ADR and ADN, which were expected to be published in November 2022.

### Classification

#### Assignment of packing group to articles

In 2012, the UN Sub-Committee of Experts had already decided to delete the packing groups for all articles appearing in the list of dangerous goods. Subsequently, it was specifically pointed out in RID/ADR/ADN 2.1.1.3 that articles are not assigned to a packing group and that any test requirements for packagings are specified in the relevant packing instruction. Nevertheless, the UN Model Regulations and RID/ADR/ADN still indicate a packing group for three UN numbers for articles, which is contrary to the principle set out in 2.1.1.3.

The UN Sub-Committee of Experts decided to delete the packing group for articles of UN Nos. 2028, 2870 and 3165 and to include a reference to the test requirements for packing group II in packing

instruction P 803 applicable to UN No. 2028. No such reference is included in the case of packing instruction P 301 applicable to UN No. 3165, because the packing instruction already specifies the specific characteristics of the packaging. As special packing provision PP 13 applicable to UN No. 2870 already lays down the test requirements for packing group I, no further amendments are necessary in the case of this UN number either.

#### Disilane

Disilane is a pyrophoric liquefied gas under pressure which is spontaneously flammable in air. This gas, which belongs to the group of silicon hydrogens, is used in industry to coat products with silicon and to clean silicon-containing wafers (base plate for electronic components). This substance is currently carried under the collective entry UN 3161 Liquefied gas, flammable, n.o.s.

However, this collective entry does not take into account the pyrophoric properties of disilane, which is particularly important for air transport, as pyrophoric substances may not be carried in either passenger or cargo aircraft.

The UN Sub-Committee of Experts adopted the inclusion of a new UN number for disilane (UN 3553). In packing instruction P 200, an existing special packing provision requiring gas-tight closures for the valve openings of pressure receptacles for the carriage of pyrophoric gases is assigned to this new entry.

### Articles containing gallium

The 58<sup>th</sup> session of the UN Sub-Committee of Experts discussed a proposal by China to include a new UN number for articles containing gallium. This new UN number should allow the same exemptions as those that currently apply to articles containing mercury. This is to prevent stricter provisions for the less dangerous substance gallium than for the more dangerous substance mercury. It was added by way of explanation that gallium is suitable as a substitute for mercury in many applications, which could reduce mercury emissions (see [Bulletin 3/2021, p. 20](#)).

The UN Sub-Committee of Experts agreed to include a new UN number 3554 for gallium contained in manufactured articles, which would be assigned the same transport provisions as currently apply to UN 3506 mercury contained in manufactured articles. With regard to special provision 366, which exempts articles containing mercury for air transport if they contain less than 15 g of mercury, it was decided to await the decision of the ICAO Dangerous Goods Panel in November on the question of whether this exemption should also

apply to articles containing gallium.

### Monkeypox viruses

The current outbreak of monkeypox has also preoccupied the UN Sub-Committee of Experts with regard to the classification of material and patient samples contaminated with monkeypox virus. According to the table in RID/ADR 2.2.62.1.4.1, monkeypox virus is assigned to entry UN 2814 Infectious substance affecting humans, Category A.

According to international guidelines (e.g. EU Directive 2000/54/EC), monkeypox virus is assigned to risk group 3.

Pathogens that can cause severe disease in humans, but for which there is effective prevention or treatment, are classified under risk group 3. Two vaccines are currently available for prevention, which are already licensed in the United States of America and Canada. Medicines for the treatment of monkeypox have also recently been approved in the European Union.

Pathogens falling under risk group 3 are shown in the table in RID/ADR 2.2.62.1.4.1 (infectious substances included in Category A) with the additional comment “cultures only”. If the restriction “cultures only” is not indicated in this table, this means that pathogens fall under risk group 4, which can cause severe diseases in humans, but against which there is usually no effective prevention or treatment.

The UN Sub-Committee of Experts considered that classifying monkeypox virus in Category A without restrictions is not justified by the risk group assigned according to international guidelines. It was agreed to treat monkeypox virus like most other risk group 3 viruses and to assign it to Category A only in cultures.

This decision means that monkeypox virus may be assigned to UN No. 3373 Biological substance, Category B or medical waste contaminated with monkeypox virus may be assigned to UN No. 3291 CLINICAL WASTE, UNSPECIFIED, N.O.S.

Multilateral special agreements RID 2/2022 and M347 initiated by Germany enable the signatory states to implement this decision in European land transport ahead of schedule.

### Electric storage systems

#### Summary of tests for lithium cells and batteries

2.2.9.1.7 (g) requires manufacturers and subsequent distributors of lithium cells and batteries to provide the test summary specified in the Manual of Tests and Criteria, Part III, sub-section 38.3, paragraph 38.3.5. The purpose of this provision is to enable the consignor to ascertain that the lithium cells or batteries are of a type that has passed the applicable tests in the Manual of Tests and Criteria. However, some battery manufacturers are of the view that they only need to provide the test summary to registered distributors of their products and refuse to provide the test summary to other participants, including the consignors of these products.

The International Air Transport Association (IATA) proposed that the test summary be made available to all entities upon request. France supported this proposal and explained that a similar discussion was taking place at European level and that a possible solution might be to put a QR code on the “battery passport”.

The UN Sub-Committee of Experts preferred to keep the current text and to include an explanation of the term “make available” in a Note specifying that consignors or other

persons in the supply chain must be able to confirm that the provisions have been complied with.

## Packing

### Marking of packagings

According to 6.1.3.1, for packages with a gross mass of more than 30 kg, the marks or a duplicate thereof shall appear on the top or on a side of the packaging. For packages with removable lids (e.g. drums or jerricans), this wording may result in the mark appearing only on that lid, with the risk of a lid being placed on an incorrect packaging that does not meet the specifications of the mark.

The UN Sub-Committee of Experts made a clarification specifying that the mark must always appear on a non-removable component. For packages with a gross mass of more than 30 kg and a removable lid, this means that the mark must appear on the packaging itself, as well as on the lid. A transitional measure ensures that packagings produced before 1 January 2027 may continue to be used.

### Packing instruction LP 903

Packing instruction LP 903 deals with the packing of lithium batteries in large packagings. Currently, only a single battery and a single device containing lithium batteries may be packed in a large packaging. In contrast, for packing instruction LP 906, which deals with the packing of damaged or defective lithium batteries in large packagings, it was decided in the last biennium also to allow large packagings for several damaged or defective batteries or devices containing lithium batteries. For the additional test requirements for such large packagings, the highest number of batteries and equipment, the highest total energy content of the batteries and the

arrangement within the package, including partitions and protective devices for the parts, were included as supplementary criteria. This amendment will enter into force for RID/ADR/ADN in the 2023 edition.

Against the background of the growing number of battery-powered motor vehicles and the rapidly increasing production of lithium batteries, the battery industry requested that packing instruction LP 903 also be approved for multiple batteries. Following a preliminary discussion at the 58<sup>th</sup> session of the UN Sub-Committee of Experts (see [Bulletin 4/2021, p. 22](#)), the battery industry submitted a document that addressed the concerns originally expressed.

In order to prevent large packagings from being used for the carriage of thousands of small cells or batteries, which could increase the potential for damage, it is specified that the packing instruction may only be applied for large cells with a gross mass of more than 500 g, large batteries with a gross mass of more than 12 kg and equipment containing such cells or batteries.

To prevent damage from movement, contact with other cells or batteries or from superimposed loads within the large packaging under normal conditions of carriage, inner packagings, trays or partitions are prescribed. It is explicitly laid down that plastic bags alone are not sufficient to meet these requirements.

### Packages containing coolants or conditioners

RID/ADR 5.5.3.3 contains provisions for packaged dangerous goods requiring cooling or conditioning. However, in accordance with 5.5.3.3.1, dangerous goods packed in accordance with packing

instruction P 203, P 620, P 650, P 800, P 901 or P 904 are exempted from these provisions.

For packed dangerous goods which are required to be packed in accordance with another packing instruction and which contain a coolant or conditioner, 5.5.3.3.2 contains the following requirements:

- Packages shall be capable of withstanding very low temperatures.
- Packages shall not be affected or significantly weakened by the coolant or conditioner.
- Packages shall be designed and constructed to permit the release of gas to prevent a build-up of pressure that could rupture the packaging.
- The dangerous goods shall be packed in such a way as to prevent movement after the dissipation of any coolant or conditioner.

Spain had noted that packing instructions P 901 and P 904 did not reflect the criteria set out in 5.5.3.3.2 and should be removed from the list of packing instructions to which 5.5.3.3 does not apply. On the other hand, packing instructions P 520, P 911 and LP 906 should be added to this list because these packing instructions also regulate the use of coolants. This would have the advantage that the provisions of 5.5.3.3.2 would no longer have to be complied with when preparing the packages.

The UN Sub-Committee of Experts adopted Spain's proposals, with an addition to packing instruction P 800 to prevent movement after the dissipation of any coolant.

### Use of recycled plastics material

Global initiatives to limit the negative

impact of human activities on the environment (e.g. the European Commission's "Green Deal", United Nations goals relating to the circular economy and sustainable development) also have an impact on the production of plastics packagings. The new levy on non-recycled plastics packagings introduced by the European Commission means that manufacturers and users of plastics packagings will have to change their traditional production processes. Ways are being sought to reduce the amount of non-recycled virgin plastics material and increase the proportion of recycled material in production processes. This also affects the manufacturers and users of plastics packagings for the transport of dangerous goods.

At the suggestion of Belgium, an informal working group was held during the 60<sup>th</sup> session of the UN Sub-Committee of Experts, which reached the following conclusions:

Most experts recognised the need to consider carefully the use of recycled plastics for packagings for the safe global transport of dangerous goods. It was proposed to promote the use of recycled material by assessing the relevant standards and practices in order to modernise the current UN Model Regulations and better reflect technical progress in the recycling of polymers. In so doing, the experience of the packaging and polymer industries should be called upon, which are already using innovative technologies to produce recycled plastics for packagings intended for the carriage of non-dangerous goods.

It was proposed that the UN Sub-Committee of Experts should be kept informed of the progress of the work of the ISO working group that is revising standard ISO 16103:2005 on the use of recycled plastics in packagings for the transport of dangerous goods, referred to in 1.2.1, so that the UN Model

Regulations could be adapted as quickly as possible. The principles for the revision of this standard already provide that the sources for the plastics material are not limited to used industry packagings as before. The provisions of the revised standard will take into account whether the material originates from a known closed system (e.g. used UN packagings) or an open system (e.g. household waste or other sources of plastic waste). Depending on the origin of the plastics material, different quality control criteria must be met before the material can be considered suitable for the production of packagings, intermediate bulk containers (IBCs) and large packagings for the transport of dangerous goods.

#### Use of the term "filling ratio" in the regulations

According to RID/ADR/ADN 1.2.1, the term "filling ratio" is defined as "the ratio of the mass of gas and the mass of water at 15 °C that would fill completely a pressure receptacle fitted ready for use". This means that the term "filling ratio" is only defined for gases, although the same term is also used for solids and liquids.

The English and French versions already use different terms, "filling ratio" and "degree of filling" or "taux de remplissage" and "degré de remplissage", although not uniformly.

At Spain's request, the UN Sub-Committee of Experts agreed to standardise the terms used. For the German version, this means that the term "filling ratio" will now only be used for solids and liquids and the term "filling factor", which is to be newly included in the German version, will only be used for gases. All the related consequential amendments will be checked again at the next session of the UN Sub-Committee of Experts.

#### Articles containing lithium batteries

In connection with the inclusion of new UN numbers for articles containing dangerous goods, a new 2.1.5 on the classification of articles was included in RID/ADR/ADN 2019. Articles containing dangerous goods may also contain lithium batteries. These lithium batteries must be of a type that has been demonstrated to meet the test requirements of the Manual of Tests and Criteria, Part III, sub-section 38.3. However, some exceptions apply in cases that are otherwise regulated in RID/ADR/ADN. Examples given are: "Pre-production prototype articles containing lithium batteries or for a small production run of not more than 100 such articles".

It was noted that these examples are incorrect, as special provision 310, which sets out exemptions from successfully passing the tests of the Manual of Tests and Criteria, Part III, sub-section 38.3, mentions pre-production prototypes or production runs of cells or batteries, but not articles containing such cells or batteries.

The UN Sub-Committee of Experts agreed to a clarification which, in addition to 2.1.5.2, also covers special provision 310, which will in future be assigned to all UN numbers for articles, and special provisions 363 and 388. It also agreed to supplementary provisions in packing instructions P 006 and LP 03 which have to be taken into account for articles containing pre-production prototypes or small production runs of lithium batteries. At the same time, the UN Sub-Committee of Experts decided to make a clear statement in the special provisions referred to about which provisions of the sub-paragraphs of 2.2.9.1.7 lithium batteries do not have to comply with if the test requirements of the Manual of Tests and Criteria, Part III, sub-section 38.3 do not have to be met.

## Next session

The 61<sup>st</sup> session of the UN Sub-Committee of Experts will be held from 28 November to 6 December

2022 in Geneva. This will be the last session of the 2021/2022 biennium at which decisions can still be taken for the 23<sup>rd</sup> revised edition of the UN Model Regulations.

**Jochen Conrad**  
**Katarina Burkhard**

# RID/ADR/ADN JOINT MEETING

## Geneva/hybrid, 12 to 16 September 2022

The RID/ADR/ADN Joint Meeting in September 2022 was the second meeting of the 2022/2023 biennium. Its decisions will be reflected in the 2025 editions of RID, ADR and ADN.

The Joint Meeting of the RID Committee of Experts and the Working Party on the Transport of Dangerous Goods of the United Nations Economic Commission for Europe took place from 12 to 16 September 2022 in the form of a hybrid meeting. Compared to the spring 2022 session, there was an increase in the number of delegates who chose to attend in person.

Delegates from 23 states, the European Union and 20 non-governmental organisations took part in the discussions.

## Tanks

As most of the documents submitted concerned tank topics, it was decided before the meeting that these would not be dealt with in a working group meeting in parallel, but directly in the plenary.

## Digital test reports or electronic tank record

The International Union of Wagon Keepers (UIP) returned to a proposal it had already submitted to the Joint Meeting in 2014. It requested that it should also be possible to keep the tank record in electronic form. Among other reasons, this was justified by the fact that, according to standard EN ISO/IEC 17020 (Conformity

assessment – Requirements for the operation of various types of bodies performing inspection), accredited inspection bodies send electronically generated inspection certificates without any signature. Original certificates in paper form are sometimes only available on request or for an additional charge. Tank operators are not therefore in a position to hold paper documentation with originals.

Although opinions were also divided at this meeting, UIP's proposal to keep the tank file in electronic form as an alternative was adopted by majority decision.

## Calculation of the wall thickness of shells

The construction requirements for tanks contain two formulae for calculating the minimum wall thickness of shells. In one formula, the calculation is based on the test pressure, whereas in the other formula, the calculation pressure is used. However, in connection with the calculation pressure, reference is made to a provision which is applicable to tanks of classes 3 to 9 but not to tanks for gases of Class 2.

The Joint Meeting rectified this deficiency by also including a reference to the table in 4.3.3.1.1 for the calculation pressure of gas tanks.

## Standards

After a preliminary review by the working group on standards, the Joint Meeting adopted references to new editions of two EN standards:

- EN 14432:[2023] Tanks for the transport of dangerous goods – Tank equipment for the transport of liquid chemicals and liquefied gases – Product discharge and air inlet valves
- EN 14433:[2023] Tanks for the transport of dangerous goods – Tank equipment for the transport of liquid chemicals and liquefied gases – Foot valves.

As both standards are only available in draft form at the moment, the references to these two new standards still need to be confirmed at the next Joint Meeting.

The Joint Meeting also approved the inclusion of two new editions of EN standards that were already planned for the 2023 editions of RID and ADR, but could not ultimately be included because they were not published before 1 June 2022:

- EN 13799:[2022] LPG equipment and accessories – Contents gauges for Liquefied Petroleum Gas (LPG) pressure vessels

- EN 14025:[2023] Tanks for the transport of dangerous goods – Metallic pressure tanks – Design and construction.

## Other proposals

### Exemption from appointing a dangerous goods safety adviser

In the 2019 edition of RID/ADR/ADN, the obligation to appoint a dangerous goods safety adviser in 1.8.3.1 has been extended to dangerous goods consignors. At the same time, a transitional measure was included that gives consignors a transitional period until the end of 2022 to appoint a dangerous goods safety adviser.

However, the provision in 1.8.3.2, which allows competent authorities to exempt undertakings that only carry dangerous goods occasionally or only carry small quantities of dangerous goods nationally from the requirements to appoint a dangerous goods safety adviser, has not been extended to dangerous goods consignors.

The Joint Meeting adopted the consequential amendment to 1.8.3.2 that was forgotten in the 2019 amendments.

### Definition of liquefied petroleum gas (LPG)

Liquefied petroleum gas is a commercial fuel consisting mainly of propane and butane. Liquefied petroleum gas is carried under the entries UN 1075 Petroleum gases, liquefied and UN 1965 Hydrocarbon mixture, liquefied, n.o.s.

As part of the energy transition that aims to reduce the consumption of fossil fuels and the emission of carbon dioxide, there is also an increasing use of propane and butane of biological or renewable

origin. Propane and butane obtained from biological, renewable or recycled raw materials has the same properties as propane and butane obtained from petroleum refineries or natural gas processing. In addition, the LPG industry has started to include dimethyl ether of renewable origin as a blending component of LPG. Dimethyl ether is a colourless, highly flammable, narcotic gas that can be obtained from biomass gasification, among other processes. Dimethyl ether has the same classification code (2F), danger label (2.1) and hazard identification number (23) as LPG.

This development means that the definition of LPG needs to be revised. Consequently, products from renewable sources must be allowed by deleting references to petroleum. The addition of dimethyl ether in small quantities (10 to 20%) is also to be permitted.

The liquefied petroleum gas industry submitted a proposal to this effect to the UN Sub-Committee of Experts, proposing amendments to the descriptions of UN Numbers 1075 and 1965.

The Joint Meeting welcomed these developments in the LPG industry and confirmed that the definition of LPG would have to be revised. It will return to this issue in the context of harmonising RID/ADR/ADN with the 23<sup>rd</sup> revised edition of the UN Recommendations.

### Dangerous goods in machinery, apparatus or articles

In connection with the introduction of the new UN numbers 3537 to 3546 for articles containing dangerous goods, the exemption provision in 1.1.3.1 (b) was also deleted. According to this provision, the provisions of RID/ADR/ADN did not apply to the carriage of machinery or equipment not specified in the provisions which

contained dangerous goods in their internal or operational equipment, provided that measures were taken to prevent any leakage of contents in normal conditions of carriage. Together with the new UN numbers 3537 to 3546, a transitional measure was included which allowed the use of this exemption until 31 December 2022.

The chemical industry has now found that with the expiry of the transitional measure and the discontinuation of the exemption rule, major problems arise for articles that need to be carried for repair, maintenance or reconditioning purposes. Such articles might be, for example, pressure regulators, pumps, flow meters or valves that contain dangerous goods in empty spaces that cannot be completely removed during cleaning.

It depends on the quantities of dangerous goods contained in the article as to whether assignment to UN number 3363 can be made and hence certain relaxations used. However, it is very difficult to determine exactly which dangerous goods are contained in the articles described, and they can often only be guessed at.

The industry requested feedback on how to ensure that such articles are carried in compliance with the regulations. Some delegates were of the view that the provisions should be revised. In the meantime, a multilateral special agreement could be initiated to resolve this issue urgently. The Joint Meeting will return to this issue at its next meeting.

## Informal working groups

### Informal working group on the carriage of molten aluminium

On 26 February 2018, an accident occurred on a German motorway



in which a semi-trailer skidded and overturned. On the trailer, there were three vats filled with molten aluminium. One vat was damaged when it hit the road surface and 5,400 kg of the 800°C hot, liquid aluminium leaked out and spread over the road. 100 square meters of the road surface was damaged.

Molten aluminium is carried under UN No. 3257 Elevated temperature liquid, n.o.s. of Class 9. According to special provision VC 3, carriage in bulk is permitted in specially equipped wagons, vehicles or large containers that must be constructed in accordance with standards specified by the competent authority of the country of origin.

At its meeting in March 2021, the Joint Meeting had decided to set up an informal working group to draft internationally agreed provisions for the carriage of molten aluminium. This informal working group has now submitted to the Joint Meeting a preliminary draft of some very comprehensive provisions for the construction, testing, marking and operation of vats for the carriage of liquid aluminium. In addition, requirements have been formulated for road vehicles carrying such vats. These concern in particular the fitting of vehicles with an electronic vehicle stabilisation function. Lastly, specific points have been included that will need to be taken into account when training drivers. A transitional measure ensures that vats currently in use may continue to be used.

The members of the Joint Meeting were asked to submit comments on this draft so that a decision could be taken at the next meeting.

### Informal working group on the transport of hazardous waste

The Joint Meeting was informed about the discussions in the informal working group on the transport of hazardous waste. The following topics are currently on its agenda:

- Hazardous waste in household waste: in collections of used household packaging, plastics and metals, aerosols containing dangerous products are often also disposed of. This means that the first time the waste is carried to the sorting plant, it does not comply with the provisions of ADR. In this context, there have already been fires in rubbish collection vehicles in which the waste is compressed.
- Verification of chemical compatibility: for plastics packagings, chemical compatibility with the filling substances must be demonstrated in accordance with RID/ADR 4.1.1.21. As the exact composition of mixtures of wastes is not always known, the rule for collective entries of RID/ADR 4.1.1.21.5 has to be applied. This may result in the need to fill test samples with the filling substances and store them at ambient temperature for six months in accordance with 6.1.5.2.5. Due to the constantly varying compositions of waste mixtures, it is obvious that such an approach is not practical.
- Combination packagings: according to RID/ADR 4.1.1.5.1, different variations of inner packagings are permitted in a combination packaging without the need for further testing. RID/ADR 6.1.5.1.7 lists the

conditions that must be met to avoid testing. The provisions referred to are a major hurdle for the waste industry, because the varieties of inner packagings that must be packed together are much larger than those permitted in 4.1.1.5.1. For safety reasons, it is also not realistic to repack every single packaging that contains waste.

- Exemption of asbestos on the basis of special provision 168: special provision 168 is interpreted very differently in the RID/ADR Contracting States. While some Member States consider that this exemption only applies to new articles containing asbestos, other Member States also apply the special provision to waste containing asbestos.

The European Waste Management Association (FEAD) will submit proposals on these topics to the Joint Meeting once the discussion in the informal working group has been concluded.

### Next session

The next Joint Meeting will be held in Berne from 20 to 24 March 2023.

The next session of the ad hoc working group on the harmonisation of RID/ADR/ADN with the UN Recommendations on the Transport of Dangerous Goods will be held in Geneva from 26 to 28 April 2023. The aim of this meeting will be to draft the necessary amendments for RID/ADR/ADN resulting from the 23<sup>rd</sup> revised edition of the UN Model Regulations.

**Jochen Conrad**

## CALENDAR OF OTIF'S MEETINGS IN 2023

DATE	EVENT	ORG	LOCATION
20 - 24 March	RID/ADR/ADN Joint Meeting	UNECE	Berne - Switzerland (HYBRID MEETING)

## EVENTS WITH OTIF PARTICIPATION IN 2023

DATE	EVENT	ORG	LOCATION
8 - 9 February	Railway Interoperability and Safety Committee	European Commission	(ONLINE /REMOTE)
7 - 10 February	Working Group on Annex 2 to SMGS "Provisions for the Carriage of Dangerous Goods"	OSJD	Warsaw - Poland (VIDEO-CONFERENCE)
21 - 24 February	Inland transport Committee	UNECE	Geneva - Switzerland
27 - 28 February	International Dangerous Goods Days Hamburg	ecomed stork	Hamburg - Germany
7 - 8 March	UIC Group of Experts on the Carriage of Dangerous Goods	UIC	(VIDEO-CONFERENCE)
7 - 10 March	UIC World Congress on High-Speed Rail	UIC	Marrakesh - Morocco



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