Examining the legal framework for the land transport of dangerous goods

June 2020

Issues paper

National Transport Commission

Report outline

Title	Examining the legal framework for the land transport of dangerous goods
Type of report	Issues paper
Purpose	For public consultation
Abstract	This paper provides an overview of the legislative framework for the land transport of dangerous goods by road and rail in Australia. It summarises the process implemented by states and territories to adopt the Australian Dangerous Goods Code and explores potential improvements that could be considered to promote the consistent implementation of the Code's requirements. These potential improvements are intended to enhance the safe, efficient and productive transport of dangerous goods by road and rail across Australia.
Submission details	The NTC will accept submissions until **Friday 3 July 2020** online at **www.ntc.gov.au** or by email to: Debra Kirk Manager Legislative Maintenance Email: **dkirk@ntc.gov.au**
Attribution	This work should be attributed as follows: Source: National Transport Commission, *Examining the legal framework for the land transport of dangerous goods*, Issues paper, NTC, Melbourne. If you have adapted, modified or transformed this work in anyway, please use the following: Source: based on National Transport Commission, *Examining the legal framework for the land transport of dangerous goods*, Issues paper.
Key words	Dangerous goods, transport, legislation, regulatory frameworks, interpretation
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Have your say

What to submit

The NTC wants to give everyone involved in the transport of dangerous goods by road or rail an opportunity to have a say. The NTC invites your responses to the questions and issues we have identified by **Friday 3 July 2020**.

Any individual or organisation can make a submission to the NTC.

When to submit

The NTC invites written submissions and online feedback on this issues paper by **Friday 3 July 2020**.

Submissions or feedback received on or before this date will be able to be considered as part of the review.

How to submit

Any individual or organisation can make a submission to the NTC.

Making a submission

- Visit **www.ntc.gov.au** and select 'Have your say' on the homepage.
- Send by email to:

  Debra Kirk
  Manager Legislative Maintenance
  Ph: (03) 9236 5086
  Email: **dkirk@ntc.gov.au**
  www.ntc.gov.au

Where possible, you should provide evidence, such as data and documents, to support the views in your submission.

Publishing your submission

Unless you clearly ask us not to, we publish all the submissions we receive online. We will not publish submissions that contain defamatory or offensive content.

The *Freedom of Information Act 1982* (Cwlth) applies to the NTC.

Contents

Executive summary

Context

In 2019, the Transport and Infrastructure Council approved a review of the regulatory framework that gives legal effect to the Australian Code (the Code) for the Transport of Dangerous Goods by road and rail to be conducted by the National Transport Commission.

The review is to consider whether any potential improvements to the regulatory framework of the transport of dangerous goods by road and rail can be identified, and whether interpretation guidance is required to promote consistent compliance and enforcement of the technical requirements in the Code.

The primary purpose of regulations for the road and rail transport of dangerous goods in Australia is to prevent, as far as possible, accidents to persons or property, damage to the environment, the means of transport employed or to other goods.

International co-operation to regulate the transport of dangerous goods

The land transport of dangerous goods on road and rail in Australia operates as part of an international system of co-operation. Through United Nations (UN) led multilateral agreement, harmonised requirements to inform national and international regulation of the transport of dangerous goods are agreed to facilitate global supply chain safety and efficiency. The general concepts of dangerous goods classification, packaging, marking, labelling and communication have been the subject of international conventions and codes to ensure global consistency and standardisation since 1957.

The UN Economic and Social Council (ECOSOC) Sub-Committee of Experts on the Transport of Dangerous Goods is responsible for developing and reviewing the UN Recommendations on the Transport of Dangerous Goods – Model Regulations (UNMR). The UN Recommendations are internationally accepted and form the basis for dangerous goods transport codes across the world. Australia contributes to the development of the UN Recommendations as a participating member state.

Australia's model law national scheme

In Australia, a model law national scheme structure is implemented to promote regulatory consistency with the UNMR for the transport of dangerous goods as applied to road and rail.

This scheme includes a number of legislative instruments which contain administrative provisions, duties on parties and offences, and provides a mechanism to give legal effect to the Code. However, these instruments have no legal force in and of themselves and are required to be enacted by each individual state and territory government.

Every two years, the National Transport Commission reviews and updates the Code. Any national policy and legislative amendments are presented for approval by the Transport and Infrastructure Council (the Council) which comprises all state and territory transport ministers. State and territory governments adopt changes through their own jurisdictional dangerous goods Acts and regulations using the model law approach as a template.

Under model law in Australia, consistent timing of legislative implementation across jurisdictions to adopt amendments to the Code is an important function. National alignment to internationally harmonised provisions supports the freight industry transporting dangerous goods as participants in a global and interstate market. The facilitation of consistent national compliance and enforcement interpretation promotes safe industry activity.

Access to the productivity and efficiency improvements from updated model law requirements is a key area of market value. Statistics suggest that dangerous goods are likely to represent a significant portion of the estimated $53.4 billion of annual road and rail freight industry revenue[1]. In data from 2002[2], dangerous goods accounted for 4 percent of total tonnes moved and 8 percent of the total tonne-kilometres travelled. Petroleum and petroleum products comprised nearly three quarters of all dangerous goods carried. The transport of dangerous goods impacts 104 of Australia's 108 recognised industries[3].

Examining the current legal mechanism.

To examine the current legal mechanism for the land transport of dangerous goods in Australia, this paper provides an overview of the legislative framework for the regulation of the land transport of dangerous goods and begins to explore potential system improvements that could be made to improve the safety, efficiency and productivity of Australia's land transport of dangerous goods.

Also considered in this paper is a request made by the Deputy Prime Minister, informed by a joint letter in 2018 from the Australian Logistics Council (ALC) and the Australian Trucking Association (ATA), that the NTC considers:

1. *Whether the ADG Code should be adopted into Australian law using the 'applied legislation' model. This is the same model used by jurisdictions to adopt amendments to the Heavy Vehicle National Law made by the Queensland Parliament; and*
2. *Whether a common operations manual should be developed to be adopted by all jurisdictions to encourage a more uniform interpretation of the ADG.*

This paper lays the foundation for a national discussion about:

- the way the transport of dangerous goods by road and rail is currently regulated
- what efficiencies could be created during local implementation of amendments to the Code; and
- how the Australian framework compares with legislative frameworks used for other transport modes and with international equivalents.

Next steps

The NTC is seeking responses to a number of questions and issues identified in this paper by **Friday 3 July 2020**.

Responses to these questions will inform advice and recommendations that the NTC will prepare for the Transport and Infrastructure Council about how improvements could be made to achieve greater harmonisation across legislation adoption and interpretation of Code requirements.

[1] Ibis

[2] ABS

[3] Chemistry Australia

List of questions

1 About this project

Key points

- The land transport of dangerous goods on road and rail in Australia operates as part of an international system of co-operation, led by the United Nations that has existed since the 1950s.
- Dangerous goods are likely to contribute to a significant proportion of Australia's $53.4 billion annual road and rail freight revenue each year.
- The Transport and Infrastructure Council approved the National Transport Commission to review the legal framework that underpins the Australian Dangerous Goods Code.
- As part of the review, the Deputy Prime Minister has requested that the NTC examine the consistency of implementation and interpretation of the Code requirements.

This paper explores how improvements could be made to achieve greater harmonisation across legislation adoption and interpretation of requirements.

1.1 Project objectives

1.1.1 Purpose of the review

The purpose of this paper is to examine the regulatory framework for regulating the land transport of dangerous goods within Australia and to identify any specific problems that may need to be the subject of future reform. Responses to the paper will inform advice and recommendations that the NTC will prepare for the Transport and Infrastructure Council.

The paper:

- details the current Australian legal framework that:
  - gives effect to the technical requirements specified in the Code
  - imposes duties on parties in the land transport of dangerous goods supply chain to meet the requirements in the Code
  - imposes penalties on those parties for not complying with the Code
- evaluates Australian national law scheme structures (including template, model and referred powers structures) to determine and recommend the best structure that will ensure, to the greatest extent possible, consistent and untampered adoption of requirements across Australia aligned to the United Nations Model Regulations (UNMR)
- considers where the detailed duties that require parties to comply with the Code requirements are best located to encourage jurisdictions to implement them without variations
- proposes a framework for the ongoing development of agreed interpretation guidance of technical requirements in the Code to achieve improved interpretation consistency.

1.1.2 Background

The transport of dangerous goods is a high-risk activity involving vehicles on Australia's roads and the rail network. The United Nations leads a process of international co-operation to agree harmonised requirements to inform national and international regulation of the transport of dangerous goods to facilitate global supply chain safety and efficiency. The general concepts of dangerous goods classification, packaging, marking, labelling and communication have been the subject of international conventions and codes to ensure global consistency and standardisation since 1957.

The UN Economic and Social Council (ECOSOC) Sub-Committee of Experts on the Transport of Dangerous Goods is responsible for developing and reviewing the UN Recommendations on the Transport of Dangerous Goods – Model Regulations (UNMR) which are internationally accepted and form the basis for dangerous goods transport codes across the world.

Australia implements a model law national scheme structure to promote consistency with the UNMR for the transport of dangerous goods as applied to road and rail. This scheme includes a number of legislative instruments which contain administrative provisions, duties on parties and offences, and provides a mechanism to give legal effect to the Australian Code for the Transport of Dangerous Goods by Road and Rail. However, these instruments have no legal force in and of themselves.

Australian state and territory governments have responsibility for regulating the road and rail transport of dangerous goods through administration of the Australian Dangerous Goods Code (the Code). The Code is adopted through legislation in each in state and territory drawing on national model legislation administered by the National Transport Commission and approved by the Transport and Infrastructure Council.

This single model legislative framework has been in place since the creation of the 7th edition of the Code in 2008 as a Transport and Infrastructure Council Agreed Reform. As per the Intergovernmental Agreement signed by all state and territory transport ministers in 2003, every jurisdiction has agreed 'to use their best endeavours to implement and maintain Agreed Reforms in a uniform or nationally consistent manner.'

1.1.3 Request from the Deputy Prime Minister

The Deputy Prime Minister has requested that the NTC examine the consistency of implementation and interpretation of the legal requirements for the land transport of dangerous goods in Australia.

This request includes matters raised by the Australian Logistics Council (ALC) and the Australian Trucking Association (ATA) that in its next review the NTC considers:

1. *Whether the ADG Code should be adopted into Australian law using the 'applied legislation' model. This is the same model used by jurisdictions to adopt amendments to the Heavy Vehicle National Law made by the Queensland Parliament; and*
2. *Whether a common operations manual should be developed to be adopted by all jurisdictions to encourage a more uniform interpretation of the ADG.*

In support of this request, the ALC and ATA stated:

> *As is well known, each State and Territory separately implements the updated ADG Code and associated updates to their dangerous goods transport regulations. It is also the case that each jurisdiction can have a number of different agencies responsible for enforcement of the ADG Code. This has led to unfortunate inconsistencies both in the legislative implementation of the ADG as well as its interpretation on the ground.*

1.1.4 Previous reviews

Following the development of the 7th edition of the Code, the NTC performed an implementation and regulatory outcomes review[4]. Specifically, the review examined the consistency with which the Code and accompanying model legislation had been implemented by state and territory governments.

The review found a lack of uniformity in the timing of the enactment of legislation across state and territories to implement the 7th edition of the Code was a significant issue for many businesses. Further, jurisdictional variations in adopting model law wording and references can create uncertainty for industry and can increase compliance costs. Operational issues were also raised by industry because of inconsistent enforcement, administration and differing interpretations of obligations and requirements.

Staggered implementation is still evident today. Implementation monitoring conducted by the NTC shows that legislative and regulatory amendments are not implemented consistently across the country.

This paper draws heavily on the following reviews and research reports:

- Productivity Commission Research Report: *Chemicals and Plastics Regulation*, 2008
- Productivity Commission, Supplement to Research Report: Chemicals and Plastics Regulation: *Lessons for National Approaches to Regulation*, 2009
- National Transport Commission, *Australian Code for the Transport of Dangerous Goods by Road and Rail 7th edition reform package – Implementation and Regulatory Outcomes Review*, 2011
- National Transport Commission, *Strategic Framework Review of the Regulation of Land Transport of Dangerous Goods: final recommendations*, 2013.

In preparing this paper, the premises and recommendations in the above reviews and research reports were re-examined. This was to verify their continued validity and to assess if the recommendations had been implemented and, if they had achieved their intended outcome. The Productivity Commission's supplement *Lessons for National Approaches to Regulation* forms the basis of the discussion on available regulatory frameworks in section 6 of this paper.

1.2 Scope of the paper

The scope of this paper is to:

- review the legal framework that gives legal effect to the Code – that is, the legal mechanism(s) used in Australian states and territories that 'call up' the Code into legislation and therefore give it legal force
- provide an overview of where the Australian requirements sit within the United Nations framework
- explore other available frameworks, including those adopted in other countries
- explore options to achieve consistent interpretation of the Code.

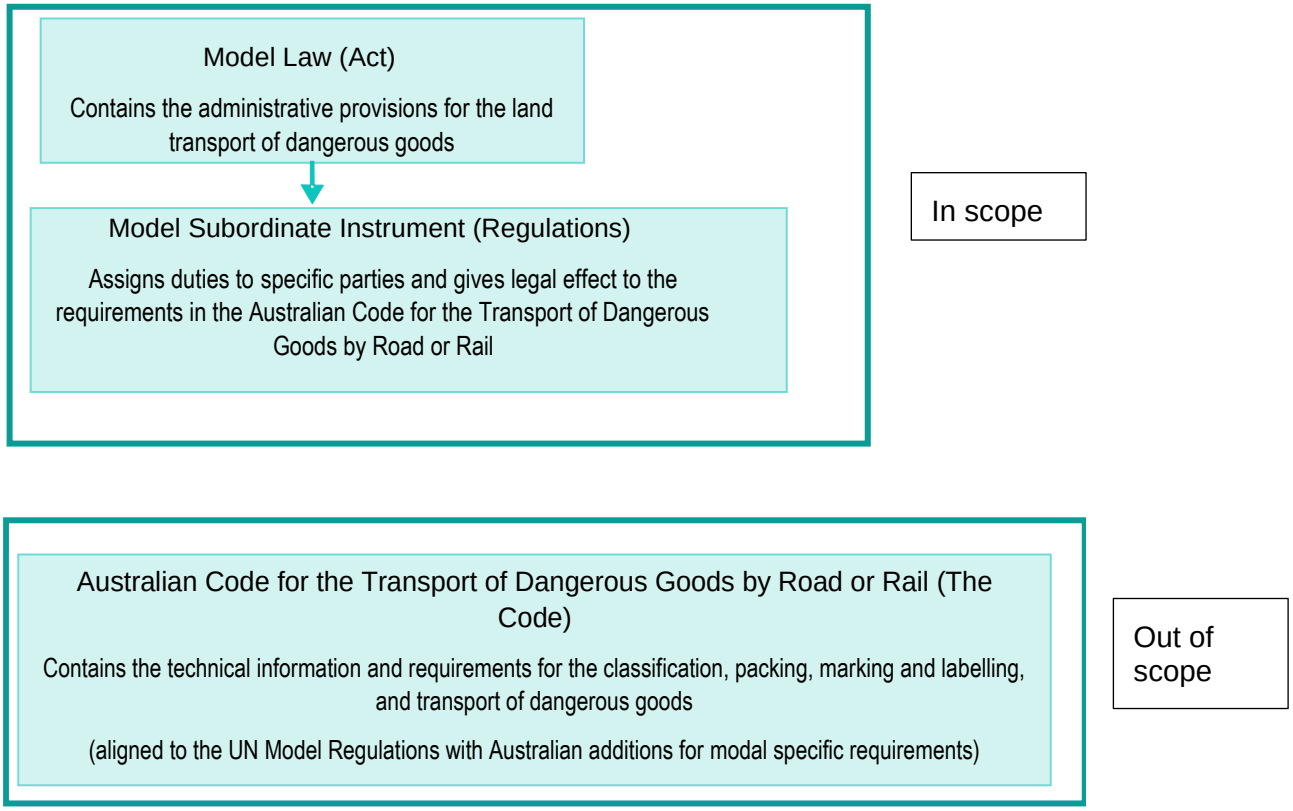
This paper does not include a review of the Code itself. The Code is a document, that although agreed to by the Transport and Infrastructure Council, has no legal force until it is

[4] National Transport Commission 2011, *Australian Code for the Transport of Dangerous Goods by Road and Rail 7th Edition Reform Package – Implementation and Regulatory Outcomes Review,* NTC, Melbourne

adopted into law in a jurisdiction. The legal framework, therefore, consists only of the *Model Act on the Transport of Dangerous Goods by Road or Rail* (Model Law) and the *Model Subordinate Instrument on the Transport of Dangerous Goods by Road or Rail* (MSI).

Figure 1 shows what is in scope and what is out of scope in this paper.

Figure 1. The parameters of this paper



In 2019, the Transport and Infrastructure Council approved the progression of the NTC's review of the legal framework that underpins the Code and methods by which consistent national interpretation of the Code can be encouraged.

This paper explores how the transport of dangerous goods by road and rail is currently regulated in Australia and overseas, and what potential improvements could be made.

1.3 Problem statement

The legal framework that facilitates the implementation of, and gives legal effect to, the Australian Code for the transport of dangerous goods by road and rail (the Code) across each state and territory is not promoting uniformity for the transport of dangerous goods regulations across Australia.

Improvements may be required to realise the full safety and productivity benefits in harmony with the UN Recommendations on the Transport of Dangerous Goods. Further work is required to ensure that the regulation of the transport of dangerous goods by road and rail in Australia is consistent with international practices where possible.

Inconsistent timing of the implementation of legislative amendments by jurisdictions can lead to a gap in the uptake of productivity and efficiency improvements contained in updated Code requirements. It can also impose significant cost on businesses transporting dangerous goods, particularly those conducting cross-border operations.

Competing priorities of state and territory government agencies, governments and parliaments may be contributing to the inconsistent implementation of national reforms agreed to by the Transport and Infrastructure Council.

The NTC's 2019 National Transport Reform Implementation Monitoring Report to TISOC, shows that some jurisdictions have not yet implemented the 2016 or 2018 transport of dangerous goods amendment packages. This can result in difficulties in compliance and enforcement activities in those jurisdictions that have not yet been able to implement agreed reforms. This scenario can be challenging for entities that operate in multiple jurisdictions to take advantage of reforms and can add significantly to the complexity of their operations.

Inconsistency of interpretation and enforcement of the Code is a particular concern for industry. A key factor appears to be the absence of a common understanding across the national compliance and enforcement community, as well as industry duty holders of 'what compliance looks like' for the various technical requirements in the Code.

2 International and intergovernmental agreements

Key points

- The Code is based on the UNMR, which applies to all modes of transport.
- The Transport and Infrastructure Council voting protocols require consensus for all model and national laws.
- Competing legislative and resource priorities within individual jurisdictions may play a role in inconsistent implementation of model reforms.
- Industry suggests that uniform interpretation of the Code across Australia could be further encouraged.
- The dangerous goods administering agencies can differ from transport agencies in some jurisdictions, which may also contribute to the inconsistent implementation of model reforms.

2.1 International conventions

Since 1957, the general concepts of dangerous goods classification, packaging and communication have been the subject of international conventions and codes to ensure global consistency and standardisation. The United Nations (UN) Economic and Social Council (ECOSOC) Sub-Committee of Experts on the Transport of Dangerous Goods is responsible for developing and reviewing the UNMR.

The Sub-Committee of Experts on the Transport of Dangerous Goods consists of 28 member states (including Australia), nine non-member states, five UN specialised agencies, three intergovernmental organisations, 21 non-governmental organisations that hold consultative status with ECOSOC and 28 non-governmental organisations that hold consultative status with the sub-committee.

The UNMR contain globally applicable recommendations, including recommendations regarding classification, packaging, marking and labelling, and communication requirements for transporting dangerous goods. The UNMR do not include requirements or recommendations to address risks that are specific to any particular mode of transport. At the modal level, the UNMR serve as the basis for international or regional mode-specific requirements. The framework for the development and interrelationship of these mode-specific requirements is detailed in section 4.1 of this paper.

2.2 Intergovernmental Agreement

Since the early 1990s, the NTC and its predecessor the National Road Transport Commission has been responsible for developing, reviewing and maintaining dangerous goods land transport policy, including the Model Law, MSI and the Code.

The NTC leads national land transport reform in support of Australian governments to improve safety, productivity, environmental outcomes and regulatory efficiency. The functions of the NTC are supported by an Intergovernmental Agreement (IGA) signed by all state and territory transport ministers in 2003.

The IGA identifies the NTC's role to:

> *Develop uniform or nationally consistent regulatory and operational arrangements for road, rail and intermodal transport including recommending to the [Transport and Infrastructure] Council proposed reforms and amendments to agreed reforms.*

2.2.1 Voting arrangements for reform proposals under the Intergovernmental Agreement

The current voting arrangements for the Transport and Infrastructure Council in relation to proposed recommendations for its consideration are established by the Council of Australian Governments (COAG) and require Transport and Infrastructure Council decisions to be made on the basis of consensus. Voting is generally required to be undertaken in-session at a council meeting. In circumstances where a minister does not register a vote, the minister is taken to have supported the recommendation.

However, in some cases, the unanimous voting protocol can mean that nationally consistent proposals may not progress, or are delayed, if consensus is unable to be reached.

2.2.2 Achieving national consistency of implementation of agreed reforms

Competing priorities of state and territory government agencies, governments and parliaments may be contributing to inconsistent implementation of national reforms agreed to by the Transport and Infrastructure Council. The NTC's 2019 *National Transport Reform Implementation Monitoring Report* to TISOC, shows that some jurisdictions have not yet implemented the 2016 or 2018 transport of dangerous goods amendment packages.[5] One jurisdiction has not implemented any of the amendment packages since 2008. For those jurisdictions that have implemented all of the amendment packages, there was no consistency on the dates of implementation.

This scenario makes it not only difficult for entities that operate in multiple jurisdictions to take advantage of reforms but adds to the complexity of their operations. It can also lead to difficulties in compliance and enforcement activities in those jurisdictions that have not yet been able to implement agreed reforms.

2.2.2.1 Interpretation and enforcement

A particular matter that has been raised by the ALC and ATA is the potential to improve the inconsistency of interpretation and enforcement by jurisdictions. There may be many contributors to this inconsistency, but the two key factors appear to be:

- the lack of training for compliance and enforcement officers
- the lack of a common understanding on the part of compliance and enforcement officers as well as duty holders (industry) of 'what compliance looks like' for the various technical requirements in the Code.

The MSI includes a requirement to ensure those involved in transporting dangerous goods are appropriately trained and competent, relevant to the tasks they perform. However, other than for a driver of a vehicle transporting dangerous goods in containers with a capacity of 500 L/kg or more, there is no specific or approved training required.

This lack of detail and specificity around training content has resulted in limited availability of quality public training courses.

[5] An amendment packages is a compilation of the changes to the model laws and the Code requirements.

In 2006, the NTC indicated in the *Australian Dangerous Goods Code 7th Edition Legislative Package: Summary Response to Public Submissions*[6] that, in the interest of developing and obtaining approval for the significant structural, content and enforcement changes that were eventually implemented, policy issues such as the lack of a national training package for dangerous goods transport regulatory requirements were not considered. At the time, the NTC believed that training policy was outside the scope of the 7th edition Legislative Package exercise but indicated that it might be addressed in future work programs.

In the 2006 summary the NTC commented:

> *This is primarily a revision exercise. The intention is not to make major changes to underlying policy on the transport of dangerous goods but to update the Code and the supporting regulatory framework.*

2.2.2.2 Competent Authority Panel Rules

The NTC is responsible for development and maintenance of the Competent Authority Panel Rules (CAP Rules). The CAP Rules establish the Competent Authorities Panel (CAP) and set out how CAP is to operate. Under the CAP Rules, the Competent Authority[7] of each jurisdiction is a member of CAP and is entitled to appoint a representative to participate and vote on its behalf in relation to CAP decisions.

CAP has a number of functions including:

> *e) to facilitate the establishment of common training and licensing systems across participating jurisdictions*

There is no evidence of CAP having developed a set of common competencies or training requirements for those involved in transporting dangerous goods.

There is also limited guidance material available for regulators or industry on how to apply, or comply with, the technical requirements of the Code.

The Victorian Competent Authority (WorkSafe Victoria), through its Dangerous Goods Stakeholder Reference Group, has recently acknowledged the gap in knowledge and training in all aspects of the chemical industry, including transport, and is currently seeking suggestions from stakeholders on how to best address this.

2.2.3 Governance and agreement process

Regulatory reforms and amendments proposed by the NTC are progressed for Transport and Infrastructure Council approval once endorsed by TISOC. This includes proposed reforms and amendments to the Model Law and MSI for the transport of dangerous goods.

It is important to note that, in most jurisdictions, the agencies responsible for regulating the transport of dangerous goods by road or rail do not sit within the transport ministerial portfolios. In most jurisdictions, the relevant laws are administered by workplace safety authorities. This disconnect of administering agencies from transport ministers can contribute to delays and to the inconsistent adoption or implementation of amendments to model laws agreed by the council.

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[6] National Transport Commission 2006, *Australian Dangerous Goods Code 7th Edition Legislative Package: summary response to public submissions,* NTC, Melbourne

[7] A Competent Authority is the agency or body responsible for administering the applicable laws in each state or territory.

This disconnect can also result in administering agencies not being fully aware of the jurisdiction's commitment to maintaining agreed reforms in accordance with the Intergovernmental Agreement.

In 2008, COAG acknowledged that chemicals policy does not fall under any one ministerial council and agreed to establish a Standing Committee on Chemicals (SCOC) compromising representatives of all ministerial councils with responsibility for the regulation of chemicals. SCOC was established in 2009. SCOC was established to provide a forum to address issues in chemicals and plastics regulation that crossed more than one portfolio and to make recommendations to the appropriate Ministerial Council. The 2009 COAG Memorandum of Understanding for Chemicals and Plastics Regulatory Reform provides that, among other matters, the standing committee's role was to:

- *provide an ongoing forum for assessing the consistency of chemicals-specific policy settings across the relevant policy areas, including: public health; workplace health and safety; transport safety; environment protection; and national security*
- *support the coordinated development of regulatory proposals that have cross-portfolio implications, including the conduct of regulatory impact assessments.*

In its 2008 research report on Chemicals and Plastics Regulation, the Productivity Commission recognised the need for significant cross-portfolio coordination in developing dangerous goods transport regulation and expressed that this was a task that would be facilitated by the creation of SCOC. Proposed reforms to the transport of dangerous goods in Australia are not currently considered by SCOC.

3 United Nations framework

Key points

- Australia is a full member state of both the UN Sub-Committee of Experts on the Transport of Dangerous Goods and the UN Sub-Committee of Experts on the Globally Harmonised System for the Classification and Communication of Hazardous Chemicals.
- The UN Recommendations for the transport of dangerous goods contain the common framework and core provisions for the safe transport of dangerous goods but cannot be used on their own because they do not address mode-specific risks.
- The UNMR are the basis for the mode-specific instruments that regulate transport of dangerous goods by air, sea, road, rail and inland waterways.

3.1 United Nations Model Regulations

The United Nations created the UN Committee of Experts on the Transport of Dangerous Goods (TDG) in 1953 as a subsidiary body of the Economic and Social Council. The committee's mandate was expanded in 1999 to include the Globally Harmonised System for the Classification and Communication of Hazardous Chemicals (GHS). At that time, it became known as the Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonised System for the Classification and Communication of Hazardous Chemicals. The committee now has two subsidiary committees, one for matters relating to TDG and one for matters relating to the GHS.

Australia is a full member state of both the UN Sub-Committee of Experts on the Transport of Dangerous Goods (TDG Sub-Committee) and the UN Sub-Committee of Experts on the GHS (GHS Sub-Committee).

The TDG Sub-Committee is responsible for developing and maintaining the UN Recommendations. The UN Recommendations contain the common framework and core provisions for the safe transport of dangerous goods but cannot be used on their own because they do not address mode-specific risks. The UN Recommendations provide a general basis for the safe transport of dangerous goods that is modified and complemented by specific requirements of a country or region and by mode of transport. Australia is represented on the TDG Sub-Committee by the Commonwealth Department of Infrastructure, Transport, Regional Development and Communications.

In the 'About the recommendations' section on its website, the United Nations Economic Commission for Europe (UNECE) states:

> *The Model Regulations aim at presenting a basic scheme of provisions that will allow uniform development of national and international regulations governing the various modes of transport; ….It is expected that governments, intergovernmental organizations and other international organizations, when revising or developing regulations for which they are responsible, will conform to the principles laid down in these Model Regulations, thus contributing to worldwide harmonization in this field...*

The UNMR are divided seven parts, covering:

Part 1. General Provisions, Definition, Training and Security

Part 2. Classification

Part 3. Dangerous Goods List, Special Provisions and Exceptions

Part 4. Packaging and Tank Provisions

Part 5. Consignment Procedures

Part 6. Requirements for the construction and testing of packagings, intermediate bulk containers (IBCs), large packagings, portable tanks, multiple-element gas containers (MEGCs) and bulk containers

Part 7. Provisions Concerning Transport Operations (applying generally to all modes)

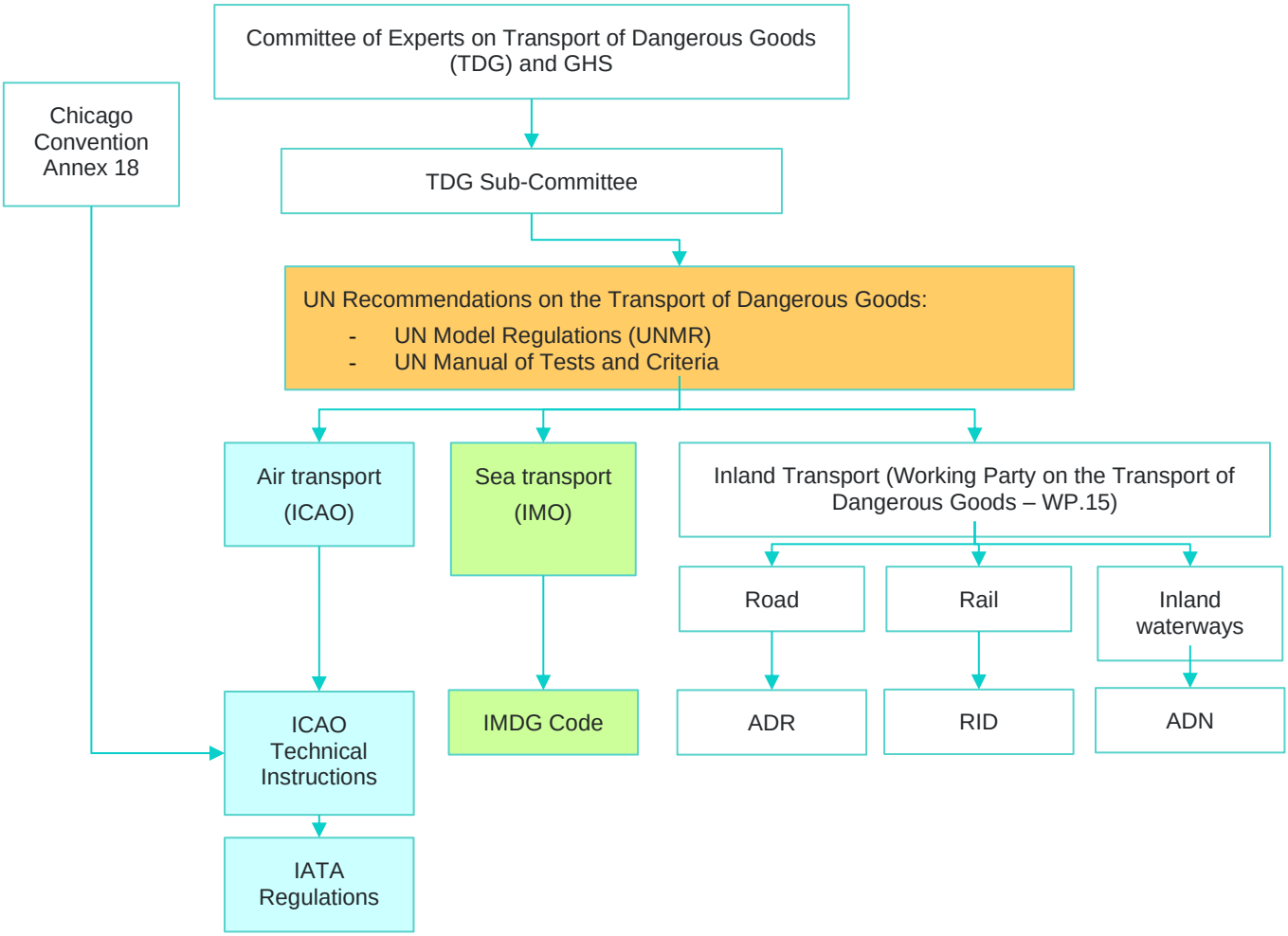
The structure and clause numbering of the mode-specific instruments are generally consistent with that of the UNMR.

Figure 2 provides an overview of the various modal instruments and their relationship to the UNMR. Most core requirements in the mode-specific instruments are a direct replication of those in the UNMR – for instance, the classification procedures and dangerous goods list.

In other instances, the UNMR provide a high-level overview of requirements that are then elaborated further in the modal instruments. An example of this is Chapter 1.3 – Training, which contains a general duty for all persons engaged in the transport of dangerous goods to be trained commensurate with their responsibilities. Chapter 1.3 provides a general overview of ‘awareness training’, ‘function specific training’ and ‘safety training’ along with general statements about the need for record keeping and periodic retraining. It does not provide details on how to comply with these.

Australian representation on the various bodies responsible for developing the mode-specific instruments is detailed in section 5 of this paper.

Figure 2. Relationship of mode-specific instruments to the UNMR



ADN = European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR = Agreement concerning the International Carriage of Dangerous Goods by Road; IATA = International Air Transport Association; ICAO = International Civil Aviation Organization; IMDG = International Maritime Dangerous Goods Code; IMO = International Maritime Organization; RID = Regulations concerning the International Transport of Dangerous Goods

3.2 Modal implementation of the UNMR through global instruments

3.2.1 Maritime transport

Globally, the transport of dangerous goods by sea is regulated under Chapter VII of the International Convention for the Safety of Life at Sea, developed in 1974 (SOLAS) and associated annexes. To ensure effective implementation of the requirements, SOLAS mandates the International Maritime Dangerous Goods Code (IMDG Code), which is developed by the International Maritime Organization (IMO). As at 16 March 2020, there were 168 contracting States (countries) to SOLAS.

The format of the IMDG Code is in line with that of the UNMR, supplemented by additional chapters specific to transport by sea. In addition to the mode-specific chapters, the IMDG Code adds more specificity to the training requirements specified in Chapter 1.3 of the UNMR. This includes a detailed matrix of function specific training requirements. The IMO regularly updates the IMDG Code in line with the UNMR.

3.2.2 Air transport

At the global level, the transport of dangerous goods by air is regulated under Annex 18 of the Convention on International Civil Aviation (Chicago Convention). Annex 18 is implemented by the Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO TI) which are developed by the International Civil Aviation Organization (ICAO). ICAO also publishes a manual called the *Dangerous Goods Regulations* to operationalise the ICAO TI. As at 13 April 2019, there were 193 contracting parties to the Chicago Convention.

The format of the IMDG Code is in line with that of the UNMR, supplemented by additional chapters specific to transport by air. In addition to the mode-specific chapters, the ICAO Technical Instructions and associated *Dangerous Goods Regulations* add more specificity to the training requirements specified in Chapter 1.3 of the UNMR. This includes a detailed matrix of function-specific training requirements.

ICAO regularly updates the ICAO Technical Instructions and associated *Dangerous Goods Regulations* in line with the UNMR.

Contracting States and airline operator variations are permitted but must be notified to ICAO. Variations are published in the *Dangerous Goods Regulations* and on the ICAO website.

3.2.3 International legal instruments of regional application

There are three primary instruments governing the international transport of dangerous goods by road, rail or inland waterways. These instruments are mandatory throughout the European Union and are also widely used in other countries and regions. The instruments are aligned to the UNMR and, while different ECOSOC or UNECE bodies are responsible for maintaining each of the instruments, provisions that are common across all three instruments are first discussed and agreed by the UNECE Working Party on the Transport of Dangerous Goods and the International Carriage of Dangerous Goods by Rail (RID) Safety Committee, commonly known as the ADR/RID/ADN Joint Meeting.

All contracting parties to the various agreements and convention apply the requirements to national transport as well as international transport.

3.2.3.1 Road – Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)

The ADR was developed under the auspices of the UNECE Inland Transport Committee and came into force in 1968. Contracting parties are required to comply with Annexes A and B to the ADR. These annexes set out the specific duties and requirements for the safe transport of dangerous goods by road. In 2019, the word ‘European’ was dropped from the title of the agreement, in recognition of the broader global use of the annexes. Globally, the annexes are referred to as the ADR. There are currently 52 contracting parties to the ADR. In addition to the contracting parties, many other countries follow the ADR, either through direct reference or mirroring. More detail on countries that apply or align with the ADR are provided in section 6 of this paper.

The format of the ADR is in line with that of the UNMR, supplemented by additional chapters specific to transport by road. In addition to the mode-specific chapters, the ADR adds more specificity to the training requirements in Chapter 1.3 of the UNMR. In addition to the additional detail in Chapter 1.3, the ADR includes Chapter 1.8, which deals with checks and other supportive measures to ensure compliance with safety requirements.

Central to the interpretation and consistent application of the requirements in the ADR is the requirement that every organisation involved in any part of the chain of the transport of dangerous goods appoints one or more dangerous goods safety advisors (DGSA). The competencies, examinations, certification, recertification and duties of DGSA are detailed in Chapter 1.8.

The ADR establishes both the duties of the various parties and the technical requirements. However, it does not contain enforcement provisions.

Variations by contracting states are permitted but must be notified to the UNECE. State variations are published on the UNECE website. Mutual recognition is in place for cross-border transport.

The UNECE Inland Transport Committee Working Party on the Transport of Dangerous Goods (WP.15) regularly updates the ADR in line with the UNMR.

3.2.3.2 Rail – Regulations concerning the International Transport of Dangerous Goods (RID)

The RID is annexed to the Convention for the international transport by rail (COTIF) and as such, it is mandatory for all contracting parties. The Intergovernmental Organisation for the International Carriage by Rail (OTIF) RID Safety Committee is responsible for updating the RID regulations in line with the UNMR. The RID regulations are closely aligned to the ADR as a result of the ADR/RID/AND Joint Meeting.

3.2.3.3 Inland waterways – European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN)

The ADN provisions are applicable to inland waterways within Europe. The regulations are annexed to the agreement in the same manner as the ADR. They are based on the UNMR, ADR and RID, with additional regulations specific to inland waterways transport.

4 Australian regulatory frameworks

Key points

- The NTC maintains the Model Law, MSI and the Code based on the UNMR rather than the ADR/RID.
- Any changes to the Model Law, MSI or the Code require consensus of all Transport and Infrastructure Council members.
- States and territories enact their own legislation based on the Model Law and MSI and may choose to implement variations.
- All states and territories adopt the Code through their own legislation.
- State/territory-based laws are administered by one or more competent authorities.
- Collectively, all state and territory competent authorities form CAP.

The Australian technical requirements for transporting dangerous goods are generally based on the UN Recommendations. The specific UN document used, whether by reference or as a basis for Australian developed requirements, depends on the mode of transport.

Likewise, the regulatory framework or legal mechanism used to adopt the technical requirements and detail the duties and offences is also mode specific.

Model requirements and regulatory frameworks are detailed further below.

4.1 Regulation of land transport of dangerous goods (road and rail)

Key points

- Australia uses the model law national scheme structure to implement laws regulating the transport of dangerous goods by road and rail.
- The model laws contain administrative provisions, duties on parties and offences and provide a mechanism to give legal effect to the Code. The MSI does not contain detailed training requirements.
- Because model laws have no legal force in and of themselves, jurisdictions must amend local laws to implement model provisions.
- Until 2008, duties and other components of the model laws were contained within the Code itself, minimising derogation from reforms approved by the Transport and Infrastructure Council.
- Reform implementation monitoring performed by the NTC demonstrates the inconsistency of dangerous goods reform implementation across jurisdictions.

Land transport of dangerous goods in Australia is regulated under jurisdictional dangerous goods Acts and regulations using a model law approach. Under the Intergovernmental Agreement, the NTC is responsible for developing policy and model laws, including maintaining the model laws for land transport of dangerous goods, for approval by the Transport and Infrastructure Council. All amendments to model laws proposed by the NTC must be approved by the council members by consensus.

Under the Intergovernmental Agreement, states and territories have committed to 'use their best endeavours' to align their legislation and regulations with the model laws.

The model laws and jurisdictional legislation and regulations contain the administrative provisions, assign duties to specific parties and give legal effect to the Code. The Code sets out the technical requirements for the land transport of dangerous goods.

Unlike many countries, which base their dangerous goods land transport on the mode-specific UN ADR and RID, the Code is based directly on the UNMR, with all mode-specific requirements being developed in and specific to Australia. The Code also contains a number of non-mode-specific requirements that are either additional to or different to those in the UNMR. The Code is given force in each jurisdiction by direct reference or 'call up' in their regulations.

The current model law approach was introduced in 2008 when new model legislation and regulations, together with a significantly restructured Code, were introduced. Individual jurisdictions agreed at that time to develop their own legislation and regulations in a uniform and nationally consistent manner, based on the model laws.

From the late 1990s until 2008, state and territory laws reflected Commonwealth template legislation and regulations enacted to apply in the ACT and the Jervis Bay Territory. The template law was adopted by individual jurisdictions either by direct reference or by repeating most of the provisions of the template in their own legislation.

Under the template approach, the regulations were incorporated into the Code. As part of the 2008 reform and restructuring of the Code, the regulations were removed from the Code and placed in the MSI. This offered jurisdictions the flexibility to make regulations that differed from those in the MSI.

The current model laws comprise the following:

- the Model Act on the Transport of Dangerous Goods by Road or Rail, which contains the administrative provisions
- the Model Subordinate Instrument on the Transport of Dangerous Goods by Road or Rail, which assigns duties to specific parties and gives legal effect to the Code
- the Australian Code for the Transport of Dangerous Goods by Road or Rail, which sets out the technical requirements – this is called up in the MSI.

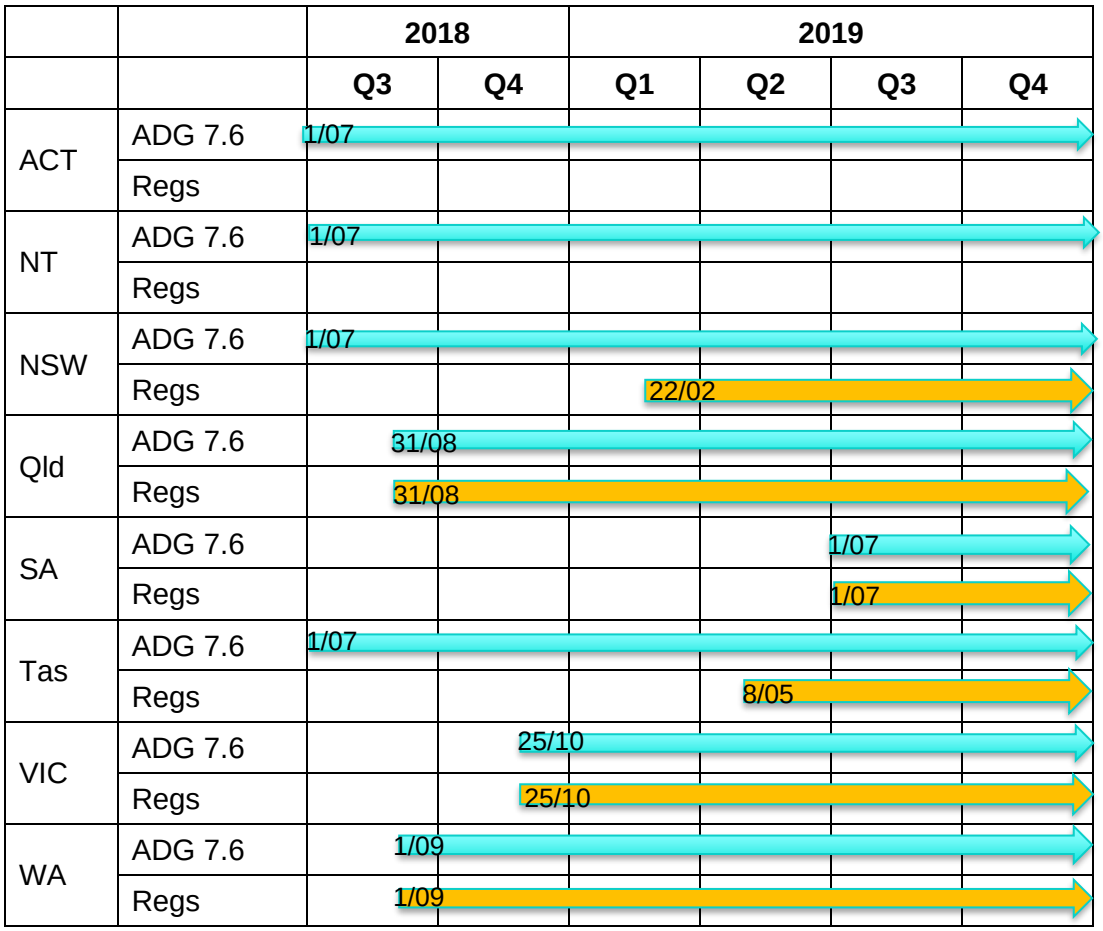
An overview of the relationship of the Code to the UN Recommendations is shown in Figure 4. The current regulatory framework and Competent Authorities are shown in Figure 5.

Many jurisdictions automatically apply amendments to the Code by referencing it as '*the Australian Code … edition 7, as amended from time to time'*. While this assists in harmonising the technical requirements and providing a nationally consistent implementation date,[8] the jurisdictions are required to amend their legislation and regulations to incorporate any amendments to the model law or MSI that often complement Code changes.

Implementation monitoring conducted by the NTC demonstrates that legislative and regulatory amendments are not consistently implemented across jurisdictions. Figure 3 provides a comparison of commencement of amendment package 5 across the jurisdictions. Amendment package 5 was approved by the Transport and Infrastructure Council in May 2018.

[8] Despite referencing the Code as amended from time to time, some jurisdictions are required to Gazette the current Code for it to commence in the specific jurisdiction

Figure 3. Comparison of commencement of amendment package 5



Question 1: What impact has the staggered implementation of amendments had on your business? If possible, please provide examples, economic data, etc.

Question 2: If you are a competent authority, what are the impediments to implementing amendment packages on a consistent date or with consistent transition periods?

Question 3: If you are a competent authority, how could regulatory reviews deliver the harmonisation of dangerous goods regulation more efficiently for Australia?

4.1.1 Training

Other than drivers of vehicles transporting dangerous goods in containers with a capacity of 500 L or greater, who are required to undertake a training course that has been approved by the Competent Authority, the MSI does not contain detailed training requirements.

The MSI contains the following general duties in relation to training:

Cl. 1.3.1 Instruction and training

(2) A person who is responsible for management or control of a task must not employ, engage or permit someone else to perform the task if the other person: (a) has not received, or is not receiving, appropriate instruction and training to ensure that he or she is able to perform the task safely and in accordance with this subordinate instrument; or (b) is not appropriately supervised in performing the task to ensure that he or she is able to perform the task safely and in accordance with this subordinate instrument.

(3) A person must not manage, control or supervise a task unless the person has received instruction and training to enable him or her to manage, control or supervise another person to perform the task safely and in accordance with this subordinate instrument.

Chapter 1.3 – Training in the Code is simply marked **<RESERVED>**.

Figure 4. Relationship of the Code to UN Recommendations

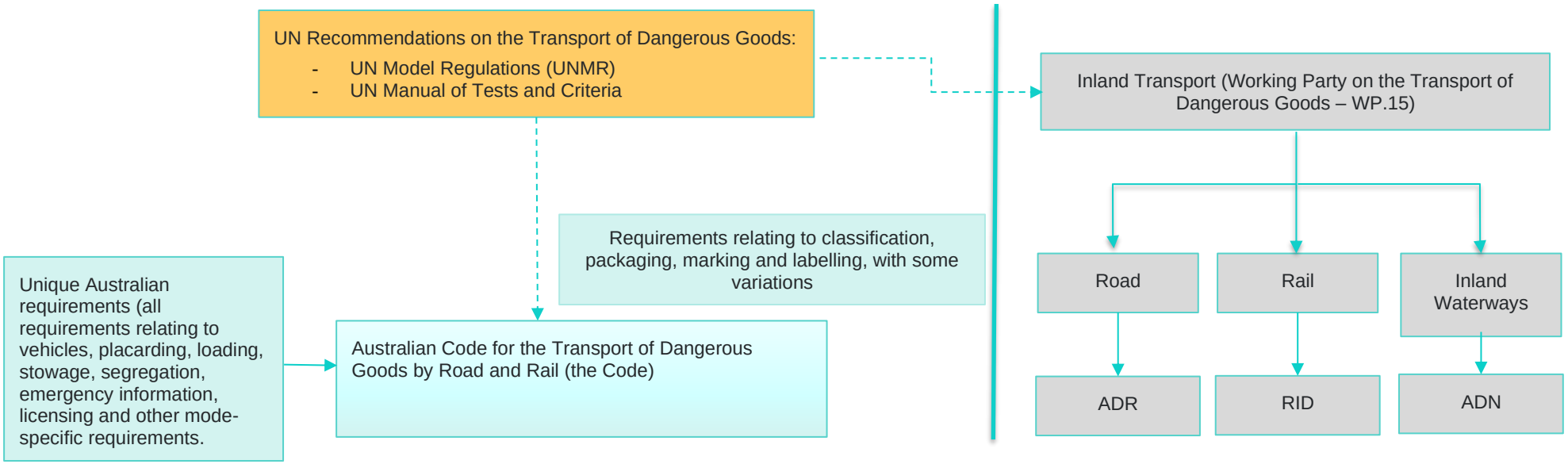
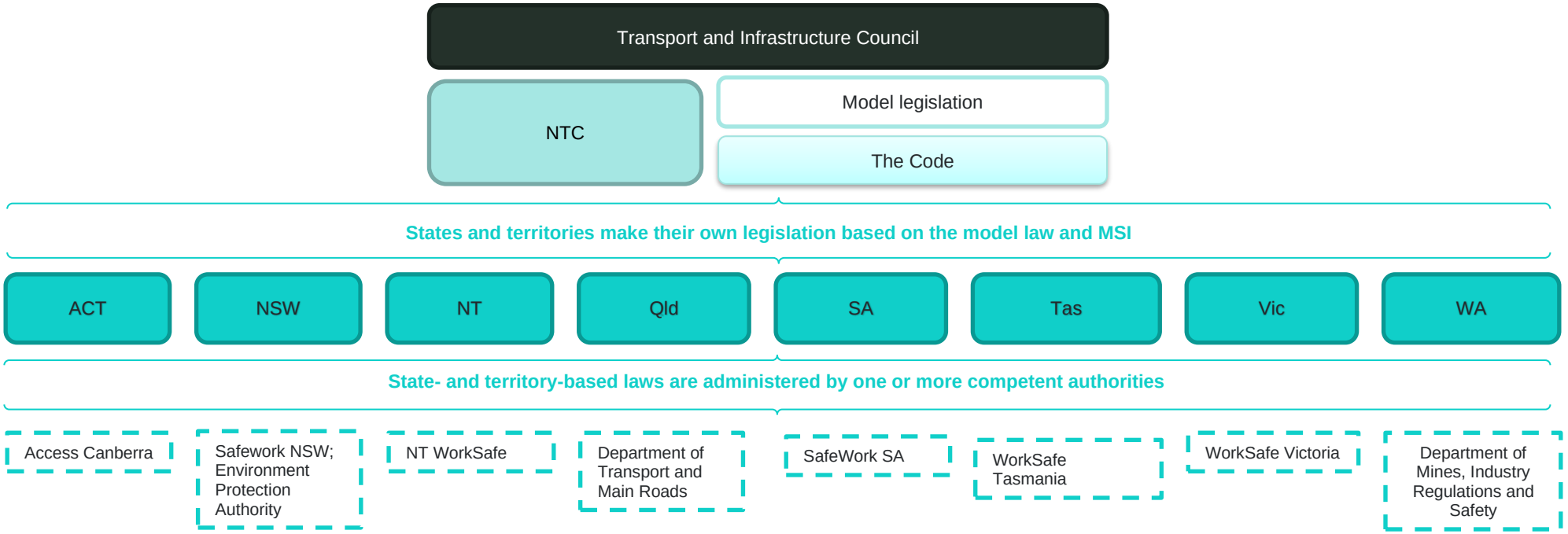


Figure 5. Overview of current regulatory framework



4.2 Regulation of air transport

Key points

- The Act and regulations for the air transport of dangerous goods are administered by a single national regulator, the Civil Aviation Safety Authority (CASA).
- The Act and regulations directly call up the current version of the ICAO's Technical Instructions.

Dangerous goods transport by air in Australia are regulated nationally under s 32 of the *Civil Aviation Act 1988* (Cwlth) and Part 92 of the Civil Aviation Safety Regulations. The Act and Regulations are administered by the Civil Aviation Safety Authority (CASA). The Act applies the ICAO Technical Instructions. When updated ICAO Technical Instructions are released, they are automatically applied by the Act, and so no amendments are required.

ICAO, a UN ECOSOC body, develops the mode-specific ICAO Technical Instructions based on the UNMR. CASA permits the use of any equivalent document, the most common of which is the International Air Transport (IATA) Dangerous Goods Regulations. The IATA Dangerous Goods Regulations are a conversion of the ICAO Technical Instructions into operational language, prepared by representatives from industry. Figure 5 provides a representation of the regulatory framework for air transport of dangerous goods and the relationship to the ICAO Technical Instructions to the UNMR.

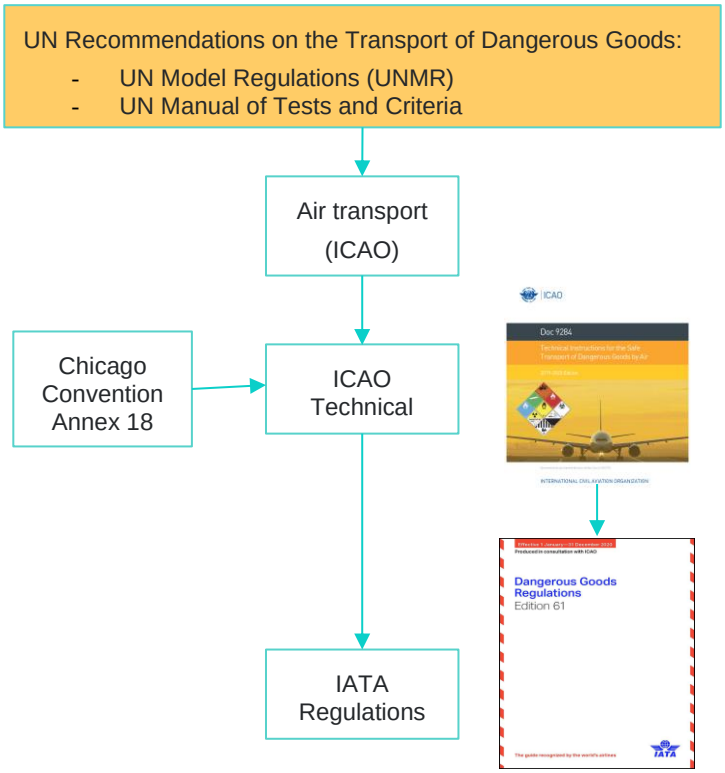
Australia is represented by CASA at both ICAO and IATA.

State (country) or operator (specific airline) variations must be notified to ICAO. These variations are incorporated into both the ICAO Technical Instructions and the IATA Dangerous Goods Regulations.

4.2.1 Training

Detailed training requirements for the various parties in the transport of dangerous goods by air are specified in the ICAO Technical Instructions and everyone involved in transporting dangerous goods by air must receive formal training. The specific subject matter required to be included in the training depends on the functions performed. CASA is responsible for approving all training packages. Parties requiring accredited training must be retrained every two years. All parties in the chain are responsible for verifying the accreditations of their immediate upstream and downstream parties.

Figure 6. Regulatory framework and relationship to the UNMR for air



4.3 Sea transport

Key points

- The Act and regulations for the sea transport of dangerous goods are administered by a single national regulator, the Australian Maritime Safety Authority (AMSA).
- The Act and regulations directly apply the current version of the IMDG Code, as well as allowing any applicable transitional period.

The international and national transport of dangerous goods by sea is regulated nationally by Marine Orders issued under the *Navigation Act 1912* (Cwlth), which is administered by the Australian Maritime Safety Authority (AMSA). The Act calls up the current version of the IMDG Code. When the IMDG Code is updated, it is automatically applied by the Act, and so no amendments are required.

Figure 6 provides a representation of the regulatory framework for sea transport of dangerous goods and the relationship of the IMDG Code to the UNMR.

The International Maritime Organization (IMO), a UN ECOSOC body, develops the mode-specific IMDG Code based on the UNMR.

Australia is represented at IMO by AMSA.

4.3.1 Training

Detailed training requirements for the various parties in the transport of dangerous goods by sea are specified in the IMDG Code and everyone involved in transporting dangerous goods by sea must receive formal training. The subject matter required to be covered in the training

depends on the functions the person performs. Training must be delivered to a training package 'accepted' by AMSA. Any person requiring accredited training must be retrained every three years.

Figure 7. Regulatory framework and relationship to UNMR for sea

5 International regulatory frameworks

Key points

- In the European Union, the UK, the US and China, duties imposed on parties involved in transporting dangerous goods by road and rail are contained in the modal codes that those countries have formally agreed to adopt.
- While Member States of the European Union may vary provisions of the modal codes, variations must be notified to the UN.
- In the UK, while the regulations that give effect to the modal codes provide exemptions for domestic transport, they give effect to all duties and provisions of those codes with no variants.
- In the US, the federal Department of Transportation has power to align relevant US laws with revisions to the UN Recommendations and modal codes.
- The ASEAN countries and China directly reference the modal codes or reflect them in their local laws to varying degrees.

The following provides an overview of the regulatory frameworks used for the land transport of dangerous goods in a number of countries or regions.

5.1 European Union

Land transport of dangerous goods in the European Union is covered under Directive 2008/68/EC of the European Parliament and of the Council on the inland transport of dangerous goods. The directive lays down rules governing the transport of dangerous goods by road, rail or inland waterways within or between European Community Member States. The rules also cover loading and unloading activities, the transfer to or from another mode of transport, and the stops necessitated by the circumstances of the transport. All Member States have signed the Agreement concerning the International Carriage of Dangerous Goods by Road, which mandates the ADR, and the Convention for International Transport by Rail, which mandates the RID.

Legal effect is given to the ADR and RID through the Acts, Decrees and Regulations of the Member State. Duties of the parties involved in the transport chain are contained in the ADR and RID, along with the technical provisions.

Member States are permitted to regulate variations to the provisions in the ADR but must notify these to ECOSOC.

5.2 United Kingdom

The UK adopts the ADR, RID and ADN through the use of ambulatory referencing in the Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (CDG Regs). Ambulatory referencing refers to ‘a reference in legislation to an international instrument as modified from time to time (and not simply to the version of the instrument that exists at the time the secondary legislation is made)’.[9]

[9] UK Department for Transport, *Merchant Shipping (Ambulatory Reference) (Load Line) Regulations 2017 – Impact Assessment*, 2016

The CDG Regs provide the legal framework within the UK because the ADR itself does not contain provisions for enforcement. The regulations implement the duties and provisions of the ADR and RID, with a number of exceptions for domestic transport. The regulations also give legal effect in the UK to exemptions allowed by the EU Dangerous Goods Directive and any UK derogations. Offences for noncompliance with the duties in the ADR are contained in a schedule to the Health and Safety at Work etc. Act 1974, under which the CDG Regs are made. The key regulation in the CDG Regs is regulation 5:

> ***Carriage to be in accordance with ADR or RID***
>
> *5. No person is to carry dangerous goods, or cause or permit dangerous goods to be carried, where that carriage is prohibited by ADR or RID, including where that carriage does not comply with any applicable requirement of ADR or RID.*

The CDG Regs define each of the ADR, RID and ADN as 'revised or reissued from time to time', thereby automatically adopting the latest edition without the requirement to amend the regulations. The UK Department of Transport has advised that agreement to adopt the ADR using ambulatory referencing was achieved through introducing a strong consultation framework that ensured comprehensive consultation with all interest stakeholders and full transparency of decisions.

5.3 ASEAN

In 2002, the Transport Ministers of the Association of Southeast Asian Nations (ASEAN) signed Protocol 9 to the ASEAN Framework Agreement on the Facilitation of Goods in Transit. Protocol 9 requires all contracting parties to the agreement to adopt the provisions of the UNMR and the ADR.

5.4 United States

The land transport of hazardous materials (dangerous goods) in the US is regulated under Title 49 of the Code of Federal Regulations (49 CFR). The Pipeline and Hazardous Material Safety Administration (PHMSA) in the Department of Transportation is responsible for 49 CFR.

Under the law, the Secretary for Transportation may issue regulations for the safe transportation, including security, of hazardous material in intrastate, interstate and foreign commerce. The PHMSA administers the regulations and issues procedural regulations. The PHSMA also issues Final Rules that amend the Hazardous Materials Regulations, including aligning the regulations with revisions to the UN Recommendations and modal codes. Final Rules were issued in 2011 and 2009 to update the regulations to align with the UNMR.

The US is represented by PHMSA at both the UN Sub-Committee and WP.15, where they have full voting status. PHMSA participates in the Joint Meeting to advise US shippers on applicable European requirements, and also to ensure US input into the development of those requirements which, once adopted, are likely to be proposed for adoption in the UN Recommendations.

5.5 China

On 1 December 2018, China implemented the Regulations concerning Road Transportation of Dangerous Goods (JT/T 617). These regulations are closely aligned to the ADR, with three of the seven parts of the regulations directly referencing the ADR. Unlike other countries using direct reference, China's regulations specifically reference ADR 2015. Referencing a specific version of the ADR is likely to impact on China's ability to maintain currency of its requirements.

6 Available regulatory frameworks

Key points

- 'Referral of powers', 'template law' and 'model law' approaches make up the national scheme structures to achieve national regulatory consistency across the Australian federation in particular areas.
- While the 'referral of powers' approach is arguably the best way to achieve national consistency, it can be challenging to achieve national consensus.
- If implemented strictly, the 'template law' approach can achieve regulatory consistency.
- The 'model law' approach can only achieve regulatory consistency if jurisdictions enact local laws based on the agreed model.

In its 2009 supplement to the research report on chemicals and plastics regulation[10], the Productivity Commission discussed the barriers to achieving national regulation posed by federalism and identified a number of mechanisms that have been used by Australian governments for national regulatory approaches.

The following discussion on the available regulatory frameworks draws heavily from the Productivity Commission's 2009 supplement.

6.1 Mechanisms for national consistency

Australia is a federation, with legislative power divided between state and Commonwealth levels of government. Under the Constitution, the Commonwealth government has a limited range of matters over which it has exclusive powers to make laws. The states retain the power to make laws over all matters, unless the Constitution specifically provides that the Commonwealth has power to make laws over that matter. Regulating the transport of dangerous goods is one such matter for which the Commonwealth does not have exclusive power.

While there are a number of regulatory frameworks that can be used for achieving nationally consistent regulation, the success of these frameworks relies on the cooperation of all governments.

In our consultation regulation impact statement *In-service safety for automated vehicles July 2019*, the NTC provides the following overview of the requirement for cooperation between governments to achieve national consistency of regulation:

> *Australia's federal structure divides legislative power between state and Commonwealth levels of government. The division of legislative power means that the two levels of government need to cooperate to achieve a national approach. The High Court has noted the challenges of achieving effective cooperative schemes in the federal system, quoting Professor Cheryl Saunders:*
>
> > *Australia is a federation of a dualist kind…. While some provisions in the Constitution provide for co-operation, they do not fundamentally alter its dualist character; indeed, if anything, they reinforce it. The nature of the*

[10] Productivity Commission 2009, Supplement to Research Report: Chemicals and Plastics Regulation: *Lessons for National Approaches to Regulation*, Australian Government, Canberra.

Australian constitutional system needs to be borne in mind in designing co-operative procedures. The issues at stake essentially are questions of principle.[1112]

National consistency of the regulation of the land transport of dangerous goods currently relies on the cooperation of jurisdictions as agreed in the IGA.

6.2 Referral of Powers

Under s 51(xxxvii) of the Constitution, the Commonwealth Parliament has the power to make laws with respect to 'matters referred to the Parliament of the Commonwealth by the Parliament or Parliaments of any State or States'. If one or more states refer powers to the Commonwealth, the Commonwealth becomes the legislator and regulator on that matter for those jurisdictions. If all jurisdictions refer their power, national uniformity is achieved, making this a highly effective mechanism for achieving regulatory consistency.

However, the referral of powers has been a topical issue since Federation, and there remain several unresolved issues, such as whether powers that have been referred to the Commonwealth can be revoked by the states, and the degree to which states can act concurrently (though not inconsistently) once a power has been referred. In relation to the latter, once a power has been referred to, and enacted by, the Commonwealth, s 109 of the Constitution gives this law ascendancy over an inconsistent state law, thus limiting the extent to which the states can legislate over the same matters (Tate 2005)[13].

Referral of powers has been used successfully to allow the Commonwealth to enact legislation regulating the transport of dangerous goods by sea and by air and remains arguably the best way to achieve national consistency; it should be considered an option for the Commonwealth, state and territory governments. However, history shows that it is unlikely the states would be willing to refer their powers to the Commonwealth to enact laws for regulating dangerous goods by land. The referral of powers to the Commonwealth would also be further complicated by the fact that the transport of dangerous goods is only a part of the overall transport and freight task, which is regulated at the state and territory level.

6.3 Template law

Template legislation (also referred to as 'applied laws' legislation) involves one jurisdiction (the host jurisdiction) enacting a law that is then applied or adopted by other jurisdictions. The template approach can also be applied to regulations, standards and codes of practice. Template legislation can follow one of two forms: either the Commonwealth can enact legislation within the Commonwealth's legislative powers that is applied in the states for residual matters, or one state or territory can enact legislation that is subsequently applied in other states and territories. The approach of template law, with the legislation enacted by the Commonwealth and then applied by the states, was used for the land transport of dangerous goods prior to 2008. As the Commonwealth does not have exclusive power to legislate over this matter, the scope of the Commonwealth Act and regulations was limited to Commonwealth territories (the ACT, the Northern Territory, etc. The states were required to

[11] ASIC v Edensor Nominees Pty Limited (2001) 204 CLR 559

[12] National Transport Commission 2019, *Consultation regulation impact statement: In-service safety for automated vehicles*, NTC, Melbourne.

[13] Tate, P. 2005, *Cooperative Federalism: Referrals of State Powers to the Commonwealth and Their Consequences,* Paper delivered at a Constitutional Law Conference in Sydney, 18 February

enact legislation in their own jurisdictions that either referred the Commonwealth legislation or replicated it.

A closely related approach is adoption by reference, which involves jurisdictions referring in primary or subordinate legislation to instruments that have not been enacted by any jurisdiction. Adoption by reference is commonly used to adopt Australian Standards.

The template and reference approaches have strengths and weaknesses. Their greatest advantage is that if the original legislation is applied or referred to without amendment by the states and territories, regulation is nationally uniform. Also, if all jurisdictions reference the template regulation as amended from time to time, these approaches can facilitate the consistent uptake of amendments, thereby reducing the potential for inconsistencies as seen in the current regulatory framework for the land transport of dangerous goods.

6.4 Model law

Model law is agreed by relevant ministers and forms the basis of laws agreed to be passed by each jurisdiction. Model law itself has no legal effect.

The model law approach is usually underpinned by an Intergovernmental Agreement committing each of the states and territories to enact their own laws and regulations, mirroring the model.

The Transport of Dangerous Goods model law is an example, as are the model Australian Road Rules.

There is no legal obligation on any state or territory to adopt the model – either at all or in total. Adoption of the model relies on states and territories observing longstanding obligations that in many instances were entered into by previous governments. This contributes to jurisdictional inconsistencies in both the laws and commencement dates.

Without common guidance on interpretation of provisions, the model laws approach also leads to inconsistencies in understanding and application by both duty holders and enforcement officers, even if the text of the law is enacted using the same text as the model law.

7 Discussion

The matters raised by the ALC and ATA appear to centre around the inconsistencies in the legislative implementation of the Code and how compliance is interpreted by industry, transport authorities and police enforcement agencies. It was in this context that the ALC and ATA requested that consideration be given to:

1. *Whether the ADG Code should be adopted into Australian law using the 'applied legislation' model. This is the same model used by jurisdictions to adopt amendments to the Heavy Vehicle National Law made by the Queensland Parliament; and*
2. *Whether a common operations manual should be developed to be adopted by all jurisdictions to encourage a more uniform interpretation of the ADG [Code].*

Potential options for achieving consistency in implementation, interpretation and application are discussed below.

7.1 Legal framework for adopting the Code

The ALC and ATA specifically ask if the Code should be adopted using an 'applied legislation' model (also known as template law), similar to that used for the Heavy Vehicle National Law. A template law approach was used for edition 6 of the Code, but most jurisdictions preferred to write their own legislation, replicating the provisions in the Commonwealth legislation (with variations) rather than simply adopting it.

The referral of powers and a single Commonwealth law, as per the regulation of the transport of dangerous goods by sea or air, remain arguably the best way to achieve true national consistency, without jurisdictional variations. However, as discussed in 6.2 of this paper, the barriers to achieving this may prove too difficult to overcome at this time.

A review of the current legal framework for regulating the land transport of dangerous goods has shown that, in general, the issues of inconsistency relate more to different take-up dates of amendments rather than the content of the regulations themselves. While there are some regulatory variations between jurisdictions, these have minimal impact on the actual movement of dangerous goods across borders. They can, however, add cost and inefficiencies to organisations that operate in more than one jurisdiction.

The consistency of the implementation of the Code and amendments may be better achieved through an 'adoption by reference' approach, as mentioned in section 6.3 of this paper and further described below.

The technical requirements for safely transporting dangerous goods by road and rail are contained in the Code, rather than the laws themselves. All jurisdictions implement the Code as it is written, thereby achieving a high degree of consistency in the core principles and requirements. The inconsistencies sit within the laws themselves and the dates on which amendments in the model laws and revised editions of the Code are adopted by the jurisdictions.

These issues can be summarised into the following:

- the date on which individual jurisdictions reflect the amendment package in their own laws
- the manner in which jurisdictions reference the Code in their laws, leading to variations in the dates on which revisions are adopted
- jurisdictional variations that are inconsistent with the model laws.

These inconsistencies could be substantially reduced, regardless of whether based on template law or model law, by implementing the following:

- moving the duties on the parties out of the regulations and placing them in the Code
- improving how the Code is referenced in the regulations to allow for automatic adoption
- strengthening the governance and agreement framework.

These approaches are discussed in greater detail below.

Question 4: Thinking about the available national scheme structures, what approach has the potential to best achieve national consistency with greatest efficiency for the land transport of dangerous goods in Australia?

Question 5: Are there administrative procedures, such as gazettal requirements or other requirements, contained in jurisdictional laws that are preventing consistent implementation of Australian Dangerous Goods Code updates?

Question 6: What changes could to be made to existing governance arrangements to mitigate differences across jurisdictions?

7.1.1 Changing where the duties sit and adopting by reference

At present, the duties on the various parties involved in transporting dangerous goods sit within the MSI, with each jurisdiction required to amend its laws to adopt any changes to the MSI. This leads to variations being made by individual jurisdictions and inconsistencies in implementation dates. As demonstrated in Figure 3, some jurisdictions are yet to amend their laws to adopt previous amendment packages.

In countries that implement the ADR, the regulations themselves contain only a general duty, requiring all parties to follow the requirements in the ADR. Chapter 1.4 of the ADR specifies the safety obligations of the participants, detailing which tasks or requirements each participant is responsible for. A copy of Chapter 1.4 of the ADR is contained in Appendix A.

This does not prevent individual countries implementing variations in their regulations to the requirements specified in the ADR. For countries that are signatories to the Agreement, these variations must be notified to UNECE for publishing on its website. This is not required for countries that adopt the ADR by reference but are not signatories to it.

Placing the detailed duties in the Code, if coupled with changes to the way the Code is referenced in legislation, would eliminate the need for jurisdictions to amend laws to implement amendments. This would ensure that amendments, to both the legal duties and the technical requirements in the Code, are implemented on a common date across all jurisdictions. This would allow industry to take full benefit of amendments while also ensuring enforceability across all jurisdictions.

While specifying the duties in the Code rather than in the regulations has the potential to provide many benefits and efficiencies to jurisdictions, the one disadvantage is that the offences would need to be specified in the legislation. This could be done by way of a schedule to the regulations. If the duties in the Code were expressed in the same manner as in Chapter 1.4 of the ADR, then the schedule of offences could be substantially simplified in comparison with how they are currently expressed.

Having only a general duty in the regulations that requires compliance with the provisions in the Code, supported by detail on the responsible parties within the Code, also has the potential to provide considerable efficiencies to governments. In particular, it could provide a resource saving because governments would no longer be required to transpose

amendments into their jurisdictional legislation. While individual jurisdictions would retain the right to implement variations within their own laws, it is believed this would be somewhat disincentivised. Where variations do occur, these would be considerably easier for duty holders to identify.

7.1.2 Referencing the Code in legislation

For the 'adoption by reference' approach identified in section 7.1.1 above, to provide the intended automatic adoption of amendments to the Code and with a common implementation date, the way in which the Code is referenced in the legislation would need to be amended.

The MSI defines the Code as '……, approved by the Transport and Infrastructure Council, as in force or remade from time to time. …'. However, there are very few jurisdictions that have replicated this definition in their own legislation.

By way of example, Western Australia references the specific edition of the Code (edition 7.6). Both the Northern Territory and ACT reference the seventh edition, approved by the Australian Transport Council, as amended from time to time. In Victoria, the *Dangerous Goods Act 1985* defines the Code as '…, (Seventh edition or subsequent edition) as in force from time to time…'. However, this is qualified by s 10 of the Act, which defines 'in force' as being from the date notice of the amendment is published in the *Government Gazette* or a later date as specified by the Authority and specified in the notice.

The delay by many jurisdictions in replicating the definition in the MSI in their own legislation results in new editions of the Code, and therefore amended requirements, being implemented with inconsistent timeframes. This results in increased costs and inefficiencies for industry, particularly those that operate across multiple jurisdictions, by preventing them from taking full advantage of reforms. In addition, the referencing by many of jurisdictions to the 7th edition of the Code has seen the NTC reluctant to move to edition 8. The latest amendment package will see the Code published as edition 7.7.

Question 7: Is placing the detail of duties on parties in the Code itself a viable option to achieve clarity and consistency about parties' specific obligations or are there other approaches that should be considered?

Question 8: What further could be developed to help jurisdictions implement the Code in a consistent and timely manner?

7.1.3 Strengthening the governance and agreement framework

For the approaches as described in sections 7.1.1 and 7.1.2 to achieve national consistency across jurisdictions, and provide the intended outcomes, it would be important to implement a robust consultation and agreement process to enable full participation and transparency in decision making.

There are number of additional steps that could be pursued to establish a strong and inclusive framework to provide the appropriate assurance of effective governance to the jurisdictions.

These could include:

- discussing and agreeing proposed amendments at a multi-portfolio forum that includes both transport ministers and ministers responsible for the legislation in their jurisdiction (as discussed in section 2.2.3 of this paper, SCOC may provide an appropriate forum)

- strengthening the NTC's Transport of Dangerous Goods Maintenance Advisory Group to facilitate greater discussion and understanding of issues with a view to developing solutions that, when developed into legislative reform for Transport and Infrastructure Council approval, will be acceptable to all jurisdictions
- improving transparency of decisions made by the UN Sub-Committee, including the rationale behind those decisions – this would also help with the understanding and interpretation of amendments adopted when the UNMR are revised
- increasing involvement of the NTC, as the agency responsible for amending the model laws and the Code, in UN Sub-Committee discussions, including participation in informal or intersessional working groups on matters with the potential for high impact in Australia.

7.1.4 Improving consistency of interpretation and enforcement

The second question posed by the ALC and ATA for consideration was:

> *Whether a common operations manual should be developed to be adopted by all jurisdictions to encourage a more uniform interpretation of the ADG Code.*

The issue of inconsistency of interpretation and enforcement has been ongoing since the 7th edition was first introduced. In its submission to the NTC titled *ADG 7 Implication Issues*, Accord Australasia raised the lack of training and guidance material and provided a number of examples of differing interpretations between duty holders and individual regulatory inspectors. This was reiterated in several submissions to the NTC's 2012 *Strategic framework review of the regulation of land transport of dangerous goods: options paper.* These are summarised in the *Strategic Framework Review of the Regulation of Land Transport of Dangerous Goods: final recommendations*, published by the NTC in 2013[14].

COAG's *Best Practice Regulation: A Guide for Ministerial Councils and National Standard Setting Bodies* published in 2007, contains a number of agreed principles for regulatory processes for all governments. One of those agreed principles is:

> *providing effective guidance to relevant regulators and regulated parties in order to ensure that the policy intent and expected compliance requirements of the regulation are clear;*

The lack of published guidance material to assist stakeholders in a common understanding of the requirements and how compliance is achieved is a deficiency in the current system to meet that principle.

The size and complexity of the Code is such that developing a 'common operations manual' has the potential to result is another large, complex document that does not provide the clarity required. Greater consistency of interpretation is more likely to be achieved by developing a series of topic-specific guidelines. This approach is in keeping with that of other national agencies and regulators. For example, the Office of the National Rail Safety Regulator and SafeWork Australia.

Guidelines developed and agreed by Competent Authorities, industry and the NTC would provide clear guidance to duty holders on what compliance looks like while also guiding enforcement officers on how they should interpret the requirements.

As there is no central national platform or online presence for Competent Authorities, the NTC may be an appropriate body to facilitate the development and ongoing maintenance of guidance material as requirements evolve.

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[14] National Transport Commission 2013, *Strategic Framework Review of the Regulation of Land Transport of Dangerous Goods: final recommendations,* NTC, Melbourne

Question 9: What do you think is the best way to achieve uniform interpretation of Code requirements?

Question 10: If guidance material was created, which body should be responsible for its maintenance to ensure it remains contemporary and fit for purpose?

7.2 Other potential improvements

This paper looks at the legal framework for adopting the Code. The Code itself is explicitly excluded from the scope of the paper. The following suggestions are provided purely to stimulate discussion of potential improvements that could be investigated to future reform proposals:

- consider aligning Australian requirements for land transport to adopting the ADR/RID, either by direct reference, with variations in the MSI, or by mirroring
- include specified training in the Code, aligned to Chapter 1.3 of either the UNMR or the ADR
- consider a requirement similar to the dangerous goods safety advisor in Chapter 1.8 of the ADR.

8 Next steps

Key points

We want to hear from you. Consultation is open until **Friday 3 July 2020**.

Any individual or organisation can make a submission to the NTC.

8.1 Have your say

The NTC wants to give everyone involved in the transport of dangerous goods by road or rail an opportunity to have a say. The NTC invites your responses to the questions and issues we have identified by **Friday 3 July 2020**.

Any individual or organisation can make a submission to the NTC.

To make an online submission, please visit www.ntc.gov.au and find the report for comment on the homepage.

Or, you can email your comments to: Debra Kirk, Manager Legislative Maintenance, dkirk@ntc.gov.au

Where possible, you should provide evidence, such as data and documents, to support your views.

Unless you clearly ask us not to, we will publish all submissions online. However, we will not publish submissions that contain defamatory or offensive content.

The *Freedom of Information Act 1982* (Cwlth) applies to the NTC.

Appendix A ADR Chapter 1.4

• CHAPTER 1.4

SAFETY OBLIGATIONS OF THE PARTICIPANTS

• 1.4.1 General safety measures

1.4.1.1 The participants in the carriage of dangerous goods shall take appropriate measures according to the nature and the extent of foreseeable dangers, so as to avoid damage or injury and, if necessary, to minimize their effects. They shall, in all events, comply with the requirements of ADR in their respective fields.

1.4.1.2 When there is an immediate risk that public safety may be jeopardized, the participants shall immediately notify the emergency services and shall make available to them the information they require to take action.

1.4.1.3 ADR may specify certain of the obligations falling to the various participants.

If a Contracting Party considers that no lessening of safety is involved, it may in its domestic legislation transfer the obligations falling to a specific participant to one or several other participants, provided that the obligations of 1.4.2 and 1.4.3 are met. These derogations shall be communicated by the Contracting Party to the Secretariat of the United Nations Economic Commission for Europe which will bring them to the attention of the Contracting Parties.

The requirements of 1.2.1, 1.4.2 and 1.4.3 concerning the definitions of participants and their respective obligations shall not affect the provisions of domestic law concerning the legal consequences (criminal nature, liability, etc.) stemming from the fact that the participant in question is e.g. a legal entity, a self-employed worker, an employer or an employee.

• 1.4.2 Obligations of the main participants

NOTE 1: *Several participants to which safety obligations are assigned in this section may be one and the same enterprise. Also, the activities and the corresponding safety obligations of a participant can be assumed by several enterprises.*

NOTE 2: *For radioactive material, see also 1.7.6.*

• 1.4.2.1 *Consignor*

1.4.2.1.1 The consignor of dangerous goods is required to hand over for carriage only consignments which conform to the requirements of ADR. In the context of 1.4.1, he shall in particular:

(a) Ascertain that the dangerous goods are classified and authorized for carriage in accordance with ADR;

(b) Furnish the carrier with information and data in a traceable form and, if necessary, the required transport documents and accompanying documents (authorizations, approvals, notifications, certificates, etc.), taking into account in particular the requirements of Chapter 5.4 and of the tables in Part 3;

(c) Use only packagings, large packagings, intermediate bulk containers (IBCs) and tanks (tank-vehicles, demountable tanks, battery-vehicles, MEGCs, portable tanks and tank-containers) approved for and suited to the carriage of the substances concerned and bearing the marks prescribed by ADR;

(d) Comply with the requirements on the means of dispatch and on forwarding restrictions;

(e) Ensure that even empty uncleaned and not degassed tanks (tank-vehicles, demountable tanks, battery-vehicles, MEGCs, portable tanks and tank-containers) or empty uncleaned vehicles and bulk containers are placarded, marked and labelled in accordance with

Chapter 5.3 and that empty uncleaned tanks are closed and present the same degree of leakproofness as if they were full.

1.4.2.1.2 If the consignor uses the services of other participants (packer, loader, filler, etc.), he shall take appropriate measures to ensure that the consignment meets the requirements of ADR. He may, however, in the case of 1.4.2.1.1 (a), (b), (c) and (e), rely on the information and data made available to him by other participants.

1.4.2.1.3 When the consignor acts on behalf of a third party, the latter shall inform the consignor in writing that dangerous goods are involved and make available to him all the information and documents he needs to perform his obligations.

- **1.4.2.2** ***Carrier***

1.4.2.2.1 In the context of 1.4.1, where appropriate, the carrier shall in particular:

(a) Ascertain that the dangerous goods to be carried are authorized for carriage in accordance with ADR;

(b) Ascertain that all information prescribed in ADR related to the dangerous goods to be carried has been provided by the consignor before carriage, that the prescribed documentation is on board the transport unit or if electronic data processing (EDP) or if electronic data interchange (EDI) techniques are used instead of paper documentation, that data is available during transport in a manner at least equivalent to that of paper documentation;

(c) Ascertain visually that the vehicles and loads have no obvious defects, leakages or cracks, missing equipment, etc.;

(d) Ascertain that the deadline for the next test for tank-vehicles, battery-vehicles, demountable tanks, portable tanks, tank-containers and MEGCs has not expired;

NOTE: *Tanks, battery-vehicles and MEGCs may however be carried after the expiry of this deadline under the conditions of 4.1.6.10 (in the case of battery-vehicles and MEGCs containing pressure receptacles as elements), 4.2.4.4, 4.3.2.3.7, 4.3.2.4.4, 6.7.2.19.6, 6.7.3.15.6 or 6.7.4.14.6.*

(e) verify that the vehicles are not overloaded;

(f) ascertain that the placards, marks and orange-coloured plates prescribed for the vehicles in Chapter 5.3 have been affixed;

(g) ascertain that the equipment prescribed in ADR for the transport unit, vehicle crew and certain classes is on board the transport unit.

Where appropriate, this shall be done on the basis of the transport documents and accompanying documents, by a visual inspection of the vehicle or the containers and, where appropriate, the load.

1.4.2.2.2 The carrier may, however, in the case of 1.4.2.2.1 (a), (b), (e) and (f), rely on information and data made available to him by other participants. In the case of 1.4.2.2.1 (c) he may rely on what is certified in the "container/vehicle packing certificate" provided in accordance with 5.4.2.

1.4.2.2.3 If the carrier observes an infringement of the requirements of ADR, in accordance with 1.4.2.2.1, he shall not forward the consignment until the matter has been rectified.

1.4.2.2.4 If, during the journey, an infringement which could jeopardize the safety of the operation is observed, the consignment shall be halted as soon as possible bearing in mind the requirements of traffic safety, of the safe immobilisation of the consignment, and of public safety. The transport operation may only be continued once the consignment complies with applicable regulations. The competent authority(ies) concerned by the rest of the journey may grant an authorization to pursue the transport operation.

In case the required compliance cannot be achieved and no authorization is granted for the rest of the journey, the competent authority(ies) shall provide the carrier with the necessary administrative assistance. The same shall apply in case the carrier informs this/these competent

authority(ies) that the dangerous nature of the goods carried was not communicated to him by the consignor and that he wishes, by virtue of the law applicable in particular to the contract of carriage, to unload, destroy or render the goods harmless.

1.4.2.2.5 *(Reserved)*

1.4.2.2.6 The carrier shall provide the vehicle crew with the instructions in writing as prescribed in ADR.

- **1.4.2.3** ***Consignee***

1.4.2.3.1 The consignee has the obligation not to defer acceptance of the goods without compelling reasons and to verify, after unloading, that the requirements of ADR concerning him have been complied with.

1.4.2.3.2 If, in the case of a container, this verification brings to light an infringement of the requirements of ADR, the consignee shall return the container to the carrier only after the infringement has been remedied.

1.4.2.3.3 If the consignee makes use of the services of other participants (unloader, cleaner, decontamination facility, etc.) he shall take appropriate measures to ensure that the requirements of 1.4.2.3.1 and 1.4.2.3.2 of ADR have been complied with.

- **1.4.3 Obligations of the other participants**

A non-exhaustive list of the other participants and their respective obligations is given below. The obligations of the other participants flow from section 1.4.1 above insofar as they know or should have known that their duties are performed as part of a transport operation subject to ADR.

- **1.4.3.1** ***Loader***

1.4.3.1.1 In the context of 1.4.1, the loader has the following obligations in particular:

(a) He shall hand the dangerous goods over to the carrier only if they are authorized for carriage in accordance with ADR;

(b) He shall, when handing over for carriage packed dangerous goods or uncleaned empty packagings, check whether the packaging is damaged. He shall not hand over a package the packaging of which is damaged, especially if it is not leakproof, and there are leakages or the possibility of leakages of the dangerous substance, until the damage has been repaired; this obligation also applies to empty uncleaned packagings;

(c) He shall comply with the special requirements concerning loading and handling;

(d) He shall, after loading dangerous goods into a container comply with the requirements concerning placarding, marking and orange-coloured plates conforming to Chapter 5.3;

(e) He shall, when loading packages, comply with the prohibitions on mixed loading taking into account dangerous goods already in the vehicle or large container and requirements concerning the separation of foodstuffs, other articles of consumption or animal feedstuffs.

1.4.3.1.2 The loader may, however, in the case of 1.4.3.1.1 (a), (d) and (e), rely on information and data made available to him by other participants.

- **1.4.3.2** ***Packer***

In the context of 1.4.1, the packer shall comply with in particular:

(a) The requirements concerning packing conditions, or mixed packing conditions; and

(b) When he prepares packages for carriage, the requirements concerning marking and labelling of the packages.

- **1.4.3.3** ***Filler***

In the context of 1.4.1, the filler has the following obligations in particular:

(a) He shall ascertain prior to the filling of tanks that both they and their equipment are technically in a satisfactory condition;

(b) He shall ascertain that the date of the next test for tank-vehicles, battery-vehicles, demountable tanks, portable tanks, tank-containers and MEGCs has not expired;

(c) He shall only fill tanks with the dangerous goods authorized for carriage in those tanks;

(d) He shall, in filling the tank, comply with the requirements concerning dangerous goods in adjoining compartments;

(e) He shall, during the filling of the tank, observe the maximum permissible degree of filling or the maximum permissible mass of contents per litre of capacity for the substance being filled;

(f) He shall, after filling the tank, ensure that all closures are in a closed position and that there is no leakage;

(g) He shall ensure that no dangerous residue of the filling substance adheres to the outside of the tanks filled by him;

(h) He shall, in preparing the dangerous goods for carriage, ensure that the placards, marks, orange-coloured plates and labels are affixed on the tanks, on the vehicles and on the containers for carriage in bulk in accordance with Chapter 5.3;

(i) *(Reserved)*;

(j) He shall, when filling vehicles or containers with dangerous goods in bulk, ascertain that the relevant provisions of Chapter 7.3 are complied with.

- **1.4.3.4** ***Tank-container/portable tank operator***

In the context of 1.4.1, the tank-container/portable tank operator shall in particular:

(a) Ensure compliance with the requirements for construction, equipment, tests and marking;

(b) Ensure that the maintenance of shells and their equipment is carried out in such a way as to ensure that, under normal operating conditions, the tank-container/portable tank satisfies the requirements of ADR until the next inspection;

(c) Have an exceptional check made when the safety of the shell or its equipment is liable to be impaired by a repair, an alteration or an accident.

- 1.4.3.5 and 1.4.3.6 *(Reserved)*

- **1.4.3.7** ***Unloader***

1.4.3.7.1 In the context of 1.4.1, the unloader shall in particular:

(a) Ascertain that the correct goods are unloaded by comparing the relevant information on the transport document with the information on the package, container, tank, MEMU, MEGC or vehicle;

(b) Before and during unloading, check whether the packagings, the tank, the vehicle or container have been damaged to an extent which would endanger the unloading operation. If this is the case, ascertain that unloading is not carried out until appropriate measures have been taken;

(c) Comply with all relevant requirements concerning unloading and handling;

(d) Immediately following the unloading of the tank, vehicle or container:

(i) Remove any dangerous residues which have adhered to the outside of the tank, vehicle or container during the process of unloading; and

(ii) Ensure the closure of valves and inspection openings;

(e) Ensure that the prescribed cleaning and decontamination of the vehicles or containers is carried out; and

(f) Ensure that the containers once completely unloaded, cleaned and decontaminated, no longer display the placards, marks and orange-coloured plates that had been displayed in accordance with Chapter 5.3.

1.4.3.7.2 If the unloader makes use of the services of other participants (cleaner, decontamination facility, etc.) he shall take appropriate measures to ensure that the requirements of ADR have been complied with.

Appendix B Additional resources

ACCORD Australasia 2010, Submission to NTC: ADG7 Implementation Issues.

Council of Australian Governments (COAG) 2007, *Best practice regulation: a guide for ministerial councils and national standard setting bodies*, COAG, Canberra.

Council of Australian Governments (COAG) 2009, *Memorandum of understanding for chemicals and plastics regulatory reform,* https://www.coag.gov.au/sites/default/files/agreements/mou_framework_chemicals_plastics_regulatory_signature.pdf [Accessed 18 May 2020]

Department for Transport, Maritime and Coastguard Agency (UK) 2016, *Merchant Shipping (Ambulatory Reference) (Load Line) Regulations 2017* https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/620980/Annex_A_-_Impact_Assessment_Load_Line.pdf [Accessed 18 May 2020]

National Transport Commission 2006, *Australian Dangerous Goods Code 7th Edition Legislative Package: summary response to public submissions,* NTC, Melbourne.

National Transport Commission 2011, *Australian Code for the Transport of Dangerous Goods by Road and Rail 7th Edition Reform Package – Implementation and Regulatory Outcomes Review,* NTC, Melbourne.

National Transport Commission 2013, *Strategic Framework Review of the Regulation of Land Transport of Dangerous Goods: final recommendations,* NTC, Melbourne.

National Transport Commission 2019, Consultation regulation impact statement, *In-service safety for automated vehicles, July 2019*, NTC, Melbourne.

Productivity Commission 2008, *Research Report: Chemicals and Plastics Regulation*, Australian Government, Canberra.

Productivity Commission 2009, *Supplement to Research Report:* Chemicals and Plastics Regulation: *Lessons for National Approaches to Regulation*, Australian Government, Canberra.

Tate, P. 2005, *Cooperative Federalism: Referrals of State Powers to the Commonwealth and Their Consequences,* Paper delivered at a Constitutional Law Conference in Sydney, 18 February

Transport and Infrastructure Senior Officials' Committee (TISOC) 2012, *2012 Review of the National Transport Commission and other Relevant Bodies*, TISOC, Canberra.

Glossary

Term	Definition
ADG	Australian Dangerous Goods
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	Agreement concerning the International Carriage of Dangerous Goods by Road
ALC	Austalian Logistics Council
ATA	Australian Trucking Association
CAP	Competent Authorities Panel
COAG	Council of Australian Governments
DGSA	Dangerous Goods Safety Advisor
ECOSOC	United Nations Economic and Social Council
GHS	Globally Harmonised System for the Classification and Communication of Hazardous Chemicals
IATA	International Air Transport Association
ICAO	International Civil Aviation Organisation
ICAO TI	Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organisation
Model Law	Model Act on the Transport of Dangerous Goods by Road or Rail
MSI	Model Subordinate Instrument on the Transport of Dangerous Goods by Road or Rail
NRTC	National Road Transport Commission (now NTC)
NTC	National Transport Commission
PHMSA	Pipeline and Hazardous Materials Safety Administration

RID	Regulations concerning the International Transport of Dangerous Goods
SCOC	Standing Committee on Chemicals
SCOTI	Standing Committee on Transport and Infrastructure (now the Transport and Infrastructure Council)
SOLAS	International Conventions for the Safety of Life at Sea
TDG Sub-Committee	UN Sub-Committee of Experts on the Transport of Dangerous Goods
TISOC	Transport and Infrastructure Senior Officials' Committee
The Code	Australian Code for the Transport of Dangerous Goods by Road or Rail
UN	United Nations
UNECE	United Nations Economic Commission for Europe
UNMR	United Nations Recommendations on the Transport of Dangerous Goods – Model Regulations

List of tables and figures

Figures

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