



Framework glossary

Multimodal



Risk management framework for
inland transport of dangerous goods

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Risk management framework for inland transport of dangerous goods

Framework glossary

(version applicable to the voluntary implementation scheme during the test phase period 2018-2020)

Version 1.0/2018



Practical information for users

This Glossary is one of the documents forming the framework of guides on the Management of Risks for Inland Transport of Dangerous Goods.

It was established in parallel with the development of the other guides of the framework, namely:

- ▶ The Framework guide (overview of the framework),
- ▶ The Guide for risk estimation,
- ▶ The Guide for decision-making.

The Glossary gives definitions of the terms used across this framework.

The definitions were established on the basis of pre-existing definitions in legal texts, norms and guides; from all the materials studied during the workshops (contributions from participants, reference documents, presentations); and from the harmonising discussions held for the development of the harmonised framework of guides.

In some cases it was possible to use pre-existing definitions directly. In some other cases it was preferred to adapt pre-existing definitions slightly to improve understanding of the guides.

One column of the table of terms indicates the source of the definitions retained as applicable to the Framework. Colour coding helps the user to immediately identify the category of definition retained in the Glossary:

- ▶ A white cell means: definition copied without change from the referred source,
- ▶ A grey cell means: definition slightly adapted from the referred definition(s),
- ▶ A blue cell means: new definition established during development of the framework.

Finally, it is also worth mentioning that this Glossary is compatible with the "*General Guideline for the Calculation of Risks in the Transport of Dangerous Goods - An introduction to the basic principles of risk assessment for chapter 1.9*", adopted in 2006 by the RID Committee of Experts and in 2008 by the Working Party on Transport of Dangerous Goods for railway and road transport modes respectively.

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Definitions applicable to the Framework

Terms	Definition	Source with colour coding
Accident	An unwanted or unintended sudden event or a specific chain of such events that have harmful consequences.	[2]
BLEVE	Boiling Liquid Expanding Vapour Explosion Also used, Cold BLEVE for BLEVE which occurrence is not caused by a fire. Hot BLEVE for BLEVE which occurrence is caused by a fire	[15]
By default value	Value of a parameter which is automatically allocated by the harmonised risk estimation method. A default value can be set either to 'open' or 'closed' parameters of the model.	Guide for risk estimation
Causes	Actions, omissions, events or conditions, or a combination thereof, which led to the accident or incident.	[2]
Class	Class(es) of dangerous goods as defined in RID/ADR/ADN chapter 2.	[12]
Collective risk	A measure of the risk posed to a specific group of persons, for examples passengers, staff, inhabitants...	[7]
Communication and consultation	Continual and interactive processes that an organisation conducts to provide, share or obtain information, and to engage in dialogue with stakeholders regarding the management of risk.	[6]
Consequence	Any sequence of events consecutive to an initial event (for example a dangerous goods event), resulting in damage.	[11]
Containment	Any type of technical envelope that is authorised by RID/ADR/ADN for carrying dangerous goods under the conditions defined therein.	[12]
Continuous improvement	Overall risks should not increase, and preferably should reduce.	[10]
Control (Control measure)	Measure that is modifying risk.	[6]
Corrected value	Value allocated by the user to a given parameter to replace the value set by default for this parameter by the harmonised risk estimation model. Only the value of an 'open parameter' can be corrected. Note: when setting a corrected value, the user shall provide evidence and justify that the correction is necessary to improve the quality of the risk estimation. See also 'fixed parameter'	Guide for risk estimation
Damage	Outcome of hazardous events in which vulnerabilities are exposed to hazards (see exposure). Damage may be quantified or qualified by the measurement of its severity. Within this framework, damage may also be used to describe harm in the case of human or animal vulnerabilities.	Guide for risk estimation

Definitions applicable to the Framework

Terms	Definition	Source with colour coding
Damage indicators	Measure indicating an intensity of damage (severity) for a pre-defined type of impact. For example, Type of impact: lethality due to exposure to heat radiations Damage indicator: number of fatalities within exposed group of people	Guide for risk estimation
Dangerous goods	Those substances and articles whose carriage is prohibited by RID/ADR/ADN, or authorised only under the conditions prescribed therein.	[3]
Dangerous goods classification	The classification of dangerous goods (for the purpose of transport) as defined in chapter 2 of RID/ADR/ADN.	[12]
Dangerous goods event	Incident and/or accident involving a dangerous goods transport unit. It covers situations both where dangerous substance(s) are released and not released.	Guide for risk estimation
Dangerous substance release	See "Release".	Guide for risk estimation
Decision-making	Decision-making is a process of selecting the best among the different alternatives / options. It is the act of making a choice. The degree to which different alternatives are expected to meet the decision making objectives is measured with decision-making indicators corresponding to decision-making criteria.	Guide for decision-making
Decision-making criteria	A reference (qualitative or quantitative) which is used for assessing decision-making indicators. Criteria that are considered in a process of decision-making. Criteria are generally used to characterise the degree to which different alternatives are expected to meet the decision-making objectives.	Guide for decision-making
Decision-making indicators	An indicator (qualitative or quantitative measurement) to be compared with reference criteria used in a decision-making process.	Guide for decision-making
Decision-making principle	In principle objective which is assessed within a decision-making process in order to optimise a risk situation. In the Guide for decision-making, decision-making principles are risk-based principles which may be supplemented with decision-making criteria of external origin under the responsibility of the decision-maker.	Guide for decision-making
DG transport unit	A transport unit carrying dangerous goods cargo.	Guide for risk estimation
Effect	See "Impact".	Guide for risk estimation
Effect distance	The estimated distance, counted from the location of the source of the hazardous areas, to which the considered hazard has a predefined effect on the considered vulnerability.	Guide for risk estimation

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Terms	Definition	Source with colour coding
Expected value	<p>(general math formulation) The sum (integral) of a cumulative distribution function of the random variable over a given probability space.</p> <p>Under this framework we apply the finite formulation for assessing the expected value of the severity of a finite number of DG scenarios (samples) having a given cumulative frequency (F) for a given severity (S) over the frequency domain.</p> <p>The curves composed by [F; S] couples over the considered samples is called the F/S curve.</p> <p>It is also known as F/N curve when applied to the estimation of expected human fatalities.</p>	Guide for risk estimation
Exposure	Process in which vulnerabilities are exposed to hazardous areas of a given intensity.	Guide for risk estimation
Fireball	A fire which burns so rapidly that the burning mass can rise like a cloud or ball into the air.	[13]
Fixed parameter	In the harmonised risk estimation model this term is used to characterise a parameter whose value cannot be changed by the user.	Guide for risk estimation
Flash fire	<p>Fast combustion of a flammable gas cloud after delayed ignition, without pressure build-up.</p> <p>Flash fire is the commonly used term in English for gas cloud fire.</p>	[13]
Frequency	<p>Number of pre-defined occurrences divided by a given normaliser.</p> <p>Within this framework the following typical normalisers are considered: per year, per volume of transport (number of tons, number of tons/km) or per number of predefined operations.</p>	Guide for risk estimation
Gas cloud fire	See "Flash fire".	[13]
Grouped fatality risk	<p>A measure of the risk posed by the occurrence of specific hazardous scenarios resulting in grouped fatalities.</p> <p>Within the present framework this risk is represented by the F/N curve.</p>	Guide for risk estimation
Harm	<p>Outcome of hazardous events in which human vulnerabilities are exposed to hazards (see exposure).</p> <p>In the context of present framework, typical harms are physical injury or fatalities of humans or animals.</p>	[6]
Harmonised risk estimation model	<p>The harmonised risk estimation model is the risk estimation model described in the Guide for risk estimation.</p> <p>The harmonised risk estimation model was established during the development of the Inland TDG risk management framework on the basis of existing practices.</p>	Framework
Hazard	<p>Source of potential damage/harm.</p> <p>Remark: with this definition "a condition" that could lead to an accident is also considered as being "a source of potential damage/harm".</p>	[6]
Hazard classification	<p>The classification of hazards for chemicals is defined in the 'Globally Harmonised System of Labelling and Classification of Chemicals' (GHS).</p> <p>This classification is notably used to derive the classification of Dangerous Goods for their transport, as reported in chapter 2 of RID/ADR/ADN.</p>	[12]

Definitions applicable to the Framework

Terms	Definition	Source with colour coding
Hazardous area	Multi-dimensional space within which one or more hazards are present during a certain period of time.	Guide for risk estimation
Hazardous scenario	Assumed sequence of events triggered by a dangerous goods event leading to pre-defined types of hazard and damage/harm.	Guide for risk estimation
Hot BLEVE	BLEVE resulting from the overheating of a tank shell by thermal radiation or direct exposure to a fire, causing the rupture of the shell.	[13]
IBC	Intermediate Bulk Container.	[12]
Impact	Measurement of the severity of pre-defined types of damage/harm.	Guide for risk estimation
Improvement target	For TDG, expressed as an expectation value of fatalities per year from all modes of TDG. This would be used to monitor performance and propose additional restrictions or safety measures.	[10]
Incident	Any occurrence, other than accident or serious accident, associated with the operation of trains and affecting the safety of operation.	[2]
Individual risk	Likelihood per year that a person staying at one given place on or in the surrounding of the infrastructure under consideration is killed by the effects of a transport event, including DG scenarios.	Guide for risk estimation
Inland transport of dangerous goods	The rail, road and inland waterways transport of dangerous goods from the time of loading such dangerous goods on board a transport unit to the time of unloading them.	Guide for risk estimation
Interested parties	See "Stakeholders".	Guide for risk estimation
Jet fire	Combustion of a flammable substance that flows, in a jet form, from an opening/breach of a pressurised shell.	[13]
Leak frequency	Rate with which a leak, corresponding to a given leak definition, occurs.	Guide for risk estimation
Loss of containment	Abnormal release of a dangerous substance from its containment to the environment. Equivalent to "Release".	Guide for risk estimation
Mandate	Instructions for procuring risk estimations corresponding to a risk situation broadly described by a decision-maker.	Guide for decision-making and Guide for risk estimation
Monitoring	Continual checking, supervising, critically observing or determining the status in order to identify change from the performance level required or expected.	Guide for decision-making
Non-dangerous goods event	A transport event which does not involve any dangerous goods transport units.	Guide for risk estimation
Non-regression	Current risk level for existing systems shall not be increased. Note: There is a link to the GAME (Globalement au moins équivalent) principle. In essence, the non-regression principle would be equivalent to prohibiting any increase in existing risk levels relating to transport of dangerous goods.	[10]
Occurrence	Occurrence means any safety-related event which endangers or which, if not corrected or addressed, could endanger a given activity and includes in particular an accident and incident.	Framework

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Terms	Definition	Source with colour coding
Open parameter	In the harmonised risk estimation model, this term is used to characterise a parameter of the model whose value can be set by the user. See also "Corrected value".	Guide for risk estimation
Operational decision	Decision concerning the manner in which a given activity is performed.	Guide for decision-making
Option	An action or a given set of actions (risk control measures) studied within a decision-making process as a way of reaching a future risk situation (target) starting from a reference risk situation.	Guide for decision-making
Package	Package means the complete product of the packing operation, consisting of the packaging or large packaging or IBC and its contents prepared for dispatch.	[12]
Parameter	Individual element of a formula to which a name, a definition and a value are allocated.	Guide for risk estimation
Pool fire	The combustion of material evaporating from a flammable liquid surface (pool).	[13]
Practices	Ways of performing risk estimations and risk management by stakeholders. The Inland risk management framework describes a harmonised approach to current practices.	Framework
Prevention	The approach of using risk reduction measures to seek to prevent the occurrence of a given event. Within this framework prevention covers actions aiming at preventing the occurrence of dangerous goods events.	Guide for risk estimation
Proactive	Risk management behaviour consisting of trying to prevent risks before they are realised instead of reacting after they have been realised.	Guide for decision-making
Probability	Measure of the chance of occurrence expressed as a number between 0 and 1, where 0 is impossibility and 1 is absolute certainty.	[6]
Qualitative approach	Risk estimations using a qualitative (verbal) approach to the frequencies and severity of hazardous scenarios. In principle, a given risk may be estimated either with qualitative or quantitative approach and should be perceived in the same way by interested parties.	Guide for risk estimation
Quantitative approach	Risk estimations using a mathematical approach to the frequencies and the severity of hazardous scenarios.	Guide for risk estimation
Recovery	Arrangements designed to return to a normal situation after the occurrence of an incident/accident.	Guide for decision-making
Release	Abnormal flow/migration of dangerous substance(s) outside the normal containment to the environment which can be described in terms of 1) mass flow rate and duration, 2) quantity, 3) emission of radioactivity (number of radionuclide(s) emitted per unit of time) or 4) thermal flux. Equivalent to "Loss of containment".	Framework
Repression	Action aiming at suppressing a hazardous event after it has taken place.	Guide for decision-making
Review	Activity undertaken to determine the suitability, adequacy and effectiveness of the subject matter to achieve established objectives.	[6]

Definitions applicable to the Framework

Terms	Definition	Source with colour coding
Risk	Combination of the frequency of occurrence of damage/harm and the severity of that damage/harm. Note: ISO 45001:2018 is providing a very general definition of risk as being the “effect of uncertainty”. This reference indicates also that “ <i>risk is often expressed in terms of a combination of the consequences .../... of an event and the associated ‘likelihood’ .../... of occurrence</i> ”, which is a similar expression than the one retained within this framework.	[4], [14]
Risk acceptance criteria	The terms of reference by which the acceptability of a specific risk is assessed; these criteria are used to determine whether the level of a risk is sufficiently low that it is not necessary to take any immediate action to reduce it further.	[1]
Risk analysis	Systematic use of information to identify hazards (potential sources of harm) and to estimate the risk.	[1]
Risk assessment	Overall process of risk identification, risk analysis and risk evaluation.	[6]
Risk criteria	Reference parameters by which the significance of risk is assessed.	[11]
Risk estimation	Process used to assign values to the probability and the consequence of risk.	[9]
Risk estimation model	A representation of actual or theoretical risks formulated in a way which allows the estimation of the frequency of occurrence and the severity of impacts of the considered risks. The model can be based on lessons learned from past occurrences and/or from a theoretical approach of hazards and likelihoods.	Guide for risk estimation
Risk evaluation	Procedure based on the risk analysis to determine whether a tolerable risk has been achieved.	[9]
Risk indicator	A parameter whose assigned value is representing a level of risk.	Guide for risk estimation
Risk level	A value or verbal expression representing the result of a risk estimation.	Guide for risk estimation
Risk management	The overall process of risk identification, risk assessment, decision-making, risk treatment and its control.	[8]
Risk shifting (or transfer)	Transfer of risks generally supposed to reduce the risk of one system while increasing the risk of another system.	Guide for decision-making
Risk situation	A situation which is described, within a given context, in terms of considered hazardous scenarios and potential resulting risks in terms of estimated frequency and severity of impacts. Related terms: <ul style="list-style-type: none"> ▶ Reference risk situation: A risk situation taken as a reference input to a decision-making process to be compared with target risk situations. ▶ Target risk situation: A risk situation resulting from the implementation of an option. ▶ Future risk situation: Feasible and optimal target situation resulting from the implementation of a decision-making process which is achievable through a defined set of risk control measures. 	Guide for decision-making
Safety	Freedom from unacceptable risk.	[6]

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Terms	Definition	Source with colour coding
Safety chain	A safety management approach where the safe operation of a shared system consists of a chain where each actor is expected to act as planned, before, during and after the occurrence of the considered risk situation.	Guide for decision-making
Safety management system(s)	The organisational arrangements established by an organisation to ensure the safe management of its operations.	[2]
Scenario	Assumed sequence of events. See also "Hazardous scenario".	Guide for risk estimation
Segment	<p>A zone of a transport infrastructure for which the values of parameters that are necessary for estimating the risks with the harmonized model are set.</p> <p>A segment can be used for describing the infrastructure itself, the operations performed in the considered segment, and the vulnerabilities to be considered on or in the vicinity of the infrastructure.</p> <p>In a given segment, only one value can be allocated to each parameter of a template.</p> <p>See also (description) templates.</p>	Guide for risk estimation
Severity	<p>Intensity of harm.</p> <p>Within this framework the severity is estimated by the exposure of vulnerabilities to hazardous areas.</p>	Framework
Significant accident	(railway mode only) Any accident involving at least one rail vehicle in motion, resulting in at least one killed or seriously injured person, or in significant damage to stock, track, other installations or environment, or extensive disruption to traffic, excluding accidents in workshops, warehouses and depots.	[3]
Societal concerns	The concern and anxiety that the public feels about different types of risk. It might not reflect the factual level of risk and can fluctuate as a result of, for example, media coverage.	Guide for decision-making
Societal risk	Risk that all potentially involved persons come to harm Also called "Grouped fatality risk".	Guide for risk estimation
Societal risk indicator	<p>Cumulative probability per year that at least several people are killed.</p> <p>Societal risk is generally visualised with the help of F/N curves.</p> <p>The integral of F/N curves corresponding to the Expected Value of fatalities is used within this framework as an indicator of the societal risk.</p>	Guide for risk estimation
Stakeholder	A person, group or organisation that has interest or concern in an organisation.	Guide for risk estimation
(description) Template	Pre-defined forms dedicated to assisting the user of the framework in setting the values of risk estimation parameters in a harmonised manner.	Guide for risk estimation
Tailored value	<p>Value allocated by the user to a given parameter of the risk estimation model with the objective of describing the risk situation under consideration in the best way.</p> <p>Only 'open parameters' can be tailored.</p> <p>Under this definition tailoring a value can be:</p> <ul style="list-style-type: none"> ▶ setting a value to an open parameter for which no 'default' value is proposed by the model, or, ▶ correcting the 'default' value proposed by the model for an open parameter. 	Guide for risk estimation

Definitions applicable to the Framework

Terms	Definition	Source with colour coding
Tolerable risk	Estimated residual level of risk which is considered acceptable within a decision-making process when assessed against pre-defined decision-making criteria.	[11]
Torch fire (See jet fire)	Combustion of material that flows from an opening under considerable pressure.	[13]
Transparency and recognition of practices	The extent to which risk management decisions are set out in clear and consistent terms such that they can be scrutinised and the extent to which this in turn facilitates recognition.	Guide for decision-making
Transport composition	Several transport units operated together with one or more hauling/pulling/pushing vehicle(s). Typical transport compositions are: ▶ vessels loaded with one or several transport units, ▶ trains composed with several transport units (wagons), ▶ road tractor with a semi-trailer, a trailer or several trailers.	Guide for risk estimation
Transport event	Any type of occurrence arising from transport activities involving a freight transport unit. Transport events considered by this risk management framework are those occurring at any time during transport operations, including loading, filling, carriage, unloading and emptying, as well as any temporary stops required by the transport operations (for example parks, sidings, trans-boarding, shunting yards...).	Guide for risk estimation
Transport unit	A single road or railway vehicle, or any type of container which can be carried on a single road or railway vehicle or in a vessel.	Guide for risk estimation
Value (of a parameter)	Numeric quantity allocated to a parameter.	Guide for risk estimation
VCE	Vapour Cloud Explosion. An explosion that is the consequence of the combustion of a cloud of flammable vapour, gas or spray mixed with air, in which the flame speed is such that a significant overpressure occurs.	[13]
Vulnerability	Vulnerable entity or object under consideration. Within this framework, a potential vulnerability is any part of the transport system or its environment which is sensitive to hazardous scenarios and may be damaged/harmed by the resulting hazardous areas.	Guide for risk estimation
Vulnerable	Which can be harmed by (which is sensitive to) a given hazard.	Guide for risk estimation

Glossary references

The following reference documents have been used to establish the definitions of the terms used in the Inland TDG Risk management Framework.

[Ref. N°]	Title	Reference	Version dated
[1]	Commission Implementing Regulation (EU) 2015/1136 of 13 July 2015 amending implementing Regulation (EU) 402/2013 of 30/04/2013 on the common safety method for risk evaluation and assessment	Official Journal of the European Union	14.7.2015
[2]	Directive (EU) 2016/798 of the European Parliament and of the council of 11 May 2016 on railway safety	Official Journal of the European Union	26.5.2016
[3]	Commission Directive 2014/88/EU of 09/07/2014 amending Directive 2004/49/EC of the European parliament and of the Council as regards common safety indicators and common methods of calculating accident costs	Official Journal of the European Union	10.7.2014
[4]	Safety aspects – Guidelines for their inclusion in standards	ISO/IEC Guide 51:2014 (E)	1.4.2014
[5]	Conformity assessment – Guidance on the use of an organization's quality management system in product certification	ISO/IEC Guide 53:2005 (E)	1.7.2014
[6]	Risk management – Vocabulary	ISO Guide 73:2009 (E/F)	17.9.2013
[7]	Rail Safety and Standards Board (RSSB) – Taking Safe Decisions		
[8]	UNECE – Guideline for Risk Assessment (Reproduction of INF.8 from the OTIF secretariat submitted to the Joint Meeting at its March 2006 session)	INF.8 (E)	25-26.10.2006
[9]	Generic Guideline for the calculation of risk inherent in the carriage of dangerous goods by rail. An introduction to the basic principles of risk assessment for chapter 1.9 RID	A81-03/501.2006/Add. 2	20.1.2006
[10]	DNV – Harmonised Risk Acceptance Criteria for Transport of Dangerous Goods (final report to DG MOVE)	PP070679/4, Rev. 2	25.3.2014
[11]	Guidance on Safety Risk Assessment for Chemical Transport Operations	CEFIC	10.2013
[12]	Convention concerning international carriage by rail (COTIF), Appendix C – Regulations concerning the international carriage of DG by rail	RID	1.1.2017
[13]	Guidance on risk estimation practices for Inland transport of dangerous goods -QRA dangerous goods transport on rail: study of parameters and assumptions for QRA, Handleiding Risicoanalyse Transport (HART), Bijlagen, 17.6.2014 RIVM	ver. 1.1	2015
[14]	Occupational health and safety management systems – Requirements with guidance for use	ISO 45001:2018 (EN)	3.2018
[15]	Handbook of scenarios for assessing major chemical accident risks	JRC106029 Publications Office of the European Union	2017

List of Abbreviations

Abbreviation	Corresponding full text	Model parameter or pre-defined value?
1D	Single-dimensional approach to risk estimation	Y
1D+	Extended single-dimensional approach to risk estimation	Y
2D	Two-dimensional approach to risk estimation	
3D	Three-dimensional approach to risk estimation	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways	
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road	
ALARP	As low as reasonably practicable	
BKD	Breakdown	
BLEVE	Boiling Liquid Expanding Vapour Explosion	
CADaS	Common Accident Data Set	
CARE	Community database on Accidents on the Roads in Europe	
CC_A	Capacity category A	Y
CC_B	Capacity category B	Y
CC_C	Capacity category C	Y
CEMT	Conference Européenne des Ministres des Transports (acronym used for the navigability class of inland waterways)	Y
CF	Correction factor (1 = no correction)	Y
CONT	Container	Y
CONTI	Continuous	
CRG	Cargo	Y
CSI	Common Safety Indicator	Y
CSM	Common safety method	
DC(s)	Direct cause(s)	Y
DG	Dangerous goods	
DG Move	Directorate General for Mobility and Transport of the European Commission	
DGNR	Dangerous goods event without release (No Release)	
DGR	Dangerous goods release	Y
DGSC	Dangerous goods scenario	
DM	Decision-making	
DMI	Decision-making indicator	Y
DMP	Decision-making principle	Y

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EC	European Commission	
ECE	Economic Commission for Europe (regional ECOSOC commission)	
ECOSOC	United Nations Economic and Social Council	
ERA	European Union Agency for Railways	
EU	European Union	
EUDG	Expert Users and Development Group of the inland-tdg risk management framework, as described in the section 6 of the framework guide.	
EV	Expected value	Y
F	Frequency	Y
F/N	Frequency / Number of fatalities	Y
F_DGSC	Frequency of damage by the considered Dangerous Goods Scenario	Y
F_Release	Frequency of DG release	Y
F0	Frequency of a DG event	Y
F1	Frequency of a transport event	Y
FLU	Filling /Unfilling (emptying)	Y
FRT	Normal (non-DG) Freight Transport	Y
HLT	Handling / Loading / Transboarding	Y
HRB	Harbour waters area (Inland waterways)	Y
ICT	Information and communication technologies	
IR	Individual risk	Y
IT	Information technology	Y
IWW	Inland waterways	
km	Kilometre	
Max	Maximum	
Min	Minimum	
MM	Multimodal	
MMP	Multimodal platform	Y
MYS	Marshalling yards	Y
N HRS	Number of hours	Y
N INJ	Number of injuries	Y
N ITEMS	Number of quantified individual items	Y
N SQM	Number of square metres	Y
N_DGSC	Number of vulnerabilities damaged by the considered Dangerous Goods Scenario	Y
NET	Network	Y
NTD	No time dependency	
OCC	Occurrence	
OLN	Open line (railway)	Y

List of Abbreviations

OPE	Operation	
ORD	Open road	Y
OTIF	Organisation des Transports Internationaux Ferroviaires	
OWW	Open waterways	Y
P	Probability or conditional probability	Y
P1	Conditional probability to involve a DG transport unit in a transport event	Y
PRK	(car/truck) Park	Y
R	Risk indicator	
R(DGR, N FAT)	Indicator of the risk posed by a dangerous goods release (DGR) with a number N of fatalities (N FAT)	Y
RD	Roads	Y
ref	Reference	
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail	
RL	Railways	Y
RM	Risk management	
RMO	Risk management objective	Y
RMS	Risk management strategy	Y
S	Severity	Y
SEG	Segment	Y
SMS	Safety management system	
STSD	Stations and sidings	Y
T	Ton	
TDG	Transport of dangerous goods	
TK	ton.kilometre	
ToD	Time of day	Y
TU	Transport unit	
UIC	Union Internationale des Chemins de fer	
UN	United Nations	
UN number	Number allocated to a given dangerous good as reported in the Table A of RID/ADR/ADN	Y
UNECE	United Nations Economic Commission for Europe	
USR	User	Y
VA	Vulnerability within asset category	
VE	Vulnerability within environmental category	
VH	Vulnerability within human category	
WTG	Watergate waters area (Inland waterways)	Y
Y	Year	

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Risk management framework for Inland transport of dangerous goods:

- ▶ Framework guide
- ▶ Guide for decision-making
- ▶ Guide for risk estimation
- ▶ **Framework glossary**

