

Black Smoke or a Blue Sky on the Horizon - Transport & the Environment

Commissions: TLC and EEC

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General Report

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DESCRIPTION OF THE WORKSHOP

Vessels, aircrafts, trains and lorries – Equal treatment before the law in view of their environmental impact?

The aim of the workshop is to verify whether the four main means of transport, vessels, aircrafts, trains and lorries, are treated reasonably equally before the law in view, inter alia, of their shipping volumes in relation to their emissions, their impact on/danger for the environment by accidents/collisions, the transport of hazardous goods etc., or if there is – for whatever reasons – a regulatory overkill with regard to one or few of the means of transport.

QUESTIONNAIRE

Legislation for Means of Transport regarding Emissions

1. By which national rules is the normal operation of vessels, aircrafts, trains and lorries with respect to emissions governed?

There are various national rules regarding emissions from the normal operation of vessels, aircrafts, trains and lorries in the reported countries. The regulative measures include general rules, which aim at the environmental protection as well as specific rules which regulate the use of a certain mean of transport.

a. In respect to EU Member States there are various European Directives and Regulations concerning the operation of the different means of transport. A European Regulation is addressed to all Member States and is applied in full. It is directly applicable without the need for national legislation.

The main European Regulations governing the normal operation of vessels, aircrafts, trains and lorries with respect to emissions are:

• Regulation 595/2009 of 18 June 2009 on type-approval of motor vehicles and engines with respect to emissions from heavy duty vehicles (Euro VI) and on

access to vehicle repair and maintenance information and amending **Regulation** 715/2007 and **Directive 2007/46/EC** and repealing **Directives 80/1269/EEC, 2005/55/EC and 2005/78/EC,** implemented and amended by Commission **Regulation 582/2011** of 25 May 2011, amended by Commission **Regulation 136/2014** of 11 February 2014

• Regulation 748/2012 of 3 August 2012 laying down implementing rules for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organizations, amended by Commission Regulation 7/2013 of 8 January 2013, Commission Regulation 69/2014 of 27 January 2014, Commission Regulation 2015/1039 of 30 June 2015 and Commission Regulation 2016/5 of 5 January 2016 as regards the implementation of essential requirements for environmental protection

A European Directive is not self-executing and, therefore, has to be transferred into national law by each Member State. Regarding emissions from the mentioned means of transport, the relevant European Directives are the following:

Vessels:

- Directive 97/68/EC of 16 December 1997 on the approximation of the laws of the Member States relating to measures against the emission of gaseous and particulate pollutants from internal combustion engines to be installed in nonroad mobile machinery, amended by Directive 2001/63/EC of 17 August 2001, by Directive 2002/88/EC of 9 December 2002, by Directive 2004/26/EC of 21 April 2004, by Directive 2010/26/EC of 31 March 2010, by Directive 2011/88/EC of 16 November 2011 and by Directive 2012/46/EC of 6 December 2012
- Council Directive 1999/32/EC of 26 April 1999 relating to a reduction in the sulphur content of certain liquid fuels and amending Directive 93/12/EEC, amended by Directive 2005/33/EC of 6 July 2005, by Directive 2009/30/EC of 23 April 2009 as regards the specification of fuel used by inland waterway vessels and by Directive 2012/33/EC of 21 November 2012 as regards the sulphur content of marine fuels
- Directive 2006/87/EC of 12 December 2006 laying down technical requirements for inland waterway vessels, amended by Directive 2008/59/EC of 12

June 2008, Directive 2008/87/EC of 22 September 2008, Directive 2008/126/EC of 19 December 2008, by Directive 2009/46/EC of 24 April 2009, Directive 2009/100/EC of 16 September 2009, by Directive 2012/48/EC of 10 December 2012, by Directive 2012/49/EC of 10 December 2012, by Directive 2013/22/EC of 13 May 2013 and by Directive 2013/49/EC of 11 October 2013

Aircrafts:

• Directive 2008/101/EC of 19 November 2008 amending Directive 2003/87/EC so as to include aviation activities in the scheme for greenhouse gas emission allowance trading within the Community

Trains:

- Directive 97/68/EC of 16 December 1997 on the approximation of the laws of the Member States relating to measures against the emission of gaseous and particulate pollutants from internal combustion engines to be installed in nonroad mobile machinery, amended by Directive 2001/63/EC of 17 August 2001, by Directive 2002/88/EC of 9 December 2002, by Directive 2004/26/EC of 21 April 2004, by Directive 2010/26/EC of 31 March 2010, by Directive 2011/88/EC of 16 November 2011 and by Directive 2012/46/EC of 6 December 2012
- Directive 98/70/EC of 13 October 1998 relating to the quality of petrol and diesel fuels and amending Council Directive 93/12/EC, amended by Directive 2009/30/EC as regards the specification of petrol, diesel and gasoil and introducing a mechanism to monitor and reduce greenhouse gas emissions and amended by Commission Directive 2011/63/EU of 1 June 2011 for the purpose of its adaptation to technical progress

Lorries:

- Framework Directive 2007/46/EC of 5 September 2007 establishing a framework for the approval of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles
- Also **Directive 98/70/EC** of 13 October 1998

- **b.** All reported countries are ratifying nations of the following **international treaties**:
 - International Convention for the Prevention of Pollution from Ships 1973, as modified by the Protocol of 1978 (hereafter referred to as MARPOL): Annex VI (Regulations for the Prevention of Air Pollution from Ships) sets technical standards for engines, limit values for NOx emissions, as well as limit values for sulphur content in the fuel for ships
 - Convention on International Civil Aviation, signed at Chicago on 7 December 1944: Annex 16, Volume II, chapter 2 sets out limit values for gaseous emissions concerning hydrocarbons, carbon monoxide and oxides of nitrogen

Besides that, Belgium and Germany have ratified a transnational treaty, the so called "Rhine Vessel Inspection Regulations". Its scope of application governs inland waterway vessels all along the Rhine. Chapter 8a relating to the emission of gaseous and particulate pollutants from diesel motors.

c. Belgium

The general Belgian legislation is regulated in the following Act:

• Federal Law of 21 December 1998 relating to product norms to promote sustainable patterns of production and consumption and to protect the environment and the people's health (Product Norms Law)

In addition, the following Belgian rules regulate the four different means of transport:

Vessels:

- Federal Law of 6 April 1995 on the prevention of pollution by vessels
- Federal Law of 5 June 1972 relating to the safety of vessels (Safety of Vessels Law), applicable to fuels used by inland waterway vessels and by the Product Norms Law applicable to the marine fuels
- Implementing Decree: Royal Decree of 21 April 2007 relating to a reduction in the sulphur content of fuels used by inland waterway vessels and Royal Decree of 30 November 2015 relating to the name, feature and sulphur content of marine gasoil

Implementing Decree: Royal Decree of 19 March 2009 relating to technical requirements of inland waterway vessels, amended by Royal Decree of 26 December 2013

Aircrafts:

- Federal Law of 30 April 1947 implementing the Convention on International Civil Aviation, signed at Chicago on 7 December 1944
- Cooperation Agreement of 2 September 2013 between the Federal State, the Flemish Region, the Walloon Region and the Brussels Capital Region (hereafter referred to as Cooperation Agreement GGEAT)

Trains:

- Implementing Decree: Royal Decree of 5 December 2004 relating to product norms for internal combustion engines to be installed in non-road mobile machinery, amended by Royal Decree of 25 April 2014
- Implementation Decree: Royal Decree of 19 September 2013 relating to the name and features of gasoil for heating and for non-road mobile machinery

Lorries:

- Implementation Decrees: Royal Decree of 19 September 2013 relating to the name and features of gasoil-diesel for road vehicles and Royal Decree of 19 September 2013 relating to the name and features of petrol for petrol motors
- Regional Flemish Law of 27 November 2015 relating to low-emission-zones

d. Czech Republic

The general Czech legislation is regulated in the following Acts:

- Act no. 201/2012 Coll., on Air Protection
- Decree no. 415/2012 Coll., on Permitted Levels of Pollution and its Detection, and Implementing Other Provisions of Act on Air Pollution
- Act no. 200/1990 Coll., on Offences
- Act no. 40/2009 Coll., the Criminal Code

 Act no. 418/2011 Coll., on Criminal Liability of Legal Entities and Proceedings against them

In addition, the following Czech rules regulate the four different means of transport:

<u>Vessels</u>:

- Act no. 114/1995 Coll. on Inland Navigation
- Decree no. 223/1995 Coll., on Vessels' Eligibility Operating on Inland Waterways
- Decree no. 334/2015 Coll., on Administration of the Register of Small Vessels and Technical Eligibility of Small Vessels, Ferries and Floating Devices Operating on Waterways
- Decree no. 312/2012 Coll., on Establishment of Requirements for Fuel Quality for Inland and Naval Vessels in terms of Air Pollution

Aircrafts:

- Act no. 49/1997 Coll., on Civil Aviation
- Decree no. 108/1997 Sb., implementing the Act on Civil Aviation
- Act no. 383/2012 Coll., on Conditions for Trading in Greenhouse Gas Emission Allowances
- Decree no. 192/2013 Coll., Establishing Application Forms for Allocation of Allowances for the Aircraft Operator, and Issuing a Permit to Greenhouse Gas Emissions

Trains:

- Act no. 266/1994 Coll., on Railways
- Decree no. 209/2006 Coll., on Requirements for Permissible Emissions of Pollutants in the Exhaust Gases of the Combustion Engine of Train Vehicles

Lorries:

 Act No. 56/2001 Coll., on the Conditions for the Operation of Vehicles on the Road Network

- Decree no. 341/2014 Coll., on Approving the Technical Competence, and on the Technical Conditions, for Operating Vehicles on the Road Network
- Decree no. 302/2001 Coll.; on Technical Controls and Vehicles Emissions Measuring
- Regulation no. 56/2013 Coll., on Establishing Rules for the Classification of Road Vehicles into Emission Categories, and on Emission Plaques
- Regulation no. 351/2012 Coll., on Sustainability Criteria for Biofuels
- Regulation no. 240/2014 Coll., on the Amount of Time Charges, Toll Rates, Toll Discounts and Procedures for Applying for Toll Discounts

e. Germany

The general German legislation is regulated in the following Acts:

• Federal Immission Protection Law (Bundes-Immissionsschutzgesetz)

In addition, the following German rules regulate the four different means of transport:

<u>Inland waterway vessels</u>:

- Inland Waterways Act (Binnenschifffahrtsgesetz)
- Inland Waterways Responsibilities Act (Binnenschifffahrtsaufgabengesetz)
- Regulations for the Inspection of Inland Vessels (Binnenschiffsuntersuchungsordnung)
- Rhine Vessel Inspection Regulation (Rheinschiffsuntersuchungsordnung)

Seagoing vessels:

- Federal Maritime Responsibilities Act (Schiffsaufgabengesetz)
- Ship Safety Act (Schiffssicherheitsgesetz)
- Ship Safety Regulation (Schiffssicherheitsverordnung)
- Marine Environmental Behaviour Regulation (Seeumweltverhaltensverordnung)

Aircrafts:

• Air Traffic Act (Luftverkehrsgesetz)

- Air Traffic Licencing Regulation (Luftverkehrszulassungsordnung)
- Air Traffic Regulation (Luftverkehrsordnung)

Trains:

- General Railways Act (Allgemeines Eisenbahngesetz)
- Railway Construction and Operations Regulation (Eisenbahn-Bau- und Betriebsordnung)

Lorries

- Road Transport Law (Straßenverkehrsgesetz)
- Road Traffic Regulation (Straßenverkehrsordnung)
- Regulation Authorizing the Use of Vehicles for Road Traffic (Straßenverkehrszulassungsordnung)
- Regulation Authorizing the Use of Vehicles (Fahrzeugzulassungs-Verordnung)

f. Ireland

The following Irish rules regulate the four different means of transport:

Vessels:

- Sea Pollution Regulations 2010 governing emissions from vessels
- European Union (Sulphur Content of Marine Fuels) Regulations 2015
- European Communities (Greenhouse Gas Emissions Trading) Regulations 2012

Aircrafts:

- Air Navigation and Transport Act (as amended) 1998
- European Communities (Greenhouse Gas Emissions Trading) (Aviation) Regulations 2010

Trains:

- Railway Safety Act 2005
- the European Communities (Railway Infrastructure) Regulations 2010
- the European Union (Train Drivers Certification) Regulations 2010 (Amendment) Regulations 2015

European Communities (Greenhouse Gas Emissions Trading) Regulations 2012

Lorries:

- European Communities (Greenhouse Gas Emissions Trading) Regulations 2012
- European Communities (Random Roadside Vehicle Inspection) (Amendment) Regulations 2004

g. Poland

The general Polish legislation is regulated in the following Acts:

- Environmental Protection Law Act of 27 April 2001
- Transport of Dangerous Goods Act of 19 August 2011
- Act on the Management of Greenhouse Gases emissions of 17 July 2009
- Act of 12 June 2015 on the Greenhouse Gases Emissions Trading System

In addition, the following Polish rules regulate the four different means of transport:

Vessels:

- Inland Shipping Act of 21 December 2000
- Maritime Equipment Act of 20 April 2000
- Maritime Code Act of 18 September 2001
- Prevention of Sea Pollution from Ships Act of 16 March 1995

Aircrafts:

Aviation Act of 3 July 2002

Trains:

• Railway Transport Act of 28 March 2003

Lorries:

- Road Traffic Act of 20 June 1997
- Road Transport Act of 6 September 2001

h. Switzerland

The Swiss National Report presents general rules, which are:

- EPA: Federal Act on the Protection of the Environment (Environmental Protection Act, , "cornerstone" and overall regulation)
- OAPC: Air Pollution Control Ordinance
- NIRO: Ordinance on Protection against Non-Ionising Radiation
- NAO: Noise Abatement Ordinance
- SLO: Sound Levels and Laser Ordinance
- RNAO: Railway Noise Abatement Ordinance
- MaNO: Machine Noise Ordinance
- OMW: Ordinance on Movements of Waste
- ORRChem: Chemical Risk Reduction Ordinance
- CSO: Contaminated Sites Ordinance
- OIS: Ordinance relating to Impacts on the Soil
- MAO: Major Accidents Ordinance
- WPA: Waters Protection Act
- Ordinance on Emissions from Aircrafts
- Ordinance on Exhaust Gas Emissions from Ship's Engines on Swiss Territorial Waters

i. UK

The general UK legislation is regulated in the following Acts:

- Environment Act 1995
- Environment (Northern Ireland) Order 2002
- Air Quality Standards Regulations 2010

In addition, the following UK rules regulate the four different means of transport: Seagoing Vessels:

 Merchant Shipping (Prevention of Air Pollution from Ships) and Motor Fuel (Composition and Content) (Amendment) Regulations 2014

Aircrafts:

• There is no specific national legislation for the UK aviation industry

Trains:

Non-Road Mobile Machinery (Emission of Gaseous and Particulate Pollutants) Regulations 1999 (Statutory Instrument No. 1999/1053) (as amended)

Lorries:

• The Road Vehicles (Construction and Use) Regulations 1988

2. Are international and/or European rules (if applicable) fully implemented in your country?

All reported countries being **EU Member States** have fully implemented the European rules.

According to the **Swiss** National Report, applicable/ratified international and European rules are generally fully implemented. Further, Swiss environmental legislation is in many cases directly referring to the respective European Union Directives.

All reported countries also fully implemented international regulations if they are not self-executing.

3. Do national rules provide stricter or less strict requirements than international and/or European regulations (if applicable)?

From the various National Reports it can be concluded that in **Poland**, in the **UK** and in **Ireland** the European rules appear to be stricter than national rules. On the other side, **Swiss** and **Czech** national regulations are equal or even stricter than international/European regulations. **Belgian** national rules mostly provide the same requirements than European regulations (except for the requirement for marine gasoil in Belgian ports). **German** national rules also provide the same requirements than international/European regulations.

- 4. What are possible consequences if the requirements set forth in the rules are not fulfilled?
- a. In **Belgium**, the consequences vary from the imposition of a fine against normal persons and legal entities to imprisonment. The maximum amount of a fine depends in all means of transport on the possibility of danger for people's safety and/or health. If the harmful event endangers people's safety and/or health the Belgium law imposes higher limits for the penalty. Under certain perquisites the Belgium authorities are able to temporarily repeal permission to exercise a profession.
- **b.** According to the **Czech** National Report, the imposition of a fine and/or prohibition of activity are the common consequences of failure to act in line with the applicable law. In case for criminal offences a court may impose especially a prison sentence or a disqualification.
- **c.** In **Germany,** a violation of the rules regarding emissions constitutes an administrative offence, which may lead to a fine.
- **d.** The National Report of **Ireland** does not give an answer to this question.
- e. In **Poland**, there is a threat that the approval to introduce a given product such as an engine-propelled vehicle on the market might be withdrawn. Furthermore, excessive emissions may lead to higher fees for the use of the environment which are based on the level of gases and dust released into the air.
- f. In **Switzerland,** if the requirements set forth in the rules are not fulfilled, there are consequences which are criminal liability provided by administrative law or liability for damages (e.g. costs for removal of environmental contamination).
- g. The National Report of the UK indicates that only violation of the rules referring to trains may lead to a fine. Especially there are various offences which include placing an engine on the market that does not satisfy the specific regulation. The maximum penalty for supplying an engine that has not been approved is a fine not exceeding the statutory maximum which in England Wales and Northern Ireland is GBP 5,000.00 and In Scotland is GBP 10,000.00. If vehicles fail the exhaust test (which is included in the annual mandatory testing regime) they may not be used on the road.

Other than the general position on air quality there is no UK wide penalty for aircraft breaching emission levels.

- 5. If you compare the existing rules for the different means of transport, would you say that there are particularly strict rules for certain means of transport?

 There is no unanimous answer to this question.
- a. On the one hand, the **German**, **UK** and **Polish** National Reports compare the different means of transport by the limitation values for emissions.
 - The German und UK National Reports indicate that the legislation on lorries is
 most strict, followed by the legislation on trains. The limitation values for emissions from vessels and aircrafts are much higher what leads the two National
 Reporters to the conclusion that the legislation on air- and waterways is less strict
 than on roads and railways.
 - According to the Polish National Report the different means of transport are treated equally with respect to their emissions.
- **b.** On the other hand, the **Czech Republic** and **Belgium** National Reports compare the legislation on the different means of transport by the strictness of the penalty for breaching the law:
 - According to the **Czech Republic** National Report, the maximum fine differs significantly between certain means of transport. The Act on Railways and the Act on Traffic Conditions on Roads contain a fine of up to EUR 371,000.00 with the latter even setting forth a fine of up to EUR 1,852,000.00 in extreme cases. This fine is the highest amount whatsoever in this regard. A fine ranging from EUR 3,700.00 to EUR 185,000.00 may be imposed under the Act on Civil Aviation. However, a disqualification may also be imposed in the area of operating aircraft. The lowest fine may be imposed according to the Act on Inland Navigation of up to EUR 18,500.00.
 - The **Belgium** law imposes the highest fines under the Product Norms Law which is applicable on all means of transport. According to the Belgium National Report the maximum fine for a natural person under this law is EUR 10,000,000.00, for a legal entity it is EUR 20,000,000.00.

Besides, Belgium law allows authorities to impose a prohibition of practice. Also aircrafts seem to have a disadvantage because aviation activities are included in the scheme for greenhouse gas emission allowance trading while the other means of

transport are not. The consequences of not fulfilling the obligations put in place by the CGEAT are serious for airline companies. Furthermore airline companies have to fulfill the requirements in respect to noise emissions and the exploitation norms for airports.

Nevertheless, compared to the capital of the transportation companies the hardest impact of a fine probably hits the transport by lorries. A natural person may be fined by a maximum of EUR 7,000,000.00 under the law of transport on road, which is a higher maximum amount as the one in relation to vessels.

- c. Lastly, the National Report of Switzerland states that from a quantitative point of view the regulations for rail transport are stricter than those on aircrafts and vessels (without specifying this further). The Irish National Report does not give any information which allows a comparison between the different means of transport.
- d. Summarising, the result of the comparison between the existing rules for the different means of transport in the reported countries implies that the transport on road is governed by the strictest legislation. This probably arises from the fact that according to the German Institute for Economic Research most goods are transported on roads. Less strict rules exist in regard of the transport on rails, even less in regard of transport by sea and the least strict regime appears to be the one governing the transport by aircrafts.

Legislation for Means of Transport regarding Accidents/Collisions (including Hazardous Goods)

1. Which national rules apply to prevent accidents/collisions and in case an accident/collision happened to prevent and minimize their impact on the environment?

a. Belgium

Road Transport: European

- European Convention relating to the international road transport of dangerous goods, signed at Geneva on 30 September 1957 (hereafter referred to as ADR), as amended
- Directive Environmental Liability;

- Directive Dangerous Substances;
- Directive Dangerous Goods.

Railways: International

 Regulation relating to the international railway transport of dangerous goods (hereafter referred to as RIDRID), Annex C of the Convention on International Railway Transport, signed at Vilnius on 3 June 1999 (hereafter referred to as CO-TIF).

Railways: European

- Directive Environmental Liability;
- Directive Dangerous Substances;
- Directive 2008/68/EC of 24 September 2008 on the inland transport of dangerous goods, amended by Directive 2010/61/EC of 2 September 2010, by Directive 2012/45/EC of 3 December 2012 and by Directive 2014/103/EC of 21 November 2013 (hereafter referred to as Directive Dangerous Goods).

Waterways: *International:*

 International Convention for the Safety of Life at Sea (hereafter referred to as SOLAS), 1974, as amended.

Waterways: European:

- Directive 2004/35/EC of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage, amended by Directive 2009/31/EC of 23 April 2009 and by Directive 2013/30/EC of 30 June 2013 (hereafter referred to as Directive Environmental Liability);
- Directive 2012/18/EC of 4 July 2012 on the control of major-accident hazards involving dangerous substances (hereafter referred to as Directive Dangerous Substances).

Aircrafts: International

 Convention on International Civil Aviation, signed at Chicago on 7 December 1944 (Chicago Convention), Annex 18.

<u>Aircrafts:</u> European

- Directive Environmental Liability;
- Regulation 216/2008 of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency;
- Directive Dangerous Substances;
- Regulation 748/2012 of 3 August 2012 laying down implementing rules for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organizations.

b. Czech Republik

Road Transport:

- Act on Railways;
- Regulation no. 1/2000 Coll., on Transport Rules for Public Railway Cargo Transportation ("Transport Rules for Railway Cargo Regulation");
- Decree no. 376/2006 Coll., on the Management System For the Rail Operation Safety and Rail Transport Safety, and on Procedures in the Event of Accidents and Incidents on Rail Systems.

Railways:

- Act on Railways;
- Regulation no. 1/2000 Coll., on Transport Rules for Public Railway Cargo Transportation ("Transport Rules for Railway Cargo Regulation");
- Decree no. 376/2006 Coll., on the Management System For the Rail Operation Safety and Rail Transport Safety, and on Procedures in the Event of Accidents and Incidents on Rail Systems;
- Decree no. 16/2012 Coll., on Professional Qualification of Persons Managing Railway Vehicles;
- Decree no. 173/1995 Coll., on Transport Rules of Railways;
- Decree no. 16/2012 Coll., on Professional Qualification of Persons Managing Railway Vehicles;

• Decree no. 173/1995 Coll., on Transport Rules of Railways.

Waterways:

- Act on Inland Navigation;
- Decree no. 222/1995 Coll., on Waterways, Shipping Traffic in Ports, Common Accident and Transportation of Hazardous Goods ("Decree on Waterways and Transportation of Hazardous Goods");
- Decree no. 223/1995 Coll., on Liability of Vessels Operating in Inland Waterways;
- Decree no. 42/2015 Coll. on Liability of Persons Operating and Handling Vessels
- Decree no. 67/2015 Coll., on Rules of Navigation Traffic;
- Act no. 61/2000 Coll., on Maritime Navigation;

Aircrafts:

- Act on Civil Aviation;
- Decree no. 108/1997 Coll. implementing the Act on Civil Aviation;
- Decree no. 466/2006 Coll., on Flight Safety Standard.

c. Germany

The following is not concluding:

Road Transport:

- Hazardous Goods Transportation Act (Gefahrgutbeförderungsgesetz);
- Regulation on the Transport of Dangerous Goods by Road, Rail and Inland Waterway Vessels (Gefahrgutverordnung);
- Regulation for Commissioners for Hazardous Goods ("Gefahrgutheauftragten-verordnung).

(Inland) Waterways:

- Inland Waterways Act;
- Inland Waterways Responsibilities Act;

- Regulations for the Inspection of Inland Vessels;
- Rhine Vessel Inspection Regulation.

(See) Waterways:

- SOLAS;
- Convention on International Regulations for Preventing Collisions at Sea;
- Directive 2009/18/EC establishing the fundamental principles governing the investigation of accidents in the maritime transport sector and amending Council Directive 1999/35/EC and Directive 2002/59/EC of the European Parliament and of the Council;
- Directive 2002/59/EC establishing a Community vessel traffic monitoring and information system and repealing Council Directive 93/75/EEC.

d. Ireland

Road Transport:

- European Communities (Carriage of Dangerous Goods by Road and Use of Transportable Pressure Equipment) Regulations 2011;
- The Road Traffic Act 2011 is also applicable to road transport in Ireland. The Act obliges operators to inform the Minister of certain convictions. The Act is has the objective of minimizing the risk of accidents/collisions by ensuring that all those licensed to operate a motor a vehicle are fit to do so.

Waterways:

• Section 23 of the Merchant Shipping (Investigations of Marine Casualties Act) 2000 provides that the owner, charterer, master, skipper, person in charge, ship's agent, shall by using the quickest feasible means, notify the Marine Casualty Investigation Board of the casualty immediately he is aware that the marine casualty has occurred or commenced, or as soon as practicable thereafter.

e. Poland

Road Transport:

 Road Traffic Act of 20 June 1997 (ustawa z dnia 20 czerwca 1997 roku Prawo o ruchu drogowym); • Road Transport Act of 6 September 2001 (ustawa z dnia 6 września 2001 o transporcie drogowym);

Railways:

 Railway Transport Act of 28 March 2003 (ustawa z dnia 28 marca 2003 roku o transporcie kolejowym).

Waterways:

- Inland Shipping Act of 21 December 2000 (ustawa z dnia 21 grudnia 2000 roku o żegludze śródlądowej);
- Maritime Equipment Act of 20 April 2000 (ustawa z dnia 20 kwietnia 2004 roku o wyposażeniu morskim);
- Maritime Code Act of 18 September 2001 (ustawa z dnia 18 września 2001 roku Kodeks morski);
- Maritime Safety Act of 18 August 2011 (ustawa z dnia 18 sierpnia 2011 roku o bezpieczeństwie morskim).

Aircrafts:

• The Aviation Act of 3 July 2002 (ustawa z dnia 3 lipca 2002 roku Prawo lotnicze).

f. Switzerland

Regarding the prevention of accidents/collisions the following national rules are applicable:

Road Transport:

- Road Traffic Act (and regulations under classified compilation No 741);
- Federal Act on the Admission as Road Haulage Companies.

Railways:

- General Railways Act (and regulations under classified compilation No 742);
- Federal Act on the Carriage of Goods by Railways and Shipping Companies;

Waterways:

• Act on Inland Navigation (and regulations under classified compilation No 747);

 Federal Act on the Carriage of Goods by Railways and Shipping Companies, in addition Switzerland is a member of the Central Commission for Navigation on the Rhine.

Aircrafts:

• Aviation Act (and regulations under classified compilation No 748).

For the prevention and the minimization of the impact on the environment various ordinance are applicable, such as:

- Ordinance on the Transport of Dangerous Goods by Rail and cable railway;
- Ordinance on the transport of dangerous goods on streets (SDR);
- Ordinance on containment systems for dangerous goods.

g. UK

Road Transport:

• Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (CDG Regs) and the European agreement ("Accord européen relatif au transport international des marchandises dangereuses par route", known as ADR) which together regulate the carriage of dangerous goods by road are highly prescriptive. The regulations covering England, Wales and Scotland were substantially restructured for 2009 with direct referencing to ADR for the main duties. Amending regulations were made in 2011, mainly to reflect changes to the EU Transportable Pressure Equipment Directive.

Railways:

The carriage of dangerous goods by rail is governed by Appendix C of the Convention Covering International Carriage by Rail - International Carriage of Dangerous Goods by Rail. The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (as amended) apply in Great Britain.

Waterways:

• The International Maritime Dangerous Goods (IMDG) code provides guidance on transporting dangerous goods by sea. The Merchant Shipping (Dangerous Goods and Marine Pollutant) Regulations 1997 and the Dangerous Substances in Harbour Areas Regulations 1987 apply and implement the IMDG code.

Aircrafts:

The ICAO's Technical Instructions are an internationally agreed set of provisions governing the requirements for transporting dangerous goods by air. The International Air Transport Association (IATA) publishes the Dangerous Goods Regulations in accordance with the ICAO technical instructions. The Air Navigation Dangerous Goods Regulations 2002 govern the movement of dangerous goods by aircraft.

2. Are international and/or European rules (if applicable) fully implemented in your country?

a. Belgium

International and European rules with respect to accidents and collisions are implemented in Belgium.

b. Czech Republik

The Czech Republic as a member state of the European Union complies with its obligations related to implementation of EU directives in the national order. However, there are two implementation issues dealing to certain extent with transportation and accidents/collisions (including hazardous goods) that the Czech Republic has been challenged on lately. Firstly, in October 2015, the European Commission decided to refer, inter alia, the Czech Republic to the Court of Justice of the European Union (the "Court") for not having established national electronic registers of road transport undertakings. Secondly, in October 2015, the European Commission also decided to refer the Czech Republic to the Court for failing to correctly implement Directive 2004/49/EC, on safety on the Community's railways.

c. Germany

No comment / information

d. Ireland

- Ireland complies with the International Atomic Energy Agency ("IAEA") and specifically the IAEA Regulations for the Safe Transport of Radioactive Material.
- Ireland has transposed Directive 2006/117/EURATOM in relation to the control of shipments of radioactive waste and spent fuel.

- Ireland has transposed Directive 2006/94/EC into domestic law. The Directive establishes common rules for certain types of carriage of goods by road.
- The qualification and periodic training of drivers is provided for in Directive 2003/59/EC. The Directive ensures that all those transporting goods are suitably qualified and trained.

e. Poland

A significant number of relevant international and European rules have been adopted in form of international agreements or directly applicable and effective EU regulations. This includes provisions establishing technical preconditions or specifications based inter alia on:

- European Agreement concerning the International Carriage of Dangerous Goods by Road of 30 September 1957 (as amended);
- International Convention for the Prevention of Pollution from Ships of 17 February 1973 (as amended);
- Regulation concerning the Carriage of Dangerous Goods by Rail of 9 May 1980 (as amended);
- Council Regulation (EEC) No 3922/91 of 16 December 1991 on the harmonization of technical requirements and administrative procedures in the field of civil aviation (as amended);
- Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea Area of 17 March 1992 (as amended);
- European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways of 26 May 2000 (as amended);
- Commission Regulation (EU) No 445/2011 of 10 May 2011 on a system of certification of entities in charge of maintenance for freight wagons and amending Regulation (EC) No 653/2007.

However, it cannot be honestly said that the foregoing rules have been fully implemented in Poland.

f. Switzerland

The following conventions are ratified by Switzerland:

- European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR);
- Convention on International Rail Transport (COTIF), and especially its Annex
 C: the Convention in respect of the Regulation concerning the International Carriage of Dangerous Goods by Rail (RID);
- European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN).

g. Great Britain

Road Transport:

As a signatory to the European agreement concerning the International Carriage
of Dangerous Goods by Road (ADR), and a member state of the EU, the UK is
committed to harmonization of national and international regulations, as far as
possible. The regulations do allow certain exemptions that arise from the way the EU
Dangerous Goods Directive is worded, and the UK has a number of derogations from
that directive.

Railways:

 The Office of Rail and Road is the enforcement agency with regards carriage of dangerous goods by rail.

Waterways:

The MCA is active in enforcing the legislation and brings prosecutions for non compliance.

Aircrafts:

 International codes are implemented by national legislation and there is a good level of compliance.

3. Do national rules provide stricter or less strict requirements than international and/or European regulations (if applicable)?

a. Belgium

For all means of transport national rules mostly provide the same requirements than European regulations. However, the Decree Environmental Damage doesn't oblige the causal agent to submit the restoration measures to the competent authority before putting them into place. Nevertheless, the competent authority can give instructions, dictate measures and if necessary realize them.

b. Czech Republik

With the exception given in our answer to question no. 2 above, please see our answer to question no. 3 above regarding legislation for means of transport covering emissions.

c. Germany

No comment / information

d. Ireland

The International rules on the safe transport of radioactive materials provide for stricter requirements in that they apply on an international basis rather than on a European basis. The international safety standards have three broad categories which are Safety Requirements, Safety Fundamentals and Safety Guides. The three categories are broad and appear to cover more than the existing national rules.

e. Poland

As mentioned above, the relevant international agreements and EU regulations form an integral part of the Polish legal order. Hence, the main role of national law is to establish clear references to relevant provisions and ensure their enforcement. In the case of EU directives, the relevant Polish laws on transport mostly makes use of the copy-paste or reference implementation techniques. Interestingly, however, this changes in the field of environmental law where more stringent requirements are sometimes adopted. An example worth mentioning in the questionnaire is the implementation of the Environmental Damage Directive (2004/35/EC) in Polish law which provides for a number of more stringent rules than the Directive.

f. Switzerland

Generally national regulations are harmonized with international/European regulations.

g. UK

Across all sectors international legislation, be it IMDG Code or EU legislation has been more stringent than original domestic legislation. The introduction into domestic UK law of these international obligations has been the driving force in improving safety standards in transporting dangerous goods.

4. What are possible consequences if the requirements set forth in the rules are not fulfilled?

a. Belgium

Road Transport:

See consequences for vessels.

Waterways:

- SOLAS: Revocation of the certificate stating that the ship is in compliance with the requirements.
- RVIR: See procedure in the Convention for Rhine Navigation.
- Decree Marine Environment: could be a fine of 10.000 euro (multiplied by six).
- Decree Environmental Damage: Payment of costs by responsible person for the preventive or restauration measures.
- Flemish Law Environmental Damage: for a natural person 1 year of imprisonment and/or a fine of maximum 100.000 euro (multiplied by six) for ignoring the instructions relating to restoration measures; for a legal entity a fine of maximum 200.000 euro (multiplied by six) for ignoring the instructions relating to restoration measures.
- Walloon Law Environmental Damage: for a natural person: maximum 3 years of imprisonment and/or a fine of maximum 1.000.000 euro (multiplied by six); for a legal entity a fine of maximum 2.000.000 euro (multiplied by six) for ignoring

the instructions relating to restoration measures; possible additional sentences for both: publication of the judgement, prohibition to practice certain professional activities for a period of maximum 5 years (in case of legal repetition).

• Brussels Law Environmental Crimes: for a natural person maximum 3 years of imprisonment and/or a fine of maximum 300.000 euro (multiplied by six); for a legal entity a fine of maximum 600.000 euro (multiplied by six).

Railways:

- COTIF and Law Technical Requirements: if the requirements set forth in appendix C of the COTIF are not fulfilled, the consequences are for a natural person maximum 10 years of imprisonment and/or a fine of maximum 7.000.000 euro (multiplied by six); for a legal entity a fine of maximum 14.000.000 euro (multiplied by six).
- Decree Environmental Damage: See consequences for vessels.
- Flemish Law Environmental Damage: See consequences for vessels.
- Walloon Law Environmental Damage: See consequences for vessels.
- Brussels Law Environmental Damage: See consequences for vessels.

Aircrafts:

• See consequences for vessels.

b. Czech Republik

In general, two types of penalties may be imposed for failure to fulfil requirements set forth by national legislation mentioned above in terms of vessels, aircraft, trains and lorries. They include fines and prohibition of activity. As regards individual means of transport, certain differences need to be mentioned in terms of types of penalties that can be imposed and conditions related thereto (such as a scale for a fine in respect of individual infringements). The widest range of penalty types are enumerated by respective legislation on road transportation by lorries.

c. Germany

No comment / information.

d. Irland

IAEA was registered pursuant to Article 102 of the UN Charter; therefore failure to comply with the international regulations would be in breach of the UN charter. The national Regulations provide that for certain breaches an arrest may be made without a warrant and the Regulations also provide that the District Court may grant a search warrant if there exist reasonable evidence that a contravention of the Regulations has occurred.

In the area of transport of spent fuel and radioactive waste, Ireland's implementing regulations of EU law, the European Communities (Supervision and Control of Certain Shipments of Radioactive Waste and Spent Fuel) Order, 2009, create various offences which can meet with a fine of up to €5,000 and/or imprisonment for up to 3 years if prosecuted in Ireland's lowest court level (the District Court) or alternatively a fine of up to €500,000 and/or up to 3 years imprisonment if tried in the Circuit Court.

e. Poland

There are two types of possible consequences of non-compliance: administrative and criminal. Certainly, in the case of an accident/collision instruments of civil liability (both contractual and tortious) remain available. Each type of liability fulfils a different role by using different means to achieve compliance. Hence, they do not preclude each other, but quite the opposite – they are complementary and may be applied interchangeably (depending on the facts of the case).

In conclusion, there is a noticeable differentiation between the various means of transport in the field of sanctioning non-compliance. However, the most dissuasive criminal sanctions apply horizontally, regardless of the means of transport involved. Conversely, the environmental impact is the key factor in such cases. The catalogue of administrative penalties portrays certain inequalities but aviation that seems to be an advantaged means of transport in this field may be subject to the dissuasive criminal penalties.

f. Switzerland

Possible consequences are criminal liability provided for by administrative law, administrative consequences (e.g. withdrawal of a permission) or liability for damages.

g. UK

Road Transport:

• If a carrier is found to be in breach of the relevant regulations then they can be served with a prohibition notice, preventing onward transit until breaches are rectified. Other less serious breaches may simply result in words of advice.

The HSE has the power to prosecute non-compliance and defendants may be fined for breaches

Railways:

• The Office of Rail and Road is the enforcement agency with regards carriage of dangerous goods by rail.

Waterways:

The MCA has the power to prosecute ship operators and passengers who contravene the Merchant Shipping (Dangerous Goods & marine Pollutants) Regulations 1997. Those convicted of a breach may be fined.

Aircrafts:

- Failure to comply with the regulations may incur an investigation by the CAA which would have consequences for the operators.
- 5. If you compare the existing rules for the different means of transport, would you say that there are particularly strict rules for certain means of transport?
- a. Belgium

No comment / information.

b. Czech Republik

The legislation varies with differing degrees of significance and thus some rules can be seen as stricter than others. However, we understand that these differences follow from the nature of operation of the means of transport in question.

c. Germany

No comment / information.

d. Irland

The European Communities (Carriage of Dangerous Goods by Road and Use of Transportable Pressure Equipment) Regulations 2011 are strict in the sense that the District Court can issue search warrants to determine if dangerous goods exist at a certain location. The Regulations also give the police the power to arrest without a warrant if they suspect that an offence resulting from a contravention of the Regulations has been or is being committed in connection with the operation on a public road of transport equipment.

e. Poland

The general rules on accidents/collisions in the Polish legal system are primarily based on relevant international and European provisions that do not observe environmental concerns to a great extent. With respect to the relevant Polish legislation the following conclusions may be made:

- legislation concerning **waterways** seems to be the most focused on environmental issues, especially as regards dumping into sea as well as oil and air pollution,
- inland shipping and rail transport rules provide for a broad definitions of an "accident" which includes damages to the environment,
- the Aviation Law Act and rules regarding road traffic mostly target on emissions and noise rather than on an environmental impact of accidents.

Similar conclusions can be reached in relation to prevention or minimization of the environmental impact of accidents/collisions. The point of departure for relevant Polish legislation is the concept of "using the environment" which applies to inter alia each means of transport. All things considered, as regards the legal position of each means of transport before the law in view of their environmental impact in Poland, it can be reported that they are treated equally, despite certain dissimilarities regarding the legal response towards non-compliance which after all do not result in evident disparities.

f. Switzerland

Due to the strict waters protection legislation transport on **inland waterways** might be more affected by environmental regulations than other means of transport.

g. UK

All spheres of transport appear to be heavily regulated. **Road Transport** appears to bear the brunt of it (given the large volume of traffic) however all types of transport have regimes and enforcement procedures in place.

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