CEDR

Conférence Européenne
des Directeurs des Routes

Conference of European
Directors of Roads

Appendices:

Conditions for efficient road transport in Europe

July 2017

This document was compiled by **CEDR Task Group N4 (Heavy Vehicles)** as appendices of CEDR Report 2017/05 – Conditions for efficient road transport in Europe

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Table of contents

Appendix 1: Heavy Vehicles Questionnaire

CEDR members have very different ways of thinking about the weights and dimensions, attitudes toward longer and heavier vehicles and vehicle combinations and infrastructure challenges associated with this among member states. This diversity makes it difficult to agree on how the weights and dimensions of heavy vehicles can be adapted to maintain or increase the performance of the road network. An inventory of ways of thinking about the weights and dimensions of heavy vehicles can potentially form the basis for a more unified position on these issues.

One of the goals listed in the mandate for the task group is to enable CEDR members to identify common positions on the subject of heavy vehicles, to identify topics on which further studies will be of value to many CEDR members, and to help create strong, professionally grounded positions on subjects relating to the weights and dimensions of heavy vehicles. As a starting point, an inventory will be made of the on-going developments and ways of thinking about weights and dimensions of heavy vehicles in the different countries.

The Weights and Dimensions of Heavy vehicles in the EU follow Directive 96/53/EC. The Directive secures the competition between the transporters and ensures that transportation between two countries cannot be prevented due to the weights and dimensions of the heavy vehicles. Directive 96/53/EC is currently under revision to adapt to the new technologies and needs, to facilitate intermodal transport and to reduce energy consumption and emission.

This questionnaire aims to gather the necessary information to make the aforementioned inventory. In addition to general information, the questions focus on 6 areas:

- The revision of Directive 96/53/EC
- Directive 96/53/EC and derogations in national legislation
- Other national regulations
- Inspection and weight checks of heavy vehicles
- Heavy vehicles safety
- Accessibility for heavy vehicles in winter conditions

The main ambition is to get an overview of how the European countries have made use of the opportunities for differing national regulations on the weights and dimensions of heavy vehicles given in Directive 96/53/EC. In particular, the objective is to obtain information about on-going and planned projects with longer and/or heavier vehicles and vehicle combinations. Furthermore, the questionnaire aims to collect links or references to reports on the experiences from these trials / projects, and other issues related to the long and/or heavy vehicles and their impact on road infrastructure, road safety and the environment.

Please return the completed questionnaire to Mr Jon Molnes, leader of task N4 Heavy Vehicles, by **8 December 2013** at the latest, at **jon.molnes@vegvesen.no**. Please do not send paper copies.

Contact information

Please provide your contact information:

Name of organisation	
Your name	
Position on the organisation	
Telephone number	
Email address	
Questions answered	

If more than one person has contributed to answering this questionnaire, please provide their contact information and indicate which questions they answered:

Name of organisation	
Your name	
Position on the organisation	
Telephone number	
Email address	
Questions answered	

Name of organisation	
Your name	
Position on the organisation	
Telephone number	
Email address	
Questions answered	

Name of organisation	
Your name	
Position on the organisation	
Telephone number	
Email address	
Questions answered	

Definitions

For the purpose of this questionnaire, the following terms are defined as follows:
Heavy vehicle: Vehicles of categories N2 and N3 with or without combinations of trailers O3 and O4 as defined in Directive 2007/46/EC Annex II part A.

European Modular system (EMS): Vehicles and vehicle combinations with a length of up to 25.25 meters and a total weight of up to 60 tonnes, consisting of by motor vehicles, trailers and semi-trailers which comply with the dimensions laid down in Annex I of Directive 96/53/EC, used in such combinations as to achieve at least the loading length authorized in that Member State.

Studded tyres: Winter tyres which have metal studs in the tread, for additional traction on icy or snow-covered roads.

1. General

1.1 Attached is the ITF table of maximum permitted weights and dimensions in the European countries as of October 2011. Please confirm if the information given for your country is still valid, or correct any errors/changes/additions.
[ ] Information valid
[ ] Changes/corrections/additions made

1.2 Attached is a compilation of the lengths of motorways, national roads, provincial roads and community roads as listed in the Eurostat tables of motorways[1] and other roads[2]. Please confirm if the information given for your country is still valid, or correct any errors/changes/additions.
[ ] Information valid
[ ] Changes/corrections/additions made
[ ] Country not listed

1.3 Number of heavy vehicles registered in your country

a) Number of registered motor vehicles in categories N2 and N3 or with permitted total weights corresponding to these categories:
N2 (3 500 kg < total weight < 12 000 kg) _____
N3 (total weight > 12 000 kg) _____

b) Number of registered trailers and semitrailers in categories O3 and O4 or with permitted total weights corresponding to these categories:
O3 (3 500 kg < total weight < 10 000 kg) _____
O4 (total weight > 10 000 kg) _____

[1] http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=road_if_motorwa&lang=en
[2] http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=road_if_roads&lang=en

1.4 Do you have statistical data on the number of heavy vehicles per day on the categories of roads as listed in question 1.2?
[ ] No data
[ ] No differentiation of data, total number for all roads: _____ vehicles / day
[ ] Differentiated data:
Motorways: _____ vehicles / day
National roads: _____ vehicles / day
Provincial roads: _____ vehicles / day
Community roads: _____ vehicles / day

1.5 The share of domestic and foreign transport?
Domestic: ____ %
Foreign: ____ %

1.7 How do you gain data about heavy vehicles?
[ ] WIM No. of devices:__
[ ] Traffic cameras No. of devices: __
[ ] Counting manually
[ ] Other: ___ No. of devices: __

1.8 Number of charging/fuel stations for hybrid and electric vehicles: _____

1.9 Is there a plan to increase this number?
[ ] No increase planned
[ ] ____ (total number of) stations by _____ (year)

2. The revision of Directive 96/53/EC

Directive 96/53/EC is currently under revision to adapt to the new technologies and needs, to facilitate intermodal transport and to reduce energy consumption and emission. A proposal for an amending Directive was announced on April 15 2013.

2.1 The proposal grants derogations from the maximum dimensions of vehicles for the addition of aerodynamic devices to the rear of vehicles or to redefine the geometry of the cabs for tractors, improving drivers' field of vision, and improving their safety and comfort. Will an increase in vehicle length pose a problem for the accessibility of heavy vehicles on your roads?
[ ] YES [ ] NO

If YES, which increase in vehicle length will pose a problem in terms of the accessibility for vehicles on your roads? Increase above _____ mm

Comments

2.2 The proposal authorises a weight increase of one tonne for vehicles with an electric or hybrid propulsion, to take account of the weight of batteries or the dual motorisation, without prejudice to the load capacity of the vehicle. Furthermore, the maximum weight of buses will be increased by a tonne.

a) Will your bridges have sufficient bearing capacity to accommodate the suggested increase in maximum permitted vehicle weight?
[ ] YES [ ] NO

b) Do you expect this increase to affect the maintenance costs and life expectancy of your bridges?
[ ] YES [ ] NO

Comments

2.4 Do you foresee other complications relating to the suggested increases in the permitted weights and dimensions?
[ ] YES [ ] NO

If YES, please explain which complications and why:

3. Directive 96/53/EC and derogations in national legislation

The current Directive contains several derogations for increased weights and dimensions for national transport. Article 4 (4) permits Member States to allow vehicles or vehicle combinations used for transport which carry out certain national transport operations that do not significantly affect international competition in the transport sector to circulate in their territory with dimensions exceeding those laid down in Annex I. The provision goes on to list two alternative forms of transport which, when carried out in a Member State's territory, are considered to fulfil these requirements:

(a) transport operations performed by specialized vehicles or specialized vehicle combinations in circumstances in which they are not normally carried out by vehicles from other Member States, e.g. operations linked to logging and the forestry industry, or
(b) if a Member State which permits transport operations to be carried out by vehicles or vehicle combinations with dimensions deviating from those laid down in Annex I, also permits motor vehicles, trailers and semi-trailers which comply with the dimensions laid down in Annex I to be used in such combinations as to achieve at least the loading length authorized in that Member State, so that every operator may benefit from equal conditions of competition (modular concept) (EMS).

3.1 Have you made use of the derogations made possible by Directive 96/53/EC article 4 (4) (a)?
[ ] YES [ ] NO

If YES, what sort of national regulations do you have? Please indicate the type of transport, and the permitted dimensions and weight of the transport.

Type of transport	Length (m)	Width (m)	Height (m)	Total weight (tonnes)
[ ] Logging/forestry				
[ ] Other industries/transports (please describe):				

Have studies been performed or reports been made on the effects of these vehicles on road safety, infrastructure, the environment or other relevant factors?
[ ] YES [ ] NO

If YES, please provide links/references to studies/reports:

3.2 When considering permitting longer and/or heavier vehicles, what issues are considered? Please rate the factors listed below in decreasing order.
[ ] Infrastructure
[ ] Road and transport safety
[ ] Competition between road and rail (and sea)
[ ] Potential gain for the relevant industries (forestry etc.)
[ ] Other:

Comments

3.3 Does your infrastructure, in its current state, permit longer and/or heavier vehicles and vehicle combinations?
[ ] YES [ ] NO

3.4 Will specific challenges in your country/parts of your country make it difficult to permit longer/heavier vehicles?

[ ] Geographical conditions
[ ] Topography
[ ] Road curvature
[ ] Climatic conditions
[ ] Bearing capacity of bridges
[ ] Bearing capacity of the roads
[ ] Other:

If studies have been performed or reports have been made on these challenges, please provide link or reference to studies/reports:

3.5 Article 7 of Directive 96/53/EC states that the Directive shall not preclude the application of road traffic provisions in force in each Member State which permit the weight and/or dimensions of vehicles on certain roads or civil engineering structures to be limited, irrespective of the State of registration of such vehicles. To which extent have you made use of the possibility to limit the weights and dimensions of vehicles on specific roads as given in article 7 of the Directive?

	Many limitations	Some limitations	Limitations in exceptional cases only	No limitations
Axle load				
Gross vehicle weight				
Vehicle height				
Vehicle width				
Vehicle length				

3.6 Transport of 45-foot containers

a) Which weights and dimensions are permitted for the transport of 45-foot containers in your current legislation?

Total length ___ m
Distance from king-pin to rear of semi-trailer ___ m
Height ___ m
Total weight ___ t

b) Do you permit the transport of 45-foot containers with side loaders?

[ ] NO
[ ] YES, with a total length of up to ____ m

3.7 Do you permit EMS 60 t on your roads?

[ ] YES

- [ ] EMS operate temporarily on our roads as a trial
- [ ] EMS operation on our roads is permitted by national regulations
- [ ] Other, please specify

[ ] NO

- [ ] This option is not being considered
- [ ] This option is being considered
- [ ] Other, please specify

If YES, please answer questions 3.8 to 3.11. If NO, skip to question 3.12.

3.8 What were the (most important) reasons for permitting EMS to operate on your roads? Please rate the factors listed below in decreasing order.

[ ] Infrastructure
[ ] Road and transport safety
[ ] Competition between road and rail (and sea)
[ ] Potential reductions in CO_2 and NO_X emissions
[ ] Potential reductions in road noise and dust
[ ] Other:
[ ] Other:

Comments

3.9 Are EMS limited to given parts of the road network?

[ ] EMS are permitted on all roads
[ ] EMS are permitted on a limited road network only

Comments

3.10 Have studies been performed or reports made on the use of EMS in your country?

[ ] YES [ ] NO

If YES, which factors are described / evaluated?
[ ] Infrastructure
[ ] Road and transport safety
[ ] Competition between road and rail (and sea)
[ ] Potential reductions in CO_2 and NO_X emissions

Please provide links or references:

3.11 Impacts of EMS on the road infrastructure
a) Do you expect the use of EMS to affect the maintenance costs and life expectancy of your bridges?
[ ] YES [ ] NO

If YES, please explain

b) Do you foresee other complications relating to EMS?
[ ] YES [ ] NO

If YES, please explain:

3.12 Other on-going projects (other than EMS)
Are other projects currently taking place or being planned in which greater weights and/or dimensions, both in terms of 96/53/EC and national regulations, are permitted?
[ ] YES [ ] NO

If YES, please indicate the type of transport, dimensions, weights and time frame for the project.

[ ] Vehicle combinations (other than EMS) > 18.75m / 40t

Type of transport	Length (m)	Width (m)	Height (m)	Total weight (t)	Time frame

Comments

[ ] Vehicle combinations > 25.25m / 60t

Type of transport	Length (m)	Width (m)	Height (m)	Total weight (t)	Time frame

Comments

Link to studies/reports describing the project(s):

4. Other national regulations

4.1 Pendulum axles have independent suspension which allows the tyre to tilt in order to adjust to the uneven road, thus distributing the tyre pressures on a larger surface. Do you have any special regulations permitting greater axle loading for such axles?
[ ] No special regulations
[ ] Increased axle load for abnormal transports
[ ] Increased axle load for normal transports
[ ] Increased axle load for both normal and abnormal transports

Comments

4.2 Which axle loads do you permit in national transport for single axles with:
Single tyres:
Super single tyres:
Twin tyres:

4.3 Have studies been conducted in your country that examine the differences in impact on the road/road structure of single, super single and twin tyres?
[ ] YES [ ] NO
If YES, please provide links or references:

4.4 Do you have any special measures during the spring thaw?
[ ] No measures
[ ] Reduced axle loads, from _____ tonnes to _____ tonnes
[ ] Reduced total weight, from _____ tonnes to _____ tonnes
[ ] Reduced speed limit for heavy vehicles
[ ] Other:

4.5 Traffic restrictions
Do your national regulations contain traffic restrictions for heavy goods vehicles?
[ ] YES [ ] NO

If YES, please answer questions **4.6** to **4.8**. If NO, skip to question **5.1**.

4.6 Application of traffic restrictions
a) For which periods do the restrictions apply?
[ ] Weekends [ ] Holidays [ ] Tourist season [ ] Other:

b) Are the dates consistent with your neighbouring countries?
[ ] YES [ ] NO

c) Do the restrictions apply to parallel roads for transit?
[ ] YES [ ] NO

4.7 For which reasons were the traffic restrictions implemented?
[ ] Road safety
[ ] To reduce road noise
[ ] To reduce CO_2 and NO_X emissions
[ ] Other:

4.8 Do the traffic restrictions noticeably affect the efficiency of the road transport?
[ ] YES [ ] NO

Comments

5. Inspection and weight checks of heavy vehicles

As many as 1 in 3 heavy vehicles are overloaded. The proposal adds new provisions to enable the inspection authorities to better detect infringements and harmonise administrative penalties that apply to them. The Member States must carry out a minimum number of vehicle checks, using either weighing systems built into the road or by means of on-board sensors in vehicles that communicate remotely with roadside inspectors.

5.1 Average percentage of overloaded vehicles?
_____ %

5.2 How is the data on overloaded vehicles collected?
[ ] WIM
[ ] On-board weighing systems
[ ] Manual weighing
[ ] Other:

5.3 Who can be responsible for the offence?
[ ] Driver [ ] Legal person [ ] Sole proprietor [ ] Other:

5.4 Do you have a register of overloaded vehicles for a longer period of time?
[ ] YES [ ] NO

If YES, what is the information in this register used for?
[ ] Statistical purposes
[ ] Identifying repeat offenders
[ ] Increased fines or fees for repeat offenders
[ ] Withdrawal of community licenses
[ ] Other:

5.5 Do you have any special programmes for reducing the number of overloaded vehicles?
[ ] YES [ ] NO

If YES, please provide link or reference to studies, reports or description of this programme

5.6 In your country, who is allowed to carry out weight checks of heavy vehicles?
[ ] Police [ ] Road Directorate [ ] Private company [ ] Other:

5.7 What do you inspect?

[ ] Axle loads	[ ] Gross vehicle weight	[ ] Appropriate loading
[ ] Dimensions (length, height, width)	[ ] Tyre condition (pattern, pressure, size)	[ ] Cargo securing
[ ] Technical condition of the vehicle	[ ] Other:	

5.8 Does your inspection authority use pre-selection systems for weight checks?
[ ] No pre-selection
[ ] Pre-selection by WIM
[ ] Pre-selection by on-board weighing systems
[ ] Pre-selection by other measures:

5.9 Percentage of vehicles equipped with on-board weighing systems today
[ ] No data [ ] < 10 % [ ] 10 – 25 % [ ] 26 – 50 % [ ] 50 – 75 %
[ ] 75 – 90 % [ ] > 90 %

5.10 Have studies been performed on the effect of overloaded vehicles on the infrastructure?
[ ] YES [ ] NO

If YES, please provide link or reference to studies

6. Heavy vehicles safety

In the EU, the average share of accidents involving heavy vehicles is about 19%. However, there are wide variations between different countries. It is of interest to establish how large these differences are, and why there are such differences between countries. It is also useful to know what variations exist between the different countries with regard to the factors which contribute to accidents involving heavy vehicles.

6.1 Share of traffic accidents involving heavy vehicles with a permitted total weight of 3 500 kg or above

Total share of heavy vehicle involvement in accidents	___ %
Fatal	___ %
Injury (all injuries)	___ %
Material damage only	___ %

Link to studies/reports:

6.2 Do you have research/reports describing the road safety effects of one or more of the following factors?

[ ] No reports	[ ] Deformation zones	[ ] Blind spots
[ ] Cargo securing	[ ] Tyre condition (tread depth, pattern, pressure, size)	[ ] Poor vehicle maintenance
[ ] Damage to / collapse of steering systems	[ ] Other road safety issues relating to the safety of heavy vehicles	

Link/reference to studies/reports:

6.3 Do you have research/reports describing the road safety effects of one or more of the following factors relating to the weights and/or dimensions of heavy vehicles?

[ ] No reports	[ ] Vehicle length	[ ] Vehicle height
[ ] Vehicle width	[ ] Axle loads	[ ] Gross vehicle weight
[ ] (In)appropriate loading	[ ] Other factors relating to the weights/dimensions of heavy vehicles:	

Link/reference to studies/reports:

7. Accessibility of heavy vehicles in winter conditions

7.1 Is the accessibility for heavy vehicles in winter conditions considered a problem?	YES [ ]	NO [ ]
If so,		
Is this a prioritized issue?	YES [ ]	NO [ ]
Are you actively working to find solutions to these problems?	YES [ ]	NO [ ]

7.2 Research – existing research, description of on-going and planned projects

7.2.1 Have studies been performed on the accessibility for heavy vehicles in winter conditions in your country?
[ ] YES [ ] NO

If YES, please provide link or reference to studies

7.2.2 Are other projects currently taking place or being planned which focus on the accessibility for heavy vehicles in winter conditions?
[ ] YES [ ] NO

If YES, please provide link or reference to studies, reports or descriptions of these projects

7.3 Snowfall

Amount of snowfall	% of roads
No data	%
Never	%
In exceptional cases	%
Occasionally	%
Throughout the winter season	%

7.4 Drive axle load				
7.4.1 Do you require the axle load of the driving axle(s) not to be less than a given % of the actual total weight of the vehicle/vehicle combination when the vehicle is used in *national transport*?				
[ ] No	[ ] 20 %	[ ] 25 %	[ ] Other: ___ %	
7.4.2 Do you enforce this requirement for *national* transport?			YES [ ]	NO [ ]
7.4.3 Do you enforce this requirement for *international* transport?			YES [ ]	NO [ ]

7.5 Steering axle load
7.5.1 Do you require the axle load of the steering axle(s) not to be less than a given % of the actual total vehicle weight of the vehicle/vehicle combination when the vehicle is used in *national transport*? [ ] YES [ ] NO

7.6 Retractable axles
7.6.1 Do you permit the use of retractable axles to help motor vehicles or vehicle combinations move off on slippery ground, and to increase the traction of the tires on these surfaces?
[ ] For lorries
Up to what axle load? _____
Up to what speeds? _____ km/h
[ ] For tractors for semi-trailers
Up to what axle load? _____
Up to what speeds? _____ km/h
[ ] For semi-trailers
Up to what axle load? _____
Up to what speeds? _____ km/h

7.7 Snow chains		
7.7.1 Is the use of snow chains permitted?	YES [ ]	NO [ ]
If yes, under which conditions?		
7.7.2 Are vehicles and/or vehicle combinations required to carry snow chains?	YES [ ]	NO [ ]
7.7.3 If yes, does the requirement apply to		
Motor vehicles		
[ ] All motor vehicles		
[ ] Motor vehicles with a permitted total weight over 3 500 kg		
[ ] Motor vehicles with a permitted total weight over 7 500 kg		
[ ] Other:		
Trailers and semi-trailers		
[ ] All trailers and semi-trailers		
[ ] Trailers and semi-trailers with a permitted total weight over 3 500 kg		
[ ] Trailers and semi-trailers with a permitted total weight over 7 500 kg		

[ ] Other	
[ ] *Vehicle combinations*	
7.7.4 Is the requirement related to	
[ ] Specific dates? From _____ to _____	
[ ] Specific driving conditions?	
[ ] Specific roads or areas?	

7.8 Other technical solutions for improving accessibility in winter conditions		
7.8.1 The *Auto Sock* is a bag of synthetic material to put on tyres to improve their grip on snow, which is easy to use and takes up little space when not in use.		
Are you aware of the existence of such equipment?	YES [ ]	NO [ ]
Do you permit its use for the improvement of accessibility in snowy conditions?	YES [ ]	NO [ ]
Are Auto Socks permitted in place of snow chains?	YES [ ]	NO [ ]
7.8.2 *Sand spreaders* are mounted in front of the drive wheels on trucks and buses. The spreaders are operated by the driver.		
Are you aware of the existence of such equipment?	YES [ ]	NO [ ]
Do you permit its use for the improvement of accessibility in snowy conditions?	YES [ ]	NO [ ]
Are sand spreaders permitted in place of snow chains?	YES [ ]	NO [ ]
7.8.3 *On-spot chains* are automatic chains mounted in a sling by the driving wheels. When activated, the chains are slung underneath the tyres.		
Are you aware of the existence of such equipment?	YES [ ]	NO [ ]
Do you permit its use for the improvement of accessibility in snowy conditions?	YES [ ]	NO [ ]
Are on-spot chains permitted in place of regular snow chains?	YES [ ]	NO [ ]

7.9 Winter tyres		
7.9.1 Do you require the use of winter tyres?	YES [ ]	NO [ ]
If so, is the requirement related to		
[ ] Specific dates? From _____ to _____		
[ ] Specific driving conditions?		
[ ] Specific roads or areas?		
7.9.2 What requirements must a tyre fulfil in order to be considered a "winter tyre" in your national legislation?		
[ ] Tread depth?		
[ ] Tread pattern?		
[ ] Shore values?		
[ ] Markings (M+S, 3PM etc.)?		

7.10 Studded tyres		
7.10.1 Do you permit the use of studded tyres?	YES [ ]	NO [ ]
7.10.2 If the use of studded tyres is permitted, is the requirement related to		
[ ] Specific dates? From _____ to _____		
[ ] Specific driving conditions?		
[ ] Specific roads or areas?		

7.11 Other measures
7.11.1 If you do not permit or require the use of snow chains, studded tires etc., what measures do you take to ensure that the accessibility for heavy vehicles does not become a problem in difficult winter conditions?

Appendix 2: Overview of responses to the questionnaire

1. *General*

1.1 Attached is the ITF table of maximum permitted weights and dimensions in the European countries as of October 2011. Please confirm if the information given for your country is still valid, or correct any errors/changes/additions.

[ ] Information valid

[ ] Changes/corrections/additions made

1.2 Attached is a compilation of the lengths of motorways, national roads, provincial roads and community roads as listed in the Eurostat tables of motorways[3] and other roads[4]. Please confirm if the information given for your country is still valid, or correct any errors/changes/additions.

[ ] Information valid

[ ] Changes/corrections/additions made

[ ] Country not listed

Country	Weights and dimensions	Road network
Austria	Information valid	Changes/corrections/additions made
Slovenia	Changes/corrections/additions made	Information valid
Iceland	Information valid	Changes/corrections/additions made
Estonia	Information valid	Changes/corrections/additions made
Finland	Changes/corrections/additions made	Changes/corrections/additions made
Germany	Changes/corrections/additions made	Changes/corrections/additions made
Slovakia[1)]	Information valid	Changes/corrections/additions made
Luxembourg	Changes/corrections/additions made	Information valid
Poland[2)]	Information valid	Information valid
Italy	Information valid	Information valid
Bulgaria	Information valid	Information valid
Malta	Information valid	Information valid
Lithuania	Information valid	Information valid
Netherlands	Changes/corrections/additions made	Changes/corrections/additions made
United Kingdom	Information valid	Information valid
Sweden	Changes/corrections/additions made	Information valid
Norway	Changes/corrections/additions made	Information valid

1) The information for the Slovak Republic is valid with the exception of Community Roads where instead of figure 35762 should be the correct one of 36353km.

2) Information valid in 2011, changes/additions made in 2012

1.4 Number of heavy vehicles registered in your country

c) Number of registered motor vehicles in categories N2 and N3 or with permitted total weights corresponding to these categories:

[3] http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=road_if_motorwa&lang=en

[4] http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=road_if_roads&lang=en

N2 (3 500 kg < total weight < 12 000 kg) _____
N3 (total weight > 12 000 kg) _____

d) Number of registered trailers and semitrailers in categories O3 and O4 or with permitted total weights corresponding to these categories:
O3 (3 500 kg < total weight < 10 000 kg) _____
O4 (total weight > 10 000 kg) _____

Country	N2	N3	O3	O4
Austria[1)]	12825	41020	18237	60652
Slovenia[2)]	6721	20436	669	14424
Iceland	4269 (other vehicles 3,5-12,0 t= 10033)	5225 (other vehicles >12,0 t = 934)	917 (other trailers 3,5-10 t=512)	3176 (other trailers >10 t=44)
Estonia	12765	21997	395	15690
Finland	47000	49000	400	5500
Germany[3)]	339550	193535	81429	548761
Slovakia	29159	54969	3359	30689
Luxembourg	1776	8599	124	5058
Poland	2582168	338613	382876	158522
Italy	369546	491681	4551	333968
Bulgaria	/	/	/	/
Malta	353	119	5	1
Lithuania	31503	53363	3694	42812
Netherlands[4)]	-	-	-	-
United Kingdom[5)]	196000	265000	-	-
Sweden	about 16000	about 63700	about 1000	about 52900
Norway	76826	77545	234	36928

[1)] 1.3 b - Trailers categories O and R - 694729

[2)] 1.3 b: Lorries and tractors: 84408

[3)] 1.3 a: Records dated 10. january 2013

[4)] 1.3 b: We make a difference between the following categories (figures of 2013): Vans : 832.12, Lorries : 67.096, Tractors : 70.422, Trailers: 960.631, Semitrailers: 131.543

[5)] The Number licensed in for Great Britain only (excludes Northern Ireland) as at the end of 2012. 1.3 b): We do not have comprehensive stats on the number of trailers/semi-trailers. At the end of 2012, there were 9,000 rigid HGVs (with a gross weight of over 12 tonnes) that tow a trailer of 4 tonnes or more. We know of these because such HGVs are liable for extra VED because of the drawbar weight of their trailers. There were 119,00 articulated HGVs licensed at the end of 2012, but we hold no information on their semi-trailers.

1.4 Do you have statistical data on the number of heavy vehicles per day on the categories of roads as listed in question 1.2?
[ ] No data
[ ] No differentiation of data, total number for all roads: _____ vehicles / day
[ ] Differentiated data:
Motorways: _____ vehicles / day

National roads: _____ vehicles / day
Provincial roads: _____ vehicles / day
Community roads: _____ vehicles / day

	Total	Motorways	National roads	Provincial roads	Community roads
Austria[1)]	251000				
Slovenia	Differentiated data	4194	609	no data	no data
Iceland	no data				
Estonia	Differentiated data	-	430	69	8
Finland	Differentiated data	blank!	blank!	blank!	blank!
Germany	Differentiated data	7120	820	0	0
Slovakia[2)]	Differentiated data	/	/	no data	no data
Luxembourg	No data				
Poland	Differentiated data	6782	1888	no data	no data
Italy	2331 (*7.595 km of TEN roads network)				
Bulgaria	Differentiated data	12913	3229	blank!	blank!
Malta	1300 (for a typical primary road)				
Lithuania	Differentiated data	1936	514	no data	no data
Netherlands[3)]	0	0	0	0	0
United Kingdom	Differentiated data	8301	1753	446	19
Sweden[4)]	Differentiated data	15 % of 20 600 = 3100	15 % of 5 900 = 900	8 % of 630 = 50	(Not available) % = 1470 (2011)
Norway	0	0	0	0	0

1) 3903 Heavy vehicles/day on motorways

2) Data are at disposal for motorways and part of national roads with Electronic toll system

3) Plans unknown

4) Thus, we have a total, average traffic volume on motorways of 20 600 vehicles/day. Of these 15 % are Heavy vehicles.

1.5 The share of domestic and foreign transport?

Domestic: ____ %
Foreign: ____ %

	Domestic	Foreign
Austria	38	62
Slovenia	35	65
Iceland	> 99 %	< 1 %
Estonia	blank!	blank!
Finland	98	2

Germany	68,8	31,2
Slovakia[1)]	57,2	42,8
Luxembourg	blank!	blank!
Poland	94,3	5,7
Italy	n/a	n/a
Bulgaria	blank!	blank!
Malta	95	5
Lithuania	95	5
Netherlands[2)]	blank!	blank!
United Kingdom	95	5
Sweden	Not available	Not available
Norway	Not available	Not available

1) Plans unknown

2) The figures are valid for motorways and part of national roads with Electronic toll system, not for the whole network.

1.7 How do you gain data about heavy vehicles?

[ ] WIM No. of devices:__

[ ] Traffic cameras No. of devices: __

[ ] Counting manually

[ ] Other: ___ No. of devices: __

	WIM	**Traffic cameras**	**Counting manually**	**Other**
Austria	0	0	0	Traffic sensors, 2150 (motorways)
Slovenia	measurement on average 120 different locations/year	0	0	traffic counters, 641
Iceland	Yes	0	Yes	0
Estonia	3	0	0	0
Finland	0	0	0	counting automatically, 420
Germany	0	0	Yes	permanent automatic, 1488 (as of 2011)
Slovakia	0	0	Yes	Electronic toll system
Poland	0	0	Yes	0
Italy	0	0	0	Inductive loop – Microwave, 4744
Malta	0	0	Yes	Through roadside inspections

Lithuania	2	0	0	571
Netherlands	20	For specific research purposes for a pre-defined period, restrained by strict privacy regulations	Only to measure the capacity/demand on/for truck parking areas	measuring loops in asphalt, 23000
United Kingdom	6	256	Yes	Inductive Loops, 268
Sweden	0	0	0	Axle configuration. Depending on the axle configuration the counting system can recognize different types of vehicles and classify them as heavy or light vehicles. About 80
Luxembourg	blank!	blank!	blank!	blank!
Bulgaria	blank!	blank!	blank!	blank!
Norway	blank!	blank!	blank!	blank!

1.8 Number of charging/fuel stations for hybrid and electric vehicles: _____

1.9 Is there a plan to increase this number?

[ ] No increase planned

[ ] ____ (total number of) stations by ________ (year)

	Number	Plan to increase
Austria	1300	blank!
Slovenia	No data available	blank!
Iceland	0	20 by 2014
Estonia	163	No increase planned
Finland	blank	blank!
Germany	blank	blank!
Slovakia	13	4000 by 2020 Remark: It is not a realistic plan but order/wish of EC
Luxembourg	blank	blank!
Poland	There are, but no data	blank!
Italy	2300	130000 by 2020
Bulgaria	blank	An interdepartemental working group is constituted within the Ministry of

		Transport, Information Technologies and Communications for consideration of the Proposal for Directive of the European Parliament and of the Council for deployment of infrastructure for alternative fuels
Malta	45 stations (90 charging points) currently being installed	500 by 2020
Lithuania	blank	blank!
Netherlands	7 LNG stations	Plans unknown
United Kingdom	As of December 2013, there were over 6,000 government funded electric vehicle recharging points in the UK, 65% of which are publicly accessible. We estimate that the private sector have installed around 5,000 charge points nationally, again with around 65% publicly accessible. There are also over 4000 chargers located at domestic properties in the UK. The recharging points installed so far have been to support passenger car (M1) and light van (N1) electric and hybrid vehicles and not heavier vehicles that are the focus of this questionnaire (N2,N3, O2, O3).	1.9: In September 2013, the UK Government published its ultra low emission strategy "Driving the future today". The strategy sets out why this transformational change will happen, the opportunities it presents for the UK, and the challenges that must be overcome to exploit those opportunities. It articulates Government's clear and strong commitment to this agenda. The strategy identifies five work streams which are: o Supporting the early market for ULEVs o Shaping the necessary infrastructure: o Securing the right regulatory and fiscal measures o Investing in UK automotive capability o Preparing the energy sector The 2013 Spending Review (SR) contained provision of £500m additional capital funding to support the Office for Low Emissions (OLEV) work to 2020. This is in addition to the £400m already made available on this agenda from 2010-2015. We launched a call for evidence in November 2013 to inform the development of the 2015-2020 package of support for ULEVs. This consultation has recently closed and OLEV are now analysing responses and considering the balance of support between work streams. This may include further support for infrastructure to support alternatively fuelled heavier commercial vehicles, including electric recharging infrastructure and a network of refuelling

		points for gas trucks.
Sweden	293	No official national plans
Norway	1356 stations with 4934 charging points	No official plans that we are aware of, but a total of 325 new rapid charging stations by 2017 has recently been suggested

2. *The revision of Directive 96/53/EC*

Directive 96/53/EC is currently under revision to adapt to the new technologies and needs, to facilitate intermodal transport and to reduce energy consumption and emission. A proposal for an amending Directive was announced on April 15 2013.

2.1 The proposal grants derogations from the maximum dimensions of vehicles for the addition of aerodynamic devices to the rear of vehicles or to redefine the geometry of the cabs for tractors, improving drivers' field of vision, and improving their safety and comfort. Will an increase in vehicle length pose a problem for the accessibility of heavy vehicles on your roads?
[ ] YES [ ] NO

If YES, which increase in vehicle length will pose a problem in terms of the accessibility for vehicles on your roads? Increase above _____ mm

Comments

	Yes/No	Comments
Austria	Yes	Increase above 300 mm problematic. Maximum length is not defined [in the proposed Directive?]. There are certain limitations of road infrastructure (e.g. lay-bys, parking areas, etc.). After maximum length is defined, the impact will be evaluated.
Slovenia	No	
Iceland	Yes	No detailed information available on size of This has not been investigated by us, but we estimate that this will pose some problems, as we have lot of narrow roads and junctions.
Estonia	Yes	
Finland	blank!	
Germany	Yes	[The length increase will be problematic] In certain circumstances. The vehicle length is an important influence parameter on the manoeuvrability. Therefore certain roads/infrastructure could not be suitable for longer vehicles. The impact of longer truck combinations ('Lang-Lkw') on the infrastructure is one of the issues of a scientific examination within the framework of the current German longer truck combination trial (http://www.bast.de/cln_032/nn_42254/DE/Aufgaben/abteilung-v/referat-v1/v1-lang-lkw/v1-lang-lkw.html).
Slovakia	Yes	Increase above 150 mm problematic. We have problem especially with state roads network which was built years ago using the different standards as now. As the motorways network is not completed till now, state roads should replace them for time till the motorway and expressway network will be completed.
Luxembourg	No	

Poland	No	
Italy	No	
Bulgaria	No	
Malta	No	The use of such Devices on our roads are not advantageous and therefore this would not be applicable for our roads
Lithuania	No	
Netherlands	Yes	Increase above the current maximum length for EMS of 25.25m. No problems for conventional trucks. Problems with the length of parking lots, breakdown zones, curves, roundabouts
United Kingdom	Yes	Not yet known as we are currently undertaking a more detailed analysis of impacts. There could be road issues relating to longer vehicles – overtaking by other vehicles, turning, braking distance, parking.
Sweden	No	
Norway	No	

2.2 The proposal authorises a weight increase of one tonne for vehicles with an electric or hybrid propulsion, to take account of the weight of batteries or the dual motorisation, without prejudice to the load capacity of the vehicle. Furthermore, the maximum weight of buses will be increased by a tonne.

a) Will your bridges have sufficient bearing capacity to accommodate the suggested increase in maximum permitted vehicle weight?
[ ] YES [ ] NO

b) Do you expect this increase to affect the maintenance costs and life expectancy of your bridges?
[ ] YES [ ] NO

Comments

	a)	b)	Comments
Austria	Yes	Yes	a) impacts on older bridges will be evaluated
Slovenia	Yes	Yes	A considerable percentage of bridges on the national road network there is under-designed according to current design codes. To be kept in service, the structural safety of most of them was reassessed using the special loading schemes that were derived from the weigh-in-motion data. These loading schemes do have some reserves therefore it is believed that in general 1-ton increase will not affect life expectancy of the bridges in general. Nevertheless, the most critical bridges with respect to structural safety will have to be reassessed and, in case of negative results, strengthened.
Iceland	No	Yes	We have a lot of old bridges, not designed for todays loads.
Estonia	Yes	Yes	Very slightly (less than 1%). For heavy vehicles 1 tonne is OK.
Finland	blank!	blank!	
Germany	Yes	Yes	It would be suggested to equip heavy vehicles mandatory with on-board weighing systems to avoid overloading.
Slovakia	Yes	Yes	
Luxembourg	Yes	Yes	
Poland	No	Yes	
Italy	Yes	No	
Bulgaria	No	Yes	
Malta	/	/	Studies in relation to both a) and b) are ongoing.
Lithuania	Yes	No	
Netherlands	No	No	
United	0	0	Both YES and NO on a) and b). The answers are 'no' for

Kingdom			motorway and trunk road bridges as they have been designed for heavier lorries. However the answers are 'yes' for local road bridges if they have not been designed for heavier lorries. a) UK says NO for for motorway and trunk road bridges as they have been designed for heavier lorries And YES for local road bridges if they have not been designed for heavier lorries. b) UK says NO for motorway and trunk road bridges as they have been designed for heavier lorries And YES for local road bridges if they have not been designed for heavier lorries.
Sweden	Yes	No	
Norway	Yes	No	

2.4 Do you foresee other complications relating to the suggested increases in the permitted weights and dimensions?
[ ] YES [ ] NO

If YES, please explain which complications and why:

	Yes/No	Comments
Austria	Yes	- additional construction costs - negative impact on traffic flows e.g. breakdowns, take-overs, acceleration lane, etc. - negative impact on road safety - negative impact on rail and combined transport (distortion of competition) - negative impact on environment
Slovenia	blank!	
Iceland	Yes	Maintenance cost of pavements with bad bearing capacity will increase.
Estonia	No	
Finland	blank!	
Germany	Yes	'Weight' and 'Dimension' are important influence parameters for the impact behaviour of Heavy Vehicles against (existing) road restraint systems (see also EN 1317). A change in one of these parameters means the risk of a change in the impact energy, which may influence the effects on a road restraint system and finally on the course of an accident. Currently first knowledge is going to be gained in a scientific examination within the framework of the current German longer truck combination trial - but is not yet available. 'Weight' is an important influence parameter for the impact on the road pavement. A change of this parameter could lead to a higher stressing of pavements and thus to an increase of damage.
Slovakia	Yes	Higher load may cause quicker degradation of pavements and bridges and will require probably higher maintenance costs
Luxembourg	No	
Poland	Yes	Traffic safety problems
Italy	No	
Bulgaria	No	
Malta	Yes	It might reduce the lifespan of the road structure
Lithuania	No	
Netherlands	No	
United Kingdom	blank!	
Sweden	No	
Norway	No	

3. *Directive 96/53/EC and derogations in national legislation*

The current Directive contains several derogations for increased weights and dimensions for national transport. Article 4 (4) permits Member States to allow vehicles or vehicle combinations used for transport which carry out certain national transport operations that do not significantly affect international competition in the transport sector to circulate in their territory with dimensions exceeding those laid down in Annex I. The provision goes on to list two alternative forms of transport which, when carried out in a Member State's territory, are considered to fulfil these requirements:

(a) transport operations performed by specialized vehicles or specialized vehicle combinations in circumstances in which they are not normally carried out by vehicles from other Member States, e.g. operations linked to logging and the forestry industry, or

(b) if a Member State which permits transport operations to be carried out by vehicles or vehicle combinations with dimensions deviating from those laid down in Annex I, also permits motor vehicles, trailers and semi-trailers which comply with the dimensions laid down in Annex I to be used in such combinations as to achieve at least the loading length authorized in that Member State, so that every operator may benefit from equal conditions of competition (modular concept) (EMS).

3.1 Have you made use of the derogations made possible by Directive 96/53/EC article 4 (4) (a)?

[ ] YES [ ] NO

If YES, what sort of national regulations do you have? Please indicate the type of transport, and the permitted dimensions and weight of the transport.

Type of transport	Length (m)	Width (m)	Height (m)	Total weight (tonnes)
[ ] Logging/forestry				
[ ] Other industries/transports (please describe):				

Have studies been performed or reports been made on the effects of these vehicles on road safety, infrastructure, the environment or other relevant factors?

[ ] YES [ ] NO

If YES, please provide links/references to studies/reports:

Logging / forestry:

	Length	Width	Height	Weight
Austria	0	0	0	44
Slovenia	0	0	0	0
Iceland	0	0	0	0
Estonia	/	/	/	52 (7 axle road trains) 50 (6 axle road trains)
Luxembourg	25	2,55	4,00	44,00
Italy	0	0	0	0
Netherlands	0	0	0	0
United Kingdom	0	0	0	0
Sweden	24	2,60	Not regulated	60
Norway	24,00	2,55	4,00 (trailer only)*	60 tonnes total, 36 tonnes on 4-axle drawbar trailer

Other transports

	Length	Width	Height	Weight	Comments
Austria					Combined/ transport from/to the next technically suitable terminal /harbour
	0	0	0	44	1), 1) rear axle of trailer must have twin wheels or super single tyres, each vehicle more than 2 axles
Slovenia	22	/	/	/	Commercial vehicles modified for transportation cars (Revoz)
	0	0	4,22	0	All Heavy vehicles: 60% and 80% on axle limits for 6t and 8t limited roads, +50% for 8 wheels per axle, Definition for more than 3 axle in a group according to axle spacing (7t or 8t)
Iceland	25,25	2,6	4,2	44-49	This is only allowed on selected routes and with special tire and suspension conditions.
Estonia	/	/	/	44	All road trains with 6 axles or more
	20,75	/	/	/	Vehicles transport (loaded full trailer) - 20,75 m, Vehicles transport (loaded semi trailer) - 18,50 m, Special purpose vehicles or vehicles meant to carry indivisible load Width 3 m
Luxembourg	individual	/	/	/	Construction
Italy	+ 12 %	2,55	4,30	44	Transport of vehicles, transport of Straw/hay rolls, transport of ISO containers
	18,75	2,55	4,00	56	Excavation and mining material
Netherlands[1)]	Conform 96/53	Conform 96/53	Conform 96/53	50	
	25.25	Conform 96/53	Conform 96/53	60	EMS
United Kingdom	18	blank!	blank!	blank!	Articulated vehicles, where semi-trailer is a low loader
	blank!	blank!	blank!	blank!	Road trains may have a loading length exceeding 15.65m provided both vehicles in the combination are car transporters. The distance of any point forward of the transverse plane passing through the axis of the king pin of semi-trailers that are car transporters may exceed 2.04m (4.19M) Rigid vehicles equipped with 'crash cushion' devices are permitted to exceed 12m in length with the device deployed.
Sweden	24	2,60	Not regulated	60	(All other transports)
Norway	20 m (will soon be increased to 22 m)	2,55	Not regulated	No special regulations	Transport of vehicles

[1] EMS listed here

Austria	Austrian Road Safety Board (KfV): "Long and heavy Vehicles (LHV)" 2009 Austrian Road Safety Board (KfV): "Gigaliner with 44 tonnes and 48 tonnes" 2012 Austrian Road Safety Board (KfV): "Safety Aspect Gigaliner" Käfer: "The Gigaliner Impacts on Combined Transport in Austria" 2009 and 2013
Estonia	http://www.mnt.ee/public/Riigi_mnt_tugevdamise_maksumuse_hindamine_52t_MA_LOPLIK.pdf
Germany	K+P TRANSPORT CONSULTANTS (2006): Verkehrswirtschaftliche Auswirkungen von innovativen Nutzfahrzeugkonzepten, 2006 (s. http://www.forschungsinformationssystem.de/servlet/is/215924/) K+P TRANSPORT CONSULTANTS (2007): Verkehrswirtschaftliche Auswirkungen von innovativen Nutzfahrzeugkonzepten II, 2007 (s. http://www.forschungsinformationssystem.de/servlet/is/240316/) On-going study with long truck combinations (Studie zum Feldversuch mit Lang-Lkw) (Start: 01/2012, End: 12/2016)
United Kingdom	http://www.trl.co.uk/online_store/reports_publications/trl_reports/cat_vehicle_engineering/report_Longer_and/or_Longer_and_Heavier_Goods_Vehicles_LHVs___a_Study_of_the_Effects_if_Permitted_in_the_UK_Final_Report.htm
Sweden	(See separate document)

3.2 When considering permitting longer and/or heavier vehicles, what issues are considered? Please rate the factors listed below in decreasing order.

[ ] Infrastructure
[ ] Road and transport safety
[ ] Competition between road and rail (and sea)
[ ] Potential gain for the relevant industries (forestry etc.)
[ ] Other:

Comments

	Infra-structure	**Road and transport safety**	**Competition with rail and sea**	**Potential gain for relevant industries**	**Other**	**Comments**
Iceland	3	5	1	4	2	Competition between road and rail (and sea) not relevant (ranked 1 as most important (?))
Estonia	5	4	3	2	0	(Ranked from 1 to 4)

Finland	4	5	2	1	3	Other: Environment and Energy. Comments: Finland is a big country with only 5 million citizens. In most cases road transportation is the only option in national transportation.
Slovakia	5	4	3	0	0	Ranked 1-3
Luxembourg	4	5	0	0	0	Ranked 1 and 2
Italy	4	5	0	3	0	Ranked 1 to 3
Bulgaria	5	4	3	0	0	Ranked 1 to 3
Malta	4	5	0	0	0	Road and Transport safety ranked 1, Infrastructure 2, Competition between road and rail N/A, Potential gain for the relevant industries N/A
Lithuania	5	4	3	2	0	Ranked 1-4
Netherlands	3	5	2	0	4	Other: Sustainability Ranked 1 -4
Norway	3	5	2	4	0	
	In relation to logging/forestry: The original increase in permitted length was a result of a desire to reduce the height of the timber transports. The permitted trailer height was restricted to 4 m, and the length increased to 22 m. The length and weight has since been increased to 24 m and 60 t. The weight increase was given to both reduce the number of transport, this reducing the likelihood of accidents involving timber transports, and to reduce the transportation costs for a struggling pulp and paper industry. The extra permitted length for vehicle transports is mainly aimed at reducing the transportation costs.					
Austria	Infrastructure and Road and transport safety both "1" Other: impact on traffic flows "3" Competition between road and rail (and sea)" and potential gain for the relevant industries both "4" -additional construction costs -negative impact on traffic flows -negative impact on road safety -negative impact on rail and combined transport (distortion of competition) -negative impact on environment					

Slovenia	Infrastructure and road and transport safety consideres, not rated
Germany	Checked: Infrastructure, Road and Transport safety and Competition between road and rail The permit of heavier vehicles than 40 tons (44 tons in intermodal traffic) is not being considered.
United Kingdom	All aspects would need to be considered and are likely to be of equal importance. The issues of permitting proposed longer and heavier vehicles were considered and was rejected by DfT, based on a TRL report on 'Longer Heavier Goods Vehicles' in 2008.
Sweden	Difficult to answer in an objective way
Poland	Checked: Road and transport safety and Infrastructure

3.3 Does your infrastructure, in its current state, permit longer and/or heavier vehicles and vehicle combinations?
[ ] YES [ ] NO

Austria	No
Slovenia	No
Iceland	No
Estonia	YES and NO
Finland	Yes
Germany	Not in general
Slovakia	No
Luxembourg	Yes
Poland	No
Italy	Yes
Bulgaria	Yes
Malta	No
Lithuania	Yes
Netherlands	Yes
United Kingdom	No
Sweden	Yes
Norway	Yes

3.4 Will specific challenges in your country/parts of your country make it difficult to permit longer/heavier vehicles?

[ ] Geographical conditions [ ] Topography [ ] Road curvature
[ ] Climatic conditions [ ] Bearing capacity of bridges [ ] Bearing capacity of the roads
[ ] Other:

	Geo-graphical conditions	Topo-graphy	Road curvature	Climatic conditions	Bearing capacity of bridges	Bearing capacity of roads	Other
Austria	1	1	1	1	1	0	Limitation of road infrastructure (lay-bys, parking areas, safety recesses etc.)
Slovenia	1	0	1	0	1	0	0
Iceland	0	1	1	1	1	1	0
Estonia	0	0	0	0	1	1	0
Finland							
Germany	0	1	1	0	0	0	/
Slovakia	0	0	1	0	1	1	0
Luxembourg	0	0	1	0	1	0	0
Poland	0	0	1	1	1	1	0
Italy	0	1	1	0	1	1	0
Bulgaria	0	1	1	1	1	1	0
Malta	0	1	1	0	1	1	0
Lithuania	0	0	1	1	1	1	0
Netherlands	0	0	1	0	0	0	0
United Kingdom	0	0	1	0	0	0	road issues relating to longer vehicles – overtaking by other vehicles, turning, braking distance, parking
Sweden							
Norway	1	1	1	1	1	1	0
Total	3	7	14	6	12	9	

If studies have been performed or reports have been made on these challenges, please provide link or reference to studies/reports:

Austria	- Austrian Road Safety Board (KfV): "Long and Heavy Vehicles (LHV)" 2009 - Austrian Road Safety Board (KfV): "Gigaliner with 44 tonnes and 48 tonnes" 2012 - Austrian Road Safety Board (KfV): "Safety Aspect Gigaliner" - Käfer: "The Gigaliner Impacts on Combined Transport in Austria" 2009 and 2013
Slovenia	With respect to structural safety of bridges, a report on the procedures for safety assessment of existing bridges was prepared for the Slovene NRA (Žnidarič, 2010) (Žnidarič, A. (2010). Implementation of methodology for defining and controlling safety of bridges on national road network. ZAG Ljubljana, in Slovene only).
Germany	GLAESER et al. (2006): BASt Report: Effects of new vehicle concepts on the infrastructure of the federal trunk road network. (s. http://www.bast.de/cln_030/nn_42642/DE/Publikationen/Download-Berichte/unterseiten/60-tonner.html and http://www.bast.de/cln_030/nn_42642/DE/Publikationen/Download-Berichte/downloads/60-tonner-englisch-kurz.html) GLAESER et al. (2008): 2nd BASt Report: Effects of new vehicle concepts.
Malta	Studies on bearing capacity of bridges ongoing
Netherlands	1. http://kennisplein.intranet.minienm.nl/documenten/438528 2. http://kennisplein.intranet.minienm.nl/documenten/428919 3. http://kennisplein.intranet.minienm.nl/documenten/428918 4. http://kennisplein.intranet.minienm.nl/documenten/400919 5. http://kennisplein.intranet.minienm.nl/documenten/399374 6. http://kennisplein.intranet.minienm.nl/documenten/399381
UK	http://www.trl.co.uk/online_store/reports_publications/trl_reports/cat_vehicle_engineering/report_Longer_and/or_Longer_and_Heavier_Goods_Vehicles_LHVs___a_Study_of_the_Effects_if_Permitted_in_the_UK_Final_Report.htm
Sweden	(see separate document)
Norway	SINTEF, 2004, Revision of Handbook 017 Road and Street design, dimensioning conditions http://sintef.net/upload/A04305_Revisjon%20av%20H%C3%A5ndbok%20017.pdf (only available in Norwegian)

3.5 Article 7 of Directive 96/53/EC states that the Directive shall not preclude the application of road traffic provisions in force in each Member State which permit the weight and/or dimensions of vehicles on certain roads or civil engineering structures to be limited, irrespective of the State of registration of such vehicles. To which extent have you made use of the possibility to limit the weights and dimensions of vehicles on specific roads as given in article 7 of the Directive?

	Many limitations	Some limitations	Limitations in exceptional cases only	No limitations
Axle load				
Gross vehicle weight				
Vehicle height				
Vehicle width				
Vehicle length				

	Axle load	**GVW**	**Height**	**Width**	**Length**
Austria	Exceptionally	Exceptionally	Some	Some	Some
Slovenia	Some	Some	Some	Some	Some
Iceland	Many	Many	Some	Exceptionally	Exceptionally
Estonia	Exceptionally	Some	Some	Exceptionally	None
Slovakia	Many	Many	Many	Many	None
Luxembourg	Some	Some	Some	Some	Some
Italy	Many	Many	Some	Some	Some
Bulgaria	Some	Some	Some	Exceptionally	Exceptionally
Malta	None	Some	Some	None	None
Lithuania	Some	Some	Some	Some	Some
Norway [1)]	Many	Many	Many	Many	Many
Sweden	Some	Some	/	/	/
Finland	/	/	/	/	/
Germany	/	/	/	/	/
Poland [2)]	/	/	/	/	/
Netherlands [3)]	/	/	/	/	/
United Kingdom [4)]	/	/	/	/	/

1) The Norwegian road network is divided into classes with regards to permitted axle loads, GVW and vehicle length. The lower classes are commonly used on secondary county roads and local/municipality roads.

2) Axle load 11,5 t, GVW 40 t, height 4,0 m, Width 2,55 m, length 18,75 m

3) Sorry, we do not understand the question

4) Local Highways Authorities are empowered to impose restrictions to protect the infrastructure – such as local weight restrictions.

3.6 Transport of 45-foot containers

a) Which weights and dimensions are permitted for the transport of 45-foot containers in your current legislation?

Total length	___	m
Distance from king-pin to rear of semi-trailer	___	m
Height	___	m
Total weight	___	t

b) Do you permit the transport of 45-foot containers with side loaders?

[ ] NO

[ ] YES, with a total length of up to ____ m

	Total length (m)	Distance from king-pin to rear of semi-trailer (m)	Height (m)	Total weight (t)	With side-loaders	Length with side-loaders
Austria	/	/	/	44	No	
Slovenia	16,50	12,00	4,20	44	blank!	
Iceland	18,75	(2,04max+11,26) = 13,30	4,20	40	Yes	up to 13,3 m
Estonia	18	-	4,3	40	No	
Finland	18	/	4,4 / 4	48	Yes	18
Germany	16,50	12,00	4	40 (44)	blank!	
Slovakia	16,65	/	4,00 + 2 %	44	No	
Luxembourg	/	/	/	/	blank!	
Poland	No special regulations	/	/	/	No	
Italy	18,75 m + 12 %	12,00	4,30	44	No	
Bulgaria	/	/	/	/	blank!	
Malta	The max permitted is 40 ft so this is not applicable	/	/	/	blank!	
Lithuania	16,50	2,04 m (?)	4 m	44 t	No	
Netherlands	17,30	96/53	93/53	50	No	
United Kingdom	16,5	12	not specified	44	No	
Sweden	24	not regulated	not regulated	60	Yes	up to 24 m (not regulated)
Norway	17,5 m (same for all articulated	> 12,00 m	No limit	No special regulati	No	

	vehicles)			ons (max. 50 t)		

3.7 Do you permit EMS 60 t on your roads?

[ ] YES

- [ ] EMS operate temporarily on our roads as a trial
- [ ] EMS operation on our roads is permitted by national regulations
- [ ] Other, please specify

[ ] NO

- [ ] This option is not being considered
- [ ] This option is being considered
- [ ] Other, please specify

If YES, please answer questions **3.8** to **3.11**. If NO, skip to question **3.12**.

Country	
Netherlands	YES: Other
Finland	YES: EMS operation on our roads is permitted by national regulations
Sweden	YES: EMS operation on our roads is permitted by national regulations
Norway	YES: EMS operate temporarily on our roads as a trial (as of 2014 on a permanent basis)
Poland	NO: It is possible on special conditions
Italy	NO: Under specific authorisation only
Austria	NO: The option is not being considered
Iceland	NO The option is not being considered
Estonia	NO: The option is not being considered
Germany	This option is not being considered
Slovakia	This option is not being considered
Malta	This option is not being considered
Lithuania	This option is not being considered
Slovenia	/
Luxembourg	/
Bulgaria	/
United Kingdom	/

3.8 What were the (most important) reasons for permitting EMS to operate on your roads? Please rate the factors listed below in decreasing order.

[ ] Infrastructure
[ ] Road and transport safety
[ ] Competition between road and rail (and sea)
[ ] Potential reductions in CO_2 and NO_X emissions
[ ] Potential reductions in road noise and dust
[ ] Other:

Comments

Netherlands	Ranked: 1: Potential reductions in CO2 and NOX emissions 2: Decreasing number of trucks for a better traffic flow 3: impulse (incentive?) for trailer manufacturers
Finland	Longer and heavier vehicles were already allowed in Finland when we joined European Union. EMS is the way to make vehicles according to 96/53/EC
Sweden	Difficult to answer objectively
Norway	In decreasing order: Road and transport safety, Potential emissions reductions, Potential reductions in noise and dust, Infrastructure, Competition between road and rail/sea

3.9 Are EMS limited to given parts of the road network?

[ ] EMS are permitted on all roads
[ ] EMS are permitted on a limited road network only

Comments

Netherlands	Limited road network: Digital map: www.rdw-ontheffingen-lzv.nl
Finland	Blank
Sweden	All roads
Norway	Limited road network: EMS are only allowed on a main network made up of selected transport corridors, where the bridges have sufficient carrying capacity and the length does not cause problems with accessibility. Some routes are limited to 50 tonnes. In addition, businesses can apply for so-called “connecting routes” with a length of up to 17 km leading from the main corridors to their facilities or terminals.

3.10 Have studies been performed or reports made on the use of EMS in your country?
[ ] YES [ ] NO

If YES, which factors are described / evaluated?
[ ] Infrastructure
[ ] Road and transport safety
[ ] Competition between road and rail (and sea)
[ ] Potential reductions in CO_2 and NO_X emissions

Please provide links or references:

Finland	Yes, but no link
Netherlands	1. http://kennisplein.intranet.minienm.nl/documenten/438528 2. http://kennisplein.intranet.minienm.nl/documenten/428919 3. http://kennisplein.intranet.minienm.nl/documenten/428918 4. http://kennisplein.intranet.minienm.nl/documenten/400919 5. http://kennisplein.intranet.minienm.nl/documenten/399374 6. http://kennisplein.intranet.minienm.nl/documenten/399381
Sweden	(see separate document)
Norway	https://www.toi.no/getfile.php/Publikasjoner/T%C3%98I%20rapporter/2014/1319-2014/summary%20FINAL.pdf

3.11 Impacts of EMS on the road infrastructure
a) Do you expect the use of EMS to affect the maintenance costs and life expectancy of your bridges?
[ ] YES [ ] NO

If YES, please explain

Netherlands	No
Finland	Blank
Sweden	No
Norway	No

b) Do you foresee other complications relating to EMS?
[ ] YES [ ] NO

If YES, please explain:

Netherlands	Parking areas
Finland	Blank
Sweden	No (limited additional weight)
Norway	No, not as long as their use is limited to suitable routes

3.12 Other on-going projects (other than EMS)
Are other projects currently taking place or being planned in which greater weights and/or dimensions, both in terms of 96/53/EC and national regulations, are permitted?
[ ] YES [ ] NO

YES: Estonia, Germany, UK, Sweden, (Finland indicates "no" but describes a project which is technically within the parameters of EMS)

If YES, please indicate the type of transport, dimensions, weights and time frame for the project.

[ ] Vehicle combinations (other than EMS) > 18.75m / 40t

Type of transport	Length (m)	Width (m)	Height (m)	Total weight (t)	Time frame

Comments

	Type of transport	Length	Width	Height	Weight	Time frame
Estonia	Trucks, 6-axles, double tires	18,75	2,55	4,0	46	All year around, expected to start after 2 year
	Trucks, 7-axles, double tires	18,75	2,55	4,0	52	
Finland	25.25m / 60 t are not limits for EMS. There is one on-going 5 trial with one DUO2-combination used in container transportation.	31 m				Ongoing 5-year trial
Germany	Type of transport: Lang-Lkw (longer truck combinations)	17,8	2,55	4,00	40/44	until 31.12.2016
		25,25	2,55	4,00	40/44	
UK	The Longer Semi-trailer Trial is a Department for Transport permits a derogation of length. https://www.gov.uk/government/policies/providing-effective-regulation-of-freight-transport/supporting-pages/trialling-longer-hgv-semi-trailers	Semi-trailer 14.6, total 17.5			44	10 years from 2012
		Semi-trailer 15.65, total 18.55			44	
Sweden	HCT, High Capacity Transports, a research and demonstration programme on long and heavy vehicles on part of the road network is ongoing:					
	Forestry / logging	30			90	
		24			70	
	Grouped goods	32			80	

4. *Other national regulations*

4.1 Pendulum axles have independent suspension which allows the tyre to tilt in order to adjust to the uneven road, thus distributing the tyre pressures on a larger surface. Do you have any special regulations permitting greater axle loading for such axles?

[ ] No special regulations
[ ] Increased axle load for abnormal transports
[ ] Increased axle load for normal transports
[ ] Increased axle load for both normal and abnormal transports

Comments

	Regulations?	Comments
Austria	No special regulations	
Slovenia	No special regulations	Study has been done, it should be implemented…
Iceland	No special regulations	
Estonia	No special regulations	
Finland	Increased axle load for abnormal transports	Special permits needed
Germany	No special regulations	
Slovakia	No special regulations	
Luxembourg	No special regulations	
Poland	No special regulations	
Italy	Increased axle load for both normal and abnormal transports	
Bulgaria	No special regulations	
Malta	No special regulations	
Lithuania	No special regulations	
Netherlands	Increased axle load for abnormal transports	National Pendulum axle (pendelas) for indivisible loads (abnormal loads) 8 ton per axle- 16 ton per line
United Kingdom	No special regulations	
Sweden	No special regulations	
Norway	No special regulations	

4.2 Which axle loads do you permit in national transport for single axles with:
Single tyres:
Super single tyres:
Twin tyres:

	Singe tyre	Super singe tyre	Twin tyre
Austria	10 t (11.5 for driving axle)	10 t (11.5 for driving axle)	10 t (11.5 for driving axle)
Slovenia	10/11,5	10/11,5	10/11,5
Iceland	10 t, driving axle 11.5 t	10 t, driving axle 11.5 t	10 t, driving axle 11.5 t
Estonia	10	10	10
Finland	10 t	10 t	10 t/11,5 t
Germany	10/11.5 (powered wheels)	10/11.5 (powered wheels)	10/11.5 (powered wheels)
Slovakia	blank!	blank!	blank!
Luxembourg	12 to (?)	blank!	12 to (?)
Poland	blank!	blank!	blank!
Italy	12T and 8 kg/cm2	12 T and 8 kg/cm2	12T and 8 kg/cm2
Bulgaria	10 t/axle	blank!	11,5 t/axle
Malta	11,5 t	Regulations do not specify this	11,5 t
Lithuania	10	10	10
Netherlands	blank!	blank!	blank!
United Kingdom	10 t	10 t	10 t
Sweden	10 t	10 t	10 t
Norway	10 t, 11.5 t driving axle load	10 t, 11.5 t driving axle load	10 t, 11.5 t driving axle load

4.3 Have studies been conducted in your country that examine the differences in impact on the road/road structure of single, super single and twin tyres?
[ ] YES [ ] NO
If YES, please provide links or references:

Germany	COST 334 (s. http://www.fehrl.org/?m=32&mode=download&id_file=8068)
Netherlands	Yes, but no link
UK	NO, but UK did however contribute to the COST 334 sudy
Norway	Better use of the carrying capacity of bridges – NPRA Directorate of Public Roads publication no. 75 1994 (only available in Norwegian)

4.4 Do you have any special measures during the spring thaw?

[ ] No measures

[ ] Reduced axle loads, from _____ tonnes to _____ tonnes

[ ] Reduced total weight, from _____ tonnes to _____ tonnes

[ ] Reduced speed limit for heavy vehicles

[ ] Other:

	Reduced axle loads	Reduced total weight	Reduced speed limit
Slovenia	Depends on the area. Normally we reduced axel loads from 10t to 8t or from 8t to 6t. Limitations are public announced for the determinate time. Within the regulation, media and signs (additional panel).. They should react positive, restriction is to protect the road network. (How do the restrictions affect the efficiency of the transport of heavy goods?) They need to load less, therefore, cost per km should be higher. Reactions are not very positive, but they are trying to respect.	NO	NO
Iceland	10 to 7 tonnes, from 7 tonnes to 5 tonnes, down to 2 tonnes	40 to 27 tonnes	YES
Estonia	YES	44 to 8 tonnes, Usually registered mass of vehicles are reduced to 8 tonnes with road signs on certain roads. Sometimes actual weight reduced to 8 tonnes with road signs on certain roads.	
Finland	YES	12 tn is most common restriction for vehicle. (trailer is one vehicle here). Announced by	NO

		traffic signs. 1000-2000 km yearly.	
Poland	From 11,5 t to 8 t	NO	NO
Lithuania	Axle loads reduced In some cases in the very weak asphalt and gravel surface.	to 10 tonnes.	NO
Sweden		From 60 to 12 (or sometimes 4) tonnes on some peripheral parts of the capillary network. Relevant on some peripheral parts of the capillary road network: For industry and particularly for the forest industry with many heavy transports, it is important to decrease the bearing capacity restrictions. After 2007, when a new, more restrained approach to temporary reductions was adopted, the number of kilometres of road with bearing capacity constraints drastically decreased. But that means that the maintenance costs for the roads will increase – but this increase is estimated to be socio-economically motivated.	
Norway	From 10 or 8 tonnes to 8, 7 or 6 tonnes (On specific county and local roads only. Exemptions can be made for easily spoiled goods and public transportation.) (On the other hand, on many roads with a general permitted axle load of 8 tonnes, the permitted axle load is increased from 8 to 10 tonnes on frozen roads. The increase is subject to local announcement.)		
Bulgaria	Blank		

Austria	No measures
Germany	No measures
Slovakia	No measures
Luxembourg	No measures
Italy	No measures
Netherlands	No measures
United Kingdom	No measures
Malta	No measures (no spring thaw)

4.5 Traffic restrictions

Do your national regulations contain traffic restrictions for heavy goods vehicles?

[ ] YES [ ] NO

	Yes/No
Austria	YES
Slovenia	YES
Germany	YES
Slovakia	YES
Luxembourg	YES
Poland	YES
Italy	YES
Bulgaria	YES
Netherlands	YES
Iceland	NO
Estonia	NO
Finland	NO
Malta	NO
Lithuania	NO
United Kingdom	NO [1)]
Sweden	NO
Norway	NO

[1)] Local Highways Authorities do this for their local areas

If YES, please answer questions **4.6** to **4.8**. If NO, skip to question **5.1**.

4.6 Application of traffic restrictions

a) For which periods do the restrictions apply?

[ ] Weekends [ ] Holidays [ ] Tourist season [ ] Other:

b) Are the dates consistent with your neighbouring countries?

[ ] YES [ ] NO

c) Do the restrictions apply to parallel roads for transit?
[ ] YES [ ] NO

4.8 Do the traffic restrictions noticeably affect the efficiency of the road transport?
[ ] YES [ ] NO

Comments

	Type of restrictions	Dates consistent with neighbouring countries	Restrictions applicable to parallel transit roads	Restrictions noticeably affect transport efficiency	Comments on transport efficiency
Austria	Weekends, holidays, other (night)	YES	YES	YES	Positive impacts especially on road safety, noise and traffic flow
Slovenia	Weekends, holidays, tourist season	YES	YES	YES	RGD du 19 juillet 1997 relatif aux limitations de la circulation des poids lourds les dimanches et jours fériés.
Germany	Holidays, tourist season	NO	NO	Blank	
Slovakia	Weekends, tourist season	YES	YES	NO	
Luxembourg	Weekends, holidays, other (transit)	YES	YES	YES	
Poland	Weekends, holidays	NO	NO	YES	
Italy	Weekends, holidays	NO	YES	YES	
Bulgaria	Weekends, holidays, tourist season, other (high temperatures)	YES	YES	NO	
Netherlands	Restrictions, not specified	NO, because of driving bans in Germany	YES	NO	No (hardly) Environmental zones, maximum weight on some bridges (but I suppose you were not looking for that)

4.7 For which reasons were the traffic restrictions implemented?
[ ] Road safety
[ ] To reduce road noise
[ ] To reduce CO_2 and NO_x emissions
[ ] Other:

	Road safety	Noise	Emissions	Other
Austria	1	1	1	
Slovenia	1	0	0	Traffic flow
Germany	1	0	0	To reduce traffic jams during holiday / tourist season

Slovakia	1	0	0	
Luxembourg	1	0	0	Sunday restrictions in F and D, holiday weekdays in F and D
Poland	1	0	0	
Italy	1	0	0	
Bulgaria	1	0	0	Prevention of demolishing the road pavement
Netherlands	0	1	1	fragile construction of bridges

5. *Inspection and weight checks of heavy vehicles*

5.1 Average percentage of overloaded vehicles?

_____ %

5.2 How is the data on overloaded vehicles collected?

[ ] WIM

[ ] On-board weighing systems

[ ] Manual weighing

[ ] Other:

		Data collected by		
	% overloaded	**WIM**	**On-board systems**	**Manual weighing**
Austria	/ (Police with no permanent checkpoints, no reliable statistic)	0	0	1
Slovenia	10,8 % on Motorways, 18,2 % on State roads	1	0	1
Iceland	8	0	0	1
Estonia	10,8 %	1	0	1
Finland	10	1	0	1
Germany	/	1	0	1
Slovakia	2 % (motorways 2012), 2,5% (state roads 2012)	0	0	1
Luxembourg	/	0	0	1
Poland	8	1	0	0
Italy	5	0	0	1
Bulgaria	6	0	0	1
Malta	48	0	0	1
Lithuania	25 % (from WIM)	1	1	1
Netherlands	13-15 %	1	0	0
United Kingdom	67 (this is the percentage of overloaded vehicle which we weighed as oppose to all vehicles on the road. We adopt a targeted approach to weighing)	1	0	1
Sweden [1)]	17	1 [2)]	0	0
Norway	11 %	0	0	1

1) BWIM data collected annually from 16 national test sites (since 2004):
   - The average for 2013 is that approximately 17% of vehicles heavier than 35 tons, filtered by 5%, are overloaded at the national measurement sites (varies from 8-32%).

- The average for 2012 is that approximately 17% of vehicles heavier than 35 tons, filtered by 5%, are overloaded at the national measurement sites (varies from 8-31%).
- The average for 2011 is that 16% of vehicles heavier than 35 tons, filtered by 5%, are overloaded at the national measurement sites (varies from 9-32%).

Annual reports on BWIM measurements (until 2009):
http://publikationswebbutik.vv.se/shopping/itemlist____3486.aspx

2) BWIM, Bridge-Weigh-In-Motion

5.3 Who can be responsible for the offence?

[ ] Driver [ ] Legal person [ ] Sole proprietor [ ] Other:

	Driver	Legal person	Sole proprietor	Other
Austria	1	0	0	loader, haulage undertaking
Slovenia	1	1	1	person who load cargo
Iceland	1	0	0	0
Estonia	1	0	0	0
Finland	1	0	0	0
Germany	1	1	1	0
Slovakia	1	1	0	0
Luxembourg	1	0	0	Tpt company holder
Poland	1	0	0	0
Italy	1	0	1	Goods loader
Bulgaria	1	0	0	0
Malta	1	0	0	0
Lithuania	1	1	1	0
Netherlands	1	0	0	0
United Kingdom	1	0	0	Vehicle operator which could be a limited company, self employed, partner etc.
Sweden	1	0	0	0
Norway	0	0	0	Owner/lease holder

5.4 Do you have a register of overloaded vehicles for a longer period of time?
[ ] YES [ ] NO

	Yes/No
Austria	NO
Slovenia	YES
Iceland	YES
Estonia	NO
Finland	NO
Germany	NO
Slovakia	NO
Luxembourg	NO
Poland	NO
Italy	YES
Bulgaria	YES
Malta	NO
Lithuania	YES
Netherlands	YES
United Kingdom [1)]	YES
Sweden	NO
Norway	YES

[1)] We keep a record of all enforcement action taken against operators not exclusively for overloading.

If YES, what is the information in this register used for?
[ ] Statistical purposes
[ ] Identifying repeat offenders
[ ] Increased fines or fees for repeat offenders
[ ] Withdrawal of community licenses
[ ] Other:

	Statistics	Identifying repeat offenders	Increase fines for repeat offenders	Withdraw community licenses	Other
Slovenia	1	0	0	0	
Iceland	1	1	0	1	
Italy	1	0	0	0	
Bulgaria	0	1	1	0	
Lithuania	1	0	0	0	
Netherlands	1	1	0	0	
United Kingdom	1	1	0	0	Additional action can be taken against an operator's licence other than court/financial penalties. This is more likely to happen

					to repeat offenders.
Norway	0	1	0	1	

5.5 Do you have any special programmes for reducing the number of overloaded vehicles?
[ ] YES [ ] NO

If YES, please provide link or reference to studies, reports or description of this programme

	Yes/No
Austria	No
Slovenia	blank!
Iceland	No
Estonia	No
Finland	No
Germany	No
Slovakia	No
Luxembourg	No
Italy	No
Bulgaria	No
Malta	No
Lithuania	No
United Kingdom	No
Sweden	No
Norway	No
Poland	Yes
Netherlands	Yes: Source approach (for example sugar factory where overloaded trucks with sugar beets do not get paid; gentlemen's agreement within a market segment like transport of sand and gravel)

5.6 In your country, who is allowed to carry out weight checks of heavy vehicles?
[ ] Police [ ] Road Directorate [ ] Private company [ ] Other:

	Police	Road Directorate	Private company	Other
Austria	1	0	0	0
Slovenia	1	0	1	0
Iceland	1	1	0	0
Estonia	1	0	0	0
Finland	1	1	0	0
Germany	1	1 [1)]	0	0
Slovakia	1	1	0	0
Luxembourg	1	0	0	Customs
Poland	0	0	0	Other
Italy	1	0	0	0

Bulgaria	1	1	0	0
Malta	0	1	0	0
Lithuania	0	1	0	0
Netherlands	1	0	0	Road Inspection
United Kingdom	1	1	0	0
Sweden	1	0	0	0
Norway	1	1	0	0
	14	9	1	

[1)] The Road Directorate may carry out weight checks with assistance of police only.

5.7 What do you inspect?

[ ] Axle loads
[ ] Dimensions (length, height, width)
[ ] Technical condition of the vehicle
[ ] Gross vehicle weight
[ ] Tyre condition (pattern, pressure, size)
[ ] Other:
[ ] Appropriate loading
[ ] Cargo securing

	Axle loads	GVW	Appropriate loading	Dimensions	Tyre condition	Cargo securing	Technical condition	Other:
Austria	1	1	1	0	1	1	1	0
Slovenia [1)]	1	1	1	1	1	1	1	0
Iceland	1	1	1	1	0	1	0	0
Estonia	1	1	1	1	1	1	1	0
Finland	1	1	1	1	1	1	1	0
Germany	1	1	0	1	1	1	1	0
Slovakia [2)]	1	1	1	1	1	1	1	0
Luxembourg	1	1	1	1	1	1	1	0
Poland	1	1	1	1	1	0	1	0
Italy	1	1	1	1	1	1	1	0
Bulgaria	1	1	0	1	0	0	0	0
Malta	0	1	1	0	1	1	1	0
Lithuania	1	1	1	1	0	1	0	0
Netherlands	1	1	0	0	0	0	1	0
United Kingdom	1	1	1	1	1	1	1	we check all aspects of vehicle/load condition and enforce/check drivers hours regulations
Sweden	1	1	1	1	1	1	1	0
Norway	1	1	0	1	1	1	1	0
Total	16	17	13	14	13	14	14	1

1) In case of Company Control: axle loads, gross vehicle weight and Dimensions

2) All of abovementioned parameters are checked but not all by each check

5.8 Does your inspection authority use pre-selection systems for weight checks?
[ ] No pre-selection
[ ] Pre-selection by WIM
[ ] Pre-selection by on-board weighing systems
[ ] Pre-selection by other measures:

	No pre-selection	WIM	On-board systems	Other
Austria	1	0	0	0
Slovenia	0	1	0	0
Iceland	1	0	0	0
Estonia	1	0	0	0
Finland	1	0	0	0
Germany	0	1	0	0
Slovakia	0	0	0	In selected sections of motorways and state roads we have in pavement built in scales
Luxembourg	1	0	0	0
Poland	0	1	0	0
Italy	1	0	0	0
Bulgaria	0	0	0	1
Malta	1	0	0	0
Lithuania	0	1	0	0
Netherlands	0	1	0	0
United Kingdom	0	1	0	1 We keep a record of all enforcement action taken against operators, not exclusively for overloading
Sweden	1	0	0	0
Norway	1	0	0	0

5.9 Percentage of vehicles equipped with on-board weighing systems today
[ ] No data [ ] < 10 % [ ] 10 – 25 % [ ] 26 – 50 % [ ] 50 – 75 %
[ ] 75 – 90 % [ ] > 90 %

Finland less than 10 %, The Netherlands “No data, but estimation 10-25 %”, the rest “no data”.

5.10 Have studies been performed on the effect of overloaded vehicles on the infrastructure?
[ ] YES [ ] NO

If YES, please provide link or reference to studies

Slovenia	No link available
Iceland	Icelandic Road and Coastal Administration

Germany	No link
Netherlands	Only in Dutch. Will be send with Wetransfer.

6. *Heavy vehicles safety*

6.1 Share of traffic accidents involving heavy vehicles with a permitted total weight of 3 500 kg or above

Total share of heavy vehicle involvement in accidents ___ %
Fatal ___ %
Injury (all injuries) ___ %
Material damage only ___ %

	Total share	Fatal	Injury	Material damage	Comments
Austria	17,2	36,84	16,56	no data	Total share: 17,2 – share of accidents on motorways with personal injuries) Injury all injuries) – share of injured persons by accidents involving trucks
Slovenia	total number: 2547	total number: 22	total number: 482	total number 2043	
Iceland	10,1	20,1	8,1	10,3	
Estonia	7	21	7	no data	comment: (% of accidents with at least one vehicle >3,5t)
Germany	6	16,1	5,3	8,1	Material damage in the narrow sense: are accidents whose cause of accident is an irregularity or an offence concerning participation in road traffic. At the same time the motor vehicle has to be towed away from the place of accident because of a damage (motor vehicle not ready to drive). This includes accidents under the influence of intoxicating substances. With full details recorded are all other accidents with material damage where a road user involved was under the influence of intoxicating substances (other accidents under the influence of alcohol or other intoxicating substances). (all other accidents involving material damage are only numerically

					recorded by the locality of the accidents (in town/village, out of town/village, on motorways)
Slovakia	11,54	blank!	blank!	blank!	Remark: Figure for 2012, for other lines data in required distribution are not at disposal
Poland	7	9,4	7	blank!	
Italy	9,8	7,0	4,4	/	
Malta	10,78	0,31	10,47	Data not available	Note: Statistics are only available for heavy vehicles involved in accidents with casualties. Data as a % of all accidents is not available. The % are given over a year period between October 2012 – October 2013.
Netherlands	Unknown	12 % (Average 2006–2012)	4	Unknown	
United Kingdom		15	4	/	We are unable to answer the first or last part of this question as our data only contains injury accidents. The only source which we're aware of to answer the other questions would be insurance data, which we do not have access to.
Sweden	blank!	20	blank!	blank!	For injuries involving HV the statistics is incomplete due to the fact that there is a classification for unknown vehicle mass, including foreign vehicles, which the registry do not recognize. Since 1999 the police no longer register accidents with only material damage/damage to property (accident with vehicle damage, but no injuries).
Luxembourg	(we don't know the share, but we have the exact number of accidents involving vehicles with a permitted total weight of 3 500 kg or above): 2000: 4 fatal, 64 injury 2001: 6 fatal, 58 injury 2002: 8 fatal, 53 injury 2003: 8 fatal, 36 injury 2004: 6 fatal, 41 injury 2005: 3 fatal, 44 injury 2006: 7 fatal, 47 injury 2007: 5 fatal, 69 injury 2008: 2 fatal, 58 injury				

	2009: 2 fatal, 43 injury 2010: 8 fatal, 55 injury 2011: 3 fatal, 52 injury 2012: 3 fatal, 49 injury
Norway	blank!
Finland	blank!
Bulgaria	blank!
Lithuania	blank!

Link to studies/reports:

Iceland	No link available
Bulgaria	http://www.aci.it/fileadmin/documenti/notizie/Comunicati/Incidenti_2011_-_Rapporto_ACI_ISTAT.pdf
Malta	http://www.nso.gov.mt/statdoc/document_view.aspx?id=3633&backurl=/themes/theme_page.aspx
Netherlands	Source: Ministry of Infrastructure and Environment and accident database COGNOS of the SWOV. Only accessible for insiders.
Sweden	(see separate document)

6.2 Do you have research/reports describing the road safety effects of one or more of the following factors?

[ ] No reports
[ ] Deformation zones
[ ] Blind spots
[ ] Cargo securing
[ ] Tyre condition (tread depth, pattern, pressure, size)
[ ] Poor vehicle maintenance
[ ] Damage to / collapse of steering systems
[ ] Other road safety issues relating to the safety of heavy vehicles

Link/reference to studies/reports:

6.3 Do you have research/reports describing the road safety effects of one or more of the following factors relating to the weights and/or dimensions of heavy vehicles?

[ ] No reports
[ ] Vehicle length
[ ] Vehicle height
[ ] Vehicle width
[ ] Axle loads
[ ] Gross vehicle weight
[ ] (In)appropriate loading
[ ] Other factors relating to the weights/dimensions of

heavy vehicles:

Link/reference to studies/reports:

	AT	SI	IS	EE	FI	DE	SK	LU	PL	IT	BG	MT	LT	NL	UK	SE	NO
Weights and dimensions																	
No reports			x	x	-		x	x	x	x	-	x	x				-
Vehicle length	x				-	x					-			x	x	x	-
Vehicle height					-						-			x			-
Vehicle width					-						-			x			-
Axle loads		x			-	x					-						-
Gross vehicle weight	x	x			-	x					-			x	x		-
Inappropriate loading					-						-						-
Other					-	x					-						-
Other factors																	
No reports			x		-		x	x	x	x	-	x					-
Deformation zones					-						-					x	-
Blind spots		x			-	x					-			x	x	x	-
Cargo securing		x			-						-					x	-
Tyre condition		x			-						-			x		x	-
Vehicle maintenance		x			-						-			x		x	-
Steering systems					-						-					x	-
Other	x	x			-	x					-			x		x	-

Austria	-Austrian Road Safety Board (KfV): "Long and Heavy Vehicles (LHV)" 2009 -Austrian Road Safety Board (KfV): "Gigaliner with 44 tonnes and 48 tonnes" 2012 -Austrian Road Safety Board (KfV): "Safety Aspect Gigaliner"
Slovenia	http://www.avp-rs.si/images/dokumenti/SARK/statistika/Nevarni_odseki_2012.pdf
Germany	Benefit Study on rear underrun protection systems for heavy goods vehicles, BASt, 2013 On-going research project about 'Blind Spots – Conflicts between turning right vehicles and bicyclists'. GLAESER et al. (2006): BASt Report: Effects of new vehicle concepts on the infrastructure of the federal trunk road network. (s. http://www.bast.de/cln_030/nn_42642/DE/Publikationen/Download-Berichte/unterseiten/60-tonner.html and http://www.bast.de/cln_030/nn_42642/DE/Publikationen/Download-Berichte/downloads/60-tonner-englisch-kurz.html) GLAESER et al. (2008): 2nd BASt Report: Effects of new vehicle concepts.
Netherlands	http://www.onderzoeksraad.nl/uploads/investigation-docs/1007/599942c28adbvrachtwagenongevallen-nl-web.pdf http://www.fietsberaad.nl/library/repository/bestanden/notitie%20analyse%20onveiligheid%20vrachtauto's.pdf http://www.swov.nl/rapport/Factsheets/NL/Factsheet_Dodehoekongevallen.pdf

	http://oud.tln.nl/media/5_infra_en_planning/a_artikelen_magazine_infra/t13_2011_26-27_ip_rws_en_tln_over_overbelading.pdf
UK	http://trl.co.uk/online_store/reports_publications/trl_reports/cat_traffic_and_transport_planning/report_safer_aerodynamic_frontal_structures_for_trucks:_final_report.htm http://www.trl.co.uk/online_store/reports_publications/trl_reports/cat_vehicle_engineering/report_Longer_and/or_Longer_and_Heavier_Goods_Vehicles_LHVs___a_Study_of_the_Effects_if_Permitted_in_the_UK_Final_Report.htm
Sweden	n-depth analysis of accidents with heavy goods vehicles - Effects of measures promoting safe heavy goods traffic., Former Swedish Road Administration (Vägverket), http://publikationswebbutik.vv.se/upload/4598/2009_2_in_depth_analysis_of_accidents_with_heavy_goods_vehicles.pdf Correlation between truck combination length and injury risk., Bálint, A., Fagerlind, H., Martinsson, J. Holmqvist, K, Division of Vehicle Safety, Chalmers University of Technology, Sweden http://acrs.org.au/wp-content/uploads/66_Balint_NPR.pdf Also, see separate document
Norway	Institute of Transport Economics, 2010 In-depth study of 130 fatal accidents involving heavy goods vehicles in Norway 2005 - 2008 https://www.toi.no/getfile.php/Publikasjoner/T%C3%98I%20rapporter/2010/1061-2010/1061-2010-nett.pdf (English summary only)

7. *Accessibility of heavy vehicles in winter conditions*

7.1 Is the accessibility for heavy vehicles in winter conditions considered a problem?	YES [ ]	NO [ ]
If so,		
Is this a prioritized issue?	YES [ ]	NO [ ]
Are you actively working to find solutions to these problems?	YES [ ]	NO [ ]

	Considered a problem?	Prioritised issue?	Working on solutions?
Iceland	YES	YES	YES
Finland	YES	YES	YES
Germany	YES	YES	YES
Slovakia	YES	YES	YES
Italy	YES	YES	YES
Sweden	YES	YES	YES
Luxem-bourg	YES	YES	Blank
Norway	YES	YES	YES
Poland	YES	NO	NO
Slovenia	YES	NO	NO

Austria	NO		
Estonia	NO		
Lithuania	NO		
Netherlands	NO		
United Kingdom	NO		
Bulgaria	Blank	Blank	Blank
Malta	Blank (no winter)	Blank (no winter)	Blank (no winter)

7.2 Research – existing research, description of on-going and planned projects

7.2.1 Have studies been performed on the accessibility for heavy vehicles in winter conditions in your country?
[ ] YES [ ] NO

If YES, please provide link or reference to studies

7.2.2 Are other projects currently taking place or being planned which focus on the accessibility for heavy vehicles in winter conditions?
[ ] YES [ ] NO

	Studies	**Other projects**
Estonia	Yes, http://www.mnt.ee/public/Muldkeha_labi kulmumise_ja_kandevoime_seose_uuring _2011_lisadega.pdf	No
Finland	Yes, no link	No
Germany	Yes, A research project on snow tyres is on-going. Focus is put on heavy goods vehicles and on cars. One item is the analysis of the currently required minimum tread depth of 1.6 mm and the question, if a change of this requirement for snow tyres would increase safety significantly. There were some projects in the last years. The most of projects for the winter maintenance had a direct benefit for heavy vehicles. Please see: http://www.bast.de/cln_033/nn_74636/ DE/Forschung/abgeschlossene/fp-abgeschlossen-v5.html	Yes, There are some projects. The most of projects for the winter maintenance have a direct benefit for heavy vehicles. Please see: http://www.bast.de/cln_033/nn_74576/E N/E-Forschungsprojekte/e-laufende/e-fp-laufend-v5.html

	A special project in relating to heavy vehicles is: ROOS et al. (2012): Coping with high traffic volumes on motorways in winter (s. http://bast.opus.hbz-nrw.de/frontdoor.php?source_opus=607&la=de)	
Italy	Yes, VIABILITA' ITALIA http://www.poliziadistato.it/articolo/view/30973/	Yes, http://www.poliziadistato.it/articolo/view/30973/
Sweden	don't know. Samlad lägesrapport om vinterdäck -Redovisning av ett regeringsuppdrag, Former Swedish Road Administration (Vägverket) (2009) http://www.trafikverket.se/PageFiles/28253/samlad_lagesrapport_om_vinterdack_redovisning_av_ett_regeringsuppdrag.pdf Förbättrad tillgängligheten/ framkomligheten i vissa situationer, Former Swedish Road Administration (Vägverket) (2008) See also separate document.	
Norway	Yes, SINTEF, 2009 , Trials with heavy vehicles on inclines http://www.sintef.no/upload/Teknologi_og_samfunn/Veg%20og%20samferdsel/Rapporter/2009/A11476_Fors%C3%B8k%20med%20tunge%20kj%C3%B8ret%C3%B8y%20i%20stigninger.pdf (English summary only)	No
Austria	No	No
Iceland	No	No
Slovakia	No	No
Poland	No	No
Lithuania	No	No
Netherlands	No	No
United Kingdom	No	No
Slovenia		
Luxembourg		
Bulgaria		
Malta		

7.3 Snowfall

Amount of snowfall	% of roads

No data	%
Never	%
In exceptional cases	%
Occasionally	%
Throughout the winter season	%

If YES, please provide link or reference to studies, reports or descriptions of these projects

	No data	Never	Exceptionally	Occasionally	Throughout
Slovenia	http://meteo.arso.gov.si/uploads/probase/www/climate/image/sl/by_variable/snow/mean-seasonal-snow-cover-duration_71-00.png				
Slovakia	There is certain amount of snowfall on all roads during winter (usually November-March)				
Austria	0	0	0	0	100
Iceland				100	
Estonia					100
Finland					100
Germany					
Luxem-bourg					
Poland					
Italy		41	59	21	
Bulgaria	0	0	0	0	100
Malta					
Lithuania					
Netherlands	X				
United Kingdom				100	
Sweden					100 %, We have winter conditions throughout the winter season in all parts of the country. But fewer in the southern part.
Norway					

7.4 Drive axle load
7.4.1 Do you require the axle load of the driving axle(s) not to be less than a given % of the actual total weight of the vehicle/vehicle combination when the vehicle is used in

national transport? [ ] No | [ ] 20 % | [ ] 25 % | [ ] Other: ___ %
7.4.2 Do you enforce this requirement for *national* transport? YES [ ] NO [ ]
7.4.3 Do you enforce this requirement for *international* transport? YES [ ] NO [ ]

7.5 Steering axle load
7.5.1 Do you require the axle load of the steering axle(s) not to be less than a given % of the actual total vehicle weight of the vehicle/vehicle combination when the vehicle is used in *national transport*? [ ] YES [ ] NO

	% required	**Enforced in national transport**	**Enforced in international transport**	**Requirement for % on steering axles**
Austria	25 %	Yes	Yes	No
Slovenia	25 %	No	Yes	No
Iceland	25 %	Yes	Yes	No
Finland	25 %, 18 / 20 % (heavy combinations)	Yes	Yes	Yes
Slovakia	25 %	Yes	Yes	Yes
Italy	20 %, haul ratio 1.45	No	No	No
Bulgaria	25 %			Yes
Lithuania	25 %	Yes	Yes	No
Luxem-bourg	No			No
Poland	No			No
Estonia	No	0	0	No
Germany	No			No
Netherlands		No	No	No
United Kingdom	No	No	No	No
Sweden	No			No
Norway	No	No	No	Yes
Malta				

7.6 Retractable axles
7.6.1 Do you permit the use of retractable axles to help motor vehicles or vehicle combinations move off on slippery ground, and to increase the traction of the tires on these surfaces?
[ ] For lorries
Up to what axle load? _____
Up to what speeds? _____ km/h
[ ] For tractors for semi-trailers
Up to what axle load? _____
Up to what speeds? _____ km/h
[ ] For semi-trailers
Up to what axle load? _____
Up to what speeds? _____ km/h

	Lorries		Tractors		Semi-trailers	
	Speed	Axle load	Speed	Axle load	Speed	Axle load
Austria	30	14,95	30	14,95	-	-
United Kingdom	30	Maximum authorised weight + 30%	30	Maximum authorised weight + 30%	30	Maximum authorised weight + 30%
Norway		No limit, provided the vehicle and its tyres are dimensioned for the relevant axle load		No limit, provided the vehicle and its tyres are dimensioned for the relevant axle load		No limit, provided the vehicle and its tyres are dimensioned for the relevant axle load
Germany	As defined in 97/27/EC	As defined in 97/27/EC	As defined in 97/27/EC	As defined in 97/27/EC	As defined in 97/27/EC	As defined in 97/27/EC
Slovenia						
Iceland						
Estonia						
Finland						
Slovakia						
Luxem-bourg						
Poland						
Italy	Use of retractable axles not permitted	Use of retractable axles not permitted	Use of retractable axles not permitted	Use of retractable axles not permitted	Use of retractable axles not permitted	Use of retractable axles not permitted
Bulgaria						
Malta						
Lithuania						

Nether-lands						
Sweden						

7.7 Snow chains		
7.7.1 Is the use of snow chains permitted?	YES [ ]	NO [ ]
If yes, under which conditions?		

	Permitted?	Conditions
Austria	Yes	On closed snow layer
Slovenia	Yes	During winter conditions.
Iceland	Yes	
Finland	Yes	/
Germany	Yes	The maximum permissible speed for motor vehicles equipped with snow chains shall be at maximum 50 kph, even in the most favourable circumstances.
Slovakia	Yes	When the pavement is covered by continuous layer of snow, ice or ground ice
Luxembourg	Yes	Tout véhicule routier peut être muni de dispositifs antidérapants non incorporés pendant toute l'année en cas de neige ou de verglas ou lorsque le risque de chute de neige ou de formation de verglas existe (Any road vehicle may be equipped with additional non-skid devices throughout the year in case of snow or ice or if there is risk of snow or formation of ice)
Poland	Yes	If snow on road pavement.
Italy	Yes	
Sweden	Yes	Winter conditions
Norway	Yes	If necessary to ensure sufficient traction
United Kingdom	No	Only in conditions where the road would not be damaged.
Estonia	No	
Lithuania	No	
Netherlands	No	
Bulgaria	Blank	
Malta	Blank	

7.7.2 Are vehicles and/or vehicle combinations required to carry snow chains?	YES [ ]	NO [ ]
7.7.3 If yes, does the requirement apply to		
Motor vehicles		
[ ] All motor vehicles		
[ ] Motor vehicles with a permitted total weight over 3 500 kg		
[ ] Motor vehicles with a permitted total weight over 7 500 kg		
[ ] Other:		
Trailers and semi-trailers		
[ ] All trailers and semi-trailers		
[ ] Trailers and semi-trailers with a permitted total weight over 3 500 kg		
[ ] Trailers and semi-trailers with a permitted total weight over 7 500 kg		
[ ] Other		
[ ] *Vehicle combinations*		
7.7.4 Is the requirement related to		
[ ] Specific dates? From _____ to _____		
[ ] Specific driving conditions?		
[ ] Specific roads or areas?		

	Required?	Vehicles	Dates, conditions, areas
Austria	Yes	Motor vehicles > 3.5 t, All trailers, semi-trailers and vehicle combinations in national transport	1 November - 15 April
Slovenia	Yes	All motor vehicles	15 November - 15 March / national transport, specific driving conditions (winter conditions), specific roads / areas (determined by a traffic sign)
Iceland	No		
Finland	Yes	Combination weight > 44t + drive axle mass < 18 % of mass of combination	1 December - 28 February
Germany	Yes	All motor vehicles	Specific conditions (Only if sign with snow chain symbol is shown)
Slovakia	Yes	Motor vehicles > 3.5 t, trailers + semi-trailers > 3.5 t	15 November - 31 March, specific conditions
Poland	Yes	Motor vehicles > 3.5 t	Specific conditions
Italy	Yes	Motor vehicles > 3.5 t	November 15 to April 15, specific conditions and specific roads/areas
Norway	Yes	Motor vehicles > 3.5 t, trailers + semi-trailers > 3.5 t	From 1 November to second Monday after Easter Sunday (Northern Norway 16 October – 30 April), and outside this period if driving conditions make the use of such equipment necessary
Estonia	No		
Luxembourg	No		
Lithuania	No		
Netherlands	No		
United Kingdom	No		
Sweden	No		
Bulgaria	Blank		
Malta	Blank		

7.8 Other technical solutions for improving accessibility in winter conditions		
7.8.1 The *Auto Sock* is a bag of synthetic material to put on tyres to improve their grip on snow, which is easy to use and takes up little space when not in use.		
Are you aware of the existence of such equipment?	YES [ ]	NO [ ]
Do you permit its use for the improvement of accessibility in snowy conditions?	YES [ ]	NO [ ]
Are Auto Socks permitted in place of snow chains?	YES [ ]	NO [ ]
7.8.2 *Sand spreaders* are mounted in front of the drive wheels on trucks and buses. The spreaders are operated by the driver.		
Are you aware of the existence of such equipment?	YES [ ]	NO [ ]
Do you permit its use for the improvement of accessibility in snowy conditions?	YES [ ]	NO [ ]
Are sand spreaders permitted in place of snow chains?	YES [ ]	NO [ ]
7.8.3 *On-spot chains* are automatic chains mounted in a sling by the driving wheels. When activated, the chains are slung underneath the tyres.		
Are you aware of the existence of such equipment?	YES [ ]	NO [ ]
Do you permit its use for the improvement of accessibility in snowy conditions?	YES [ ]	NO [ ]
Are on-spot chains permitted in place of regular snow chains?	YES [ ]	NO [ ]

	Auto sock			Sand spreaders			On-spot chains		
	Aware?	Permit?	Replace snow-chains?	Aware?	Permit?	Replace snow-chains?	Aware?	Permit?	Replace snow-chains?
Austria	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No
Slovenia	Yes	Yes		No			No		
Iceland	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Estonia	Yes	Yes	No	Yes	Yes	No	Yes	No	No
Finland	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Germany	No			Yes	Yes	No	Yes	Yes	No
Slovakia	Yes	Yes	No	Yes	No	No	No	No	No
Italy	Yes	No	No	Yes	No	No	Yes	No	No
Lithuania	No			No			No		
Netherlands	No								
United Kingdom	Yes	Yes		No	Yes		No	Yes	
Sweden	Yes	Yes		Yes	Yes		Yes	Yes	
Norway	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No
Luxembourg									
Poland									
Bulgaria									
Malta									

7.9 Winter tyres
7.9.1 Do you require the use of winter tyres? YES [ ] NO [ ]
If so, is the requirement related to
[ ] Specific dates? From _____ to _____
[ ] Specific driving conditions?
[ ] Specific roads or areas?
7.9.2 What requirements must a tyre fulfil in order to be considered a "winter tyre" in your national legislation?
[ ] Tread depth?
[ ] Tread pattern?
[ ] Shore values?
[ ] Markings (M+S, 3PM etc.)?

	Requirement?	Conditions	Tyre requirements
Austria	Yes	1 November - 15 April	Tread depth 4 mm, markings M+S
Slovenia	Passenger cars only	15 November - 15 March	Tread depth 3 mm, M+S markings
Iceland	Yes	1 November - 15 April, only if conditions make it necessary	Tread depth 3 mm, "rough pattern"
Estonia	No		Tread depth 3 mm, M+S markings
Germany	Yes	Specific driving conditions	Tread depth 1.6 mm, markings
Slovakia	Passenger cars only	15 November - 31 March	M+S markings
Luxembourg	Yes	Specific driving conditions	Markings
Poland	Yes		Markings
Italy	All motor vehicles	November 15 - April 15, Specific driving conditions, specific roads or areas	Markings
Sweden	Motor vehicles > 3 500	1 December -31 March, Specific driving conditions	Tread depth 5 mm, M+S/3PMSF markings
Norway	Yes	15 November - 31 March, Outside the period mentioned, when driving conditions make the use of such equipment necessary	Tread depth + markings
Bulgaria	blank!		
Malta	blank!		
Finland	No		
Lithuania	No		
Netherlands	No		
United Kingdom	No		

7.10 Studded tyres	
7.10.1 Do you permit the use of studded tyres?	YES [ ] NO [ ]
7.10.2 If the use of studded tyres is permitted, is the requirement related to	
[ ] Specific dates? From _____ to _____	
[ ] Specific driving conditions?	
[ ] Specific roads or areas?	

	Permit	Conditions
Iceland	Yes	1 November - 15. April, specific conditions
Estonia	Yes	1 December - 1 March
Finland	Yes	1 November - 31 March
Italy	Yes	November 15 to April 15, only on snow/ice, specific roads/areas
Sweden	Yes	Allowed from 1 October to 15 March, specific conditions
Norway	Yes	1 November to second Monday after Easter Sunday (Northern Norway 16 October – 30 April). Outside the period mentioned when driving conditions make the use of such equipment necessary
Austria	No	
Slovenia	No	
Germany	No	
Slovakia	No	
Luxembourg	No	
Poland	No	
Netherlands	No	
United Kingdom	No	
Bulgaria		
Malta		
Lithuania		

7.11 Other measures
7.11.1 If you do not permit or require the use of snow chains, studded tires etc., what measures do you take to ensure that the accessibility for heavy vehicles does not become a problem in difficult winter conditions?

Slovakia	Removing of snow and ice from pavement by snowplough or snowblower and salting
Sweden	Absence of requirements for winter tires on heavy vehicles is a contributor to a stop in traffic. In 2012 we have got additional knowledge about the problem. The result has been a basis for better understanding and a law concerning winter tires for heavy vehicles on the driving axles has been decided From 7.1: Winter critical roads and spots: We have previously identified 115 so called winter critical stretches and spots and some more such places have been recognized for continued identification. Results of analyses have shown a requirement of extra resources, shorter time limits for stand-by/preparation and using salt instead of sand. This has resulted in additional resources requested by the contractors to ensure the accessibility of these particularly vulnerable

	sections have been included in new contracts. Note, however: The main problem with accessibility for heavy vehicles at these sites does not concern vehicles that are extra-long and/or heavy. Instead, in the cases of problem it's often (a steerability problem for) 2-axle lighter trucks with 3-axle semi-trailers without bogie axle, usually when the center of gravity of the load is far behind or with empty cargo, usually combined with poor or non-winter tires. Sometimes this has resulted in "jackknife" accidents.The result has been a basis for better understanding and a law concerning winter tires for heavy vehicles on the driving axles has been decided
Norway	In addition to tyre and snow chain requirements, some roads are either closed or subject to convoy traffic during the winter season. Other roads may be temporarily closed due to snowstorms or avalanches. For more information on driving in Norway in winter, see the Trucker's Guide to Driving in Norway: http://www.vegvesen.no/_attachment/290611/binary/888656?fast_title=Donna+Diesel+Truckers+guide+%28GB%29.pdf

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Appendix 3: Impact of Single Tyres

Taavi Tõnts, Estonian Road Administration

Single, super single and twin mounted tyres, axle loads and their impact to the infrastructure

Foreword

Economical impact assessment study has shown in 2011y that it is not profitable to strengthen the Estonian road network for all trucks to drive without extra technical restrictions (investment cost 766mln EUR exceeds transport savings from 25 years, at least 5 times). At the moment 52t heavy vehicles, with 6 and more axles, are allowed then pavement is at least 0,5m frozen according to temperature sensors (restricted ca17% of bridges).

Strong pressure from forest industry (neighbour Scandinavia countries allow much higher loads) has prompted us to work out technical requirements how 52t can drive year around on lower class roads. Nearly half of the Estonian lower class roads are week for heavy vehicles because we have a lot of clayey material, gravel roads and also deep and long freezing-thawing conditions.

For working out the new technical requirements for heavy vehicle regulations we followed finally Danish studies and way to put one extra axle (7 axles) for 54t loads. Also it was overviewed the studies about single tire usage risks (see below) because of lower class week roads amount. It was finally decided according to different researches, that using heavy trucks on week roads, it must be used double tires to avoid any kind of damage risk on large municipal and state network.

Since 2015y, according to the Ministry of Economic Affairs and Communications regulations, abnormal transport requirement, in Estonia the timber transport 52t is allowed. The vehicle must have: min 7 axles (48t, 6axles); double tires and GPS[5].

Short single tire study reports overview

1) Leena Korkkiala-Tanttu during phD work Calculation method for permanent deformation of unbound pavement materials has compared the dual wheels and singles at different axle loads and tire pressure on HVS-Nordic test (VTT 2008), showing that contact pressure on pavement increases: from 525 kPa (dual wheels at 600 kPa) to **600 kPa** (dual wheels at 800 kPa) and further to **706 kPa** (single wheels at 800 kPa) it means **+17,7%** increase.

2) J.Pihlajanmäki “Paripyörän ja yksittäispyörän ero tien kuormituksen kannalta”, 2001y, FINNMAP Infra Oy compared twin wheels and super singles on 10-ton axle and found that deformation of asphalt layer was 4,5 times higher, and of unbound layers 2,5 times higher with super-singles (385R22,5) than at standard dual wheels (chart 1).

[5] https://www.riigiteataja.ee/akt/109092015002

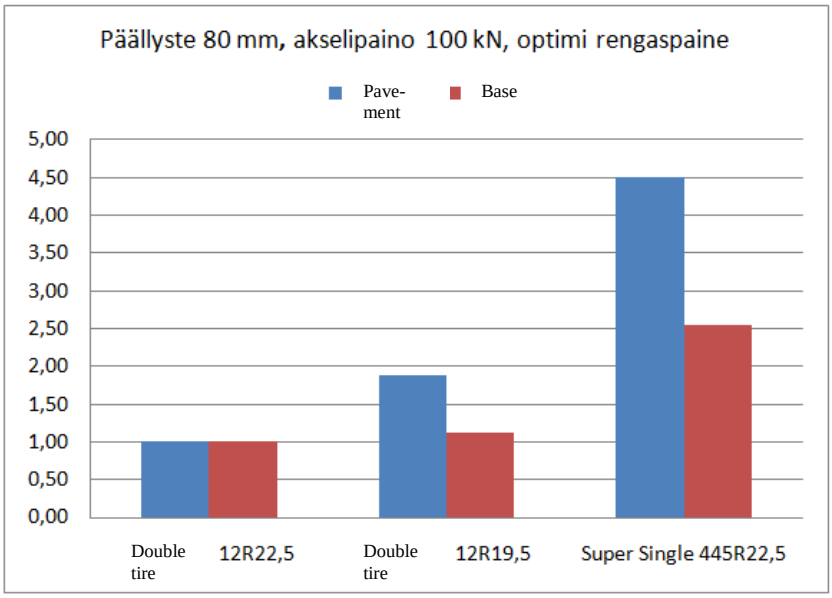


Chart 1 Pavement 80mm, axle load 100kN, optimum tire pressure.

It is known that road rutting is directly linked with contact pressure. But only in few countries, the use of higher pressure and singles has been considered in networks pavement design.

3) The Tyre Configuration Factor (TCF) was the essence of the TG3 research in COST 334 Effects of Wide Single Tyres and Dual Tyres, 2001y. It comprises influences of the: tyre type (single/ wide base/dual); inflation pressure (or differences from the optimum pressure for a given load); footprint width; footprint length; tyre diameter; tyre characteristics regarding dynamic force transmissibility; potential load imbalance (difference in load between the tyres of a dual tyre assembly); and influences from yet unknown factors (chart 2).

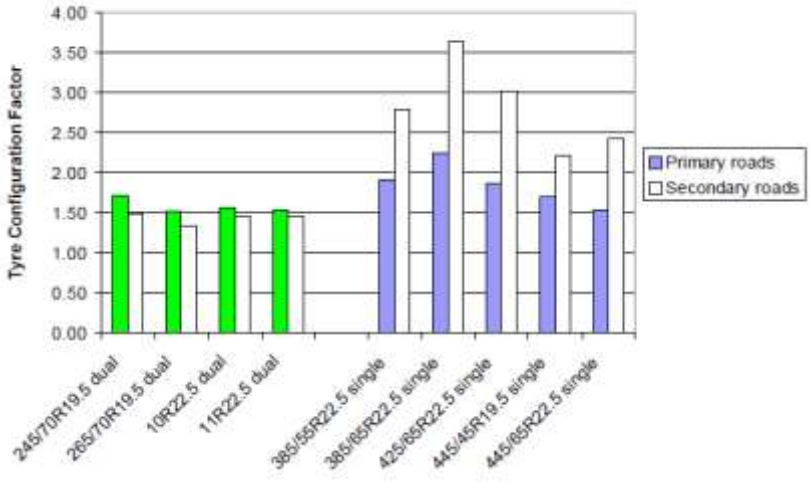
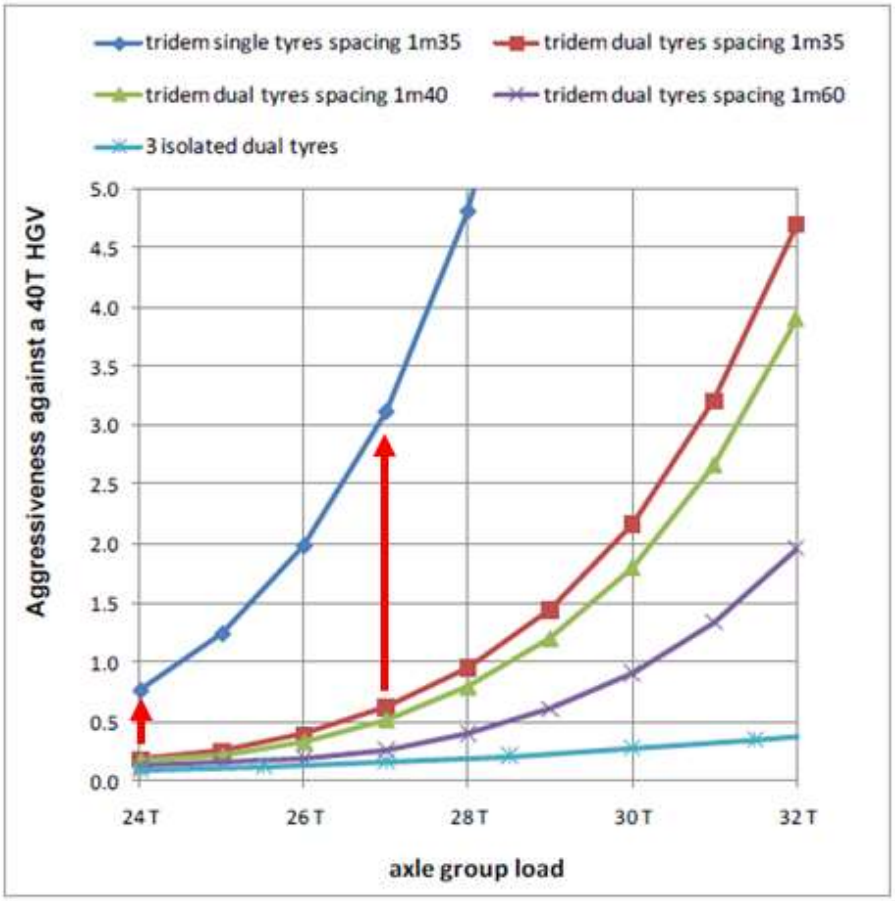


Chart 2 TCF of common current and possible future tyres for towed axles

4) Safety, Productivity, Infrastructure Wear, Fuel Use and Emissions Assessment of the International Truck Fleet A Comparative Analysis, 2010y, Joint Transport Research Centre. This study referred to SETRA calculations (chart 3), where can be seen aggressiveness of tridem axles with single and dual tires.



Source: SETRA, internal

Chart 3 Aggressiveness of tridem axles

5) Effects of Heavier Truck Loadings and Super-Single Tires on Subgrades, 2002y, JTRP Technical Reports, USA.

- According to the comparison of conventional and super-single tires under elastic-plastic conditions, super-single tires induce larger permanent strains in the pavement layers than conventional tires.
- Therefore, design of a pavement using LEF values for dual tires leads to overestimation of the pavement design life.
- Single axle loadings with super-single tires induce the largest vertical plastic strains on top of the subgrade of all the axle configurations considered.

Table 1 Comparison of damage factors between linear-elastic and elastic plastic, dynamic analysis.

Tire type	Axle load	Damage factor (linear-elastic)		Damage Factor (elastic-plastic, dynamic)	
	100kN	Fatigue	Rutting	Fatigue	Rutting
Dual	22,800 lbs	1	1	1	1
Super-Single	22,800 lbs	7.6	3.6	4.9	3.5

6) Effect of Axle and Tyre Configurations on Pavement Durability - a Prestudy, 2014y, Petri Varin, Timo Saarenketo, ROADEX Network.

Tyre type has however a much greater impact on pavement lifetime than small increases in total weight. This is because the stresses induced by super single tyres are significantly higher than the stresses induced by dual tyres. An important fact to remember is that the effect of narrow single tyres on pavement rutting is greater the thinner the pavement. With thin pavements, typical in many ROADEX countries, the rutting speed can be 8-18 times higher with super single tyres than with dual tyres.

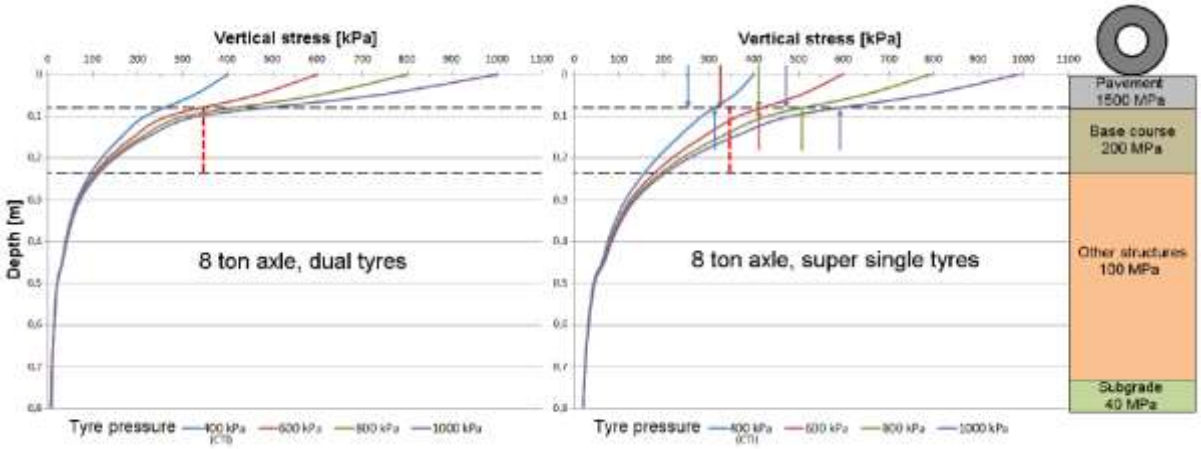


Chart 4 Aggressiveness An example of the effect of tyre type and tyre pressure on the vertical stresses induced by an 8 tonnes single axle load on a typical low volume road. The pavement thickness is 80mm. On the left a case with dual tyres is presented, and on the right with super single tyres. On the right the upper arrows present the stress at the bottom of pavement with different tyre pressures and with dual tyres, and the lower arrows present the corresponding values with super single tyres. The red vertical dashed line shows the stress value 350 kPa, which is often considered as critical stress limit.

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