

# Effective reduction of noise generated by rail freight wagons in the European Union

Information about the respondent	
In what capacity are you filling out this questionnaire? -single choice reply-( <b>compulsory</b> )	Academia
What is the name of the authority/association/company/organisation you represent? -open reply-( <b>compulsory</b> )	Newcastle University
Please specify your countries of operation or residence? -multiple choices reply-( <b>compulsory</b> )	UK - United Kingdom
Please indicate your contact details (name, email and telephone) -open reply-( <b>compulsory</b> )	
Dr Francis J. Franklin Francis.Franklin@ncl.ac.uk +44 (0) 191 222 3494 NewRail (Newcastle University's Centre for Rail Research - www.newrail.org); member of ECTRI (www.ectri.org)	
Do you consent to the publication of your response by the European Commission? <i>Contributions received may be published on the Internet, together with the identity of the contributor unless the contributor objects to publication of the personal data on the grounds that such publication would harm his or her legitimate interests. In this case the contribution could be published in anonymous form.</i> -single choice reply-( <b>compulsory</b> )	Yes
Data Sources	
If you know any reports, studies, surveys, or data that are important for this impact assessment, please give a reference. If possible include a URL to the source, or upload the file(s). -open reply-( <b>optional</b> )	
Clausen, U, Doll, C, Franklin, FJ, Vasic Franklin, G, Heinrichmeyer, H, Kochsiek, J, Rothengatter, W and Sieber, N. 'Reducing Railway Noise Pollution' Report for the European Parliament's Committee on Transport and Tourism (2012). Currently available from: <a href="http://www.i-med.ac.at/sozialmedizin/documents/EU_REDUCING-RAILWAY-NOISE-POLLUTION_full-study_Clausen-et-al-2012.pdf">http://www.i-med.ac.at/sozialmedizin/documents/EU_REDUCING-RAILWAY-NOISE-POLLUTION_full-study_Clausen-et-al-2012.pdf</a> (5.3MB)	
Extent of the problem	
Local pollution (e.g. particulates, nitrogen oxide) -single choice reply-( <b>compulsory</b> )	7
Greenhouse gas / CO <sub>2</sub> emissions and climate change -single choice reply-( <b>compulsory</b> )	6
Dependence on imported oil -single choice reply-( <b>compulsory</b> )	5
Safety / prevention of accidents -single choice reply-( <b>compulsory</b> )	1
Prices of goods as delivered to shops -single choice reply-( <b>compulsory</b> )	4
Competitiveness of industry supply chains	2

-single choice reply-(compulsory)	
Noise -single choice reply-(compulsory)	3
How do you rate the problem of rail noise in your area of residence or operation? -single choice reply-(compulsory)	Very important
In your opinion and in general, what are the negative impacts of rail noise? -open reply-(optional)	
1. Rail noise and vibration (excluding locomotive and drive system noise) is an indicator of the maintenance quality of the track and vehicles. Poor quality track and vehicles experience higher forces and the rate of degradation of the system is high; therefore, measures which reduce noise levels by improving track and vehicle quality will improve operational safety and potentially reduce maintenance costs. 2. Rail noise and vibration from freight routes with dense traffic and/or operating during the night are a potential health hazard.	
Freight trains -single choice reply-(compulsory)	5
Passenger trains -single choice reply-(compulsory)	4
Passenger cars -single choice reply-(compulsory)	1
Trucks -single choice reply-(compulsory)	2
Airplanes -single choice reply-(compulsory)	3
Are there any other important noise sources? Where would you see these then compared to the sources listed above? -open reply-(optional)	
Construction noise - between Trucks-2 and Airplanes-3.	
How would you rate your level of knowledge about issues regarding rail noise or leading to rail noise? -single choice reply-(compulsory)	High
Quality of wheels -single choice reply-(compulsory)	Very important
Quality of rails -single choice reply-(compulsory)	Very important
Speed of trains -single choice reply-(compulsory)	Very important
Amount of traffic -single choice reply-(compulsory)	Important
Are there any other aspects contributing to the problem of rail noise? -open reply-(optional)	
Quality of vehicle suspension and coupling. Quality and design of track infrastructure (bridges, etc.). Train locomotive systems (i.e., diesel is noisier). Brake systems - by and large no longer an issue in the U.K., but still a problem elsewhere. Curve squeal in tight curves (which can occur even for high-quality rails and wheels).	
<b>Assessment of existing measures to reduce or limit rail freight noise</b>	
What measures have already been considered/implemented to tackle the problem of rail freight noise in your area/country/region of residence/operation? -multiple choices reply-(compulsory)	Noise barriers - Insulated windows - Measures on the track (dampers, stiff pads, bi-bloc sleepers, rail grinding) - Legal noise emission ceiling - Programmes

to manage rail roughness/track upgrading/new design  
 - EU funding for research and development -  
 Voluntary commitment

If possible, please describe the most important measures already taken. Please indicate whether certain combinations of measures have been used effectively. -open reply-(optional)

The UK has switched to disc brakes and composite brake blocks - very effective for reducing noise levels, as well as reducing rust particles near railway (reduced costs for cleaning vehicles). Noise studies are carried out for all new rail projects (CrossRail, HS1, HS2) and upgrades (Thameslink) with various solutions implemented: resilient rail pads, changing from jointed track to continuously welded rail, flange lubricators, noise shields (bunds, barriers, acoustic cladding). Choice and effectiveness of technology can be very location-specific. In general, noise levels are controlled through regular inspection and maintenance of track and wheelsets to prevent (or correct) corrugation and out-of-roundness respectively.

How effective were the measures taken so far in reducing rail noise? -single choice reply-(compulsory) **Effective**

Please provide further comments on your answer about the effectiveness of measures so far. -open reply-(optional)

Do the measures implemented at the national/local level restrict mobility of people and/or goods? -single choice reply-(compulsory) **No**

How quickly is the retrofitting of quieter brakes for existing rail freight wagons implemented in your region of residence/operation? -single choice reply-(compulsory) **There is a substantial progress**

Business as usual -single choice reply-(compulsory) **Important**

Reducing noise from rail freight traffic -single choice reply-(compulsory) **Important**

Maintaining competitiveness of the rail freight sector -single choice reply-(compulsory) **Very important**

Maintaining interoperability of the rail network, i.e. the ability of freight trains and wagons to move across internal EU-borders freely -single choice reply-(compulsory) **Very important**

## EU action

Are measures currently taken at national/local level sufficient to achieve a reduction of rail freight noise? -single choice reply-(compulsory) **No**

Do you think that current unilateral measures have acted as barriers to railway interoperability or that future unilateral measures will act as barriers to interoperability? -single choice reply-(compulsory) **Somewhat disagree**

Do you think that EU initiatives and policy would contribute to the broader take-up of effective measures across the EU? -single choice reply-(compulsory) **Strongly agree**

How should the EU action be targeted as to ensure that it would not undermine the subsidiarity principle and would have the highest potential for EU value added? -open reply-(optional)

## Relevance of policy options

### Subsidies approach

To what extent do you find the 'subsidies approach' appropriate to tackle the problem of rail freight noise? -single choice reply-( <a href="#">compulsory</a> )	Very much appropriate
When will it be technically and administratively feasible to introduce this approach? -single choice reply-( <a href="#">compulsory</a> )	Within 3-6 years
Will subsidies for retrofitting distort competition between operators? -single choice reply-( <a href="#">compulsory</a> )	No
Do you have further comments on the subsidies approach? We are interested in hearing any further comments as to the appropriateness of the policy measure and suggestions as to the implementation, e.g. the duration of an incentive program, on what money should be spent, and the monitoring aspects of this approach. -open reply-( <a href="#">optional</a> )	
Strengths: Creates a business case for retrofitting. Weaknesses: Difficult to make Member States pay the subsidies.	

### Noise Differentiated Track Access Charges (NDTAC) approach

To what extent do you find Noise-differentiated track access charges (NDTAC) appropriate to tackle the problem of rail freight noise? -single choice reply-( <a href="#">compulsory</a> )	Quite appropriate
When will it be technically and administratively feasible to introduce this approach? -single choice reply-( <a href="#">compulsory</a> )	Within 6-10 years
In your opinion what should be the basis for NDTAC? <i>Choose up to three</i> -multiple choices reply-( <a href="#">compulsory</a> )	Other
Please specify "Other" -open reply-( <a href="#">compulsory</a> )	Vehicles should be individually identified and noise level assessed periodically - comparable to wayside monitoring of vehicles for excessive/skew loading and wheel defects.
What form of NDTAC do you prefer? -single choice reply-( <a href="#">compulsory</a> )	Bonus-malus (i.e. reducing track charges for TSI-Noise compliant wagons and increasing them for non-compliant wagons)
To what extent should the track charges be differentiated for non-compliant and compliant wagons in order to establish a meaningful incentive to retrofit those wagons? -single choice reply-( <a href="#">compulsory</a> )	Don't know / No view
Should there be any differentiation in NDTAC between day and night? -single choice reply-( <a href="#">compulsory</a> )	Yes
In which manner? -open reply-( <a href="#">optional</a> )	
Malus at night should be more severe, i.e., a lower noise level threshold for applying the malus.	
Should NDTAC be dependent on the size and density of population exposed to rail freight noise? -single choice reply-( <a href="#">compulsory</a> )	No
Measures such as 'Low emission zones' and 'Congestion	Yes, to a large degree

charging zones' are partially targeted at bringing about a modal shift from road freight transport to rail freight transport. Do you think that NDTAC will create a modal shift from rail back to road? -single choice reply-(**compulsory**)

Do you think that introduction of the NDTAC schemes by some Member States only can have any positive spill-over effects for other Member States? In particular, could it constitute a sufficient incentive which will bring about the change also in those countries where NDTAC is not yet introduced, or will it encourage the other countries to introduce similar schemes? -open reply-(**optional**)

Yes.

Do you think that introduction of the NDTAC schemes by some Member States only can have negative effects for other Member States? In particular, could it negatively affect competitiveness of operators from those countries where NDTAC scheme is not introduced? -open reply-(**optional**)

Yes.

Do you have further comments on the NDTAC approach? We are interested in hearing any further comments as to the appropriateness of the policy measure and suggestions as to the implementation, e.g. what elements should or should not be included in NDTAC, how can it be prevented that NDTAC negatively affects competition between Member States and how can monitoring be done? -open reply-(**optional**)

Strengths: Can be designed to be cost neutral. Weaknesses: Noise-differentiated charging should apply to road traffic also, otherwise it may compromise the competitiveness of rail freight.

## Technical Specification for Interoperability (TSI) Noise approach

To what extent do you find 'TSI noise approach' appropriate to tackle the problem of rail freight noise? -single choice reply-(**compulsory**)

Very much appropriate

When will it be technically and administratively feasible to introduce this approach? -single choice reply-(**compulsory**)

Within 6-10 years

Do you think that this policy measure could lead to negative consequences for rail operators, wagon keepers or other market players? -single choice reply-(**compulsory**)

No

Do you have further comments on the TSI-Noise approach? We are interested in hearing any further comments as to the appropriateness of the policy measure and suggestions as to the implementation, e.g. on how monitoring can be done. -open reply-(**optional**)

Strengths: Leads to better level of wagon maintenance. Weaknesses: Difficult to implement, because noise levels vary with track quality. Question: What happens to a wagon that it is discovered during operation does not comply with TSI? Should it be stopped? Can such a wagon be sent back on the rail network?

## TEN-T approach

To what extent do you find 'TEN-T approach' appropriate to tackle the problem of rail freight noise? -single choice reply-(**compulsory**)

Very much appropriate

Should there be any differentiation in rail traffic restrictions between day and night? -single choice reply-(**compulsory**)

Yes

When will it be technically and administratively feasible to introduce this approach? -single choice reply-(**compulsory**)

Within 3-6 years

Do you think that this policy measure could lead to negative

No

consequences for rail operators, wagon keepers or other market players? -single choice reply-(**compulsory**)

Do you have further comments on the TEN-T approach?

We are interested in hearing any further comments as to the appropriateness of the policy measure and suggestions as to the implementation, e.g. whether the TEN-T lines cover broadly enough, whether it is practically possible to only apply restrictions to limited freight corridors and how monitoring can be done. -open reply-(**optional**)

Strengths: Creates awareness of the problem of rail noise. Targets the problems. It should be possible to optimize wagon use so that quiet wagons are used on routes where noise is a major concern. Weaknesses: Requires comprehensive monitoring.

## Density approach

To what extent do you find 'density approach' appropriate to tackle the problem of rail freight noise? -single choice reply-(**compulsory**)

Little appropriate

Should there be any differentiation in rail traffic restrictions between day and night? -single choice reply-(**compulsory**)

Don't know / No view

When will it be technically and administratively feasible to introduce this approach? -single choice reply-(**optional**)

It is possible already

Do you think that this policy measure could lead to negative consequences for rail operators, wagon keepers or other market players? -single choice reply-(**compulsory**)

No

Do you have further comments on the density approach? We are interested in hearing any further comments as to the appropriateness of the policy measure and suggestions as to the implementation, e.g. how monitoring could be done or what the technical barriers are. -open reply-(**optional**)

Strengths: Consistent with the environmental noise directive. Weaknesses: Not much point in the initiative - where many people are affected by noise, local political pressure will handle the problem.

## Maintenance approach

To what extent do you find the maintenance approach appropriate to tackle the problem of rail freight noise? -single choice reply-(**compulsory**)

Neutral

When will it be technically and administratively feasible to introduce this approach? -single choice reply-(**compulsory**)

Within 1-3 years

Do you think that this policy measure could lead to negative consequences for rail operators, wagon keepers or other market players? -single choice reply-(**compulsory**)

No

Do you have further comments on the maintenance approach? We are interested in hearing any further comments as to the appropriateness of the policy measure and suggestions as to the implementation -open reply-(**optional**)

Strengths: Should make monitoring of track quality easier. Weaknesses: Incentives are there already. High noise levels from track infrastructure indicate that there is a need for maintenance.

## Environmental health approach

To what extent do you find environmental health approach appropriate to tackle the problem of rail freight noise? -single choice reply-(**compulsory**)

Quite appropriate

When will it be technically and administratively feasible to

In 10 years or after

introduce this approach? -single choice reply-( <b>compulsory</b> )	
Do you think that this policy measure could lead to negative consequences for rail operators, wagon keepers or other market players? -single choice reply-( <b>compulsory</b> )	No

Do you have further comments on the environmental health approach? We are interested in hearing any further comments as to the appropriateness of the policy measure and suggestions as to the implementation, e.g. how monitoring can be done, what the technical barriers are, and who should carry the costs in this scenario? -open reply-(**optional**)

Do you have suggestions for any other policy measures that you would deem appropriate in contributing to substantial reductions of rail freight noise, without decreasing the competitive position of rail transport? -open reply-(**optional**)

### Assessment of impacts of policy measures/options

Business as usual -single choice reply-( <b>compulsory</b> )	Neutral
Subsidies approach -single choice reply-( <b>compulsory</b> )	Very positive
NDTAC approach -single choice reply-( <b>compulsory</b> )	Negative
TSI noise approach -single choice reply-( <b>compulsory</b> )	Negative
TEN-T approach -single choice reply-( <b>compulsory</b> )	Very positive
Density approach -single choice reply-( <b>compulsory</b> )	Don't know / No view
Maintenance approach -single choice reply-( <b>compulsory</b> )	Neutral
Environmental health approach -single choice reply-( <b>compulsory</b> )	Positive

Please provide the most important details regarding your assessments of impact -open reply-(**optional**)

Business as usual -single choice reply-( <b>compulsory</b> )	Neutral
Subsidies approach -single choice reply-( <b>compulsory</b> )	Don't know / No view
NDTAC approach -single choice reply-( <b>compulsory</b> )	Don't know / No view
TSI noise approach -single choice reply-( <b>compulsory</b> )	Don't know / No view
TEN-T approach -single choice reply-( <b>compulsory</b> )	Don't know / No view
Density approach -single choice reply-( <b>compulsory</b> )	Don't know / No view
Maintenance approach -single choice reply-( <b>compulsory</b> )	Don't know / No view

Environmental health approach -single choice reply-(compulsory)	Don't know / No view
Please provide the most important details regarding your assessments of impact -open reply-(optional)	
Business as usual -single choice reply-(compulsory)	Neutral
Subsidies approach -single choice reply-(compulsory)	Neutral
NDTAC approach -single choice reply-(compulsory)	Neutral
TSI noise approach -single choice reply-(compulsory)	Neutral
TEN-T approach -single choice reply-(compulsory)	Neutral
Density approach -single choice reply-(compulsory)	Neutral
Maintenance approach -single choice reply-(compulsory)	Neutral
Environmental health approach -single choice reply-(compulsory)	Neutral
Please provide the most important details regarding your assessments of impact -open reply-(optional)	
Business as usual -single choice reply-(compulsory)	Neutral
Subsidies approach -single choice reply-(compulsory)	Neutral
NDTAC approach -single choice reply-(compulsory)	Neutral
TSI noise approach -single choice reply-(compulsory)	Neutral
TEN-T approach -single choice reply-(compulsory)	Neutral
Density approach -single choice reply-(compulsory)	Neutral
Maintenance approach -single choice reply-(compulsory)	Neutral
Environmental health approach -single choice reply-(compulsory)	Neutral
Please provide the most important details regarding your assessments of impact -open reply-(optional)	
Business as usual -single choice reply-(compulsory)	Neutral
Subsidies approach -single choice reply-(compulsory)	Don't know / No view



NDTAC approach -single choice reply-(compulsory)	Don't know / No view
TSI noise approach -single choice reply-(compulsory)	Don't know / No view
TEN-T approach -single choice reply-(compulsory)	Don't know / No view
Density approach -single choice reply-(compulsory)	Don't know / No view
Maintenance approach -single choice reply-(compulsory)	Don't know / No view
Environmental health approach -single choice reply-(compulsory)	Don't know / No view
Please provide the most important details regarding your assessments of impact -open reply-(optional)	
Business as usual -single choice reply-(compulsory)	Neutral
Subsidies approach -single choice reply-(compulsory)	Very positive
NDTAC approach -single choice reply-(compulsory)	Very positive
TSI noise approach -single choice reply-(compulsory)	Very positive
TEN-T approach -single choice reply-(compulsory)	Positive
Density approach -single choice reply-(compulsory)	Positive
Maintenance approach -single choice reply-(compulsory)	Positive
Environmental health approach -single choice reply-(compulsory)	Positive
Please provide the most important details regarding your assessments of impact -open reply-(optional)	
Business as usual -single choice reply-(compulsory)	Neutral
Subsidies approach -single choice reply-(compulsory)	Very positive
NDTAC approach -single choice reply-(compulsory)	Positive
TSI noise approach -single choice reply-(compulsory)	Positive
TEN-T approach -single choice reply-(compulsory)	Positive
Density approach -single choice reply-(compulsory)	Negative

Maintenance approach -single choice reply-(compulsory)	Neutral
Environmental health approach -single choice reply-(compulsory)	Negative
Please provide the most important details regarding your assessments of impact -open reply-(optional)	
Business as usual -single choice reply-(compulsory)	Neutral
Subsidies approach -single choice reply-(compulsory)	Neutral
NDTAC approach -single choice reply-(compulsory)	Negative
TSI noise approach -single choice reply-(compulsory)	Very positive
TEN-T approach -single choice reply-(compulsory)	Very positive
Density approach -single choice reply-(compulsory)	Negative
Maintenance approach -single choice reply-(compulsory)	Neutral
Environmental health approach -single choice reply-(compulsory)	Negative
Please provide the most important details regarding your assessments of impact -open reply-(optional)	
Please identify any mitigating measures which can be taken to reduce negative impacts of EU rail noise related intervention could have on the competitiveness of rail freight transport vis-à-vis road freight. -open reply-(optional)	
Please identify any impacts EU level rail noise related intervention could have specifically on SMEs and microenterprises -open reply-(optional)	
<b>Final Comments</b>	
If you have any further observations or comments on how the noise of rail freight could be tackled, please specify these briefly: -open reply-(optional)	

# Effective reduction of noise generated by rail freight wagons in the European Union

Information about the respondent	
In what capacity are you filling out this questionnaire? -single choice reply-( <b>compulsory</b> )	Academia
What is the name of the authority/association/company/organisation you represent? -open reply-( <b>compulsory</b> )	Swedish National Road and Transport Research Institute
Please specify your countries of operation or residence? -multiple choices reply-( <b>compulsory</b> )	SE – Sweden
Please indicate your contact details (name, email and telephone) -open reply-( <b>compulsory</b> )	
Jan-Erik Swärdh jan-erik.swardh@vti.se +46 8 555 770 28 Member of ECTRI www.ectri.org	
Do you consent to the publication of your response by the European Commission? <i>Contributions received may be published on the Internet, together with the identity of the contributor unless the contributor objects to publication of the personal data on the grounds that such publication would harm his or her legitimate interests. In this case the contribution could be published in anonymous form.</i> -single choice reply-( <b>compulsory</b> )	Yes
Data Sources	
If you know any reports, studies, surveys, or data that are important for this impact assessment, please give a reference. If possible include a URL to the source, or upload the file(s). -open reply-( <b>optional</b> )	
Estimating non-marginal willingness to pay for railway noise abatement: application of the two-step hedonic regression technique. <a href="http://swopec.hhs.se/ctswps/abs/ctswps2012_027.htm">http://swopec.hhs.se/ctswps/abs/ctswps2012_027.htm</a> Andersson,H. and Jonsson,L. and Ögren,M., 2010, Property Prices and Exposure to Multiple Noise Sources: Hedonic Regression with Road and Railway Noise, Environmental and Resource Economics 45, p. 73-89.	
Extent of the problem	
Local pollution (e.g. particulates, nitrogen oxide) -single choice reply-( <b>compulsory</b> )	4
Greenhouse gas / CO <sub>2</sub> emissions and climate change -single choice reply-( <b>compulsory</b> )	1
Dependence on imported oil -single choice reply-( <b>compulsory</b> )	7
Safety / prevention of accidents -single choice reply-( <b>compulsory</b> )	5
Prices of goods as delivered to shops -single choice reply-( <b>compulsory</b> )	6

Competitiveness of industry supply chains -single choice reply-(compulsory)	3
Noise -single choice reply-(compulsory)	2
How do you rate the problem of rail noise in your area of residence or operation? -single choice reply-(compulsory)	Important
In your opinion and in general, what are the negative impacts of rail noise? -open reply-(optional)	
Disturbance, negative health effects	
Freight trains -single choice reply-(compulsory)	2
Passenger trains -single choice reply-(compulsory)	4
Passenger cars -single choice reply-(compulsory)	3
Trucks -single choice reply-(compulsory)	1
Airplanes -single choice reply-(compulsory)	5
Are there any other important noise sources? Where would you see these then compared to the sources listed above? -open reply-(optional)	
Industry areas	
How would you rate your level of knowledge about issues regarding rail noise or leading to rail noise? -single choice reply-(compulsory)	High
Quality of wheels -single choice reply-(compulsory)	Very important
Quality of rails -single choice reply-(compulsory)	Important
Speed of trains -single choice reply-(compulsory)	Very important
Amount of traffic -single choice reply-(compulsory)	Important
Are there any other aspects contributing to the problem of rail noise? -open reply-(optional)	
<h3>Assessment of existing measures to reduce or limit rail freight noise</h3>	
What measures have already been considered/implemented to tackle the problem of rail freight noise in your area/country/region of residence/operation? -multiple choices reply-(compulsory)	Noise barriers - Insulated windows - Measures on the track (dampers, stiff pads, bi-bloc sleepers, rail grinding) - Speed reduction - Noise-differentiated track access charges (i.e. measures for adjusting charges dependent on noise emission) - Public funding for noise abatement programmes - Local funding for tackling specific noise problem

If possible, please describe the most important measures already taken. Please indicate whether certain combinations of measures have been used effectively. -open reply-(optional)

How effective were the measures taken so far in reducing rail noise? -single choice reply-(compulsory) Effective to a certain extent

Please provide further comments on your answer about the effectiveness of measures so far. -open reply-(optional)

There is a need of stronger noise-differentiated track access charges with financial incentives for changing to other brakes.

Do the measures implemented at the national/local level restrict mobility of people and/or goods? -single choice reply-(compulsory) I don't know

How quickly is the retrofitting of quieter brakes for existing rail freight wagons implemented in your region of residence/operation? -single choice reply-(compulsory) There is very little progress

Business as usual -single choice reply-(compulsory) Important

Reducing noise from rail freight traffic -single choice reply-(compulsory) Very important

Maintaining competitiveness of the rail freight sector -single choice reply-(compulsory) Important

Maintaining interoperability of the rail network, i.e. the ability of freight trains and wagons to move across internal EU-borders freely -single choice reply-(compulsory) Important

## EU action

Are measures currently taken at national/local level sufficient to achieve a reduction of rail freight noise? -single choice reply-(compulsory) No

Do you think that current unilateral measures have acted as barriers to railway interoperability or that future unilateral measures will act as barriers to interoperability? -single choice reply-(compulsory) Don't know / No view

Do you think that EU initiatives and policy would contribute to the broader take-up of effective measures across the EU? -single choice reply-(compulsory) Don't know / No view

How should the EU action be targeted as to ensure that it would not undermine the subsidiarity principle and would have the highest potential for EU value added? -open reply-(optional)

## Relevance of policy options

## Subsidies approach

To what extent do you find the 'subsidies approach' appropriate to tackle the problem of rail freight noise? -single choice reply-( <b>compulsory</b> )	Quite appropriate
When will it be technically and administratively feasible to introduce this approach? -single choice reply-( <b>compulsory</b> )	It is possible already
Will subsidies for retrofitting distort competition between operators? -single choice reply-( <b>compulsory</b> )	No
What is the minimum level of co-financing of retrofitting costs that would have to be provided to be effective (while still being feasible for public budget)? -single choice reply-( <b>compulsory</b> )	50 %
Please can you comment on why you believe this is the right level of co-financing? -open reply-( <b>optional</b> )	
Actually, I do not know the rate but there was no "I don't know" option.	
Do you have further comments on the subsidies approach? We are interested in hearing any further comments as to the appropriateness of the policy measure and suggestions as to the implementation, e.g. the duration of an incentive program, on what money should be spent, and the monitoring aspects of this approach. -open reply-( <b>optional</b> )	
I do not think subsidies should be the best way though it would reduce the noise levels. Charges that are differentiated with respect to the brakes are more efficient if they are designed to create the incentive to change brakes.	
<b>Noise Differentiated Track Access Charges (NDTAC) approach</b>	
To what extent do you find Noise-differentiated track access charges (NDTAC) appropriate to tackle the problem of rail freight noise? -single choice reply-( <b>compulsory</b> )	Very much appropriate
When will it be technically and administratively feasible to introduce this approach? -single choice reply-( <b>compulsory</b> )	It is possible already
In your opinion what should be the basis for NDTAC? <i>Choose up to three</i> -multiple choices reply-( <b>compulsory</b> )	Type of wagons - Wagon brake type
What form of NDTAC do you prefer? -single choice reply-( <b>compulsory</b> )	Malus (i.e. increasing track charges for non-compliant wagons)
To what extent should the track charges be differentiated for non-compliant and compliant wagons in order to establish a meaningful incentive to retrofit those wagons? -single choice reply-( <b>compulsory</b> )	Don't know / No view
Should there be any differentiation in NDTAC between day and night? -single choice reply-( <b>compulsory</b> )	Yes
In which manner? -open reply-( <b>optional</b> )	
Difficult to state the magnitude, but people are more disturbed during the night for a given noise level. Also, most of the negative health	

effects have there basis in sleep disturbances.

Should NDTAC be dependent on the size and density of population exposed to rail freight noise? -single choice reply-(compulsory)	Yes
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Measures such as 'Low emission zones' and 'Congestion charging zones' are partially targeted at bringing about a modal shift from road freight transport to rail freight transport. Do you think that NDTAC will create a modal shift from rail back to road? -single choice reply-(compulsory)	Yes, to a certain degree
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Do you think that introduction of the NDTAC schemes by some Member States only can have any positive spill-over effects for other Member States? In particular, could it constitute a sufficient incentive which will bring about the change also in those countries where NDTAC is not yet introduced, or will it encourage the other countries to introduce similar schemes? -open reply-(optional)

Do you think that introduction of the NDTAC schemes by some Member States only can have negative effects for other Member States? In particular, could it negatively affect competitiveness of operators from those countries where NDTAC scheme is not introduced? -open reply-(optional)

Do you have further comments on the NDTAC approach?

We are interested in hearing any further comments as to the appropriateness of the policy measure and suggestions as to the implementation, e.g. what elements should or should not be included in NDTAC, how can it be prevented that NDTAC negatively affects competition between Member States and how can monitoring be done? -open reply-(optional)

This approach should of course also be implemented in the road sector, then the answer on 6.3.10. would probably be no!

## Technical Specification for Interoperability (TSI) Noise approach

To what extent do you find 'TSI noise approach' appropriate to tackle the problem of rail freight noise? -single choice reply-(compulsory)	Not appropriate
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When will it be technically and administratively feasible to introduce this approach? -single choice reply-(compulsory)	Don't know / No view
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Do you think that this policy measure could lead to negative consequences for rail operators, wagon keepers or other market players? -single choice reply-(compulsory)	Yes
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Please specify the probable extent of these consequences. -open reply-(optional)

Do you have further comments on the TSI-Noise approach? We are interested in hearing any further comments as to the appropriateness of the policy measure and suggestions as to the implementation, e.g. on how monitoring can be done. -open reply-(optional)

Generally better with financial incentives than legal limitations.

## TEN-T approach

To what extent do you find 'TEN-T approach' appropriate to tackle the problem of rail freight noise? -single choice reply-( <b>compulsory</b> )	Don't know
Should there be any differentiation in rail traffic restrictions between day and night? -single choice reply-( <b>compulsory</b> )	Don't know / No view
When will it be technically and administratively feasible to introduce this approach? -single choice reply-( <b>compulsory</b> )	Don't know / No view
Do you think that this policy measure could lead to negative consequences for rail operators, wagon keepers or other market players? -single choice reply-( <b>compulsory</b> )	Don't know / No view

Do you have further comments on the TEN-T approach?  
 We are interested in hearing any further comments as to the appropriateness of the policy measure and suggestions as to the implementation, e.g. whether the TEN-T lines cover broadly enough, whether it is practically possible to only apply restrictions to limited freight corridors and how monitoring can be done. -open reply-(**optional**)

## Density approach

To what extent do you find 'density approach' appropriate to tackle the problem of rail freight noise? -single choice reply-( <b>compulsory</b> )	Not appropriate
Should there be any differentiation in rail traffic restrictions between day and night? -single choice reply-( <b>compulsory</b> )	Don't know / No view
When will it be technically and administratively feasible to introduce this approach? -single choice reply-( <b>optional</b> )	
Do you think that this policy measure could lead to negative consequences for rail operators, wagon keepers or other market players? -single choice reply-( <b>compulsory</b> )	Don't know / No view

Do you have further comments on the density approach? We are interested in hearing any further comments as to the appropriateness of the policy measure and suggestions as to the implementation, e.g. how monitoring could be done or what the technical barriers are. -open reply-(**optional**)

## Maintenance approach

To what extent do you find the maintenance approach appropriate to tackle the problem of rail freight noise? -single choice reply-( <b>compulsory</b> )	Don't know
When will it be technically and administratively feasible to introduce this approach? -single choice reply-( <b>compulsory</b> )	Don't know / No view



Do you think that this policy measure could lead to negative consequences for rail operators, wagon keepers or other market players? -single choice reply-(compulsory)	Don't know / No view
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Do you have further comments on the maintenance approach? We are interested in hearing any further comments as to the appropriateness of the policy measure and suggestions as to the implementation -open reply-(optional)

## Environmental health approach

To what extent do you find environmental health approach appropriate to tackle the problem of rail freight noise? -single choice reply-(compulsory)	Very much appropriate
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When will it be technically and administratively feasible to introduce this approach? -single choice reply-(compulsory)	It is possible already
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Do you think that this policy measure could lead to negative consequences for rail operators, wagon keepers or other market players? -single choice reply-(compulsory)	No
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Do you have further comments on the environmental health approach? We are interested in hearing any further comments as to the appropriateness of the policy measure and suggestions as to the implementation, e.g. how monitoring can be done, what the technical barriers are, and who should carry the costs in this scenario? -open reply-(optional)

Do you have suggestions for any other policy measures that you would deem appropriate in contributing to substantial reductions of rail freight noise, without decreasing the competitive position of rail transport? -open reply-(optional)

## Assessment of impacts of policy measures/options

Business as usual -single choice reply-(compulsory)	Neutral
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Subsidies approach -single choice reply-(compulsory)	Positive
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NDTAC approach -single choice reply-(compulsory)	Negative
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TSI noise approach -single choice reply-(compulsory)	Don't know / No view
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TEN-T approach -single choice reply-(compulsory)	Don't know / No view
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Density approach -single choice reply-(compulsory)	Don't know / No view
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Maintenance approach -single choice reply-(compulsory)	Don't know / No view
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Environmental health approach -single choice reply-(compulsory)	Neutral
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Please provide the most important details regarding your assessments of impact -open reply-(optional)

Business as usual -single choice reply-(compulsory)	Neutral
Subsidies approach -single choice reply-(compulsory)	Positive
NDTAC approach -single choice reply-(compulsory)	Positive
TSI noise approach -single choice reply-(compulsory)	Don't know / No view
TEN-T approach -single choice reply-(compulsory)	Don't know / No view
Density approach -single choice reply-(compulsory)	Don't know / No view
Maintenance approach -single choice reply-(compulsory)	Don't know / No view
Environmental health approach -single choice reply-(compulsory)	Positive
Please provide the most important details regarding your assessments of impact -open reply-(optional)	
Business as usual -single choice reply-(compulsory)	Don't know / No view
Subsidies approach -single choice reply-(compulsory)	Don't know / No view
NDTAC approach -single choice reply-(compulsory)	Don't know / No view
TSI noise approach -single choice reply-(compulsory)	Don't know / No view
TEN-T approach -single choice reply-(compulsory)	Don't know / No view
Density approach -single choice reply-(compulsory)	Don't know / No view
Maintenance approach -single choice reply-(compulsory)	Don't know / No view
Environmental health approach -single choice reply-(compulsory)	Don't know / No view
Please provide the most important details regarding your assessments of impact -open reply-(optional)	
Business as usual -single choice reply-(compulsory)	Don't know / No view
Subsidies approach -single choice reply-(compulsory)	Don't know / No view
NDTAC approach -single choice reply-(compulsory)	Don't know / No view
TSI noise approach -single choice reply-(compulsory)	

	Don't know / No view
TEN-T approach -single choice reply-(compulsory)	Don't know / No view
Density approach -single choice reply-(compulsory)	Don't know / No view
Maintenance approach -single choice reply-(compulsory)	Don't know / No view
Environmental health approach -single choice reply-(compulsory)	Don't know / No view
Please provide the most important details regarding your assessments of impact -open reply-(optional)	
Business as usual -single choice reply-(compulsory)	Neutral
Subsidies approach -single choice reply-(compulsory)	Negative
NDTAC approach -single choice reply-(compulsory)	Positive
TSI noise approach -single choice reply-(compulsory)	Don't know / No view
TEN-T approach -single choice reply-(compulsory)	Don't know / No view
Density approach -single choice reply-(compulsory)	Don't know / No view
Maintenance approach -single choice reply-(compulsory)	Don't know / No view
Environmental health approach -single choice reply-(compulsory)	Positive
Please provide the most important details regarding your assessments of impact -open reply-(optional)	
Business as usual -single choice reply-(compulsory)	Negative
Subsidies approach -single choice reply-(compulsory)	Positive
NDTAC approach -single choice reply-(compulsory)	Very positive
TSI noise approach -single choice reply-(compulsory)	No view / Don't know
TEN-T approach -single choice reply-(compulsory)	No view / Don't know
Density approach -single choice reply-(compulsory)	No view / Don't know
Maintenance approach -single choice reply-(compulsory)	No view / Don't know

Environmental health approach -single choice reply- (compulsory)	Very positive
Please provide the most important details regarding your assessments of impact -open reply-(optional)	
Business as usual -single choice reply-(compulsory)	Don't know / No view
Subsidies approach -single choice reply-(compulsory)	Don't know / No view
NDTAC approach -single choice reply-(compulsory)	Don't know / No view
TSI noise approach -single choice reply-(compulsory)	Don't know / No view
TEN-T approach -single choice reply-(compulsory)	Don't know / No view
Density approach -single choice reply-(compulsory)	Don't know / No view
Maintenance approach -single choice reply- (compulsory)	Don't know / No view
Environmental health approach -single choice reply- (compulsory)	Don't know / No view
Please provide the most important details regarding your assessments of impact -open reply-(optional)	
Business as usual -single choice reply-(compulsory)	Don't know / No view
Subsidies approach -single choice reply-(compulsory)	Don't know / No view
NDTAC approach -single choice reply-(compulsory)	Don't know / No view
TSI noise approach -single choice reply-(compulsory)	Don't know / No view
TEN-T approach -single choice reply-(compulsory)	Don't know / No view
Density approach -single choice reply-(compulsory)	Don't know / No view
Maintenance approach -single choice reply- (compulsory)	Don't know / No view
Environmental health approach -single choice reply- (compulsory)	Don't know / No view
Please provide the most important details regarding your assessments of impact -open reply-(optional)	
Please identify any mitigating measures which can be taken to reduce negative impacts of EU rail noise related intervention could have on the competitiveness of rail freight transport vis-à-vis road freight. -open reply-(optional)	

Please identify any impacts EU level rail noise related intervention could have specifically on SMEs and microenterprises

-open reply-(optional)

## Final Comments

If you have any further observations or comments on how the noise of rail freight could be tackled, please specify these

briefly: -open reply-(optional)