



B 3	ECONOMIC IMPACTS	AFFECTED SEGMENTS													Geographical level		Source					
		Passengers					Transport operators						Employees in transport	Residents	Economy	Public bodies	Society	1st level	2nd level	Source of assessment	Spatial level of source	
		Road	Rail	Air	Public transport	Slow modes	Road	Rail	IWW	Air	Maritime	Public transport										
B 3.1	Transport costs	↘					↘												N	I	S	I
B 3.2	Private income / commercial turn over																					
B 3.3	Revenues in the transport sector																					
B 3.4	Sectoral competitiveness	↘					↘												N		E	
B 3.5	Spatial competitiveness																					
B 3.6	Housing expenditures																					
B 3.7	Insurance costs																					
B 3.8	Health service costs	↘												↘					N		S	I
B 3.9	Public authorities & adm. burdens on businesses																					
B 3.10	Public income (e.g.: taxes, charges)																					
B 3.11	Third countries and international relations																					
B 3.I	Overall impacts on social groups																					
B 3.II	Implementation phase																					
B 3.III	Operation phase																					
B 3.IV	Summary / comments concerning the main impacts	<p>- The transport costs will increase due to longer travel time, but the fuel and maintenance costs for LCVs will decrease due to the lower top speeds. The cost-benefit ratio for a reduced speed limit for LCVs turned out to be positive (see quantification of impacts). The exact change in transport costs is unknown, but the positive cost-benefit ratio seems to prove that costs for transport operators will certainly not rise. [2] [3]</p> <p>- Reduced speeds for LCVs improves road safety for all road users (including slow modes). This will lead to less accidents and reduced health service costs for road users, residents and society. [2] [3]</p> <p>- Benefits for transport operators are: fewer vehicles off the road for repair (due to accidents or high engine loads (meaning how many engine power is used)), less chance of employees being involved in accidents or getting injured; improved image of transport operators using LCVs (greener image and less often involved in accidents). [11]</p> <p>-3rd level impact: If LCVs transport time will increase due to speed limitation, then this could be advantageous to other transport modes (those in competition).</p>																				
B 3.V	Quantification of impacts	<p>- Countries with a good safety record, such as Norway, Great Britain, Sweden and the Netherlands, assign a high monetary value to the prevention of a traffic fatality (when using a cost-benefit analysis). [2]</p> <p>- The IMPROVER study concluded that the benefits of reduced speed limits for LCVs outweigh the costs with a factor of 1.65 for the existing vehicle fleet. [2]</p> <p>- The total costs of ownership for LCVs will be reduced by up to 12 % when top speeds will be limited. The cost reduction will be attributable to the fuel consumption reduction, the reduction in the costs of purchase (less powerful engine needed), the decreasing maintenance costs and lower taxes. [9]</p>																				

B 4	SOCIAL IMPACTS	AFFECTED SEGMENTS													Geographical level		Source					
		Passengers					Transport operators						Employees in transport	Residents	Economy	Public bodies	Society	1st level	2nd level	Source of assessment	Spatial level of source	
		Road	Rail	Air	Public transport	Slow modes	Road	Rail	IWW	Air	Maritime	Public transport										
B 4.1	Health (incl. well-being)																		N	R	S	I
B 4.2	Safety	↑				↑	↑							↑					N	R	S	I
B 4.3	Crime, terrorism and security																					
B 4.4	Accessibility of transport systems																					
B 4.5	Social inclusion, equality & opportunities																					
B 4.6	Standards and rights (related to job quality)																					
B 4.7	Employment and labour markets																					
B 4.8	Cultural heritage / culture																					
B 4.I	Overall impacts on social groups																					
B 4.II	Implementation phase																					
B 4.III	Operation phase																					
B 4.IV	Summary / comments concerning the main impacts	<p>- CO2 emissions, air pollutants and noise will decrease when speed limits will be reduced. This will improve the well-being of residents near motorways and the entire society. [1] [4]</p> <p>- The level of safety will increase substantially for all road users. Lower speeds reduce stopping distances, give a greater time to recognize hazards, increase the ability of other road users to judge vehicle speed and time before collision and reduce the likelihood that a driver will lose vehicle control. [4]</p>																				
B 4.V	Quantification of impacts	<p>- A 1% reduction in the average speed of traffic (all traffic modes) leads to a 2% reduction in injury accidents. [5]</p> <p>- If on a road the average speed goes down from 120 to 119 km/h, the number of road fatalities is estimated to be reduced by 3,8% and the serious road injuries by 2,9%. [4]</p> <p>- Limiting top speeds of LCVs to 100 km/h instead of 110 km/h increases the number of deaths saved by 15 % (46 % vs. 31 %). [1]</p> <p>- Limiting top speeds of LCVs in the EU to 100 km/h will reduce fatalities by approximately 190 deaths per year. [1]</p>																				

B 5	ENVIRONMENTAL IMPACTS	AFFECTED SEGMENTS													Geographical level		Source					
		Passengers					Transport operators						Employees in transport	Residents	Economy	Public bodies	Society	1st level	2nd level	Source of assessment	Spatial level of source	
		Road	Rail	Air	Public transport	Slow modes	Road	Rail	IWW	Air	Maritime	Public transport										
B 5.1	Air pollutants																		L	R	S	I
B 5.2	Noise emissions																		L	R	S	I
B 5.3	Visual quality of the landscape																					
B 5.4	Land use																					
B 5.5	Climate																				S	I
B 5.6	Renewable or non-renewable resources																				S	I
B 5.I	Overall impacts on social groups																					
B 5.II	Implementation phase																					
B 5.III	Operation phase																					
B 5.IV	Summary / comments concerning the main impacts	<p>Lower maximum speeds for LCVs will lead to several positive impacts for the environment, such as:</p> <p>- Reducing air pollution (mainly NOx, but also PM10) through lower engine loads of LCVs. This will be beneficial for the entire society and for especially for residents living near motorways. [4]</p> <p>- Noise will decline through lower speeds and less congestion [5]. Again, this counts mostly for residents near motorways.</p> <p>- CO2 emissions will reduce with the introduction of speed limits for LCVs which is desirable for the entire society and in accordance with the EU policy to reduce CO2 emissions by 20% in 2020. [6]</p> <p>- Fuel consumption of LCVs will decline with the introduction of speed limitation devices. Especially because driven speeds on motorways are above the optimum level for fuel efficiency. [6]</p> <p>- In addition, the potential indirect effects of speed limitation devices lead to even more significant CO2 reductions. For example, lower top speeds and their resulting safety benefits incentivise the market for lighter and less powerful LCVs. This potential development reduces significant additional carbon savings in the long run. [6]</p> <p>- Indirect effect: Decline of additional land-use due to lower demand for new road infrastructure based on higher road capacities.</p>																				
B 5.V	Quantification of impacts	<p>- Practical experiments in the Netherlands showed that speed limiters (limited to 110 km/h) in vans and light trucks resulted in 5% fuel savings. [5]</p> <p>- A study in the UK showed that a new 60mph (96 km/h) speed limit will reduce CO2 emissions by an average of 1.88 million tonnes of carbon per year. [6]</p> <p>- Decreasing speed limits around Rotterdam (NL) from 100 to 80 km/h gave a 25 % reduction in NOx emissions from traffic. [4]</p> <p>- When the speed limit will be reduced to 100 km/h on motorways the CO2 emissions of LCVs will be reduced by 6 to 7 %. [1]</p>																				

C REFERENCES	
C 1	Other TPMs of this subcategory
C 2	<p><b>References</b></p> <p><b>International</b></p> <p>[1] Boer, E. den., et al. (2010): Speed limiters for vans in Europe - Environmental and safety impacts, Delft: CE Delft</p> <p>[2] SafetyNet (2009): Cost-benefit analysis, Brussels: Directorate-General Transport and Energy</p> <p>[3] Global Road Safety Partnership (2008): Speed Management - A road safety manual for decision-makers and practitioners, Geneva: Publications of GRSP</p> <p>[4] European Federation for Transport and Environment (2005): Road transport speed and climate change, Brussels: Transport &amp; Environment</p> <p>[5] European Transport Safety Council (2008): Managing Speed - Towards safe and sustainable road transport, Brussels: European Transport Safety Council</p> <p>[7] European Federation for Transport and Environment (2009): Emission performance standards for light commercial vehicles (LCVs), Brussels: Transport and Environment</p> <p>[9] Verbeek, M.M.J.F., et al. (2010): Potential CO2 reduction from optimal engine sizing for light commercial vehicles, Eindhoven: TNO</p> <p>[10] European Commission (2010): Progress report on implementation of the Community's integrated approach to reduce CO2 emissions from light-duty vehicles, COM(2010) 656 final, Luxembourg: Publications Office of the European Union</p> <p>[11] European Transport Safety Council (2011): "PRAISE": Preventing Road Accidents and Injuries for the Safety of Employees, Brussels: European Transport Safety Council</p> <p>[12] European Commission (2006): IMPROVER - Impact Assessment of Road Safety Measures for Vehicles and Road Equipment, Luxembourg: Publications Office of the European Union</p> <p><b>National</b></p> <p>[6] Anable, J. Mitchell, P. Layberry, R. (2006): Getting the genie back in the bottle: Limiting speed to reduce carbon emissions and accelerate the shift to low carbon vehicles, London: Lowcvp</p> <p>[8] SWOV (2009): SWOV Fact Sheet - Lorries and delivery vans, Leidschendam: Institute for Road Safety Research</p>