



Gobierno
de España

Ministerio
para la Transición Ecológica

V Encuentro de Ciudades para la Seguridad Vial y la Movilidad Sostenible "Hacia una nueva movilidad urbana"



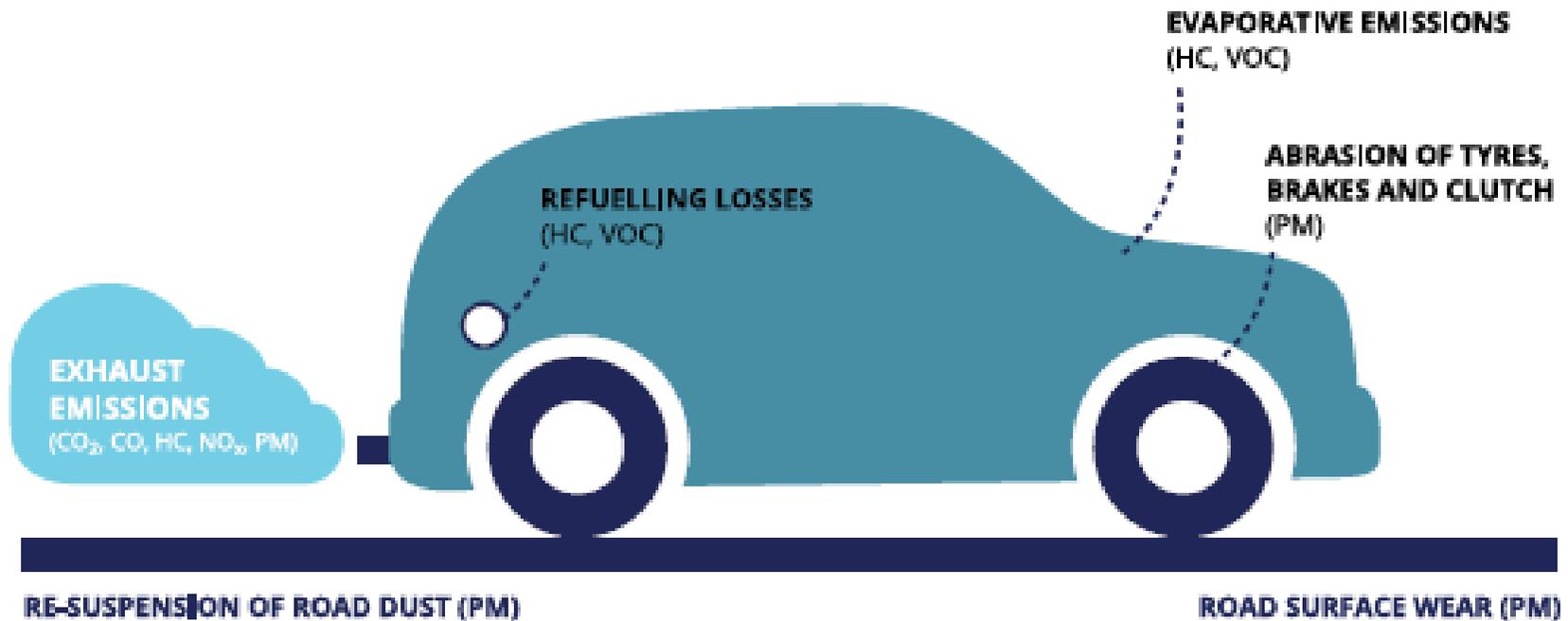
Impacto de la Movilidad en el Medioambiente

Málaga, 6 de febrero de 2019



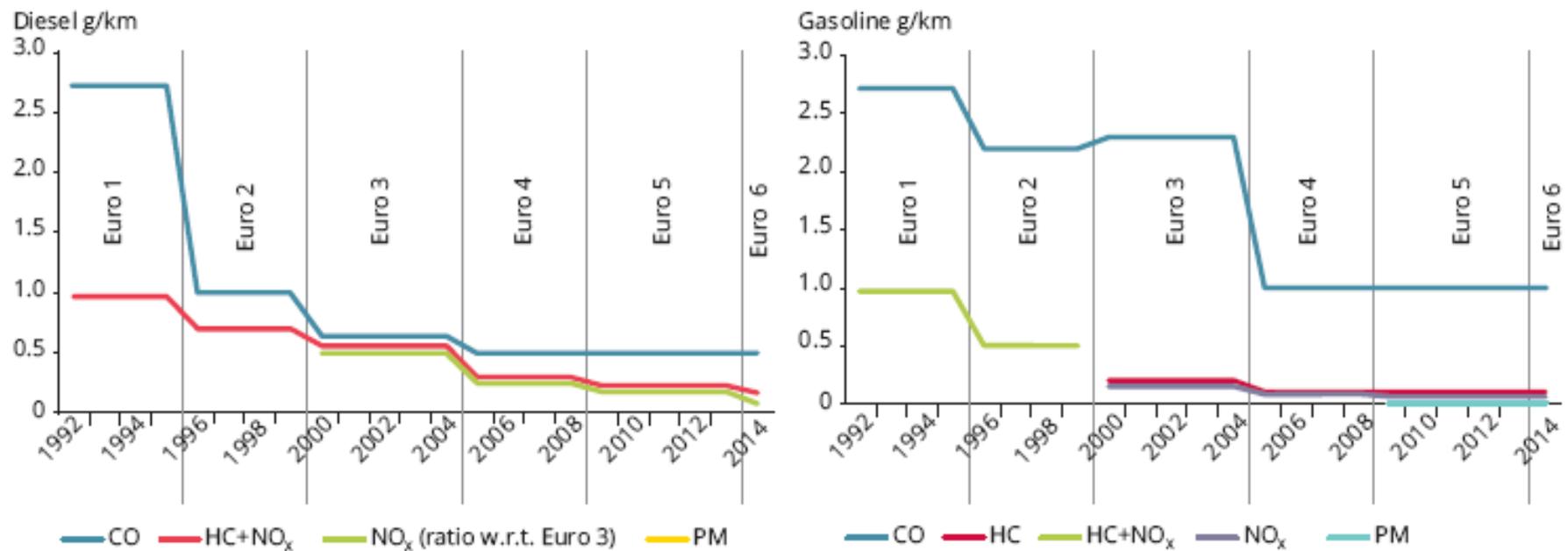
Tipos de emisiones a la atmósfera

- Emisiones por el tubo de escape
- Emisiones provocadas por la abrasión
- Emisiones evaporativas



Regulación de las emisiones de CO, NO_x, HC y Partículas

Figure 3.8 The evolution of the emission limits for gasoline and diesel passenger cars — Euro 1 to Euro 6 standards



Note: The dates refer to the year of application for the new type approvals. Application to the first registration of existing, previously type-approved, vehicle models is 1 year later, unless otherwise specified in the legislation.

Source: Euro standard regulations (EU, 1998; EU, 2007).

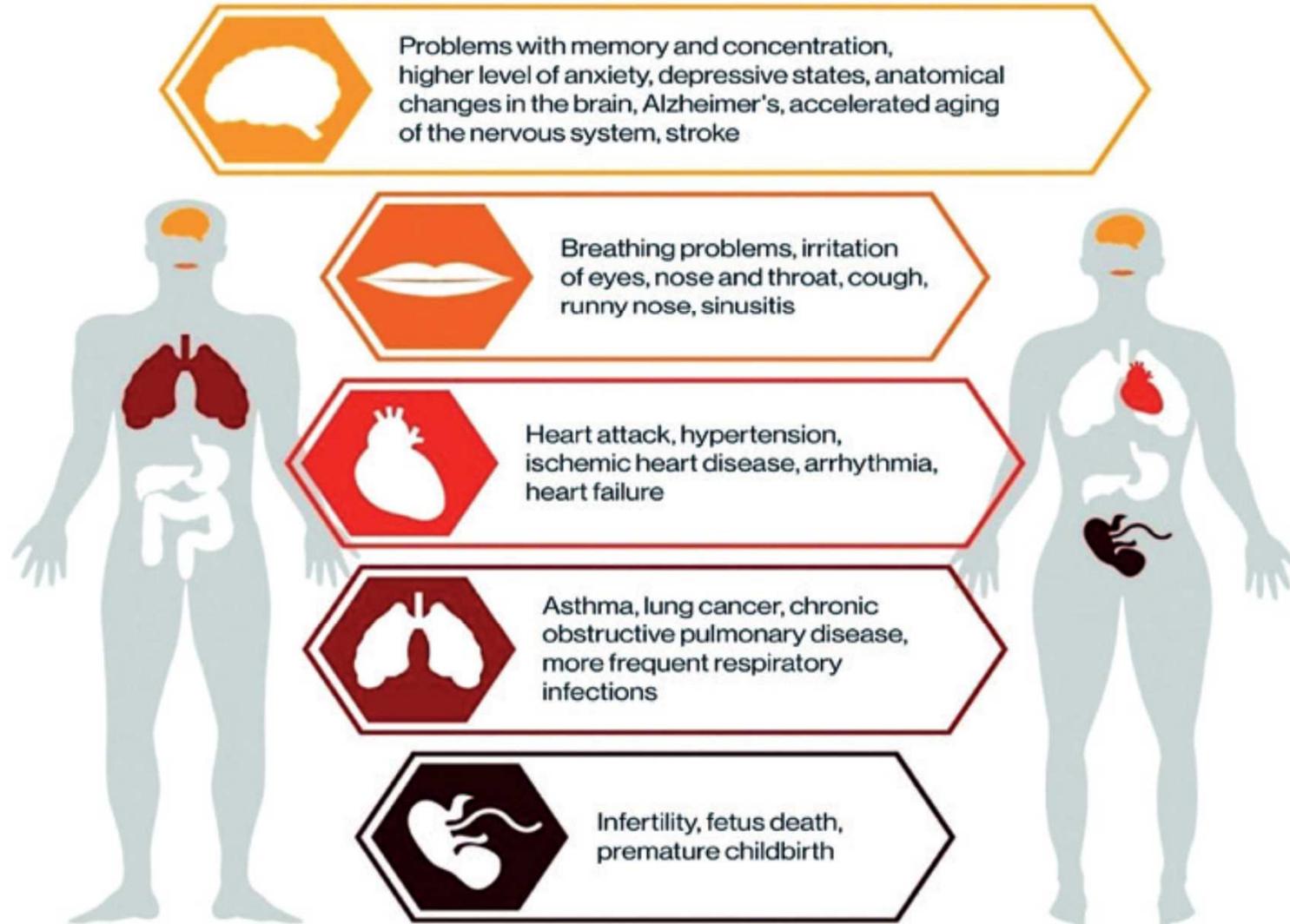


4. Tabla de desglose de las emisiones de contaminantes atmosféricos del año 2017 para el total nacional.

	NO _x	COVNM	SO ₂	NH ₃	PM _{2.5}
	kilotoneladas				
Total Emisiones	821,0	631,9	236,7	520,7	107,6
1. Procesado de la energía	741,2	128,8	218,8	12,6	84,0
A. Actividades de combustión	735,9	100,2	194,8	12,6	83,5
1. Industrias del sector energético	141,5	6,5	100,0	1,3	5,2
2. Industrias manufactureras y de la construcción	112,3	17,2	57,9	1,2	7,4
3. Transporte	343,8	27,2	17,2	2,6	14,1
4. Residencial y otros	135,3	49,2	19,6	7,5	56,8
5. Otros sectores	3,1	0,1	0,2	0,001	0,044
B. Emisiones fugitivas de los combustibles	5,3	28,6	24,0	0,038	0,5
1. Combustibles sólidos	0,007	0,045	0,004	0,030	0,2
2. Petróleo y gas natural	5,3	28,5	24,0	0,008	0,3
2. Procesos Industriales y uso de disolventes	5,2	353,7	17,5	34,0	10,5
A. Industria mineral		0,057		0,079	1,4
B. Industria química	1,7	10,5	5,2	33,7	4,5
C. Producción metalúrgica	1,7	0,8	8,8		1,7
D. Otras industrias		286,6			
G. Otros usos de disolventes	0,1	0,3	0,012	0,3	2,0
H. Industria de la pulpa, el papel, alimentación y bebidas	1,7	55,5	3,4		0,9
L. Otros					
3. Agricultura	66,0	142,9	0,067	472,2	4,0
B. Gestión del estiércol	4,6	56,1		210,9	1,7
D. Suelos agrícolas	61,0	86,7		260,9	1,6
F. Quema en campo de residuos agrícolas	0,3	0,1	0,1	0,3	0,7
5. Tratamiento y eliminación de residuos	8,7	6,5	0,3	1,8	9,0
A. Depósito en vertederos	0,021	4,1			0,009
B. Tratamiento biológico de residuos	0,004			1,2	0,002
C. Incineración de residuos	8,6	2,3	0,3		7,8
D. Tratamiento de agua residual	0,010	0,099		0,7	0,004
E. Otros		0,022		0,003	1,3



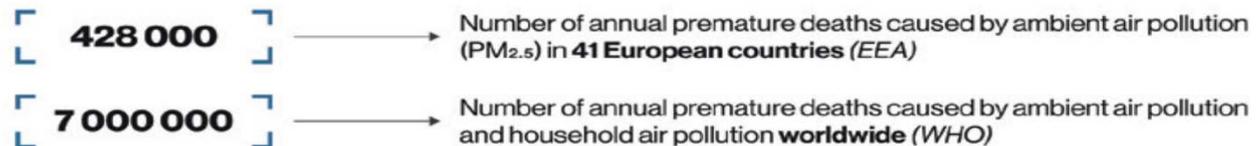
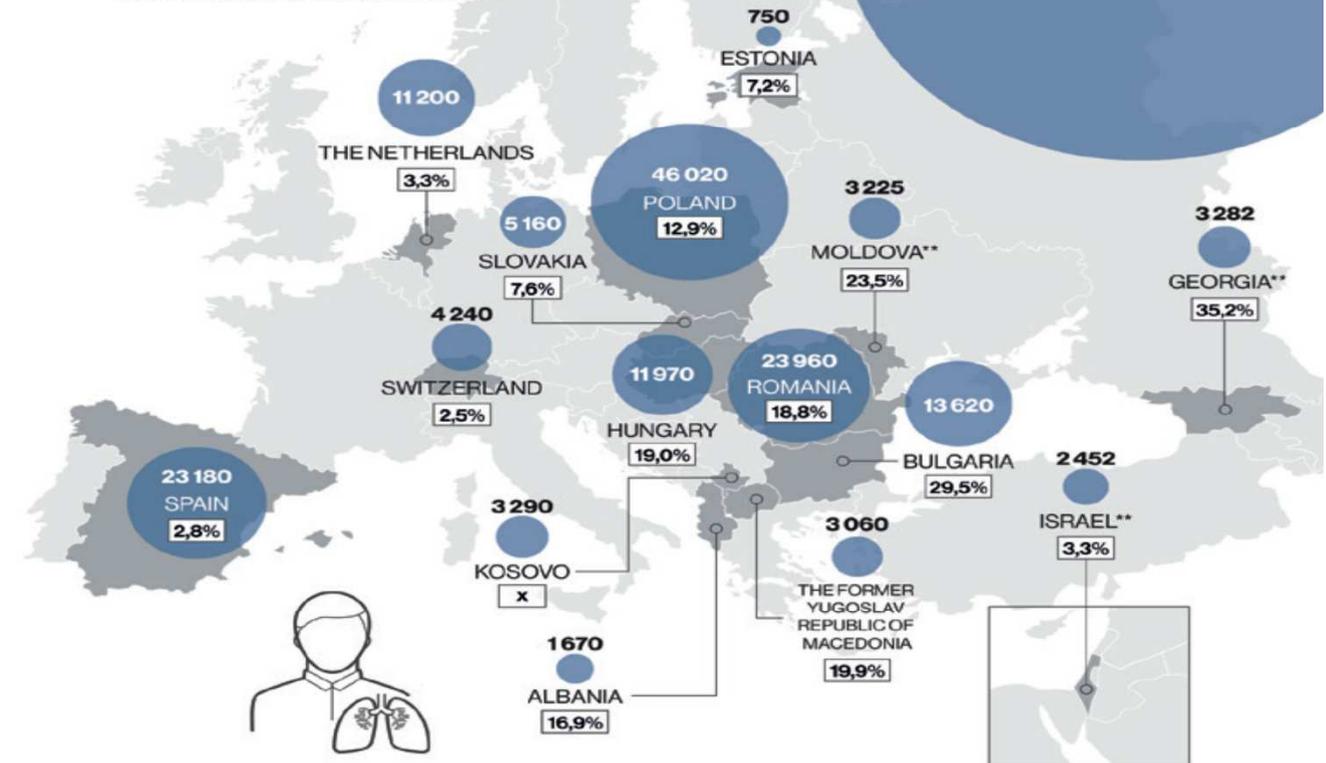
Efectos de la contaminación del aire en la salud



ESTIMATED EFFECTS OF EXPOSURE TO AIR POLLUTION IN SELECTED EUROPEAN COUNTRIES

according to EEA and WHO data

- the number of premature deaths caused by air pollution (due to negative impact of PM_{2.5}) estimated by the EEA (data for 2014)
- the economic consequences of premature deaths (due to ambient particulate matter pollution and household [indoor] air pollution) estimated by the WHO (data for 2010)



Source: Economic cost of the health impact of air pollution in Europe, WHO, 2015 and Air quality in Europe – 2017 report, EEA, 2017

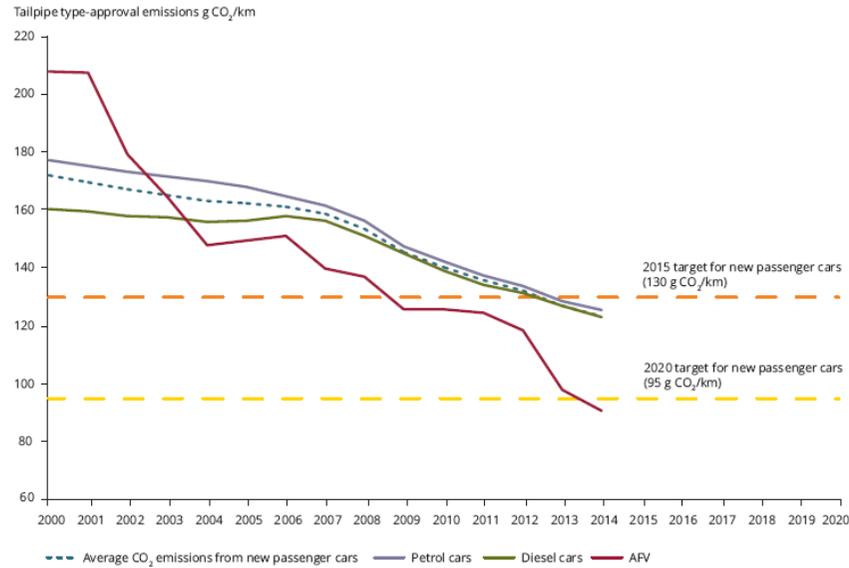
* At purchasing power parity.

** Data on premature deaths due to ambient particulate matter air pollution according to the WHO report.

- 23,180 muertes prematuras causadas por el impacto de las PM_{2,5} (estimado por la Agencia Europea de Medioambiente, 2014)
- Impacto económico del 2,8% del PIB (estimado por la Organización Mundial de la salud, 2010)

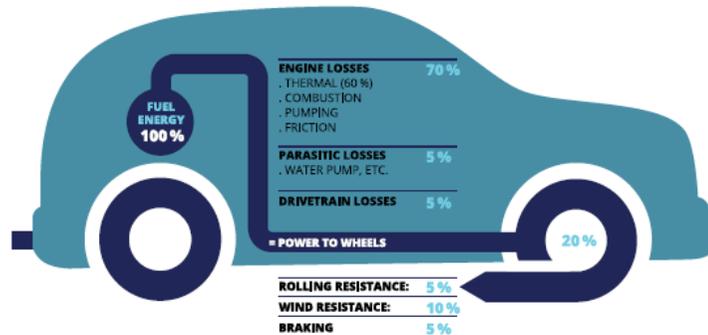
Regulación de las emisiones de CO₂

Figure 5.1 Average reduction in CO₂ emissions from new cars



Note: AFV, alternative-fuelled vehicle. AFVs include pure electric, liquefied petroleum gas, natural gas, ethanol (E85), biodiesel and plug-in hybrid vehicles (diesel-electric or petrol-electric).

Source: EEA, 2015b.

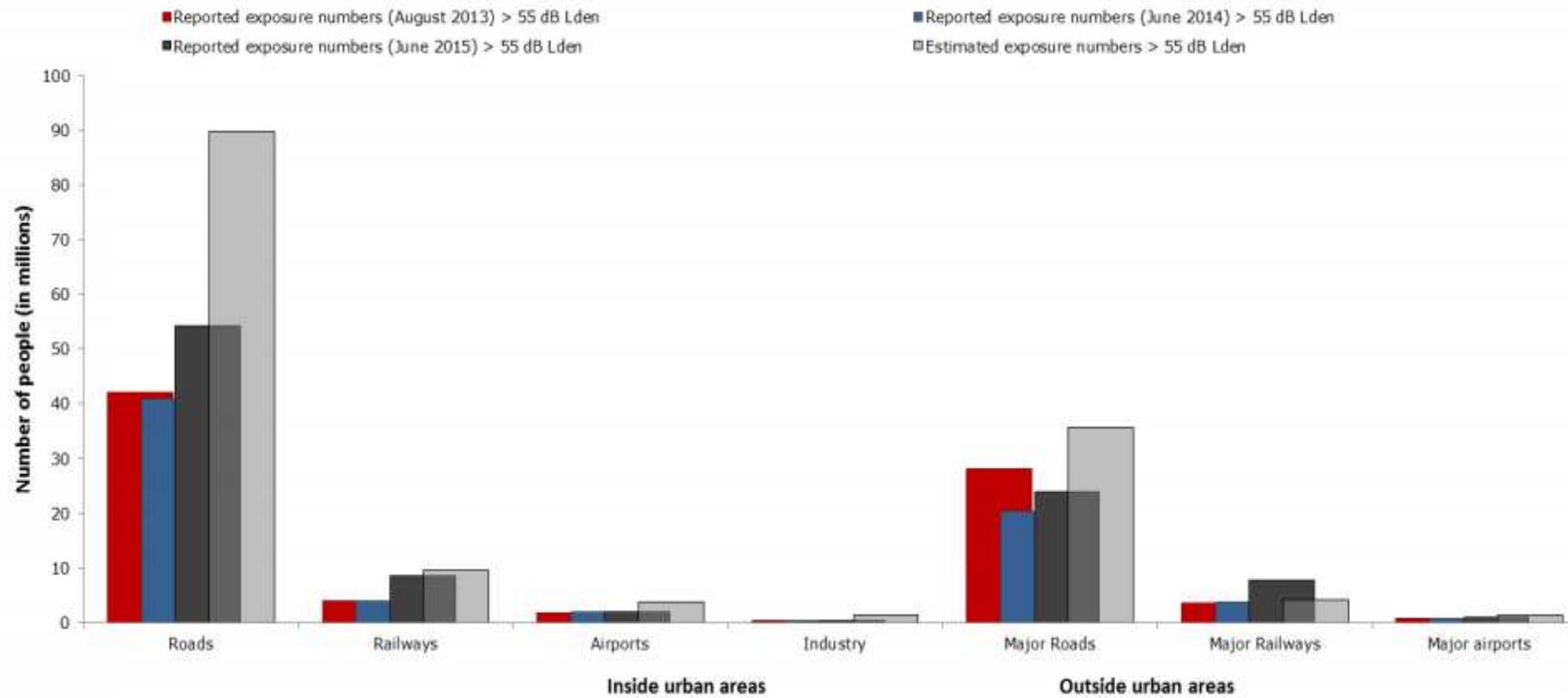


	2016 average emissions (g CO ₂ /km)	2017 average emissions (g CO ₂ /km)
Austria	120.5	120.7
Belgium	115.9	115.9
Bulgaria	125.8	126.1
Croatia	111.7	113.1
Cyprus	123.5	122.2
Czech Republic	121.1	124.4
Denmark	106.1	107.1
Estonia	133.9	132.8
Finland	120.0	118.2
France	109.8	110.4
Germany	127.0	127.1
Greece	106.3	108.8
Hungary	125.9	125.6
Ireland	112.0	111.6
Italy	113.5	113.4
Latvia	128.9	128.8
Lithuania	126.2	127.4
Luxembourg	126.1	127.0
Malta	111.7	110.4
Netherlands	105.9	108.3
Poland	125.9	127.7
Portugal	104.7	104.6
Romania	122.0	120.6
Slovakia	124.9	126.1
Slovenia	119.0	119.6
Spain	114.4	115.0
Sweden	123.1	122.3
United Kingdom	120.1	121.1
EU average	118.1	118.5

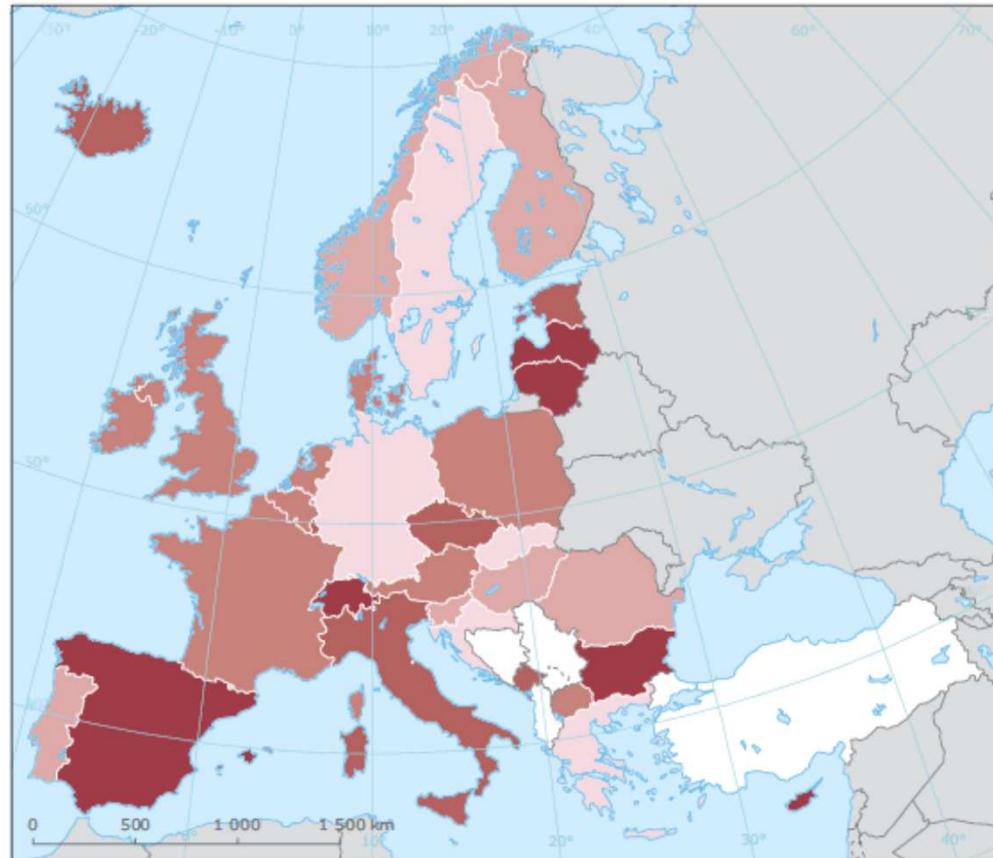
SOURCE: EEA

SOURCE: EEA

D 2002/49/CE: Datos de exposición al ruido por tipo de fuentes en la UE



Map 2.2 Proportion of the population exposed to average day-evening-night road noise levels (L_{den}) \geq 55dB (2011)



Proportion of the population exposed to average day-evening-night road noise levels (L_{den}) \geq 55dB (2011)

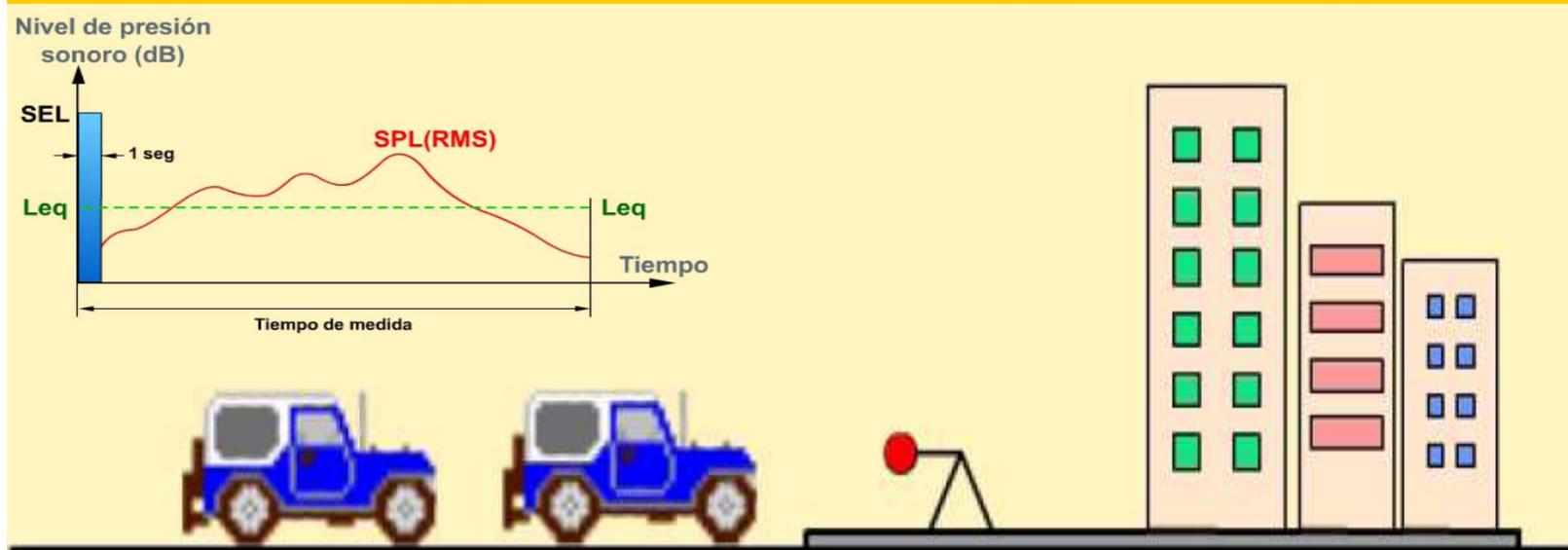


Note: For EU-28 countries, plus the former Yugoslav Republic of Macedonia, Iceland, Norway and Switzerland. Because of gaps in the reported data, a gap-filling routine is used to estimate the total population exposure to high noise levels.

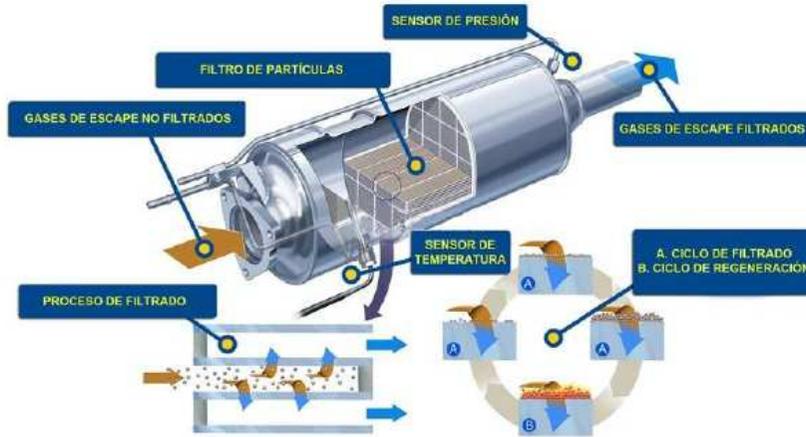
Source: EEA based on data officially reported by countries under the EU Environmental Noise Directive (2002/49/EC; EU, 2002).

Acciones que atenúan la intensidad del foco de ruido: Disminuir la intensidad del tráfico

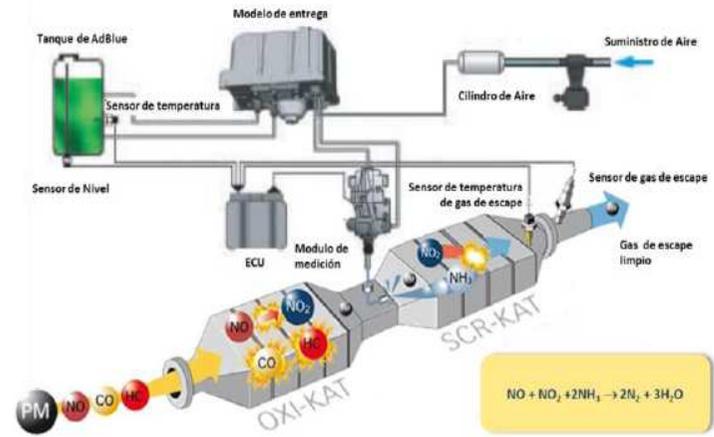
<u>Vehículos/hora</u>		<u>$L_{Aeq,1h}$</u>	<u>L_{Amax}</u>
1	->	40 dB	74 dB
2	->	43 dB	74 dB
10	->	50 dB	74 dB
100	->	60 dB	74 dB
1000	->	70 dB	74 dB



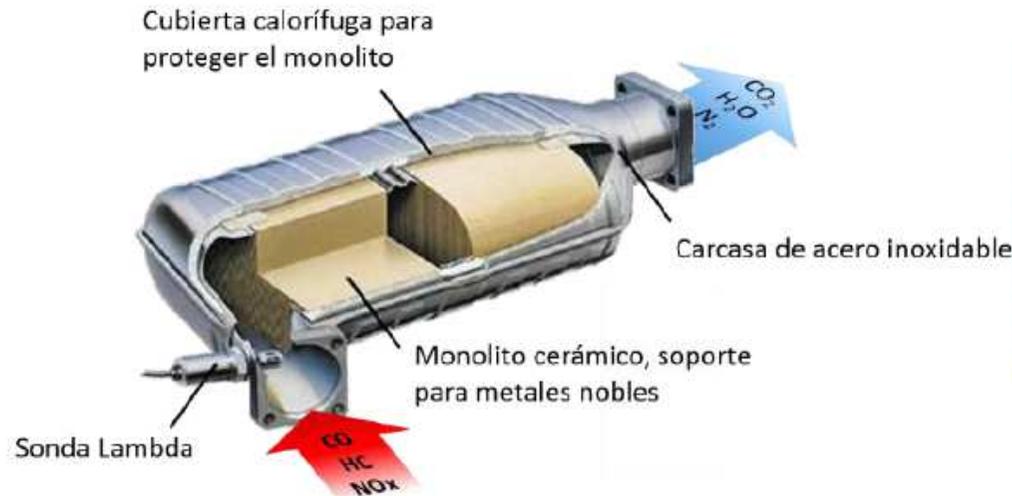
Tecnologías de reducción de emisiones y ruido



Detalle y esquema de funcionamiento de un filtro de partículas



Esquema de funcionamiento del sistema Urea-SCR



Esquema de funcionamiento catalizador de 3 vías





GOBIERNO DE ESPAÑA

MINISTERIO PARA LA TRANSICIÓN ECOLÓGICA

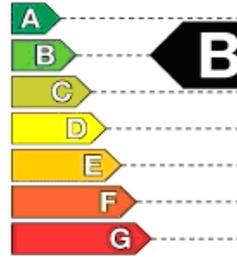




Savings, safety and comfort

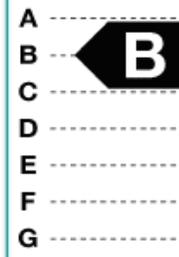
Fuel economy

Improved fuel economy saves fuel and reduces CO₂ emissions. See how much money you could be saving – use our savings calculator at www.energycar.org



Wet grip

Tyre wet grip affects the braking distance on wet roads.



Equipping your car with A class tyres could save you a further €75 over their lifetime. To find out more visit www.energycar.org

Exterior Noise

72 dB

A scale with three colored dots (green, yellow, red) and a black arrow pointing to the yellow dot.

Low Noise tyres give you a quieter ride and reduce noise pollution.

Marca de bajo nivel de ruido:



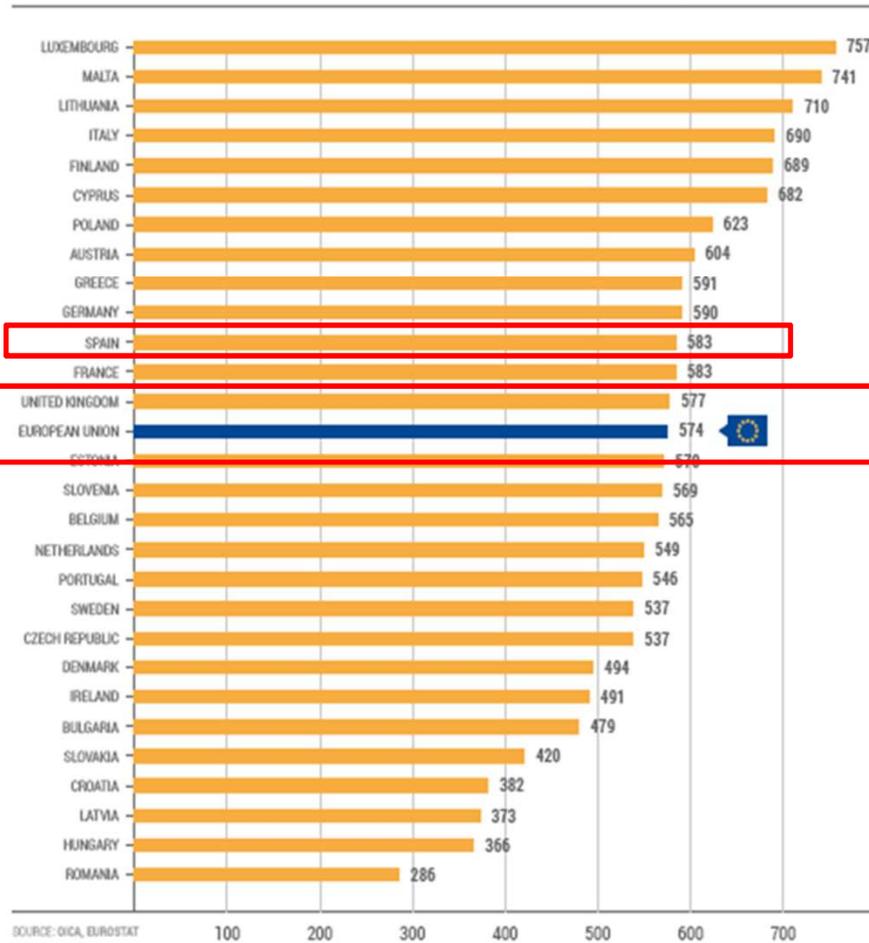
C1	C2	C3
≤69	≤68	≤70

Check your tyres regularly

Vehículos en uso por cada 1.000 habitantes

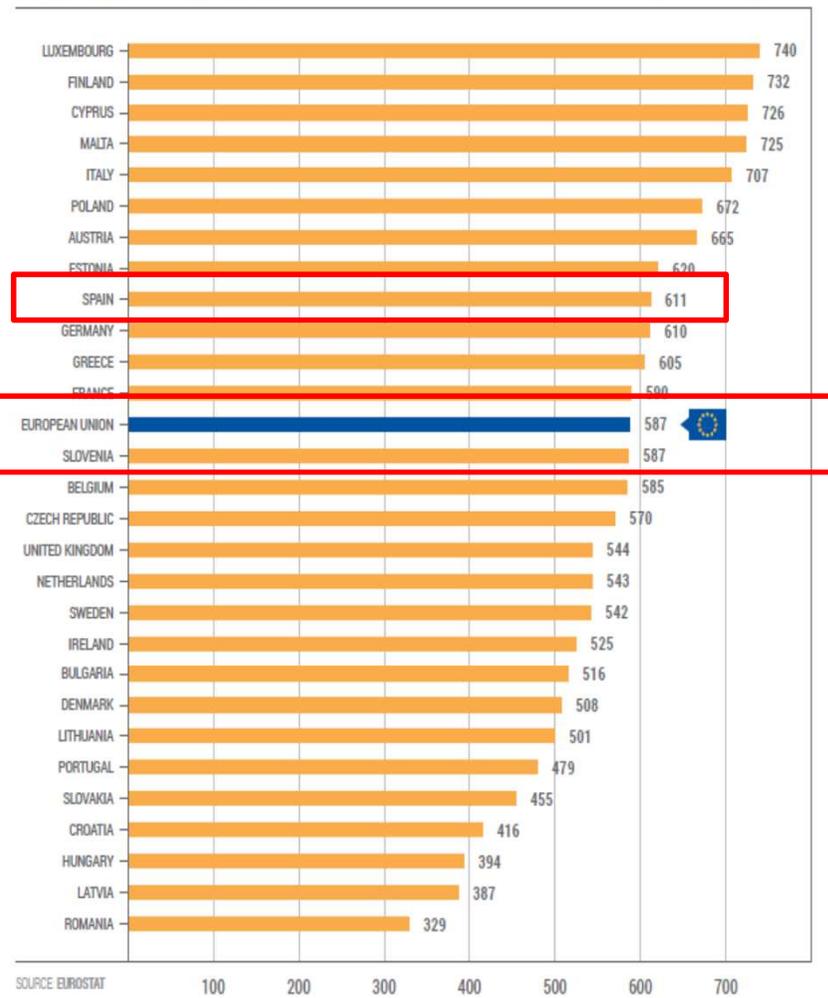
Motorisation rate in the EU

PER 1,000 INHABITANTS / 2014



Motorisation rates in the EU

PER 1,000 INHABITANTS / 2016





¡Muchas gracias por su atención!

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