

The Environmental Noise Directive (END) requires EU member states to assess exposure to noise from key transport and industrial sources with two initial reporting phases: 2007 and 2012. Where the recommended thresholds for day and night indicators are exceeded, action plans are to be implemented. This country fiche presents data related to END assessments as reported to EEA by 15th April 2016 for the two key END indicators: L_{den} (day evening and night exposure) and L_{night} (night time exposure). 2012 strategic noise maps reported are presented, as well as HIA calculations for annoyance and sleep disturbance, hospital admissions and mortality. Trends are presented as the change in exposure from 2007 to 2012, for comparable sources only.

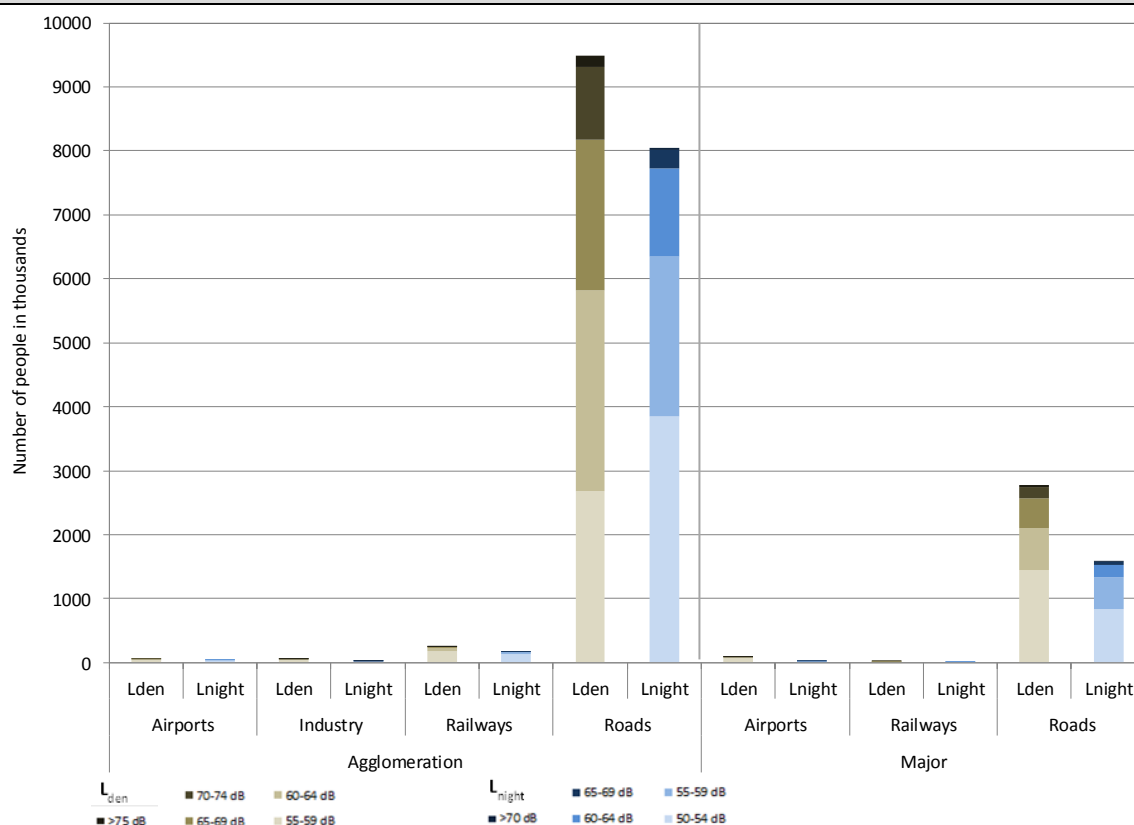


SPAIN

Noise sources covered by this assessment

Agglomerations > 100.000 inhabitants	A Coruna, Albacete, Alcala de Henares, Alcobendas, Alcorcon, Algeciras, Alicante, Almeria, Badajoz, Baix Llobregat I, Baix Llobregat II, Barcelones I, Barcelones II, Bilbao, Burgos, Cadiz, Cartagena, Castellon de la Plana, Cordoba, Dos Hermanas, Elche, Fuenlabrada, Getafe, Gijon, Girones, Granada, Huelva, Jaen, Jerez de la Frontera, Las Palmas de Gran Canaria, Leganes, Leon, Lleida, Logrono, Madrid, Malaga, Marbella, Mataro, Mostoles, Murcia, Oviedo, Palma de Mallorca, Pamplona, Parla, Reus, Salamanca, San Cristobal de La Laguna, San Sebastian - Donostia, Santa Cruz de Tenerife, Santander, Sevilla, Torrejon de Ardoz, Torrevieja, Valencia, Valladolid, Valles Occidental I, Valles Occidental II, Vigo, Vitoria - Gazteiz, Zaragoza 60 agglomerations in total, covering 18.920.666 inhabitants
Major airports > 50.000 movements per year	Alicante-Elche Airport, Barcelona El Prat Airport, Bilbao Airport, Gran Canaria Airport, Ibiza Airport, Lanzarote Airport, Madrid Barajas Airport, Malaga Airport, Palma de Mallorca Airport, Seville Airport, Tenerife North Airport, Tenerife South Airport, Valencia Airport 13 major airports in total
Major roads > 3 million vehicles per year	19976 km in total
Major railways > 30.000 train passages per year	1672 km in total

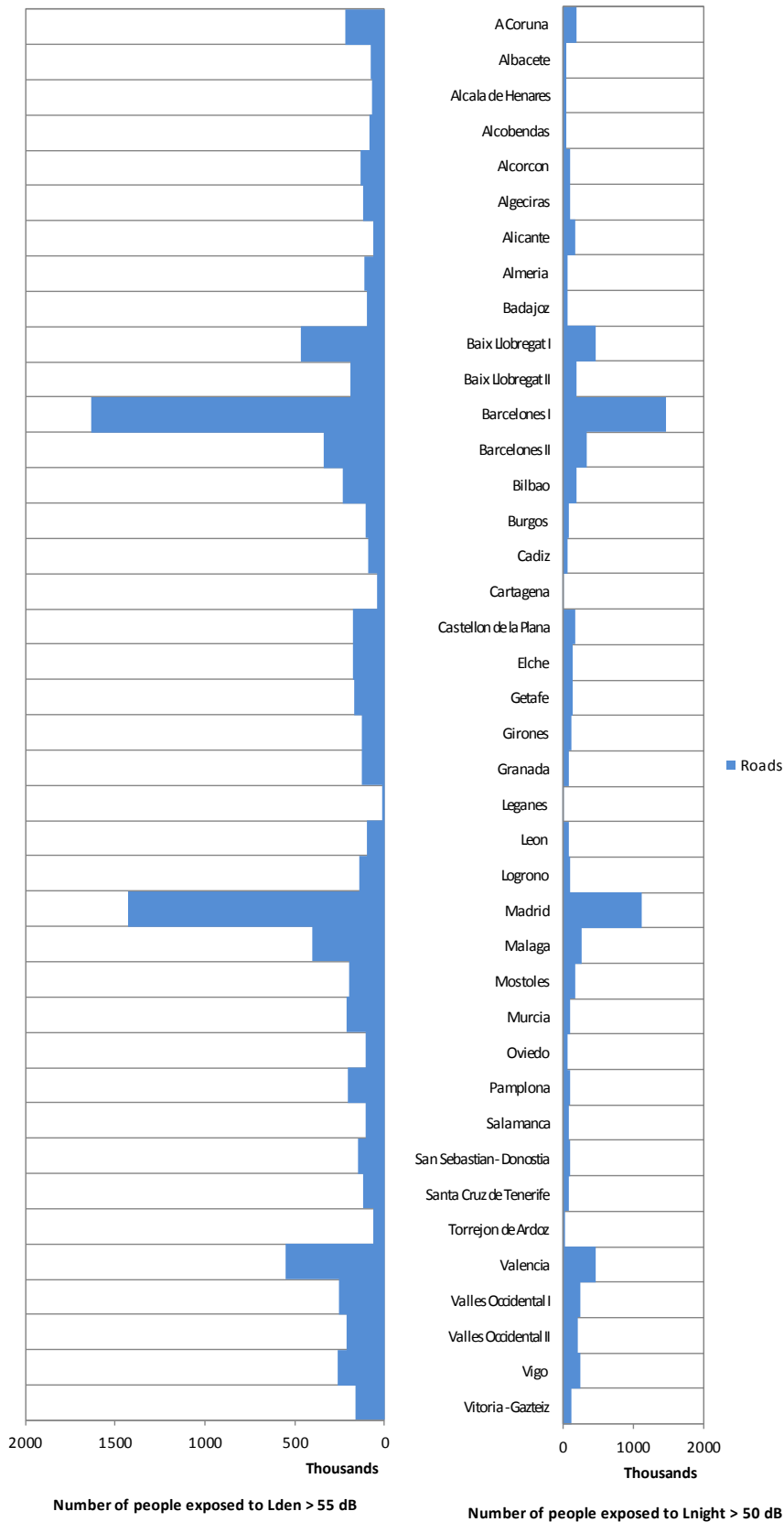
Number of people exposed to different noise bands per L_{den} and L_{night} (2012)



Data not provided in 21 agglomerations for aircraft noise, in 22 agglomerations for industrial noise, in 22 agglomerations for railway noise and in 20 agglomerations for road noise, out of 60 agglomerations.

Data not applicable in 28 agglomerations for aircraft noise, in 4 agglomerations for industrial noise and in 1 agglomeration for railway noise, out of 60 agglomerations.

Total number of people exposed to road noise inside agglomerations (2012)



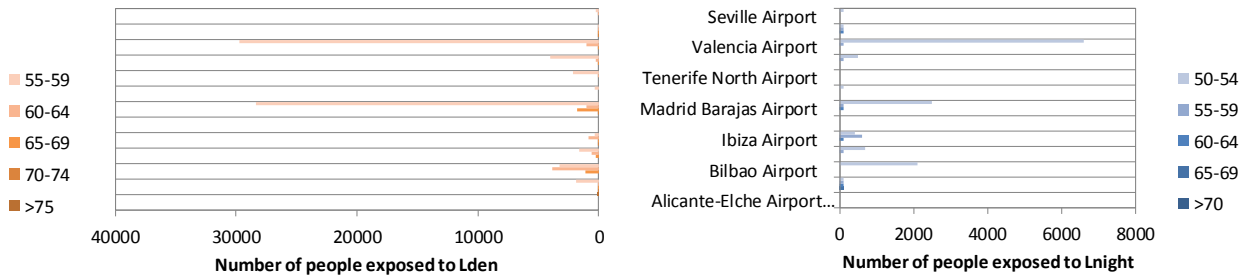
Cordoba, Dos Hermanas, Fuenlabrada, Gijón, Huelva, Jaén, Jerez de la Frontera, Las Palmas de Gran Canaria, Lleida, Marbella, Mataró, Palma de Mallorca, Parla, Reus, San Cristóbal de La Laguna, Santander, Sevilla, Torrejueja, Valladolid, Zaragoza have not provided data on noise exposure.

Total number of people exposed to railway, aircraft and industrial noise inside agglomerations (2012)



Cordoba, Dos Hermanas, Fuenlabrada, Gijon, Huelva, Jaen, Jerez de la Frontera, Las Palmas de Gran Canaria, Lleida, Marbella, Mataro, Palma de Mallorca, Parla, Reus, San Cristobal de La Laguna, Santander, Sevilla, Torre Vieja, Valladolid and Zaragoza have not provided data on noise exposure.

Total number of people exposed to Major Airports outside agglomerations (2012)

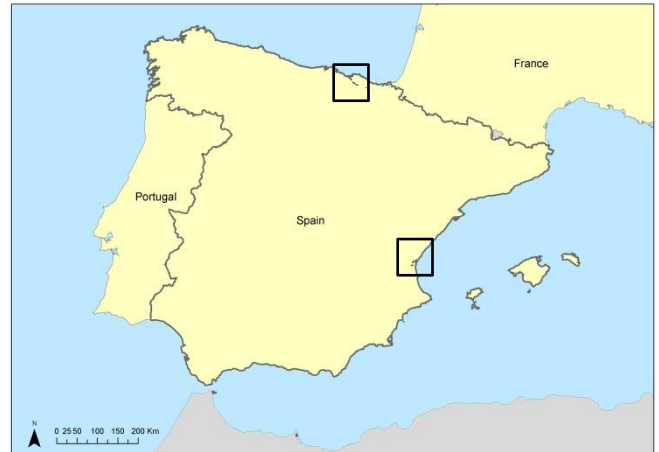


Noise contour maps (2012)

Major roads

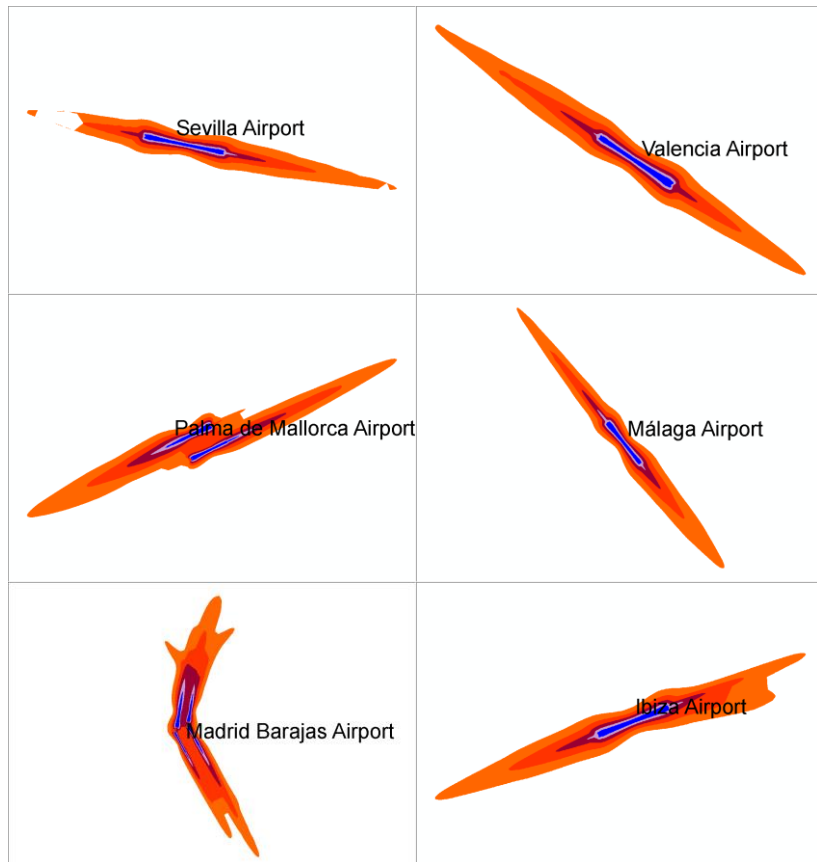


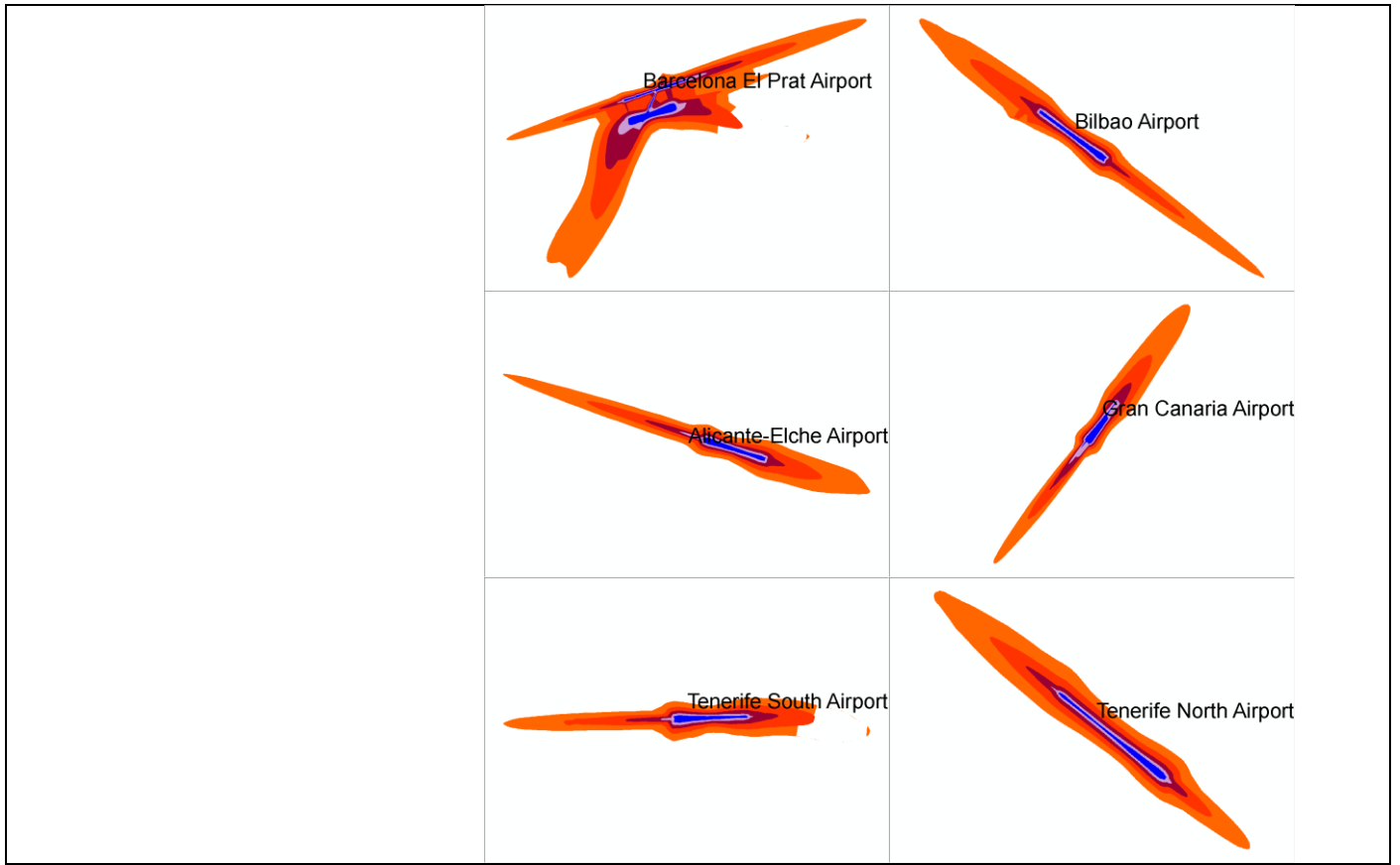
Major railways



Major airports

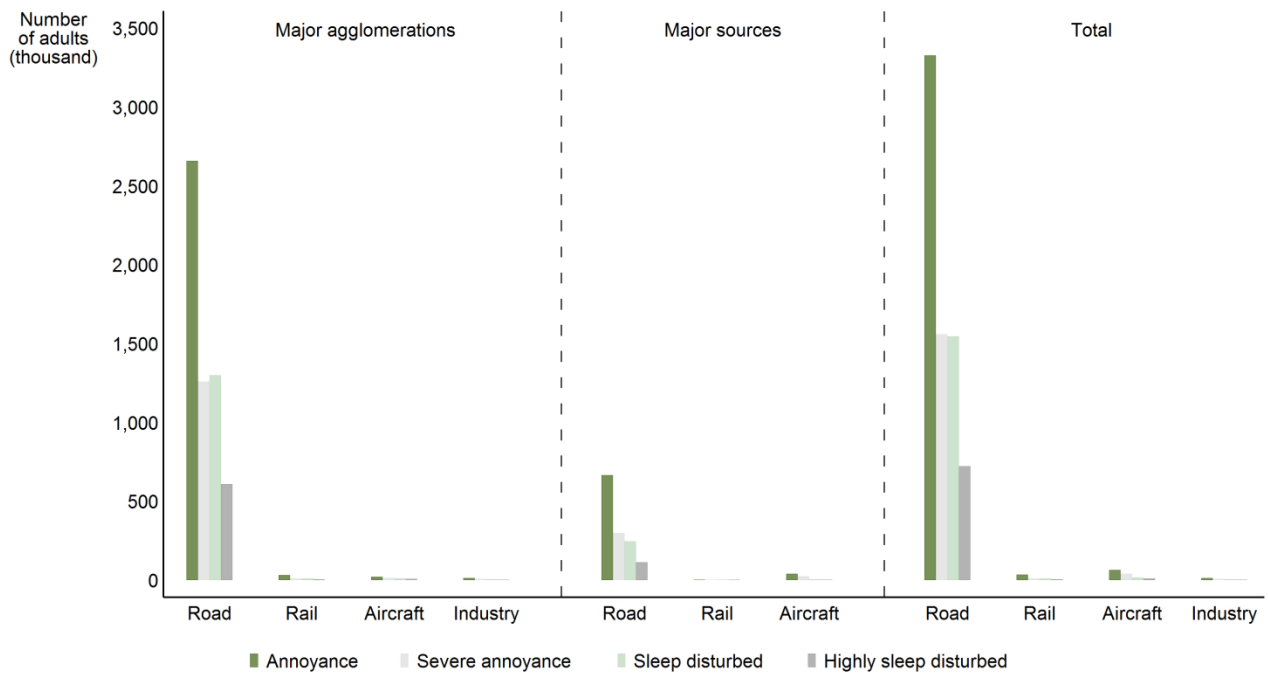
Airport	ICAO	Annual traffic
Gran Canaria Airport	GCLP	107378
Lanzarote Airport	GCCR	50612
Tenerife South Airport	GCTS	61725
Tenerife North Airport	GCXO	58919
Alicante-Elche Airport	LEAL	76877
Bilbao Airport	LEBB	54877
Barcelona El Prat Airport	LEBL	349465
Ibiza Airport	LEIB	51587
Madrid Barajas Airport	LEMD	481885
Malaga Airport	LEMG	122298
Palma de Mallorca Airport	LEPA	195891
Valencia Airport	LEVC	81224
Seville Airport	LEZL	51034





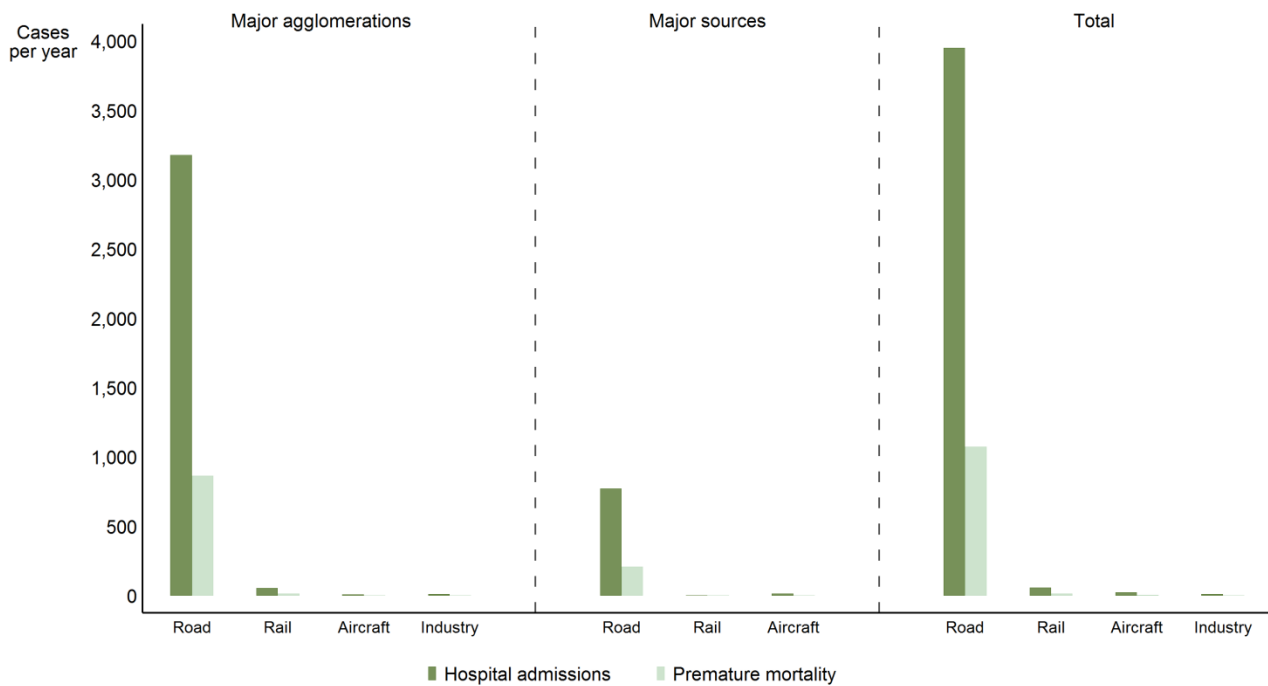
Health impact assessment

Annoyance and sleep disturbance



ES 0210216

Hospital admissions and mortality



ES 0210216

Trends on noise exposure 2007 - 2012

Trends on noise exposure are shown only in those cases where data is available for both implementation rounds:

- For major airports: total number of people exposed to more than 55 dB Lden and to more than 50 dB Lnight outside agglomerations.
- For agglomerations: percentage of population exposed to more than 55 dB Lden and to more than 50 dB Lnight due to different noise sources.

Major airports:

	L _{den}		L _{night}	
	First Round	Second Round	First Round	Second Round
Bilbao Airport	9900	8100	3700	2100
Gran Canaria Airport	3600	2400	1600	800
Malaga Airport	500	400	400	300
Palma de Mallorca Airport	100	300	0	100
Valencia Airport	38700	30800	8600	6700
Barcelona El Prat Airport	7800	2300	1100	400
Alicante-Elche Airport	8500	0	2100	0
Tenerife South Airport	11600	4300	2800	600
Tenerife North Airport	18300	2200	0	0
Madrid Barajas Airport	43300	31300	4800	2700

Agglomerations:

Air (values in %)	L _{den}		L _{night}	
	First Round	Second Round	First Round	Second Round
Madrid	0	0	0	0
Malaga	1.2	1.0	0.4	0.3
Pamplona (*)	0	0	0	0

Industry (values in %)	L _{den}		L _{night}	
	First Round	Second Round	First Round	Second Round
Bilbao	0.00	0.03	0	0
Malaga	0.18	0.78	0.43	0.30
Pamplona (*)	0.00	0.19	0.00	0.09
Valencia	0.01	0.00	0	0
Vigo	3	6	2	5

	Decrease in population exposed
	No change
	Increase in population exposed

Railway (values in %)	L _{den}		L _{night}	
	First Round	Second Round	First Round	Second Round
Alicante	0.1	0.8	0.0	0.5
Bilbao	1.3	0.9	0.5	0.3
Murcia	0.0	0.5	0.0	0.3
Pamplona	0.3	0.4	0.2	0.3
Valencia	0.4	2.1	0.1	1.2
Vigo	0.3	0.0	0.1	0.0

Road (values in %)	L _{den}		L _{night}	
	First Round	Second Round	First Round	Second Round
Alicante	87	19	74	54
Baix Llobregat I	91	100	67	100
Barcelones I	88	99	81	89
Barcelones II	92	100	77	100
Bilbao	67	67	60	57
Madrid	50	44	41	34
Malaga	57	70	46	48
Murcia	25	48	15	24
Pamplona (*)	70	64	43	30
Valencia	92	69	79	58
Vigo	56	86	45	82

(*) Increase of the number of inhabitants bigger than 10% between 2005 and 2010

For further information about environmental noise in Europe please consult <http://www.eea.europa.eu/themes/human/noise> or visit the Noise Observation & Information Service for

Europe at <http://noise.eionet.europa.eu/> and EEA Data Service <http://www.eea.europa.eu/data-and-maps/data/data-on-noise-exposure-2>.