

Noise in Europe

2015 overview of policy-related data



Germany 

April 2016



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 fact sheet presents key statistics related to END assessments as reported to EEA by 30th June 2015 for the two key END indicators: L_{den} (day evening and night exposure) and L_{night} (night time exposure). Where possible this is presented for second round assessments reported in 2012. Trends are presented as the change in exposure from 2007 to 2012, for comparable sources only.



GERMANY

Noise sources covered by this assessment

	END noise sources
Number of agglomerations	71
Major roads	48585 km
Major railways	16875 km
Number of major airports	12
Name of major airports	Berlin Schonefeld Airport Berlin Tegel Airport Stuttgart Airport Munich Airport Nuremberg Airport Frankfurt am Main Airport Hamburg Airport Hanover Langenhagen Airport Cologne Bonn Airport Dusseldorf Internatinal Airport Hamburg Airport Leipzig/Halle Airport
Name of agglomerations and number of inhabitants	Aachen 260454 Augsburg 266647 Bergisch Gladbach 105836 Berlin 3331249 Bielefeld 323395 Bochum 373976 Bonn 327913 Bottrop 116361 Braunschweig 250000 Bremen 545640

Trends on noise exposure 2007 - 2012

Trends on noise exposure show, for both implementation rounds:

- For agglomerations: the relative value of people exposed to more than 55 dB L_{den} and to more than 50 dB L_{night} due to different noise sources (values are expressed in %).
- For major airports: total number of people exposed to more than 55 dB L_{den} and to more than 50 dB L_{night} (values are expressed in real numbers).

Major airports:

	L_{den}		L_{night}	
	First round	Second round	First round	Second round
Munich Airport	7800	11300	800	3400
Nuremberg Airport	1400	1600	0	0
Hanover Langenhagen Airport	26300	18300	10500	4900
Dusseldorf International Airport	30900	32300	6600	7400
Cologne Bonn Airport	31400	35400	19900	22000
Hamburg Airport	51100	1400	5400	0
Frankfurt am Main Airport	225200	109200	107200	36800
Berlin Tegel Airport	251300	0	74000	0
Stuttgart Airport	43500	43500	5700	5700

Agglomerations:

Airports (values in %)	L_{den}		L_{night}	
	First round	Second round	First round	Second round
Aachen	N/D	N/D	N/D	N/D
Augsburg	N/D	N/D	N/D	N/D
Berlin	7.5	7.4	2.2	1.7
Bielefeld	N/D	N/D	N/D	N/D
Bochum	N/D	N/D	N/D	N/D
Bonn	N/D	N/D	N/D	N/D

Bremerhaven 112000
 Chemnitz 171254
 Cologne 1017155
 Darmstadt 149052
 Dortmund 580956
 Dresden 495800
 Duisburg 488005
 Dusseldorf 592393
 Erlangen 106326
 Essen 573468
 Frankfurt 691518
 Freiburg 219430
 Furth 116317
 Gelsenkirchen 256652
 Gottingen 121000
 Hagen 187447
 Halle 233705
 Hamburg 2007148
 Hannover 520000
 Heidelberg 145311
 Heilbronn 121627
 Herne 164244
 Hildesheim 103000
 Ingolstadt 126732
 Karlsruhe 288917
 Kassel 196526
 Kiel 253319
 Koblenz 109285
 Krefeld 234396
 Leipzig 522882
 Leverkusen 161195
 Lubeck 219932
 Ludwigshafen 165560
 Magdeburg 232364
 Mainz 203041
 Mannheim 309795
 Moers 105102
 Monchengladbach 257208
 Mulheim an der Ruhr 167156
 Munich 1378176
 Munster 291754
 Neuss 152010
 Nuremberg 510602
 Oberhausen 212568
 Offenbach 122705
 Oldenburg 162000
 Osnabruck 164000
 Pforzheim 119423

Bremen	3	4	0	1
Cologne	5	5	2	2
Dortmund	1	0	0	0
Dresden	0.6	2.0	0.2	0.2
Duisburg	N/D	N/D	N/D	N/D
Dusseldorf	1.2	1.4	0.2	0.2
Essen	0.6	2.6	0.0	0.0
Frankfurt	2.0	1.9	0.1	0.0
Gelsenkirchen	N/D	N/D	N/D	N/D
Hamburg	2.5	2.6	0.3	0.2
Hannover	0	0	0	0
Karlsruhe	N/D	N/D	N/D	N/D
Kiel	N/D	N/D	N/D	N/D
Leipzig	0	0	0	0
Mannheim	0.3	0.3	0.0	0.0
Monchengladbach	N/D	N/D	N/D	N/D
Munich	N/D	N/D	N/D	N/D
Nuremberg	0.7	0.7	0.2	0.2
Stuttgart	0.1	0.1	0.0	0.0
Wiesbaden	N/D	N/D	N/D	N/D
Wuppertal	N/D	N/D	N/D	N/D

Industry (values in %)	L _{den}		L _{night}	
	First round	Second round	First round	Second round
Aachen	0.00	0.04	0	0
Augsburg	0.59	0.26	0	0
Berlin	0.01	0.02	0.01	0.01
Bielefeld	0	0	0	0
Bochum	0.21	0.27	0.08	0.08
Bonn	0.19	0.18	0.16	0.15
Bremen	0	1	0	1
Cologne	1	0	1	0
Dortmund	0	0	0	0
Dresden	0	0	0	0
Duisburg	0	0	0	0
Dusseldorf	0.05	0.10	0.02	0.02
Essen	0.15	0.09	0.07	0.02

Potsdam	157210
Recklinghausen	117672
Regensburg	136577
Remscheid	109596
Reutlingen	112458
Rostock	202642
Saarbrücken	234740
Solingen	159699
Stuttgart	581858
Ulm	121434
Wiesbaden	278919
Wuppertal	349470
Würzburg	133808

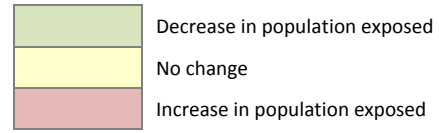
Frankfurt	0.50	0.10	0.24	0.06
Gelsenkirchen	0.04	0.19	0.00	0.04
Hamburg	0.21	0.17	0.13	0.10
Hannover	0.04	0.04	0	0
Karlsruhe	0.07	0.07	0	0
Kiel	0	0	0	0
Leipzig	0	0	0	0
Mannheim	1.78	1.87	0.52	0.55
Monchengladbach	0	0	0	0
Munich	0.05	0.04	0	0
Nuremberg	0.06	0.08	0.02	0.02
Stuttgart	0.12	0.17	0.02	0.07
Wiesbaden	0	0	0	0
Wuppertal	0	0	0	0

Railways (values in %)	L _{den}		L _{night}	
	First round	Second round	First round	Second round
Aachen	0	15	0	12
Augsburg	N/D	N/D	N/D	N/D
Berlin	5.1	6.9	3.7	5.2
Bielefeld	2.0	9.9	1.4	8.1
Bochum	2.9	11.2	2.5	8.9
Bonn	2.0	23.9	1.3	19.5
Bremen	N/D	N/D	N/D	N/D
Cologne	5	25	4	20
Dortmund	2	9	2	7
Dresden	4.7	11.1	3.3	8.2
Duisburg	1.8	20.0	0.7	14.9
Dusseldorf	8.0	21.8	6.6	16.7
Essen	3.6	12.9	2.5	9.7
Frankfurt	4.6	15.9	3.4	12.2
Gelsenkirchen	2.8	12.7	2.2	10.1
Hamburg	1.2	5.7	0.6	4.2
Hannover	5.0	34.5	3.7	28.7
Karlsruhe	N/D	N/D	N/D	N/D
Kiel	N/D	N/D	N/D	N/D
Leipzig	7	11	6	8
Mannheim	N/D	N/D	N/D	N/D
Monchengladbach	0	8	0	6

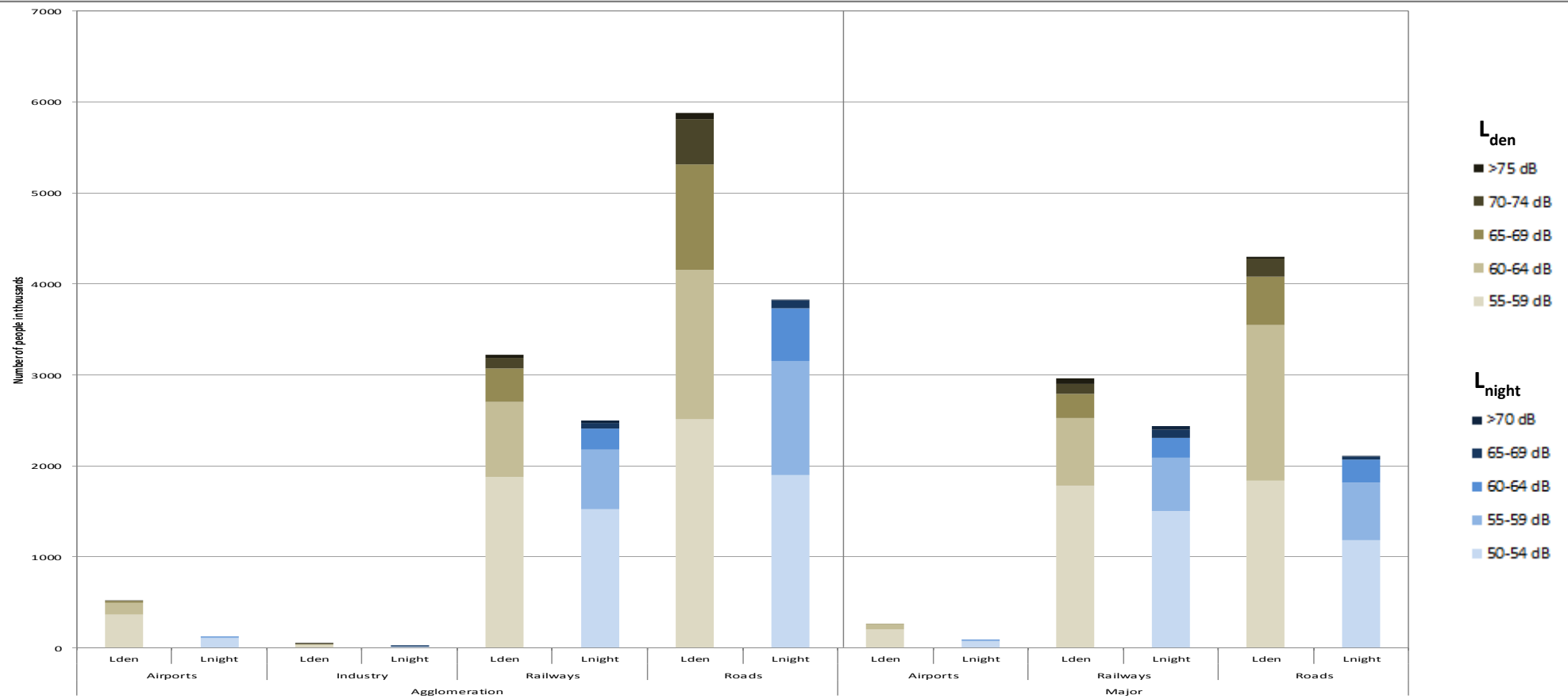
Munich	N/D	N/D	N/D	N/D
Nuremberg	N/D	N/D	N/D	N/D
Stuttgart	N/D	N/D	N/D	N/D
Wiesbaden	0	13	0	11
Wuppertal	1	7	0	5

Roads (values in %)	L _{den}		L _{night}	
	First round	Second round	First round	Second round
Aachen	32	56	19	37
Augsburg	17	16	11	10
Berlin	19	18	16	14
Bielefeld	38	23	14	12
Bochum	26	35	17	20
Bonn	37	22	26	15
Bremen	29	26	16	14
Cologne	33	25	23	18
Dortmund	30	30	19	18
Dresden	21	21	16	15
Duisburg	27	29	7	18
Dusseldorf	28	41	20	23
Essen	30	29	20	19
Frankfurt	31	30	20	21
Gelsenkirchen	24	30	7	21
Hamburg	21	21	15	14
Hannover	28	27	17	16
Karlsruhe	21	26	14	17
Kiel	12	15	8	9
Leipzig	20	16	13	10
Mannheim	20	24	12	13
Monchengladbach	46	29	14	22
Munich	22	18	14	12
Nuremberg	28	23	18	14
Stuttgart	18	20	11	13
Wiesbaden	25	31	16	20
Wuppertal	29	25	20	17

N/D: Data not provided or data not suitable to derive trends (e.g. data reported for only one round)



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



Data not provided in 24 agglomerations for aircraft noise, in 5 agglomerations for industrial noise and in 1 agglomerations for road noise.

Data not applicable in 25 agglomerations for aircraft noise and in 2 agglomerations for industrial noise.

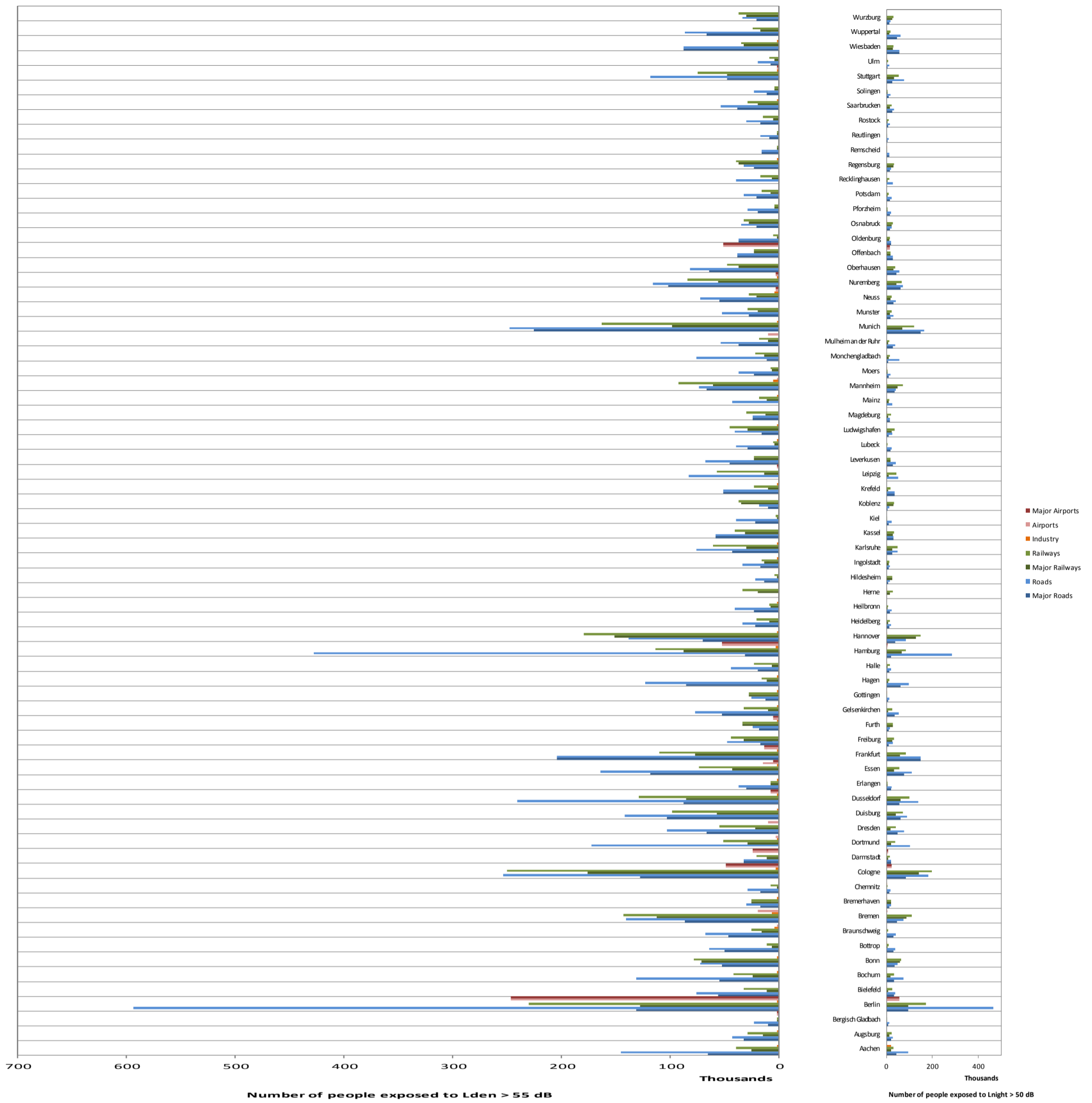
Data not provided for 1 major airport.

Data relating to END mandatory noise contour maps (2012)

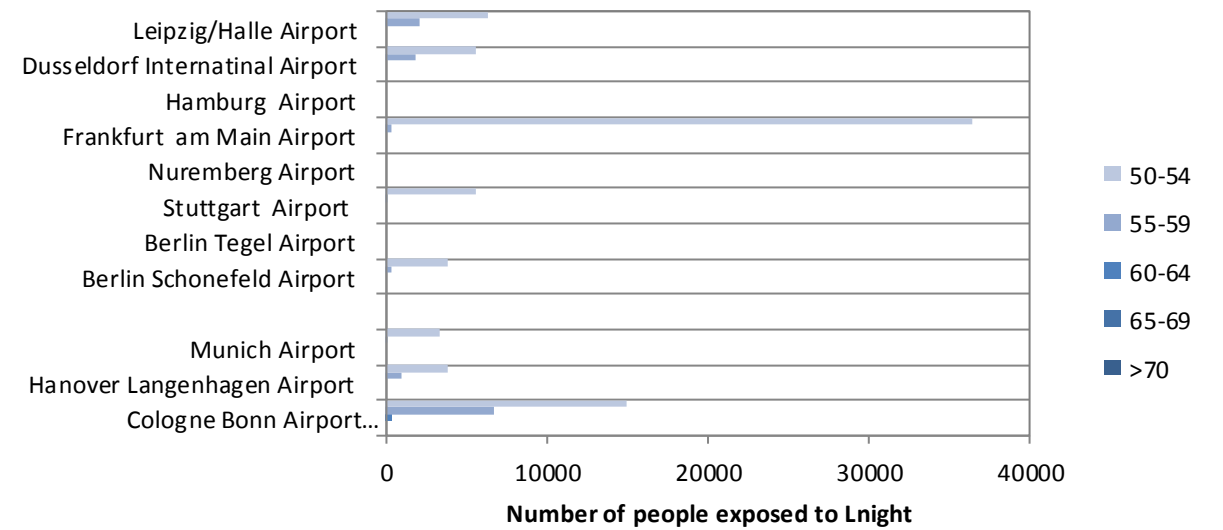
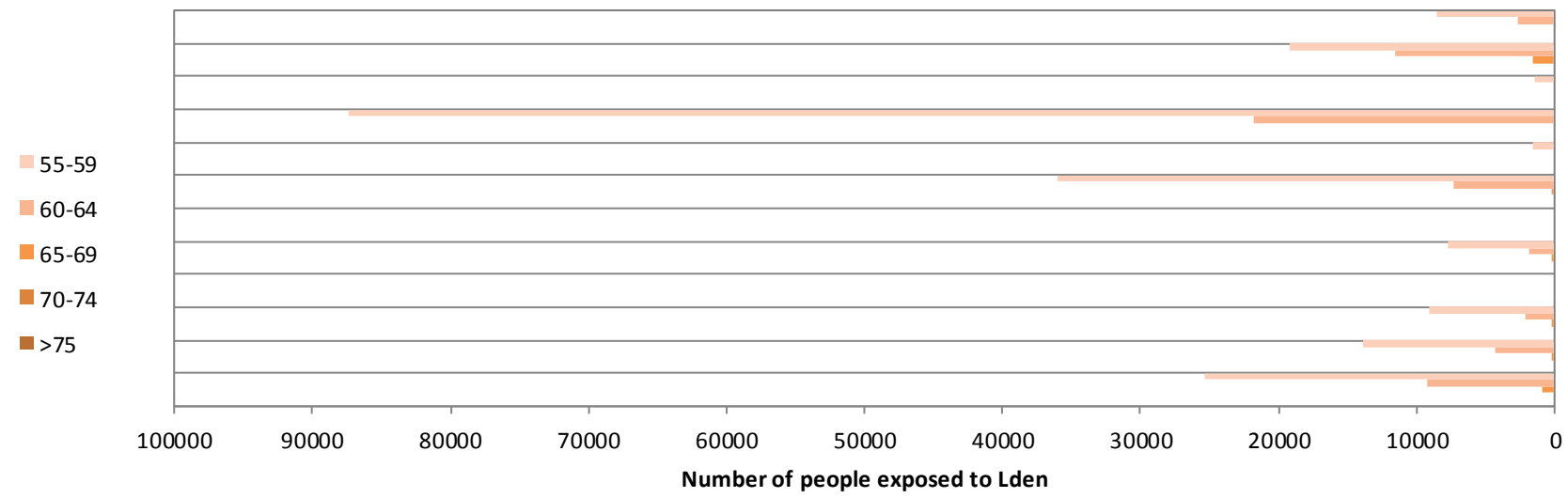
	Major roads	Major railways	Major airports
Country area (km ²)	357220.89	357220.89	357220.89
Km of noise sources	48585.00	16875.00	N/A
Area of contour map in the 55-65 dB L _{den} band (in km ²)	849.24	679.08	0.37
Share of area of contour map in the 55-65 dB L _{den} band per km of noise source reported	0.02	0.04	N/D
Percentage of the country area occupied by contour maps in the 55-65 dB L _{den} band (in %)	0.24	0.19	0.00
Area of contour map with more than 65 dB L _{den} (in km ²)	284.02	218.56	0.06
Share of area of contour map with more than 65 dB L _{den} per km of noise source reported	0.01	0.01	N/D
Percentage of the country area occupied by contour maps with more than 65 dB L _{den} (in %)	0.08	0.06	0.00

*N/A: Not applicable. N/D: No data in suitable format to perform the spatial analysis

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



Total number of people exposed to noise from major airports outside agglomerations (2012)



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