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: $L_{\text{den}}$ (day evening and night exposure) and $L_{\text{night}}$ (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.

### Noise sources covered by this assessment

#### Agglomerations

- Agglomerations > 100.000 inhabitants

71 agglomerations in total, covering 24,438,010 inhabitants

#### Major airports

- Major airports > 50,000 movements per year
  - 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 International Airport, Leipzig/Halle Airport

11 major airports in total

#### Major roads

- Major roads > 3 million vehicles per year
  - 37,424 km in total

#### Major railways

- Major railways > 30,000 train passages per year
  - 14,271 km in total

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

Data not applicable in 49 agglomerations for aircraft noise and in 6 agglomerations for industrial noise, out of 71 agglomerations.
Total number of people exposed to road noise inside agglomerations (2012)

Number of people exposed to $L_{dn} > 55$ dB

Number of people exposed to $L_{night} > 50$ dB

R: Roads
Total number of people exposed to Major Airports outside agglomerations (2012)
## Noise contour maps (2012)

### Major roads

![Major roads map](image)

### Major railways

![Major railways map](image)

### Major airports

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Health impact assessment

Annoyance and sleep disturbance

Hospital admissions and mortality
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 L_{den} and to more than 50 dB L_{night} outside agglomerations.
- For agglomerations: percentage of population exposed to more than 55 dB L_{den} and to more than 50 dB L_{night} due to different noise sources.

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