

Tackling noise pollution and other challenges to European health

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About this talk

- The “big picture”
- Zooming in: noise pollution
- Zooming in: inequalities
- How are we responding?

THE “BIG PICTURE”

ENVIRONMENTAL BURDEN OF DISEASE

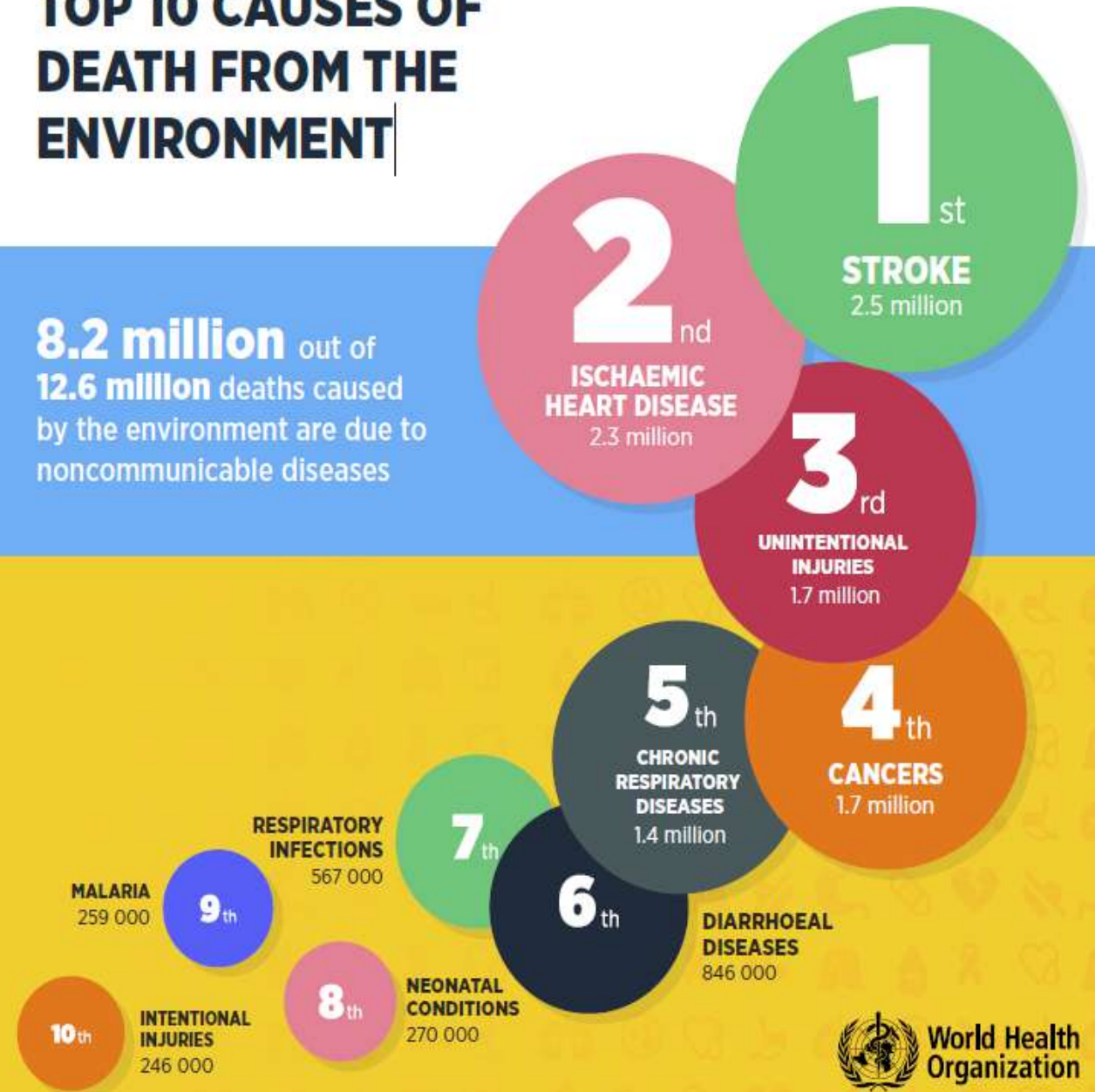
23 % of all global deaths are linked to the environmental conditions (12.6 million deaths/year)

1.4 million in the WHO European Region
=>15% of all deaths

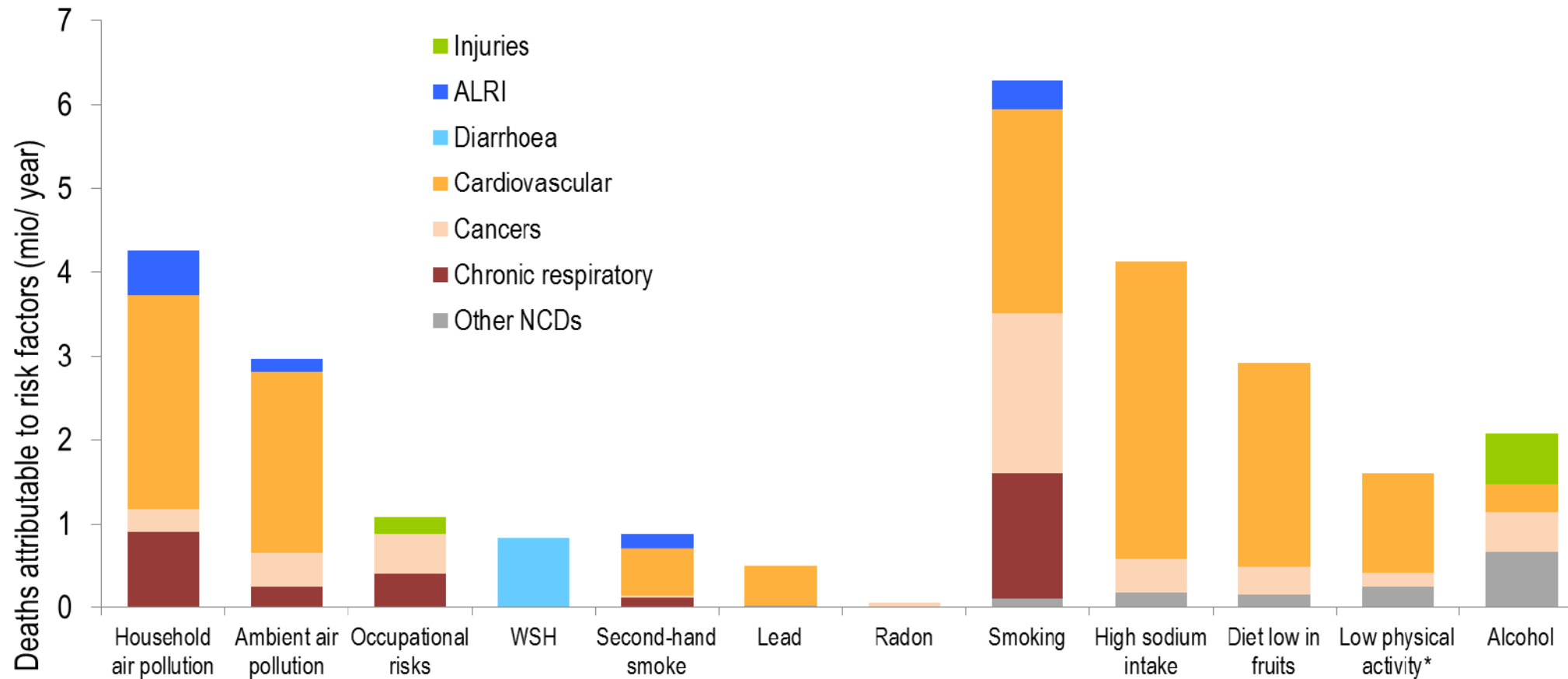
(WHO, 2016)

TOP 10 CAUSES OF DEATH FROM THE ENVIRONMENT

8.2 million out of **12.6 million** deaths caused by the environment are due to noncommunicable diseases



Deaths attributable to risk factors (million/ year)



Environment and health in Europe

06/17

1.4 m

1.4 million deaths in the WHO European Region are caused by environmental risks, corresponding to at least 15% of Europe's total deaths.

50%

Around half of these deaths are due to outdoor and indoor air pollution.

50 m

Altogether, European citizens annually lose 50 million years of healthy life due to environmental risks.

In Europe, environmental risk factors are responsible for around

26% of ischemic heart disease
25% of strokes
17% of cancers.

Cardiovascular deaths and diseases from environmental exposures are 3 times higher in lower-middle income countries than high-income countries.

Source: Preventing disease through healthy environments: a global assessment of the burden of disease from environmental risks, Geneva: WHO; 2016 (http://www.who.int/quantifying_ghimpacts/publications/preventing-disease/en/).

A dynamic context, constantly reshaped by multiple drivers at work simultaneously and with rebound effects

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- An aerial photograph of a city skyline at sunset. The sky is a mix of orange, pink, and light blue. The city below is densely packed with buildings of various heights and colors. A list of seven drivers is overlaid on the left side of the image in yellow text.
- Economic activities
 - Urbanization
 - Climate and environmental change
 - Demographic change
 - Inequalities
 - Migration
 - Technological development

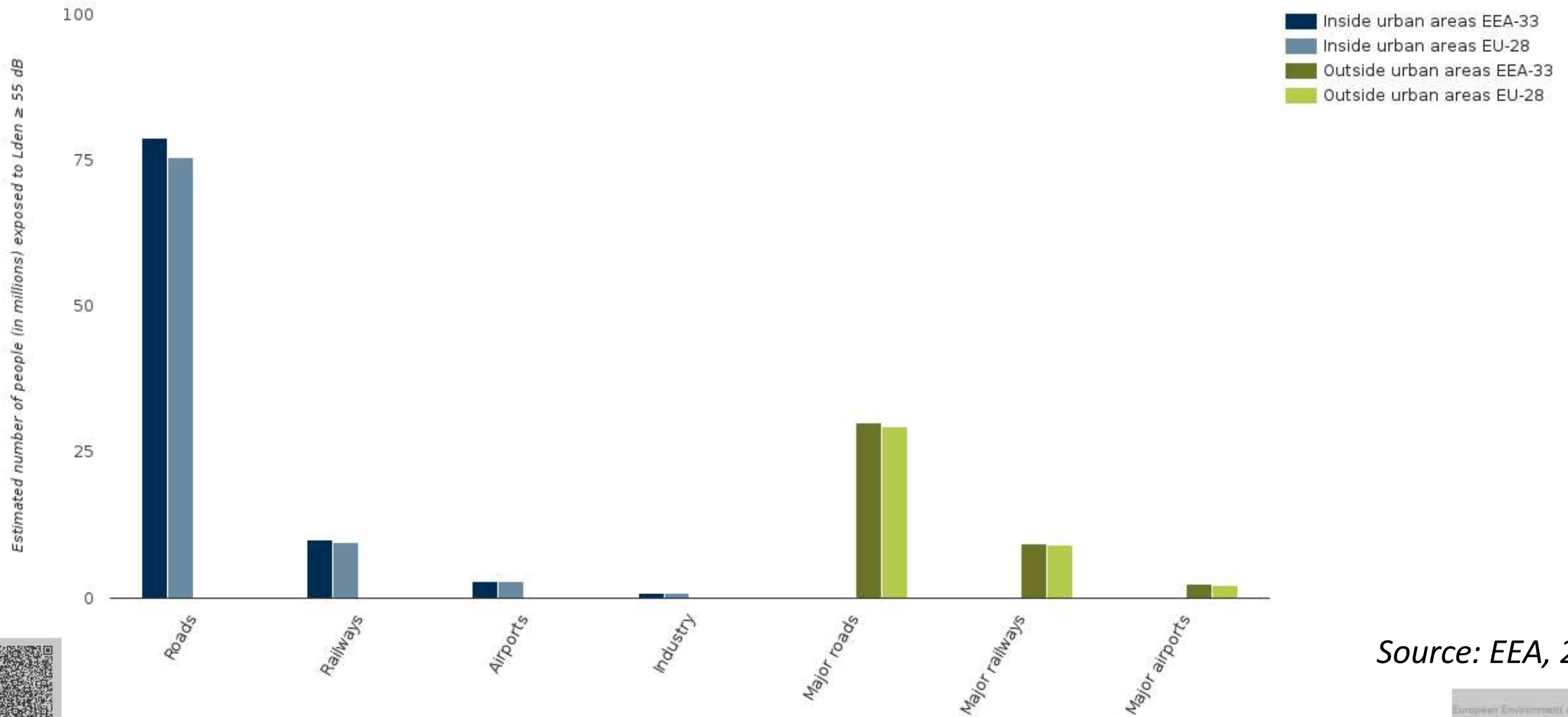
ZOOMING IN: NOISE POLLUTION

Noise – a major environment and health issue in Europe

- At least **100 million people** in the EU are **affected by road traffic noise** above the assessment threshold specified in the Environmental Noise Directive (55dB L_{den})
- Over **83 million** Europeans are exposed to harmful levels of noise from **night-time road traffic** (above 50 dB L_{night})
- At least **1.6 million healthy years of life** are **lost** due to **road traffic** noise in Western Europe

Source: WHO/JRC, 2011; EEA, 2017

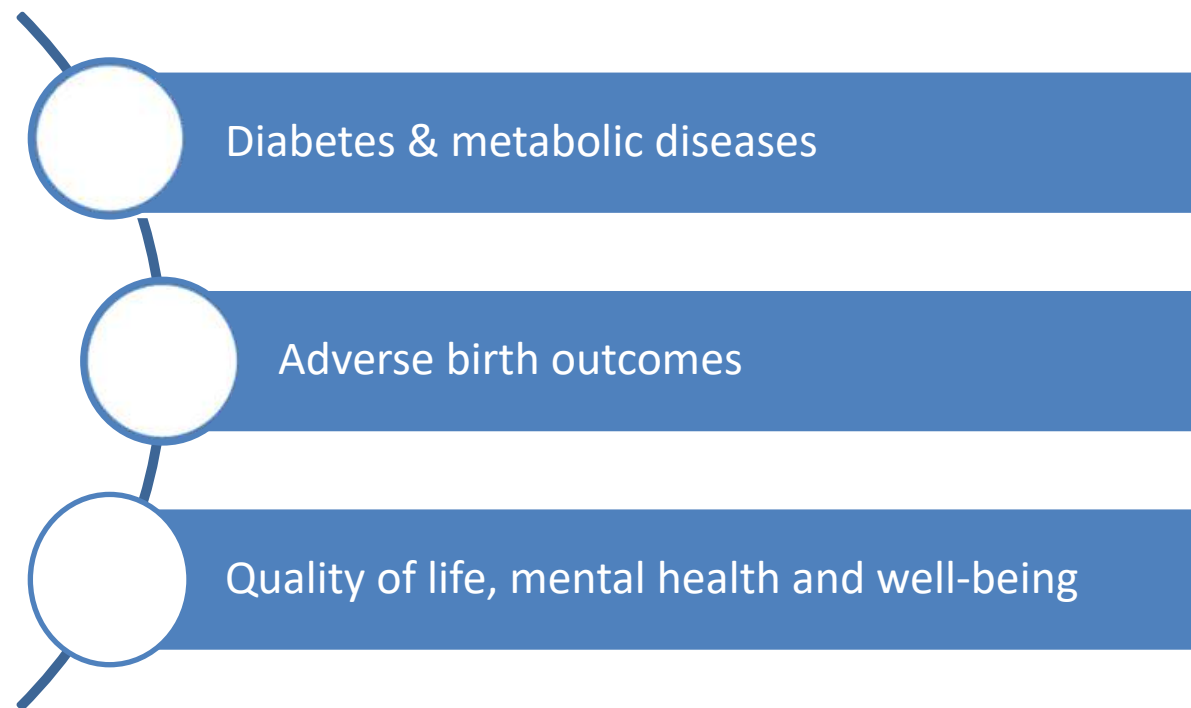
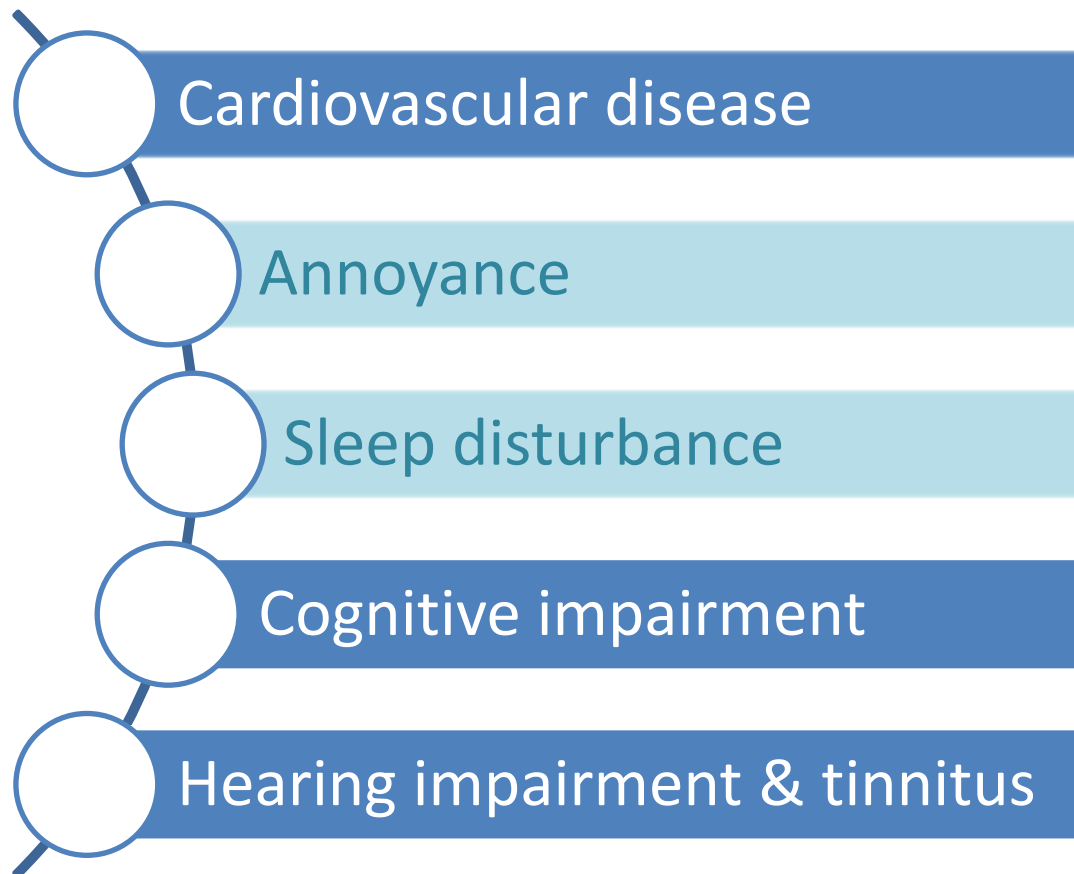
Number of people exposed to average day-evening-night noise levels (Lden) ≥ 55 dB



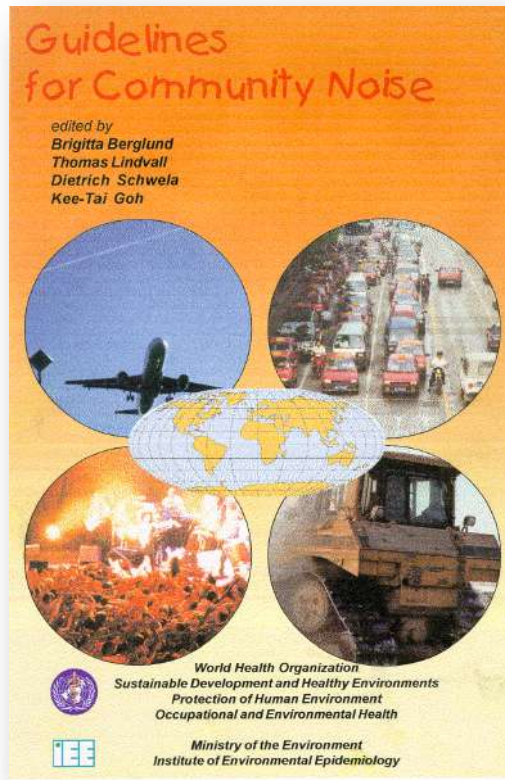
Source: EEA, 2018



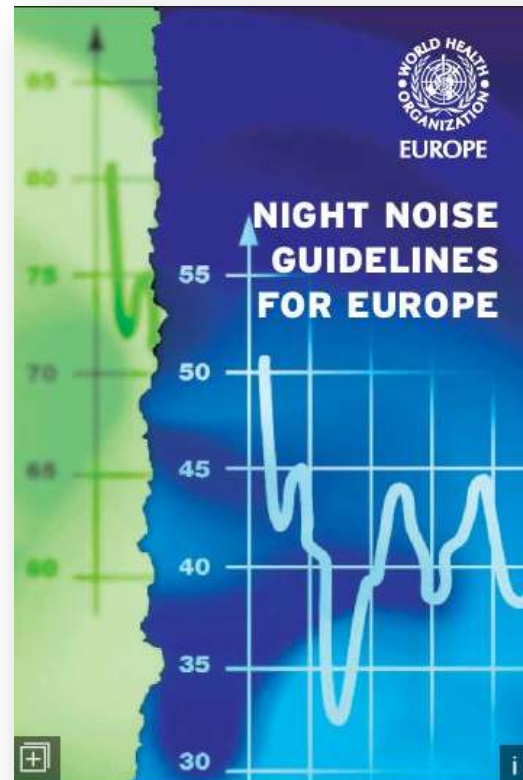
Health outcomes associated with exposure to noise



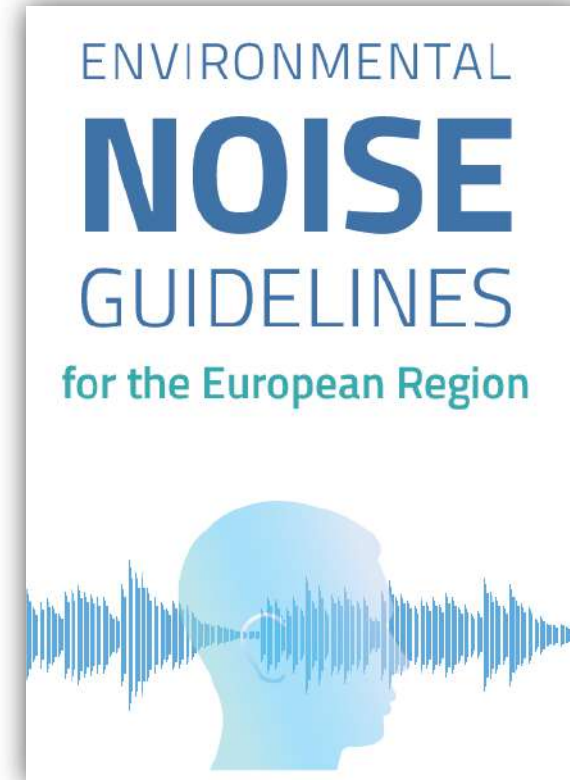
WHO noise guidelines



1999



2009



2018



Noise sources considered in WHO guidelines

Road traffic



Railway



Wind turbines



Aircraft



Leisure

Noise interventions

Evidence:

- Most evidence for road traffic, and less for aircraft
- Little/no evidence for rail, wind and leisure noise
- Most studied health outcomes: annoyance / sleep disturbance

Implementation of interventions:

- Effectiveness of implementation is context specific
- Resources needed for implementation highly variable
- Importance of community involvement

→ General recommendation:

Health should be encouraged to be considered in noise abatement measures and policy and research should be included in new infrastructure



ZOOMING IN: INEQUALITIES



Objectives:

1. To quantify the magnitude of environmental health inequalities **within** countries in the Region
2. To assess the recent trends of inequalities in environmental risk exposure or injury outcomes; and
3. To identify the most significant inequalities and the most affected population groups to enable informed decision-making

Where environmental health inequalities can affect you

URBAN ENVIRONMENTS AND TRANSPORT

Air pollution

Noise annoyance

Fatal road traffic injuries

Recreational or green areas

Chemical exposure

Contaminated sites

HOUSING CONDITIONS

Flush toilet

Bath or shower

Overcrowding

Dampness in the home

Adequately warm

Adequately cool

BASIC SERVICES

Drinking-water

Sanitation

Energy poverty

INJURIES

Fatal poisoning

Fatal falls

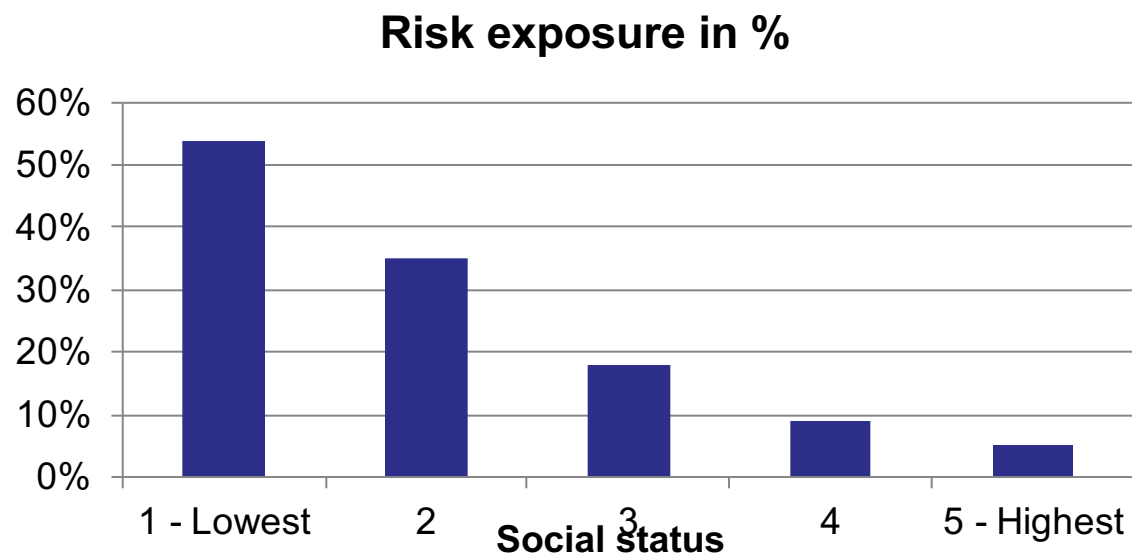
WORK SETTINGS

Fatal injuries

Working environments

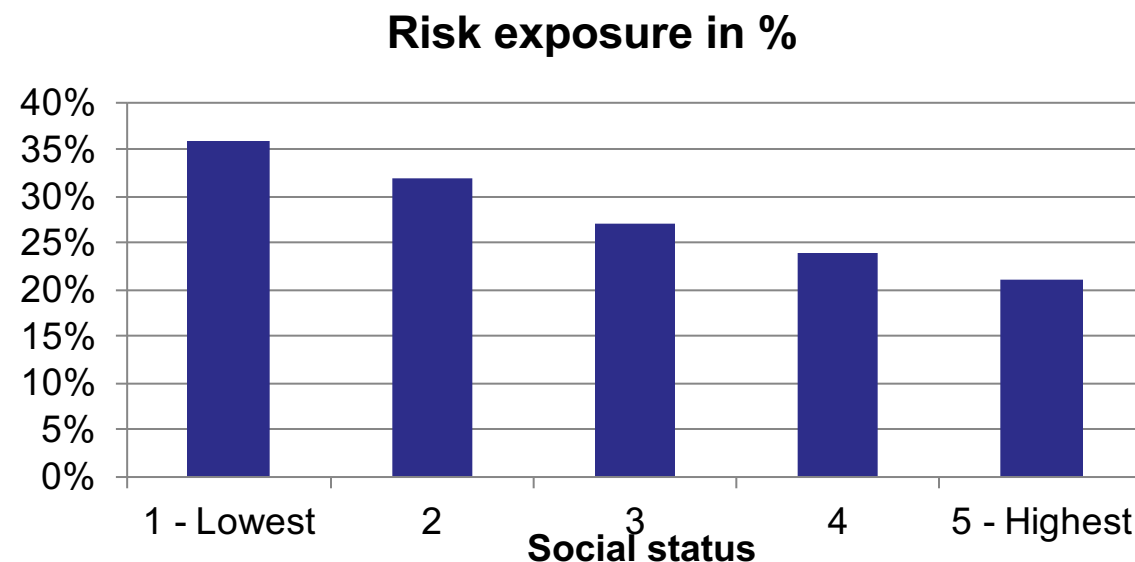


Added value of inequality assessments: planning adequate action



Strong social gradient; low risk in advantaged group

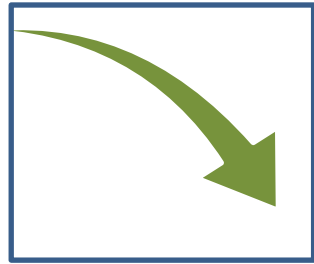
=> Action: targeting the most exposed and/or most vulnerable subpopulations



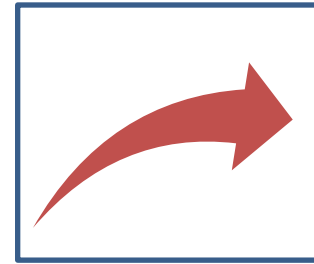
Social gradient less strong; significant risk also in advantaged group

=> Action: general improvement of environmental conditions, assuring healthy environments for all

Key messages



Environmental pollution levels mostly decline



Inequalities in exposure often remain / increase



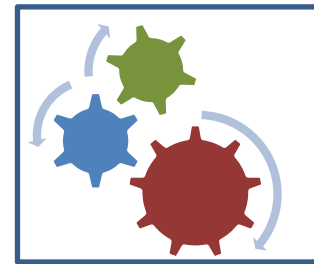
Risk can be 5 times higher for disadvantaged



Different inequality patterns require tailored action



Lack of data on inequality is a key challenge

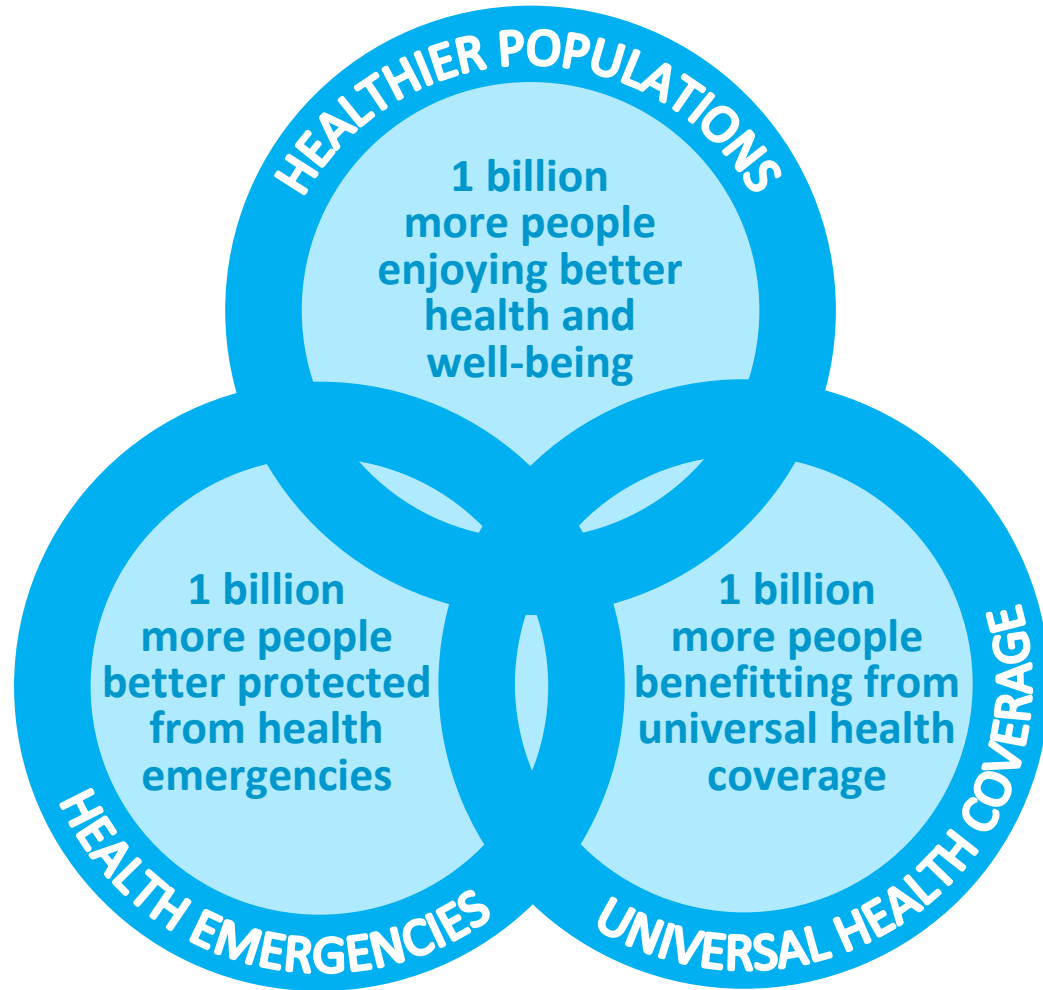


Intersectoral action across all sectors is needed

HOW ARE WE RESPONDING?



WHO 13th General Programme of Work 2019-2023



- Promote health
- Keep the world safe
- Serve the vulnerable

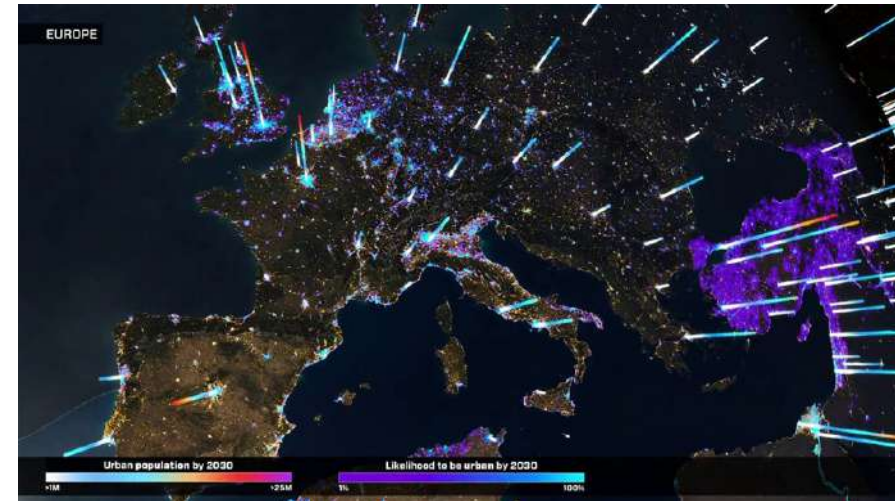
6th Ministerial Conference on Environment and Health, Ostrava, Czech Republic, June 2017

Better Health. Better Environment. Sustainable Choices



Ostrava Priorities

- Improve **air quality** for all
- Ensure access to **safe drinking water, sanitation and hygiene** for all
- Minimize the adverse effects of **chemicals**
- Prevent and eliminate the adverse effects of **waste management and contaminated sites**
- Strengthen adaptation to and mitigation of **climate change**
- Support **cities and regions** to become healthier
- Build the **environmental sustainability of health systems**



Ostrava agenda - focus

- Implementation
- Localization
- Sustainability
- Complexity
- Health Impact
- Equity

Six priority areas:

- Exposures (water, air, chemicals)
- Locations (cities, health systems)
- Complex systems (climate change, waste)

More information:

<http://www.euro.who.int/en/health-topics/environment-and-health>

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