

# Health and the Protocol on Strategic Environmental Assessments

## - setting the scene through an example -

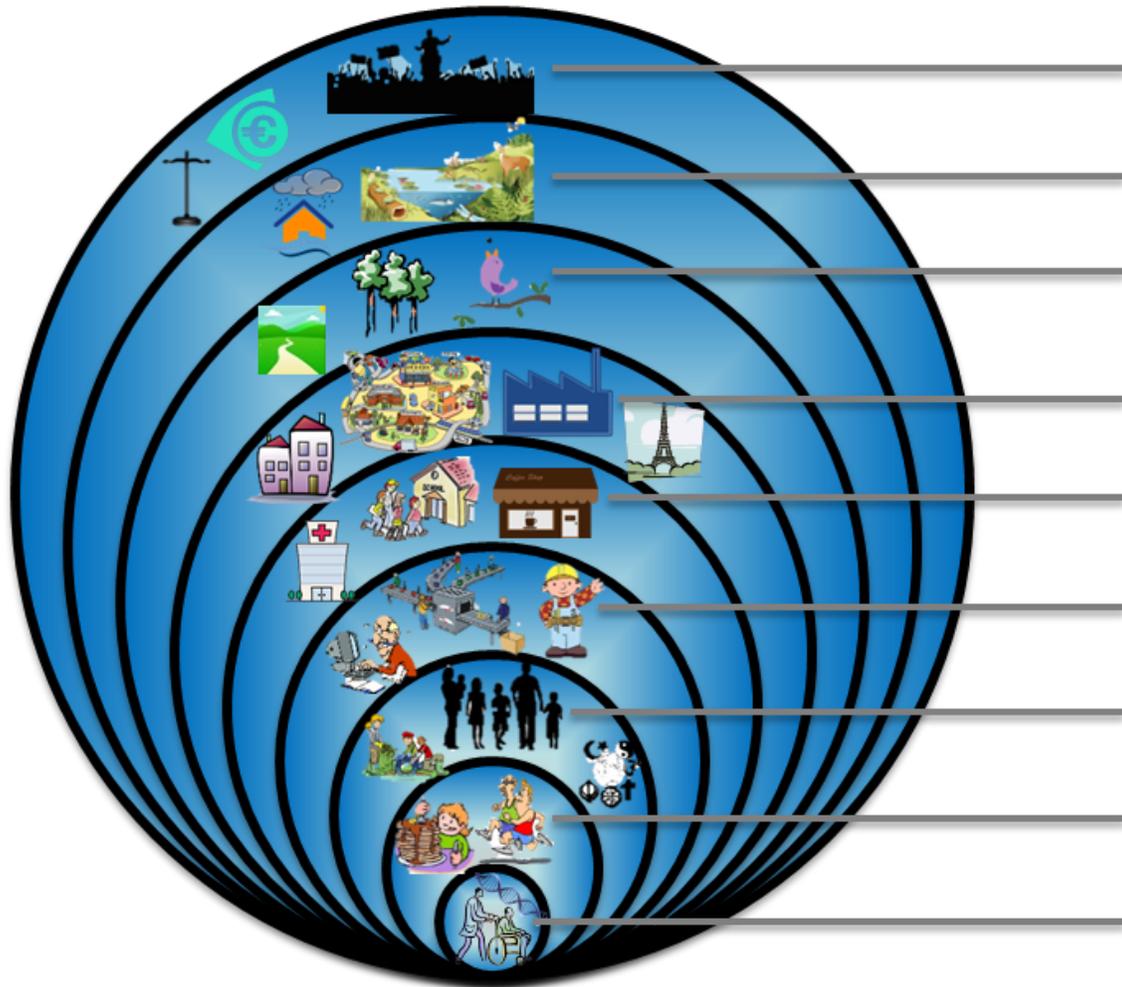
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“Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” (WHO, 1946)



**General social, economic & political factors**  
(macro level)

**Global ecosystem** (incl. climate change & natural hazards)

**Natural environmental factors**

**Built environment & housing** (incl. green spaces)

**Health services, public & private services**  
(including local economy)

**Employment & livelihood** (incl. occupational factors)

**Community & family structure** (incl. health inequalities)

**Behavioural risk factors & lifestyle**

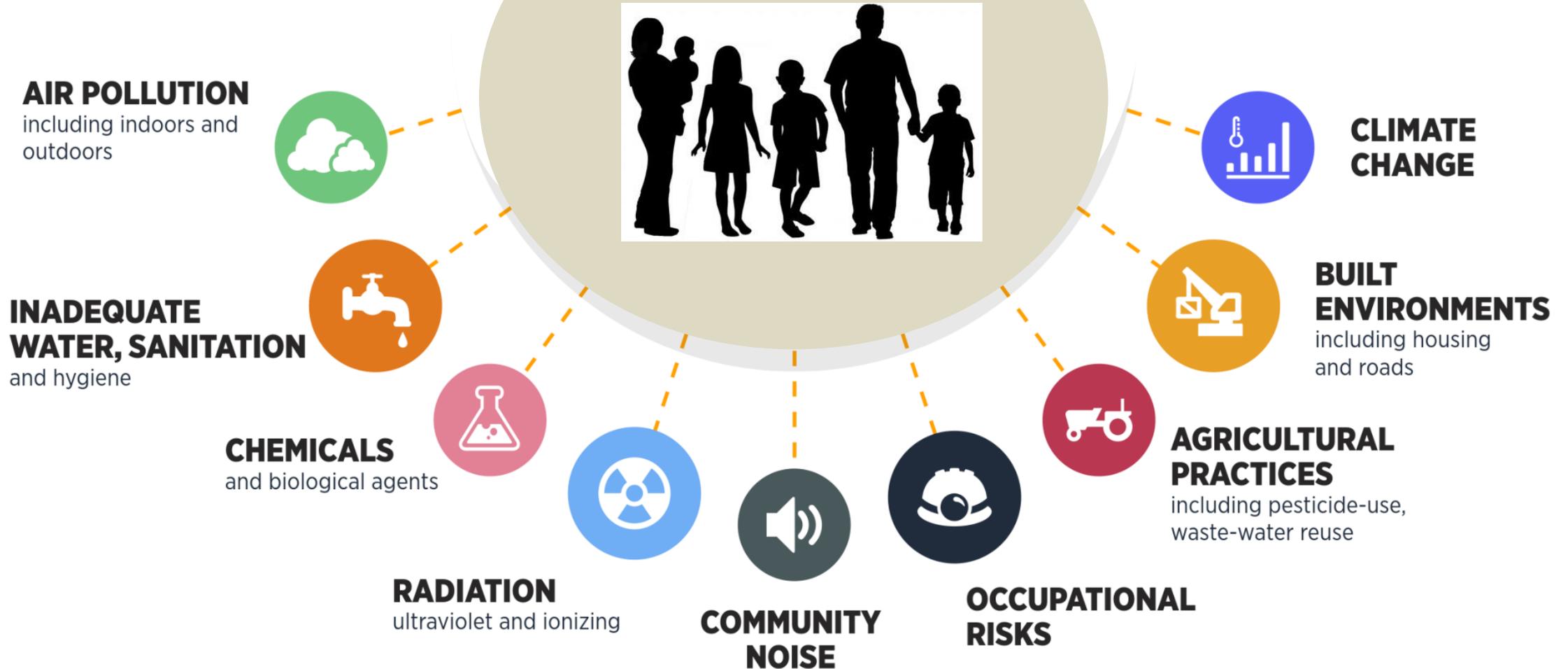
**People - Biological and genetic factors**

# Protecting health through a high level of protection of the environment



- In 2012, **12.6 million deaths globally**, were attributable to the environment - nearly 1 in 4 of total global deaths.
- When accounting for both death and disability, the fraction of the **global burden of disease** due to the environment is 22%
- In **children under five years**, up to **26% of all deaths could be prevented**, if environmental risks were removed.

# Environmental risk factors with likely (significant) effects on health



# Health and non-health plans, programmes and policies fields are interlinked

- e.g. defined in the Ostrava Declaration (2017)
  - Air quality
  - Drinking-water, sanitation and hygiene
  - Chemicals
  - Waste and contaminated sites
  - Climate change mitigation and adaptation
  - Sustainable cities and regions
  - Environmental sustainability of health systems



Source: WHO Regional Office for Europe, 2017

# Providing a high level protection of the environment, including health, through development of plans and programmes, preparation of policies and legislation, integration to further sustainable development

## Sectors where SEA (may) apply (Annex I, II)

- a) Agriculture, forestry and fishery
- b) Energy industry
- c) Extractive industry
- d) Other industry (e.g. chemicals, food)
- e) Infrastructure projects
- f) Telecommunications
- g) Tourism and leisure
- h) Waste management
- i) Water management



# Why is it not enough to tick off limit values or thresholds? An example: air pollution

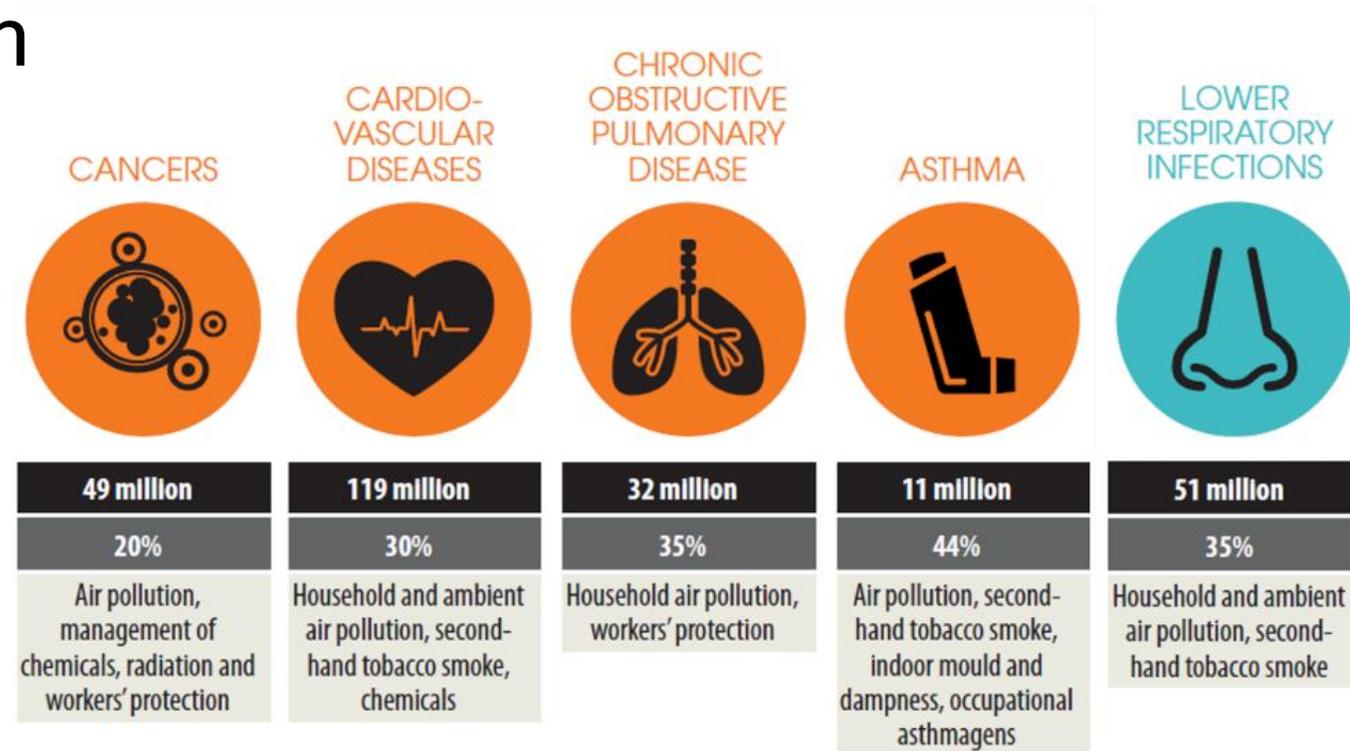
- In 2012, **92% of the world's population** lives in places where air quality levels exceed “WHO’s Ambient Air quality guidelines” for annual mean of particulate matter with a diameter of less than 2.5 micrometres (PM<sub>2.5</sub>: 10 µg/m<sup>3</sup> year).
- An estimated **6.5 million deaths (11.6% of all global deaths)** were associated with **indoor and outdoor air** pollution together - out of this 3 million to outdoor air pollution
- Nearly 90% of air-pollution-related deaths occur in **low- and middle-income** countries



# Air pollution: major sources & diseases attributable to the environment

- Major sources of air pollution include

- inefficient modes of transport
- household fuel
- waste burning
- coal-fired power plants, and
- industrial activities.



- DALYs due to preventable environmental risks
- Proportion of disease attributable to the environment
- Main areas of environmental action to prevent disease

# Urban population in the EU-28 exposed to air pollutant concentrations above the EU and WHO reference levels (2014-2016)

Pollutant	EU reference value	Exposure estimate (%)	WHO reference value Air Quality Guidelines	Exposure estimate (%)
Particle PM <sub>2.5</sub>	25 µg/m <sup>3</sup> year	6-8	10 µg/m <sup>3</sup> year	<b>74-85</b>
Ozone (O <sub>3</sub> )	120 µg/m <sup>3</sup> 8-hours	7-30	100 µg/m <sup>3</sup> 8-hours	<b>95-98</b>

# DALYs lost and economic cost of premature deaths as a result of air pollution (APMP+HAP), 2010

Country	Premature death	US\$ (millions)	% of GDP
France	16 892	53 295	2.3
Germany	41 582	144 715	4.5
Russian Federation	119 452	285 467	9.8



Source: WHO Regional Office for Europe, OECD, 2015

- **Some groups** - e.g. older adults, children, pregnant women, people with an underlying disease, e.g. asthma - may be **more at risk**, and may develop **more severe health effects more quickly** when exposed to air pollution.
- **Children** are **particularly vulnerable** to health effects (more time outside, higher respiratory rates, breathe larger volumes of air relative to their body weight; immune, respiratory and central nervous systems are not fully developed in infants)

# Tools for assessing health and economic benefits

- Produce **estimates** that support **decision-makers** to develop appropriate **actions** to protect **public health**
  - **AirQ+** - software to calculate the health impacts of AP
  - **HEAT** - health and economic assessment tool for cycling and walking
  - **iSTHAT** - (Integrated Sustainable Transport & Health Assessment Tool) a simplified methodological framework (user-friendly interactive Excel-based tool) for evaluation of health and economic benefits of carbon measures in the context of urban transportation.
  - **GreenUr** - software to calculate the health impacts of Green Spaces



# Why health in environmental assessments?

- 5 advertisements

- Early inclusion of health in SEA - decision-making prevents problems in later stages
- Health is a necessary element of sustainability
- A healthy economy depends on a healthy population
- Health is a main concern of populations involved
- Health gain is a powerful policy driver



*If not for health and the environment, why do impact assessments at all?*

# Health in environmental assessments is about ...

~~Health is a big issue, you know...~~



- How to integrate health and balance it with other issues
- Involving the right people
- Team building
- Bridging the language divide



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**Let's work together across boundaries and silos for a sustainable future for all!**

**Thank you for your attention!**

## References and links

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- AirQ+ - software tool for health risk assessment of air pollution: <http://www.euro.who.int/en/health-topics/environment-and-health/air-quality/activities/airq-software-tool-for-health-risk-assessment-of-air-pollution>
- HEAT - Health Economic Assessment Tool for walking and cycling: <https://www.heatwalkingcycling.org/#homepage>
- CaRBonH - Carbon Reduction Benefits on Health calculation tool: <http://www.euro.who.int/en/health-topics/environment-and-health/Climate-change/publications/2018/achieving-health-benefits-from-carbon-reductions-manual-for-carbonh-calculation-tool-2018>
- iSTHAT - Integrated Sustainable Transport & Health Assessment Tool <http://www.euro.who.int/en/health-topics/environment-and-health/urban-health/activities/isthat-the-integrated-sustainable-transport-and-health-assessment-tool>
- GreenUr - software to calculate the health impacts of Green Spaces: <http://www.euro.who.int/en/health-topics/environment-and-health/urban-health/activities/greenur-the-green-urban-spaces-and-health-tool>