



Why should we care about the environment?

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Health



Health



Health

- Physical, mental and social wellbeing (WHO)
- Not merely the absence of disease



healthy
body

+



healthy
mind

=

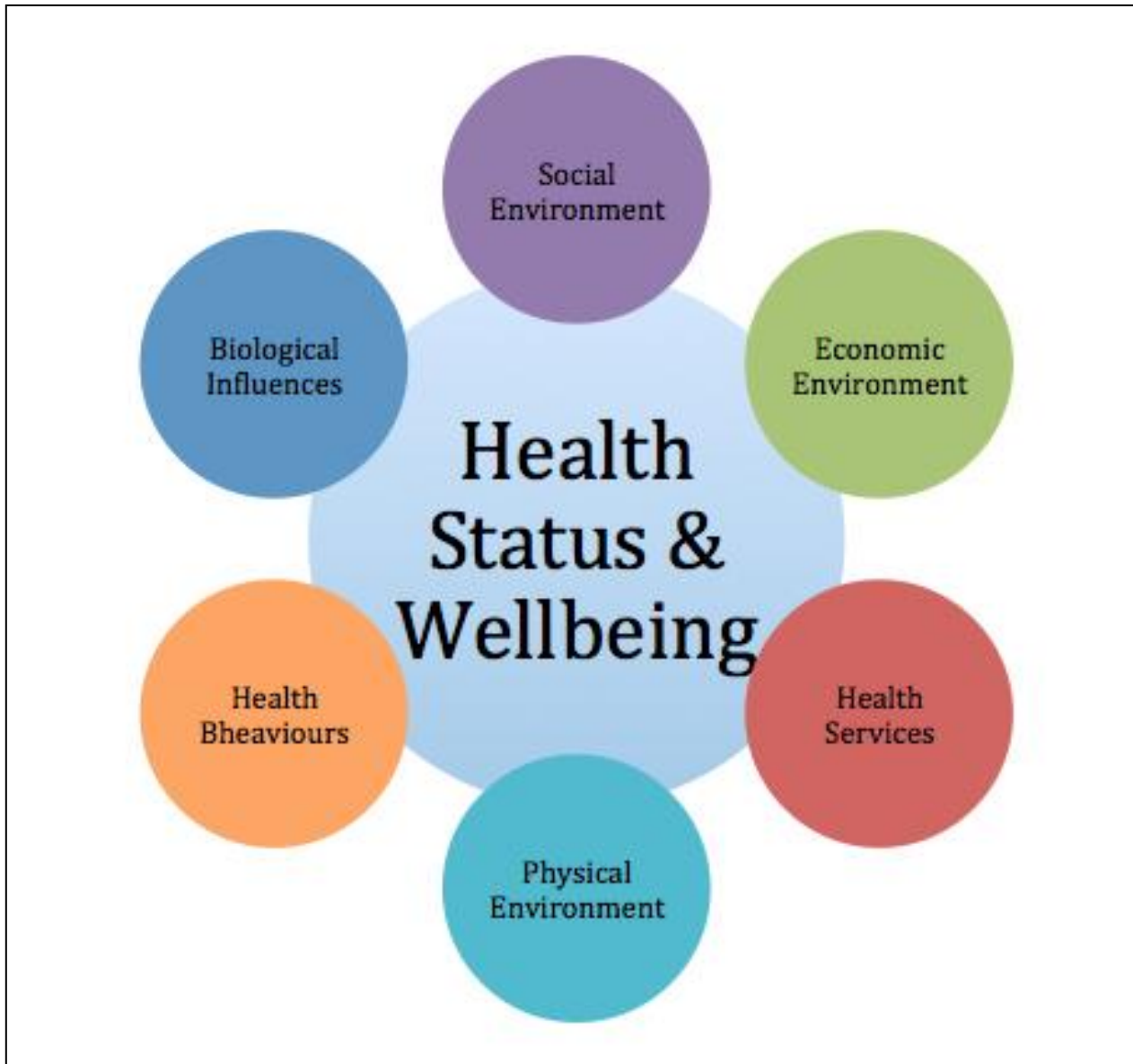


happy
life



HEALTH
IS
WEALTH

The determinants of health



ENVIRONMENTAL IMPACTS ON HEALTH

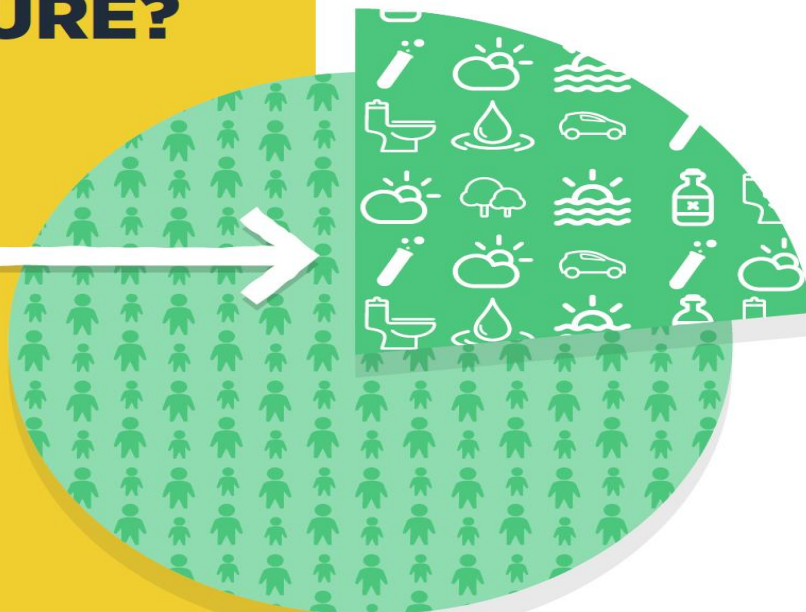
WHAT IS THE BIG PICTURE?

FACT:

23%

of all global deaths are linked to the environment.

That's roughly **12.6 million deaths** a year.



WHERE IS IT HAPPENING?



3.8 million
in South-East Asia Region

3.5 million
in Western Pacific Region

2.2 million
in Africa Region

1.4 million
in European Region

854 000
in Eastern Mediterranean Region

847 000
in the Region of the Americas



World Health Organization

#EnvironmentalHealth



AIR POLLUTION

including indoors and outdoors

CLIMATE CHANGE

BUILT ENVIRONMENTS

including housing and roads

AGRICULTURAL PRACTICES

including pesticide-use, waste-water reuse

OCCUPATIONAL RISKS

COMMUNITY NOISE

RADIATION

ultraviolet and ionizing

CHEMICALS

and biological agents

INADEQUATE WATER, SANITATION

and hygiene

Air

- We cannot survive without air
- Air is very important to all humans
- Clean air in and around the home is essential to a healthy life (WHO, 2014)





Air pollutants

- Carbon monoxide (CO)
- Nitrogen dioxide (NO₂)
- Lead (Pb)
- Sulfur dioxide (SO₂)
- Ozone (O₃)
- **Particulate matter (PM_{2.5}, PM₁₀)**

Open burning of plastics



Dioxins

Furans

PAH

Particulate matter





Air Pollution - one of the world's largest single health risks



Air pollution

Acute health effects

Chronic toxic effects

Air pollution is affecting our health

Ambient air pollution (AAP)

4.2 million deaths/yr

Household air pollution (HAP)

3.8 million deaths/yr

Joint effects of HAP and AAP

7 million deaths/yr

In some areas, a significant fraction of ambient air pollution (AAP) is caused by household fuel combustion

Remember!

**Most of these are
premature deaths!**

Air pollution is the second leading cause of non-communicable diseases (NCDs)

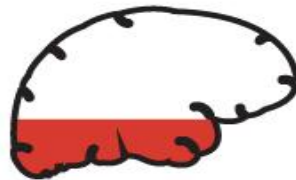
THE **INVISIBLE KILLER**

Air pollution may not always be visible, but it can be deadly.



29%

OF DEATHS FROM
LUNG CANCER



24%

OF DEATHS FROM
STROKE



25%

OF DEATHS FROM
HEART DISEASE



43%

OF DEATHS FROM
LUNG DISEASE

BREATHELIFE.
Clean Air. Healthy Future.

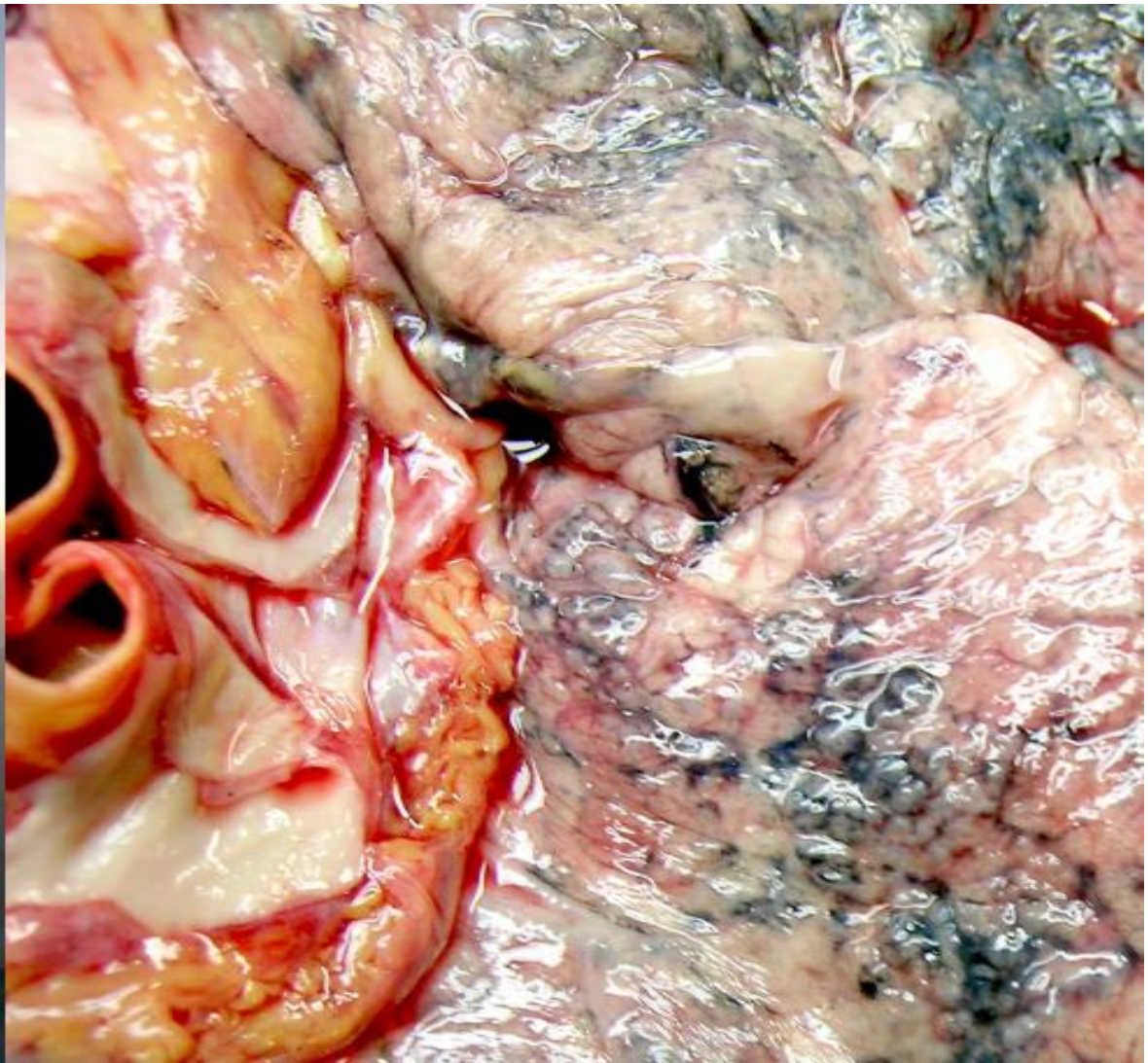


World Health
Organization



CLIMATE &
CLEAN AIR
COALITION
TO REDUCE SHORT-LIVED
CLIMATE POLLUTANTS









WOMEN AND CHILDREN

accounted for over 60% of all premature deaths from HAP in 2012.



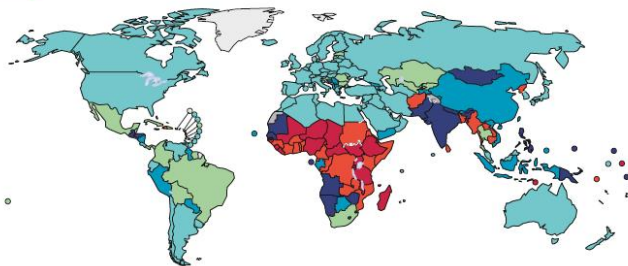
BLACK CARBON

The rapid transition of three billion people from using polluting to clean fuels and technologies could be one of the most effective black carbon mitigation opportunities of all

HOUSEHOLD AIR POLLUTION

3.8 million

die prematurely every year from household air pollution from cooking (2016). Household air pollution is mostly created by using kerosene and solid fuels such as wood with polluting stoves, open fires and lamps.



Population (%)
<5 5-25 26-50 51-75 76-95 >95
Data not available Not applicable

Women and children are the most at risk.



18% from stroke



27% from ischaemic heart disease

20% from chronic obstructive pulmonary disease (COPD)



8% from lung cancer

27% are due to pneumonia

Costs

- Health costs
- Economic costs
- Cost of suffering

Who are more at risk?

- Unborn
- Young children
- Pregnant mothers
- People who have respiratory and cardiovascular diseases
- Certain worker categories

FIRST WHO GLOBAL CONFERENCE ON AIR POLLUTION AND HEALTH

IMPROVING AIR QUALITY, COMBATTING CLIMATE CHANGE - SAVING LIVES

93% of children under 18 years play and live with air pollution levels above WHO guidelines



Air pollution is stunting our children's brains

IMPACT OF AIR POLLUTION ON CHILDREN'S HEALTH

A child who is exposed to unsafe levels of pollution can face a lifetime of health impacts. Exposure in the womb or in early childhood can lead to:



Stunted lung growth

Reduced lung function

Increased risk of developing asthma

Acute lower respiratory infections



Impaired mental and motor development

Behavioral disorders



Low birth weight

Premature birth

Infant mortality



Childhood cancers



Increased risk of heart disease, diabetes and stroke in adulthood



Children are our future!

- Children are not little adults
 - Kg to kg, pound for pound, a child's exposure is greater than an adults (dose-response)
 - Immature blood-brain barrier—allows more chemical passage
 - Detoxification systems may not be fully functional—timing of exposure.



- “Because children have more future years of life than most adults, they have more time to develop chronic diseases that may be triggered by early exposures.”



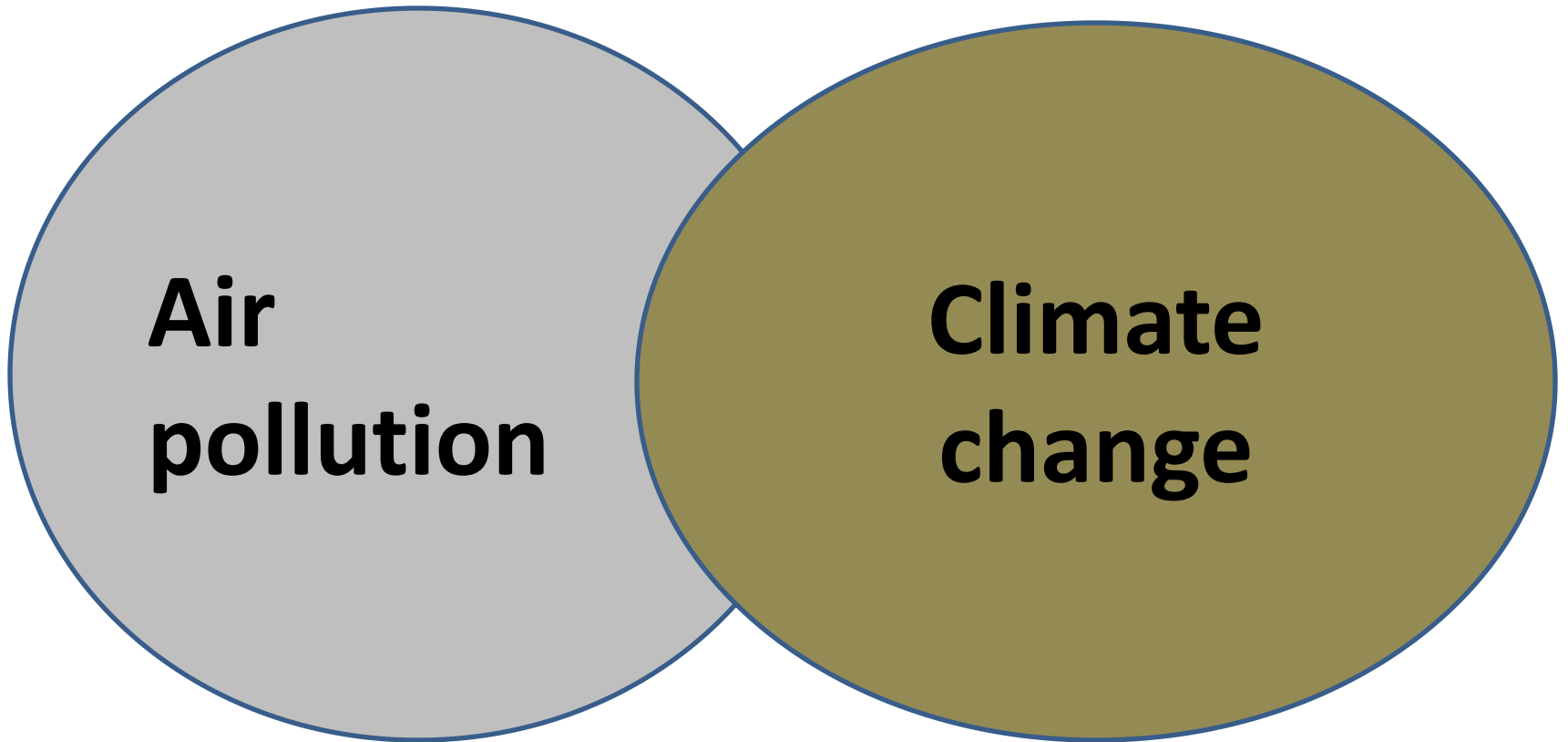
- Landrigan et al. 2003. Assessing the effects of endocrine disruptors in the national children’s study. *Environ. Health Perspectives* 111(13): 1678-1682.



Air pollution

A silent killer!

Two sides of the same coin!



FIRST WHO GLOBAL CONFERENCE ON AIR POLLUTION AND HEALTH

IMPROVING AIR QUALITY, COMBATTING CLIMATE CHANGE - SAVING LIVES

In ten years from now we cannot say that we did not know

90% of world's children are breathing toxic air, WHO study finds

Report says air pollution is having a devastating impact on children worldwide, storing up a public health time bomb



▲ Children cover their face from air pollution in New Delhi, India. Photograph: Hindustan Times/Hindustan Times. Via Getty Images

Pakistan moves to curb urban air pollution after high court ruling

UK taken to Europe's highest court over air pollution

European court of justice can impose multibillion euro fine on UK and five other countries do not address the problem



▲ Inaugural London. The European commission is suing eight other against the UK and five other countries do not address the problem. Photograph: Richard Carless/REUTERS

The UK and five other nations have been referred to Europe for failure to tackle illegal levels of air pollution.

III Pollutions

LIENS / POLLUTION

Pollution de l'air : Bruxelles poursuit la France en justice

Paris était dans le sillage de la Commission depuis près de dix ans pour son respect de la directive européenne de 2008 sur la qualité de l'air.

LE MONDE | 17/05/2015 | 08h00

Par Stéphane Charbon

LIENS / POLLUTION



Key messages

- **Air pollution is a significant environmental risk factor affecting the health of people**
- **It is an invisible and a silent killer**
- **Children are disproportionately affected to the health impacts of air pollution**
- **Air pollution and climate change are two sides of the same coin**
- **Urgent action is needed to preserve air quality**
- **All individuals have a responsibility**
- **There is no time to waste!**

**Health is wealth and no wealth is
better than health !**



Say no to air pollution!

Thank you

