



World Health
Organization

Air quality and health effects

Dr Nathalie Roebbel
Coordinator, Air Pollution and Urban Health
World Health Organization

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



BREATHE LIFE.



World Health
Organization

91% of the global population breathes polluted air



World Health
Organization

More than 3 billion people rely on polluting energy sources for cooking

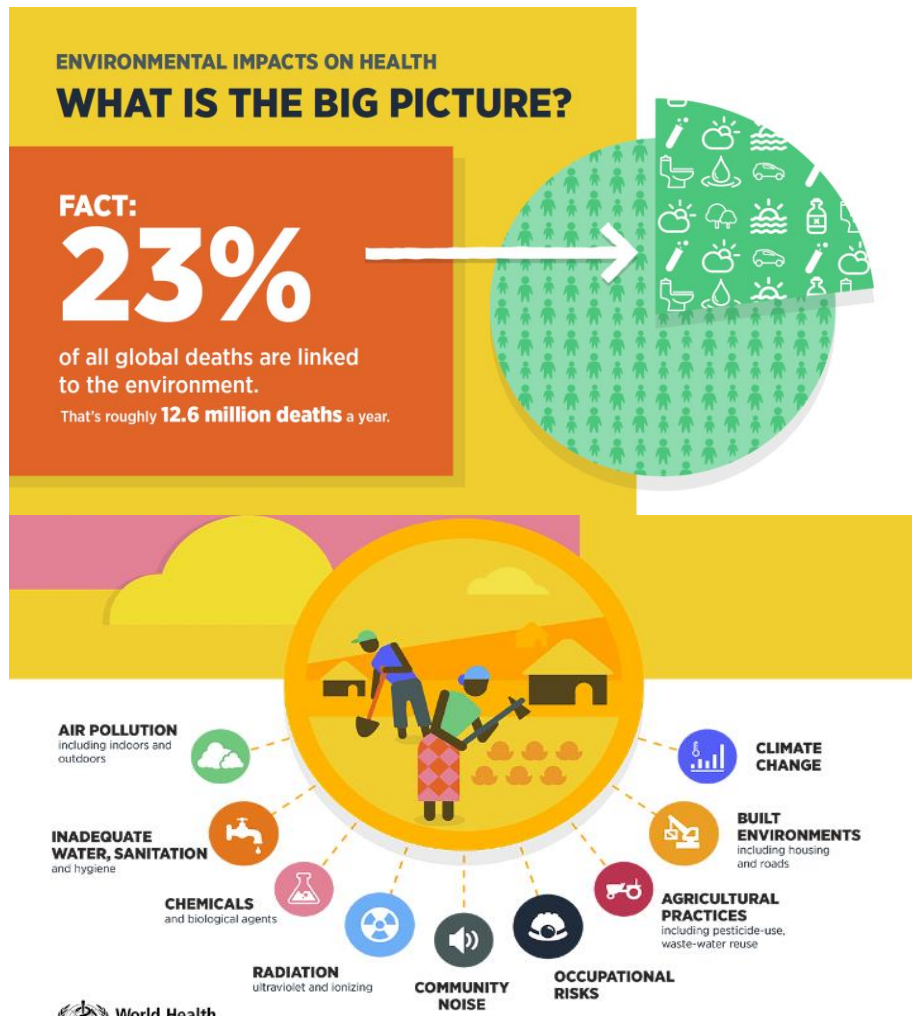


Girls in households that cook with polluted fuels spent up to 35 hours a week collecting wood and water



World Health
Organization

Air pollution is affecting our health



Ambient air pollution (AAP)

4.2 million deaths/yr

Household air pollution (HAP)

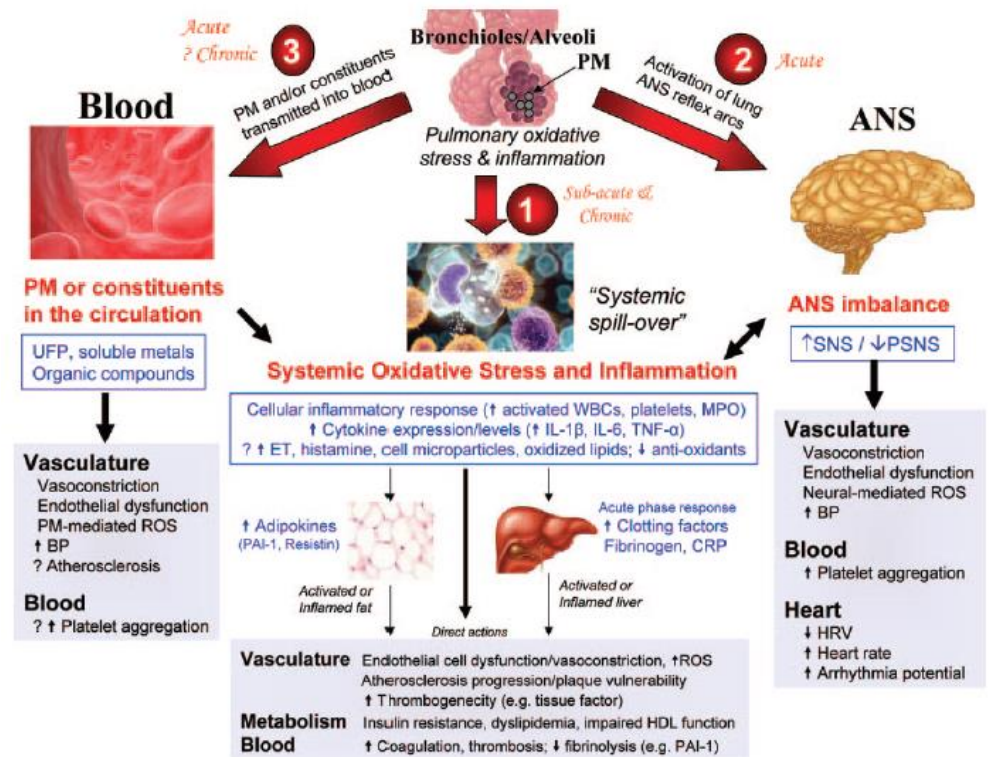
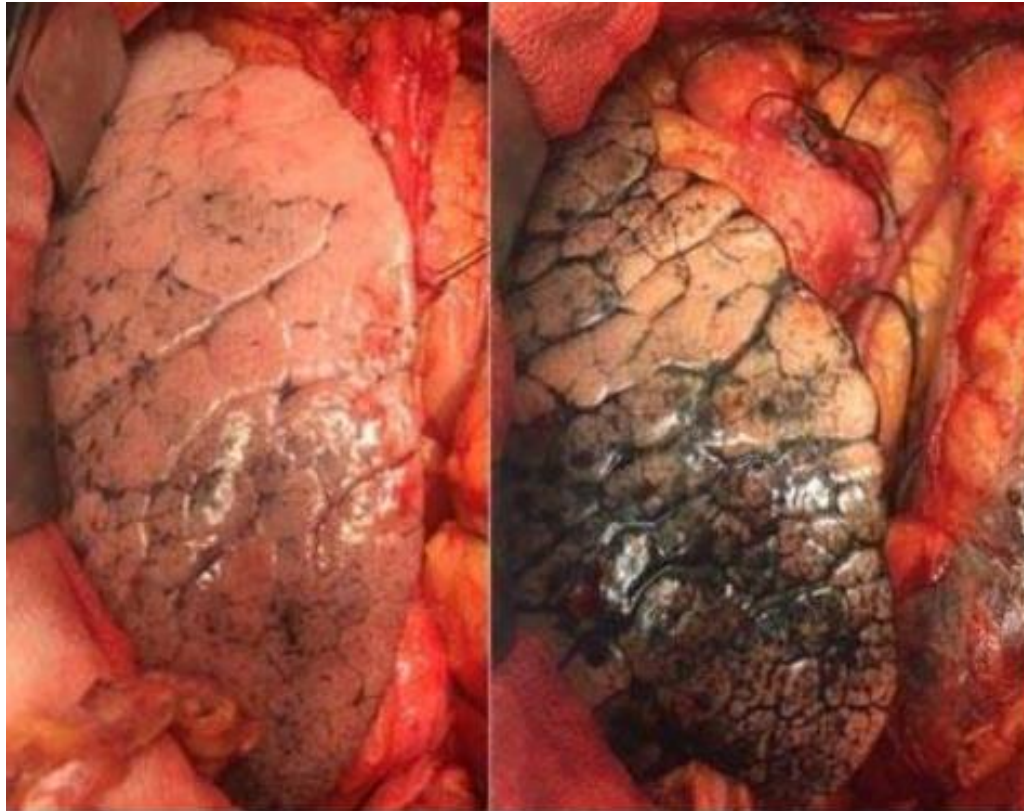
3.8 million deaths/yr

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

What air pollution does to our lungs and our cardiovascular system



<https://www.indiatoday.in/education-today/gk-current-affairs/story/air-pollution-839089-2016-10-20>



World Health Organization

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



UN
environment



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



World Health
Organization

From risks to solutions

WHAT ARE THE SOURCES OF AIR POLLUTION?

Outdoor air pollution affects urban and rural areas and is caused by multiple factors:



Countries cannot tackle air pollution alone.
It is a global challenge we must all combat together.

SOLUTIONS



CLEAN AIR FOR HEALTH

#AirPollution



World Health Assembly Resolution A68.8 & Road Map



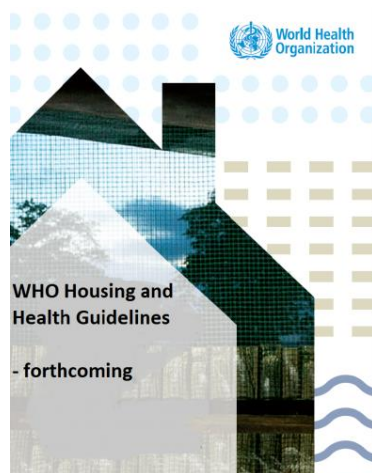
World Health Organization

There are many solutions



World Health
Organization

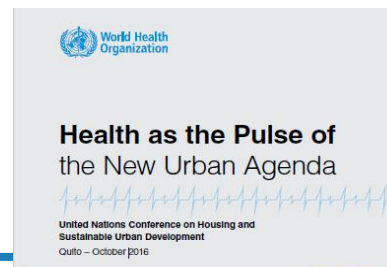
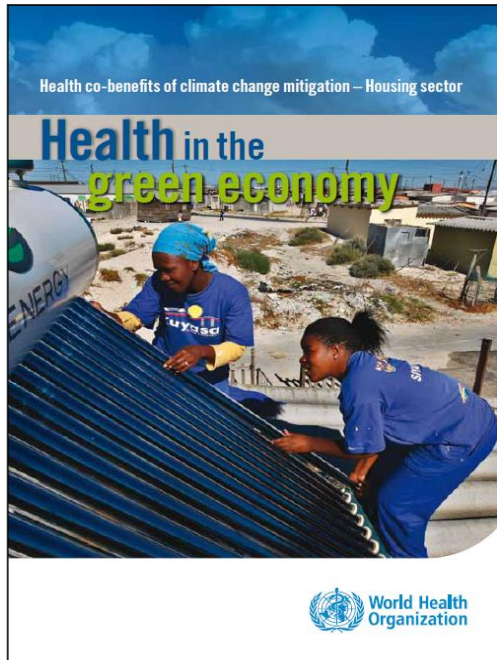
Sustainable cities - Health at the heart of urban development



Catalyze more effective urban action on air pollution and other urban health risks:

- ★ Provide urban leaders with health and economic arguments
- ★ Mapping policies
- ★ Provide alternative scenarios
- ★ Build competencies

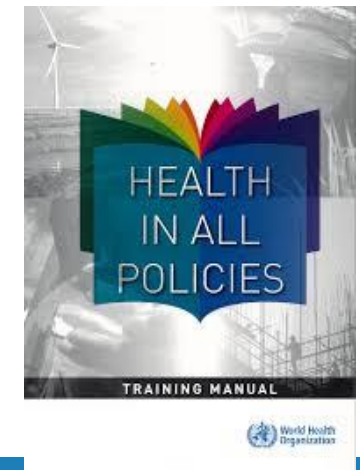
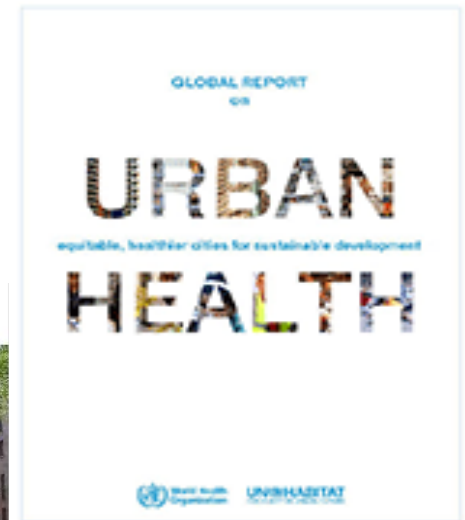
WHO knowledge goods for the dialogue across sectors



Division 44
Water, Energy, Transport



Urban Transport and Health
Module 5g
Sustainable Transport: A Sourcebook for Policy-makers in Developing Cities

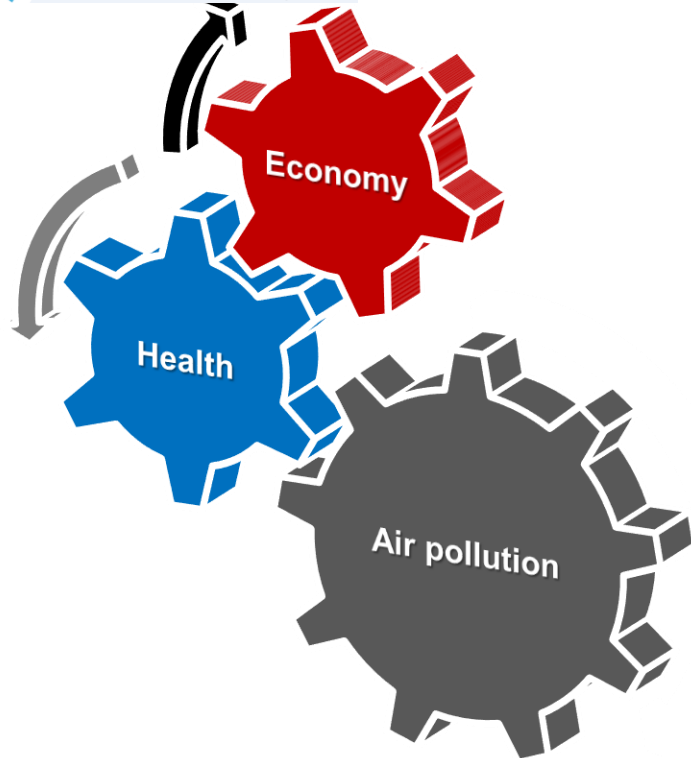


- Incorporating health in urban and territorial planning (with UN-Habitat, forthcoming)
- Housing and Health Guidelines



World Health Organization

Analytical tools to support Health and Economic Impact Assessments



AirQ+ (air pollution)

ISThAT (transportation)

HEAT (walking and cycling)

GreenS+ (green space)

HOMES (household energy)

Development and application of analytical tools to support the assessment of the health and economic impacts of interventions in key sectors, including on transport, household energy, green space and land-use, solid waste management (open source, flexible, evidence-based tools)



World Health Organization

Strengthening local capacity on urban health and air pollution



Capacity building activities as part of Urban Health Initiative pilot project in Kathmandu, 2018



Regional training workshop on Environmental Health Impact Assessment, CEHA, Amman, Jordan, 2017



Capacity building activities as part of Urban Health Initiative pilot project in Accra, 2018



Urban Health Initiative and BreatheLife training event at the 2nd Urban Forum, Kuala Lumpur, Malaysia, 2018



**URBAN HEALTH
INITIATIVE**

An enhanced global response to the adverse health effects of air pollution



**World Health
Organization**

BREATHE LIFE



World Health
Organization



CLIMATE &
CLEAN AIR
COALITION
TO REDUCE AIR POLLUTION
AND CLIMATE CHANGE

UN 
environment



A global campaign to protect our health
and climate by improving air quality



World Health
Organization

Addressing air pollution will have benefits for health and climate change



World Health
Organization

Expanding the knowledge base



- ★ Evidence of effectiveness of sectoral policies
- ★ Synthesis of **cost-effectiveness analysis** on air pollution / building the **investment case**
- ★ Guidance to **apply methodologies** for cost-benefit analysis
- ★ **Updated and new guidelines** and recommendations (sand, storms, low-cost sensors)
- ★ **Institutional capacity exists** at the national and sub-national levels to conduct such analysis

Monitoring and reporting

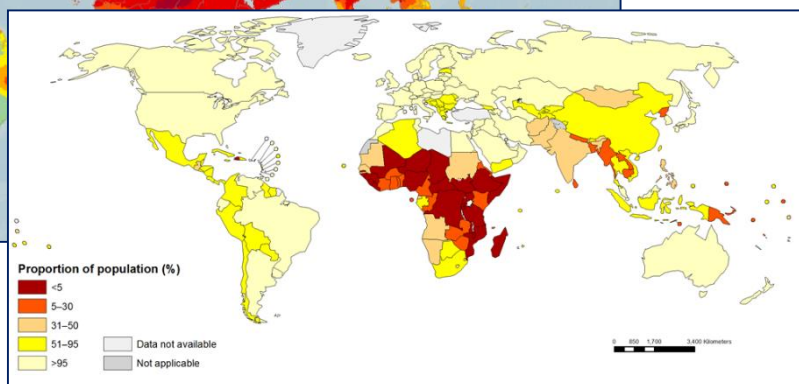


SDG 7.1.2: Percentage of population with primary reliance on clean fuels and technologies at the household level

SDG 11.6.2: Annual urban mean concentration of particulate matter (PM2.5), population-weighted.

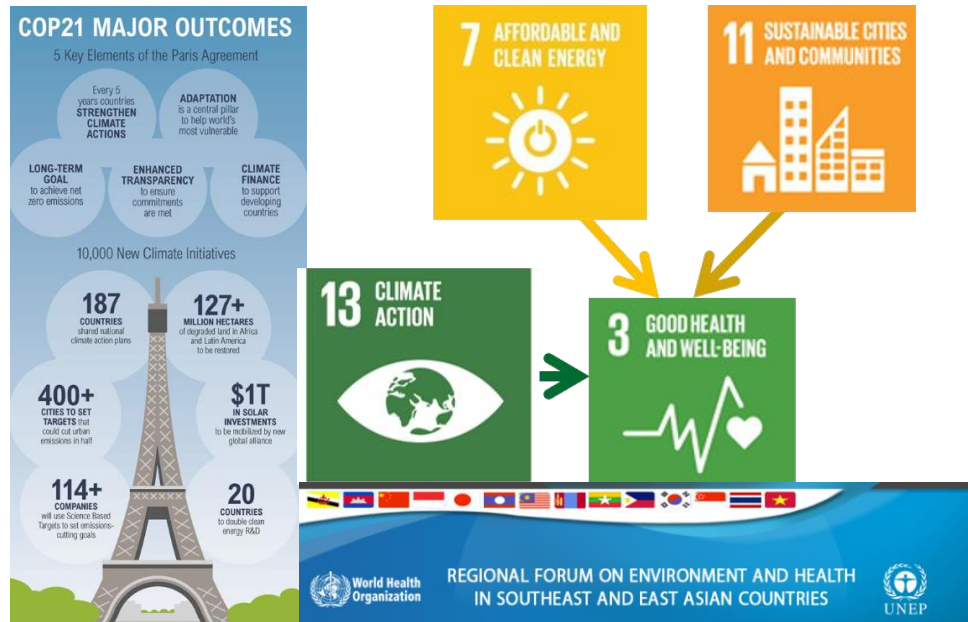
SDG 3.9.1: Mortality from air pollution

WHO Global platform for air quality and health



- ★ **Enhanced global and regional monitoring and reporting on health trends associated with exposure to air pollution (SDG reporting)**
- ★ **Expand database to other pollutants (e.g. NOx)**
- ★ **New partnerships (e.g. NASA)**
- ★ **Disaggregated data**
- ★ **Joint reporting (UN DESA / UN Habitat)**
- ★ **This is informed by national and sub-national (e.g. city-level) monitoring efforts**

Global leadership and coordination

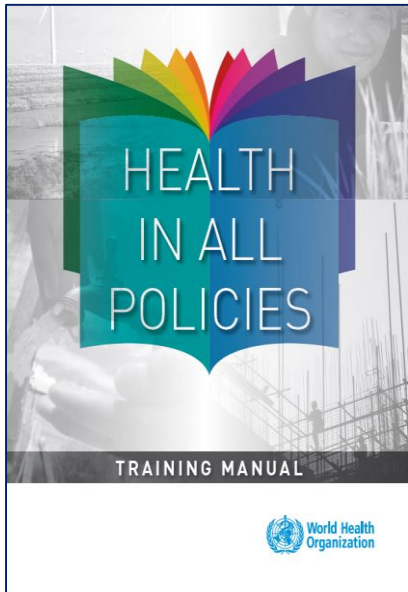
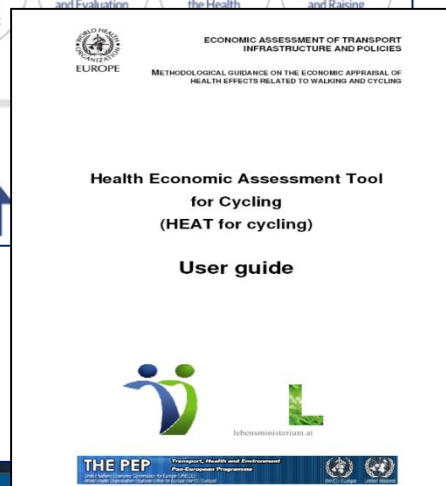
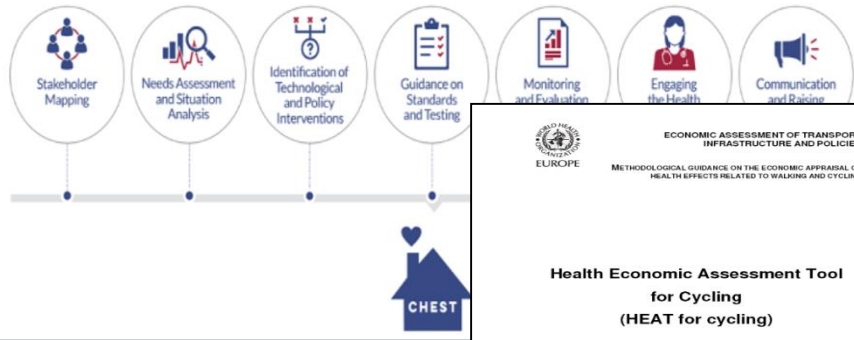


- ★ Link to **NCD agenda** at global, national and local level
- ★ Build **strong partnerships** with all levels and sectors of society and intergovernmental organizations (WB etc.)
- ★ Health as the pulse of **urban policies**
- ★ National and sub-national plans on air pollution and health **aligned with regional and global processes** and frameworks



Institutional capacity strengthening

Clean Household Energy Solutions Toolkit Modules



- ★ Enhance health sector capacity for addressing adverse effects of air pollution (global, regional and country levels) including in the context of other sector policy processes
- ★ Enhance capacities in **HiAP-governance**
- ★ Develop capacities to implement new guidelines (**e.g. housing**)
- ★ National and/or sub-national strategies developed to support such action

All Countries 2013 Current USD Billions

8,000

96.4%

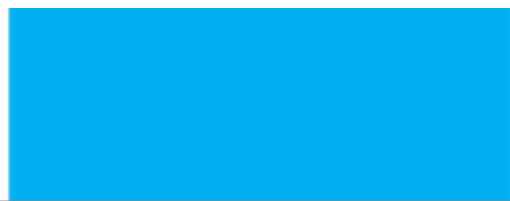


6,000

4,000

Opportunity 5: Primary Prevention

2,000



Total Expenditure on Health



3.6%

Expenditure on Prevention & Public Health Services

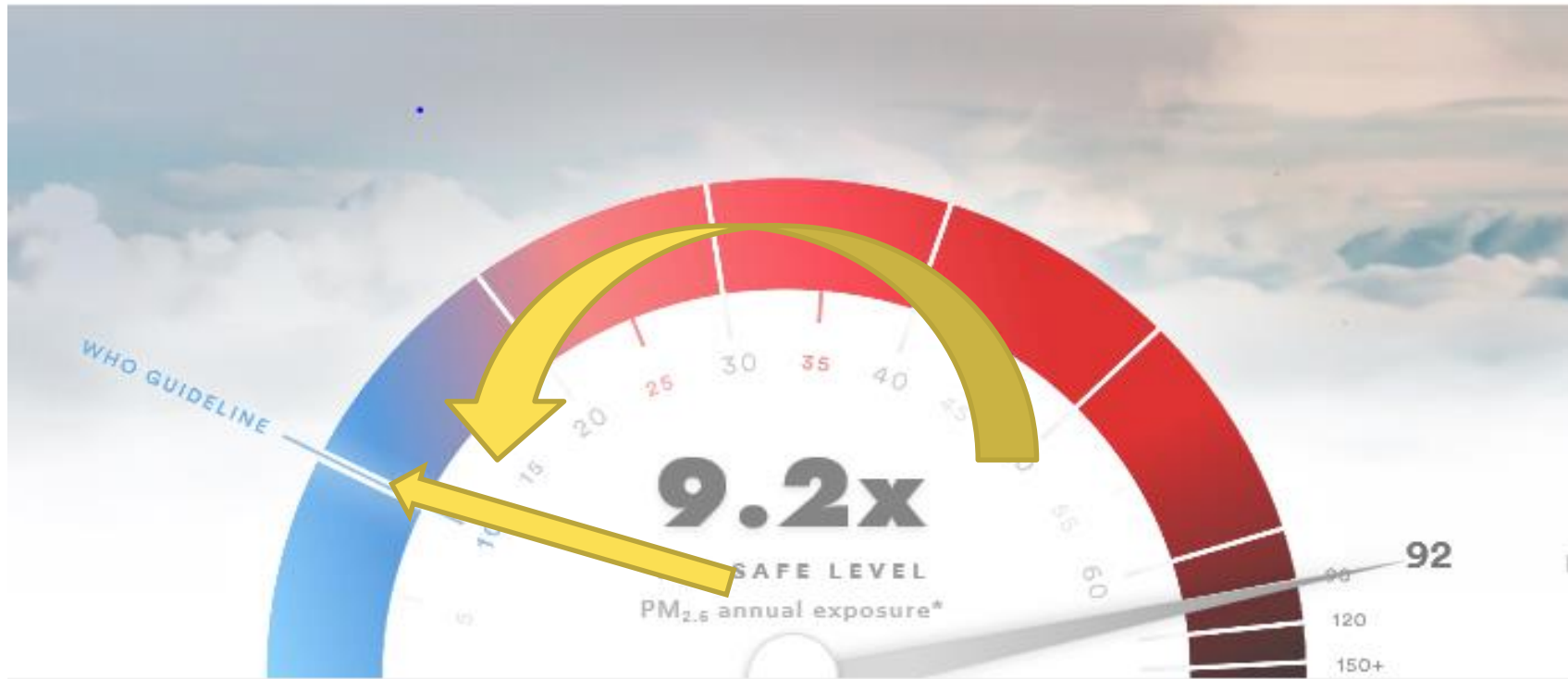
Expenditure on Prevention and Public Health Services accounted for an estimated 3.6% of total health expenditures worldwide in 2013



World Health Organization

Source: WHO GHO, OECD, UK NHS, EIU, PHE Estimates

Our shared vision



BREATHE LIFE.



World Health
Organization

Thank you !

Contact details:

Tel.: +41 22 791 21 08

Email: roebbeln@who.int