

Health and Climate Change

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Social Determinants**



**World Health
Organization**

Health risks from climate change



Health risks from climate change



Each year:

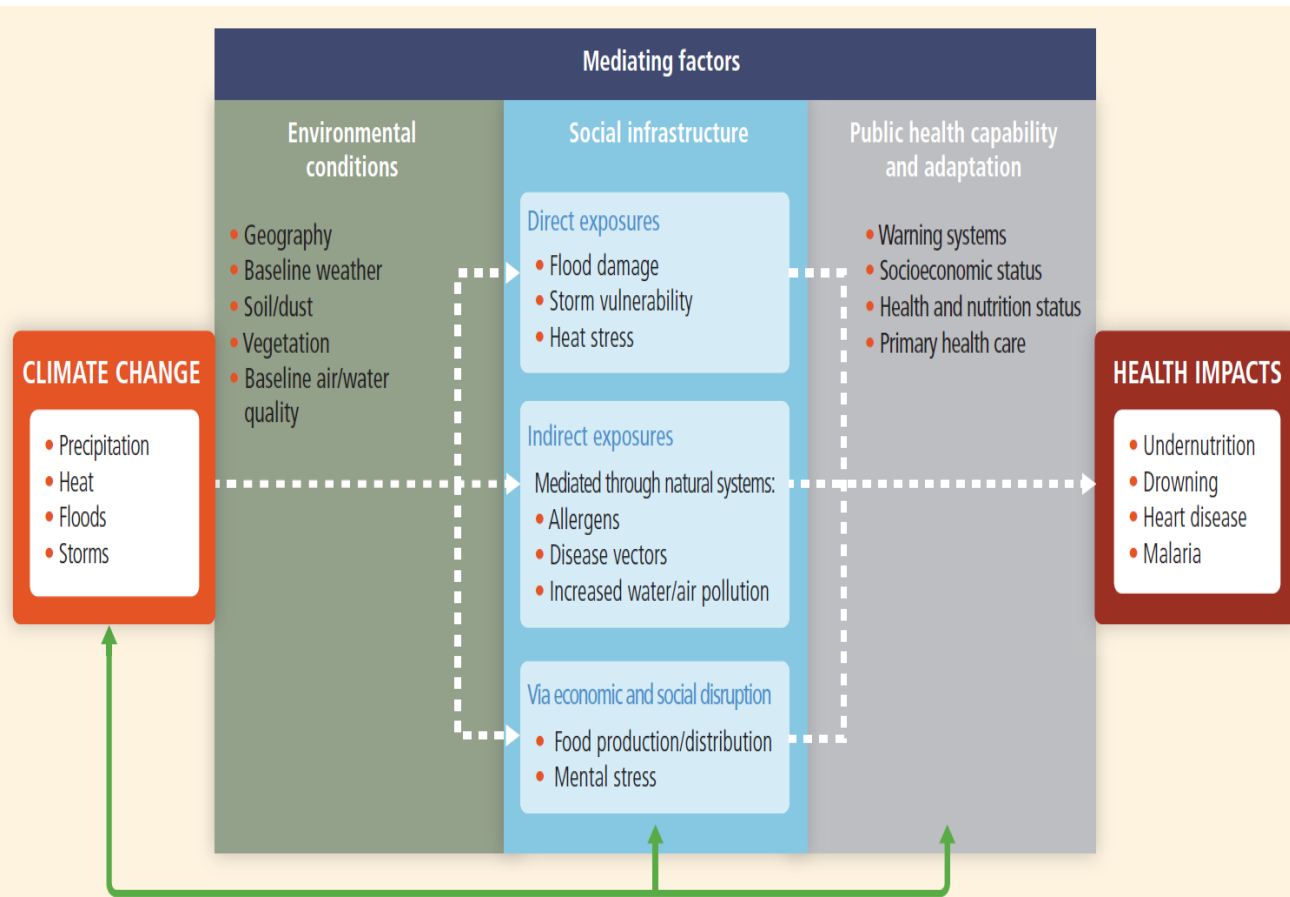
-Extreme weather events kill tens of thousands

-Malaria kills over 600,000

-Diarrhoea kills almost 600,000 children

-Undernutrition kills 3.1 million

All are highly sensitive to climate conditions



Direct: increased incidence of NCDs, injuries and deaths from droughts, floods, heatwaves

Indirect: food and water insecurity, spread of infectious diseases, displacement and mental health

Global health inequities and climate change



Cumulative emissions of greenhouse gases, to 2002

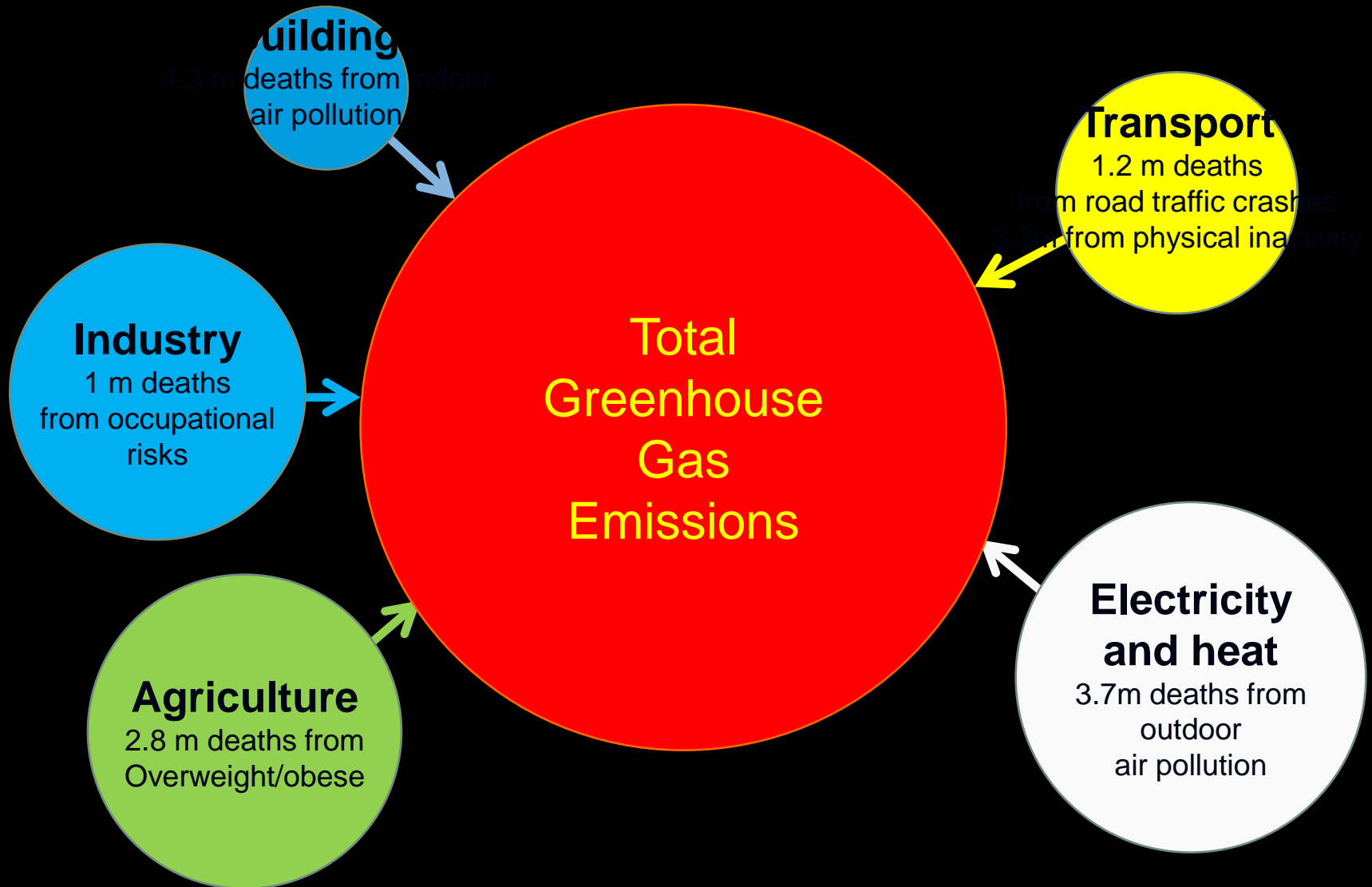


WHO estimates of *per capita* mortality from climate change, 2000

Map projections from Patz et al 2007; WHO 2008

WHO Comparative Risk Assessment estimated that by 2000, climate change that had occurred since the 1970s was causing over 150,000 additional deaths per year (WHO, 2002, McMichael et al 2004)

Health impacts of the causes of climate change



Circle size proportional to GHG emissions in 2010 (tonnes CO₂ equivalent).
Changes proportional to projections of changes by 2050. *Emissions data from IPCC, 2014.*

WHO recent Key Findings and Recommendations



COP24 SPECIAL REPORT

HEALTH & CLIMATE CHANGE





7 million people die every year from Air Pollution

Health damaging air pollutants, and greenhouse gases are emitted from many of the same sectors.

This provides a massive opportunity to mobilize the social, political and economic importance of health in support of climate action.

If Paris Agreement commitments are met, we could save millions of lives through reduced AP by 2050

PIUS UTOH/EKPE/AP/AF/GETTY IMAGES

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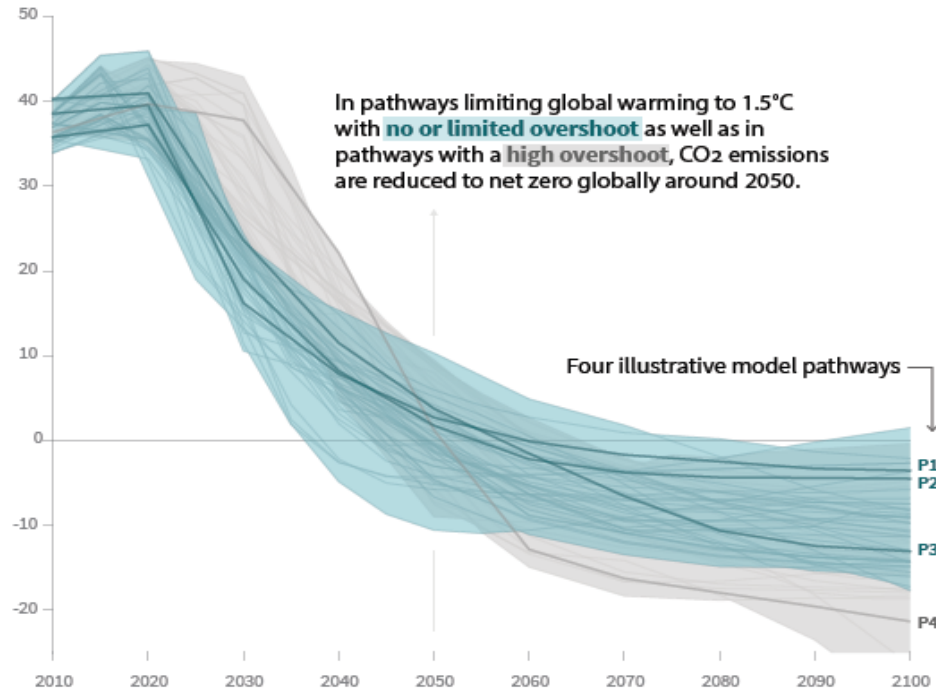
This provides a massive opportunity to mobilize the social, political and economic importance of health in support of climate action.

If Paris Agreement commitments are met, we could save millions of lives through reduced AP by 2050

Connect climate and air pollution - including SLCPs

Global total net CO₂ emissions

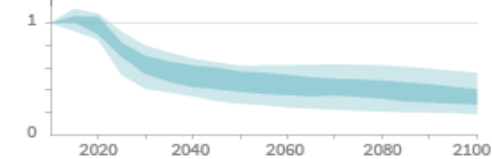
Billion tonnes of CO₂/yr



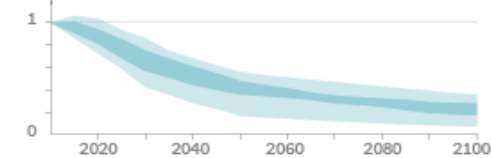
Non-CO₂ emissions relative to 2010

Emissions of non-CO₂ forcers are also reduced or limited in pathways limiting global warming to 1.5°C with **no or limited overshoot**, but they do not reach zero globally.

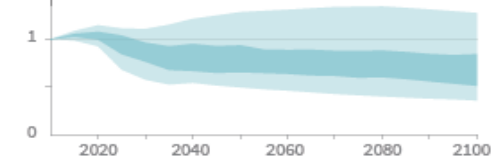
Methane emissions



Black carbon emissions



Nitrous oxide emissions



Energy-supply

Trade-offs

Synergies

Energy-demand

Trade-offs

Synergies

Land

Trade-offs

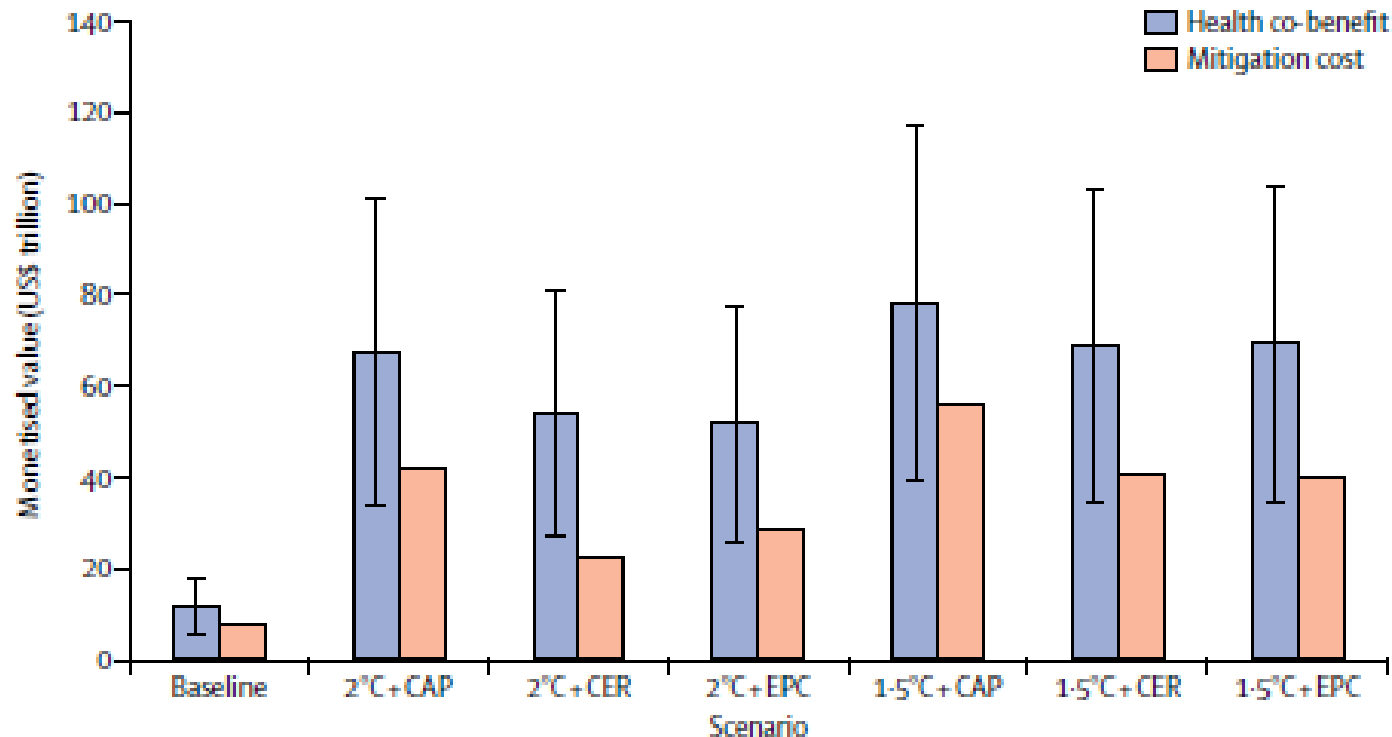
Synergies

SDG 3
Good Health
and Well-being





Include health in economic policies to address climate change

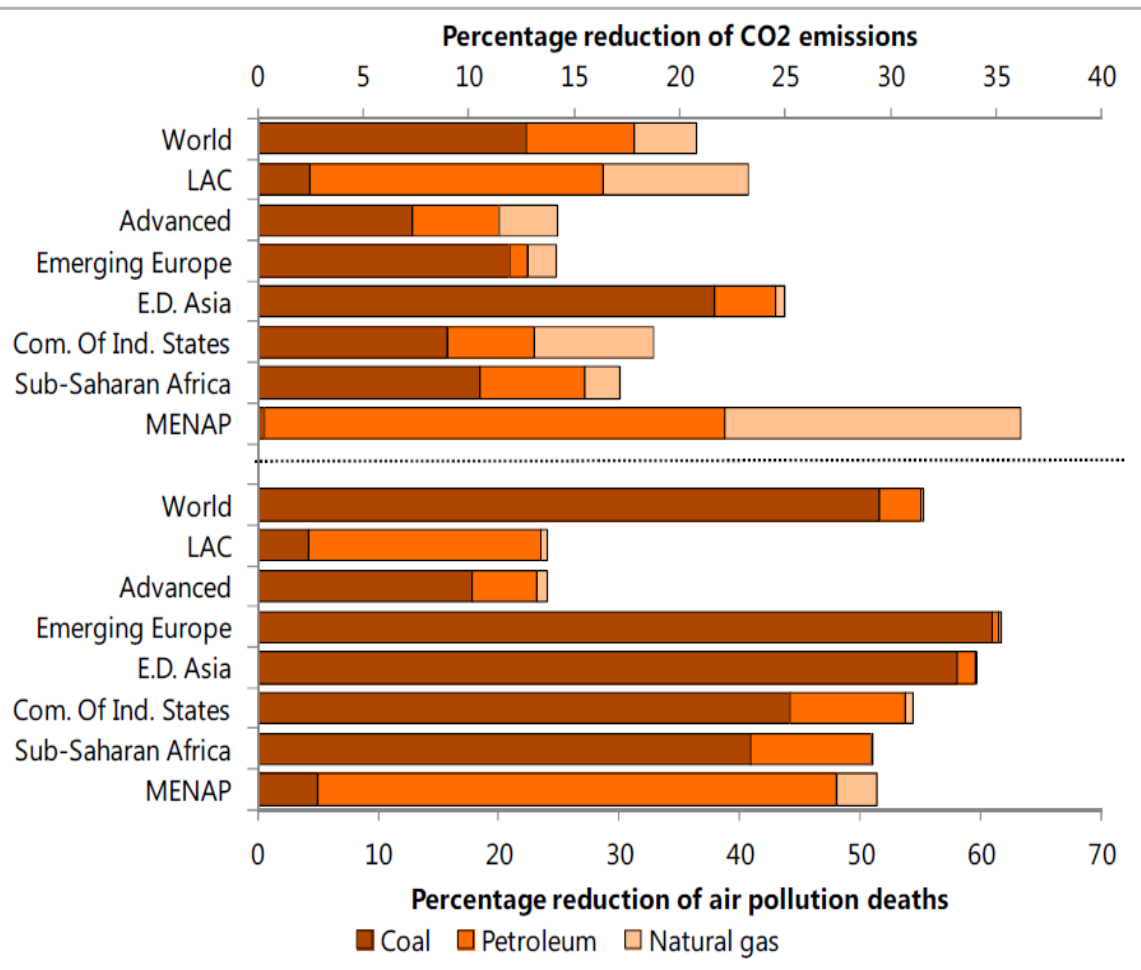


Markandya et al, Lancet Public Health, 2018

The value of the health cobenefits of climate change mitigation are approximately twice as large as the costs

We should not talk about cost of climate actions but investment in cleaner and healthier future

Include health in economic policies to address climate change



Pricing carbon in line with health and other impacts would cut ~ 50% of AP deaths, ~ 20% of CO₂ emissions, and generate ~ 3% of GDP in tax revenues

IMF, 2015



Deliver the commitments to the “right to health” into Paris rulebook





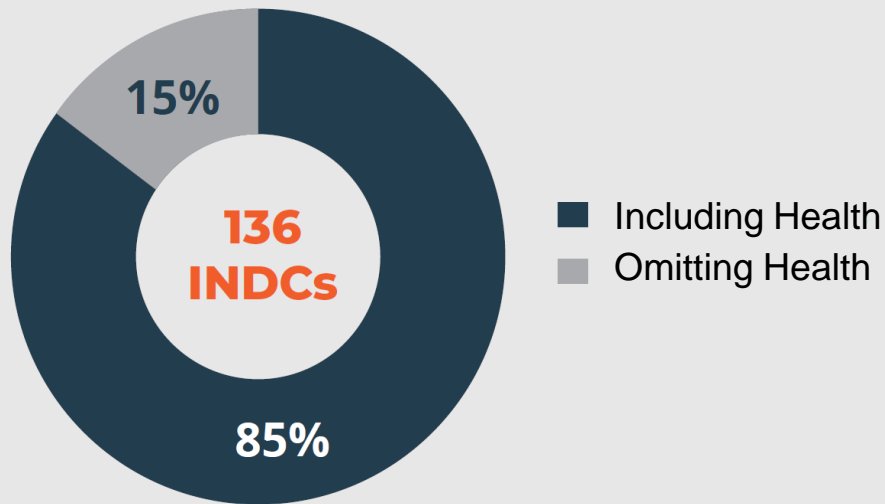
Remove the barriers to building health resilience to climate change



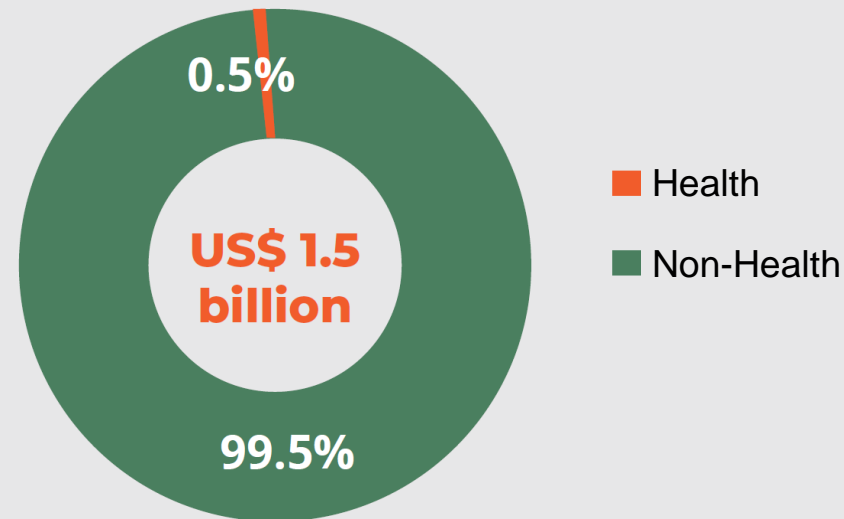
Remove the barriers to building health resilience to climate change



Inclusion of health in INDCs by Low and Middle-Income Countries



Disbursement of Multilateral Climate Finance





WHO Special Initiative

CLIMATE CHANGE AND HEALTH IN
SMALL ISLAND DEVELOPING STATES



DISCUSSION DRAFT

WHO guidance to protect health from climate change through health adaptation planning





**Use the health community
- your most trusted advocates**

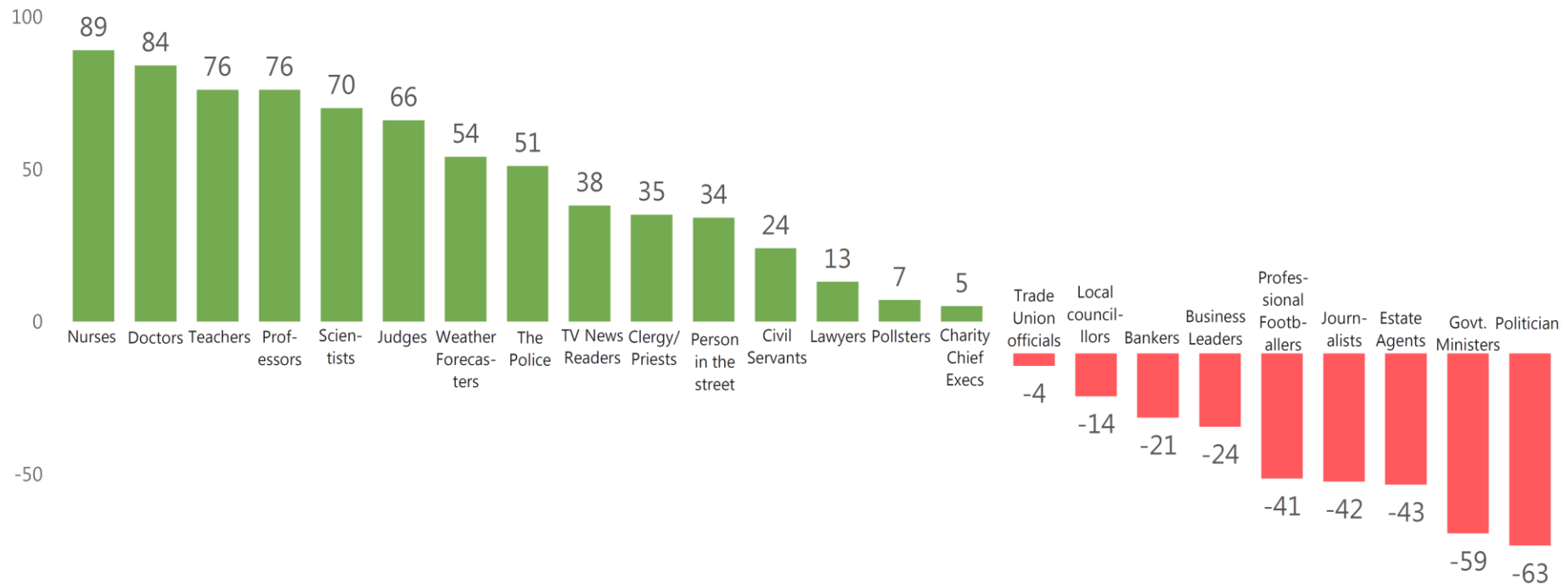
A photograph of a surgeon in a blue surgical gown, blue hairnet, and blue face mask, focused on a procedure. The background shows an operating room with other medical staff and equipment.

**Health Professionals around the world have
identified the threat of CC as one of the biggest
public health threats of the century**

Health Professionals are the most trusted group of people



Net trust = % trust to tell the truth - % do not trust to tell the truth

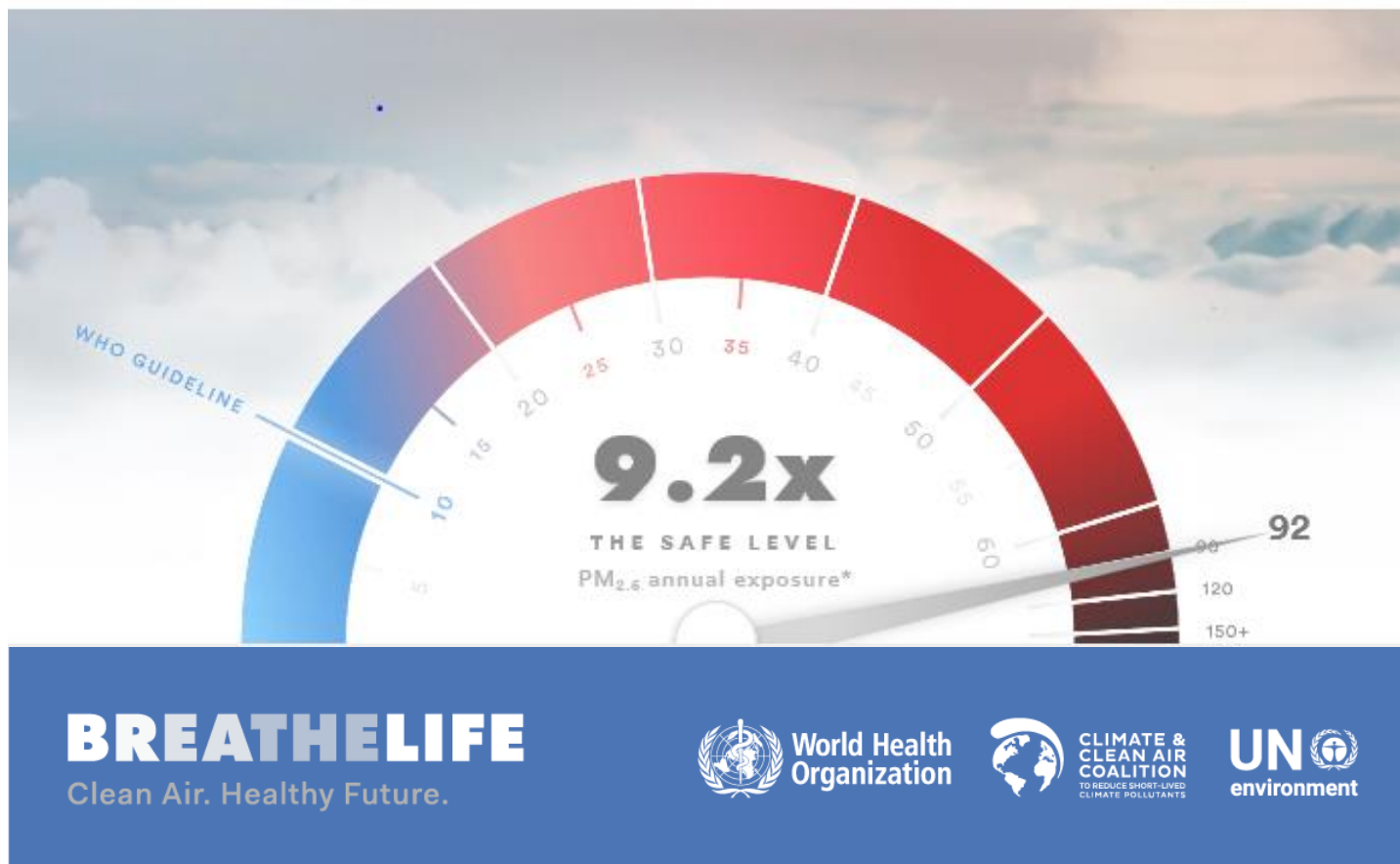


Use the health community - your most trusted advocates



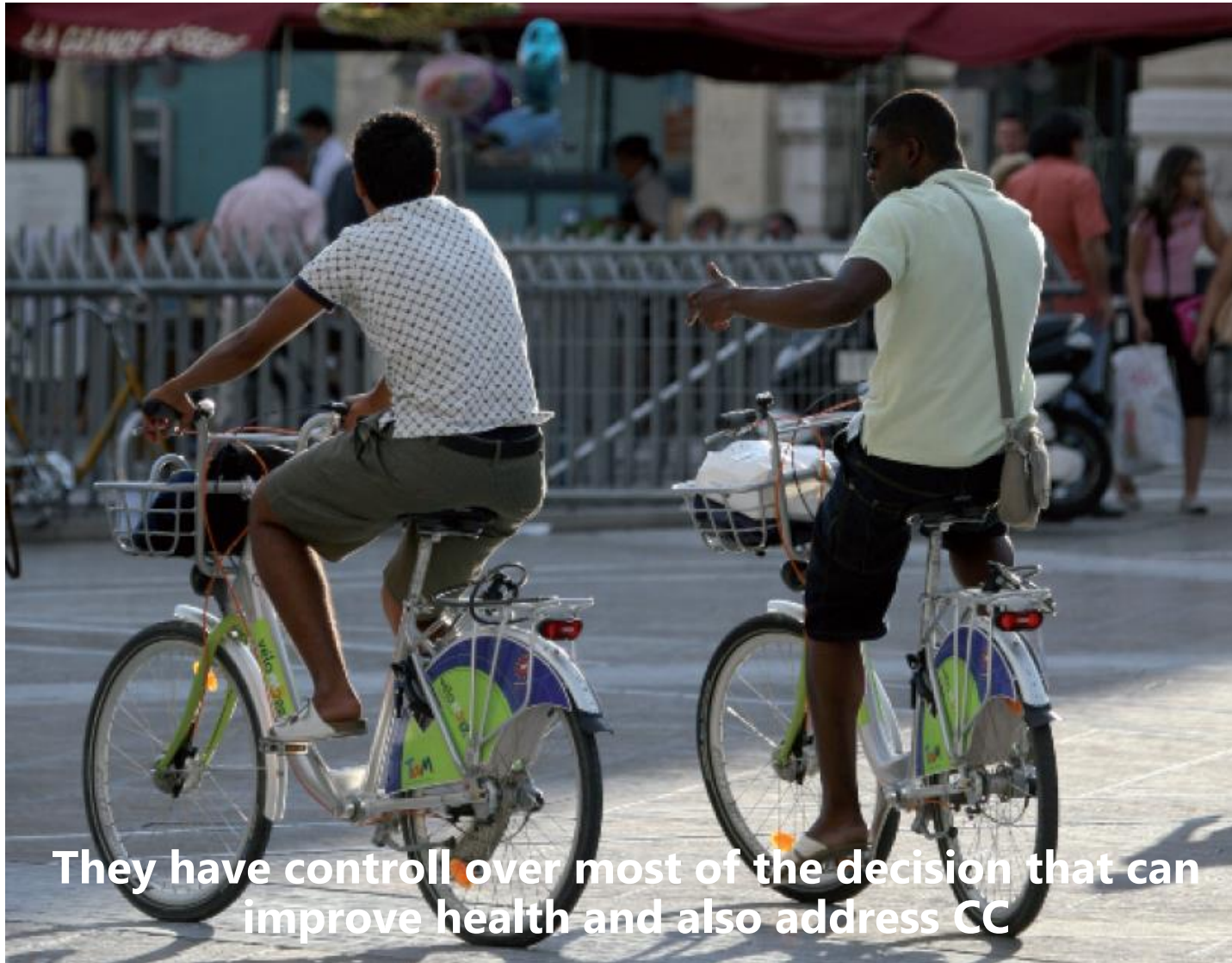


Mobilize the power of city mayors and other subnational leaders



Air pollution levels in your city, at Breathelife2030.org
Data from WHO global observatory on air pollution

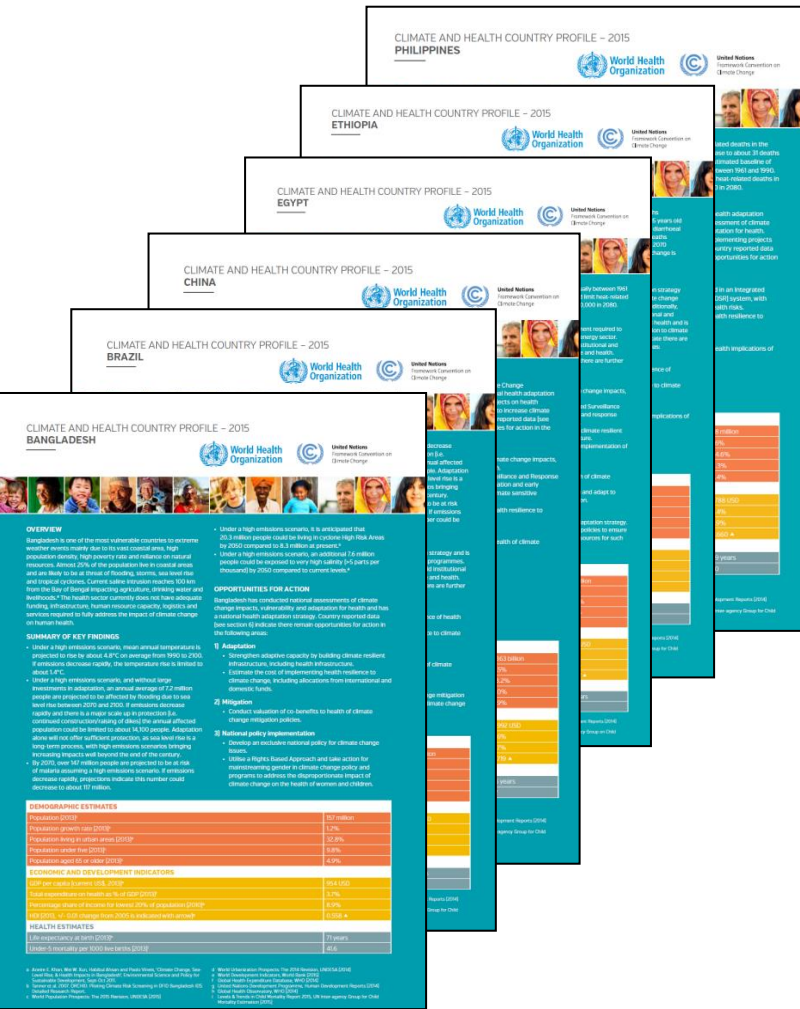
Mobilize the power of city mayors and other subnational leaders



They have control over most of the decisions that can improve health and also address CC



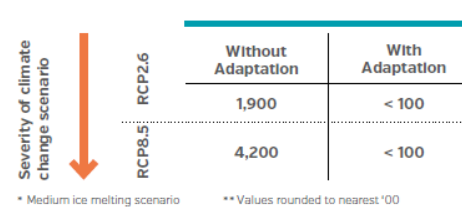
Provide country specific evidence and track progress



CLIMATE AND HEALTH COUNTRY PROFILE - FIJI



ANNUAL EXPOSURE TO FLOODING DUE TO SEA LEVEL RISE, FIJI (2070-2100)



Under a high emissions scenario, and without large investments in adaptation, an annual average of about 4,200 people are projected to be affected by flooding due to sea level rise between 2070 and 2100. If global emissions decrease rapidly and there is a major scale up in protection (i.e. continued construction/raising of dikes) the annual affected population could be limited to about < 100 people. Adaptation alone will not offer sufficient protection, as sea level rise is a long-term process, with high emissions scenarios bringing increasing impacts well beyond the end of the century.

Source: Human dynamics of climate change, technical report, Met Office, HM Government, UK, 2014.

INFECTIOUS AND VECTOR-BORNE DISEASES

Mean relative vectorial capacity for dengue fever transmission in Fiji



The mean relative vectorial capacity for dengue fever transmission is projected to increase towards 2070 under both a high and low emissions scenario.

Source: Rocklöv, J., Quarm, M. et al., 2015.⁴



KEY IMPLICATIONS FOR HEALTH

Fiji also faces inland river flood risk. It is projected, that by 2030, an additional 2,000 people may be at risk of river floods annually as a result of climate change and 1,600 due to socio-economic change above the estimated 4,700 annually affected population in 2010.⁴

In addition to deaths from drowning, flooding causes extensive indirect health effects, including impacts on food production, water provision, ecosystem disruption, infectious disease outbreak and vector distribution. Longer term effects of flooding may include post-traumatic stress and population displacement.



KEY IMPLICATIONS FOR HEALTH

Some of the world's most virulent infections are also highly sensitive to climate: temperature, precipitation and humidity have a strong influence on the life-cycles of the vectors and the infectious agents they carry and influence the transmission of water-borne and food-borne diseases.⁵

Socioeconomic development and health interventions are driving down burdens of several infectious diseases, and these projections assume that this will continue. However, climate conditions are projected to become significantly more favourable for transmission, slowing progress in reducing burdens, and increasing the populations at risk if control measures are not maintained or strengthened.⁶

SOLUTIONS

**INVEST IN
ENERGY-EFFICIENT
POWER GENERATION.**

**IMPROVE DOMESTIC,
INDUSTRY AND
MUNICIPAL WASTE
MANAGEMENT.**

**REDUCE AGRICULTURAL
WASTE INCINERATION,
FOREST FIRES AND
CERTAIN AGRO-FORESTRY
ACTIVITIES.**

**MAKE GREENER AND
MORE COMPACT
CITIES WITH
ENERGY-EFFICIENT
BUILDINGS.**

**PROVIDE UNIVERSAL ACCESS TO
CLEAN, AFFORDABLE FUELS
AND TECHNOLOGIES FOR
COOKING, HEATING AND
LIGHTING.**

**BUILD SAFE AND AFFORDABLE PUBLIC
TRANSPORT SYSTEMS AND PEDESTRIAN-
AND CYCLE-FRIENDLY NETWORKS.**



Thank you