Climate Change, Health and the SDGs

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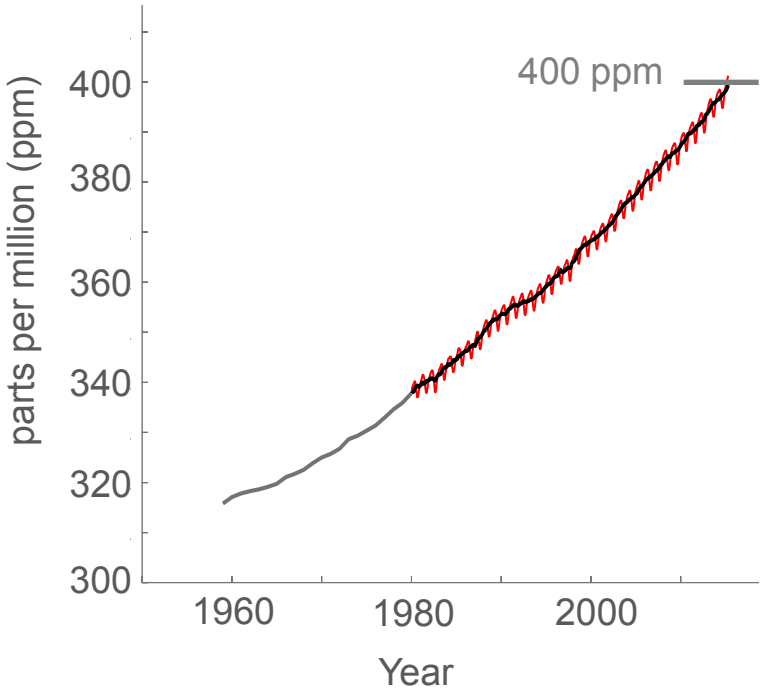
Co-ordinator

Climate Change and Health

World Health Organization

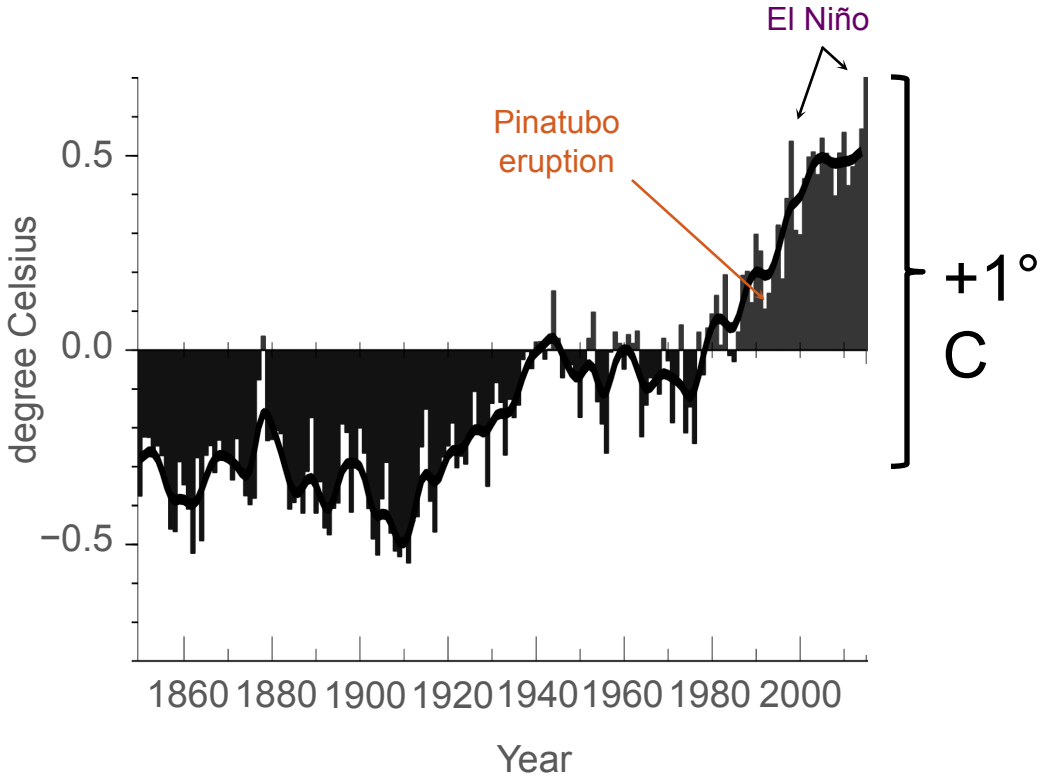
Recent trends on atmospheric CO_2 and temperature

atmospheric CO_2 concentration



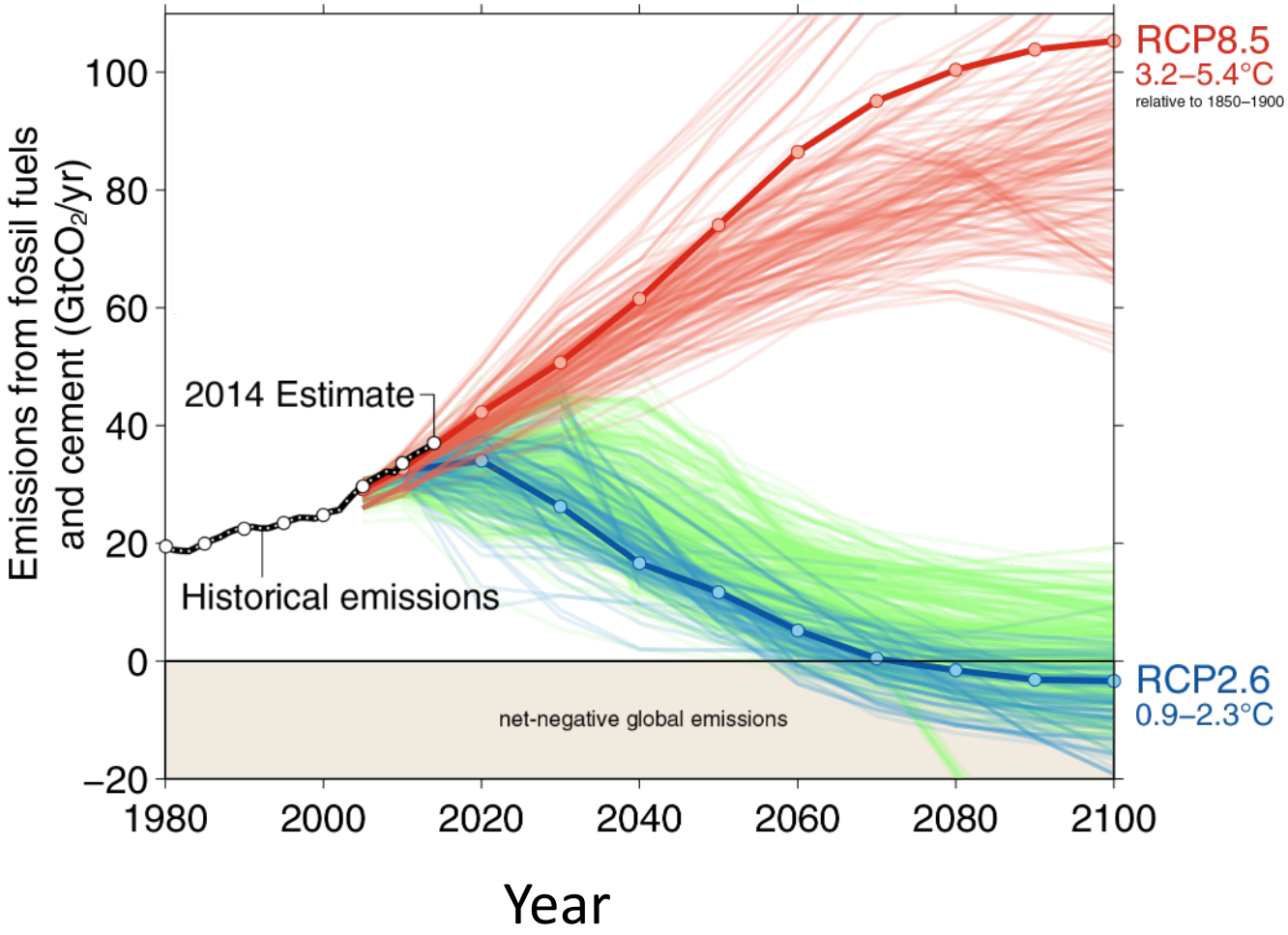
Data: Scripps/NOAA-ESRL

global temperature



Data: HadCRUT4

Emissions need to decrease to near zero to achieve climate stabilisation



high-risk climate future

Consistent with 2°C limit

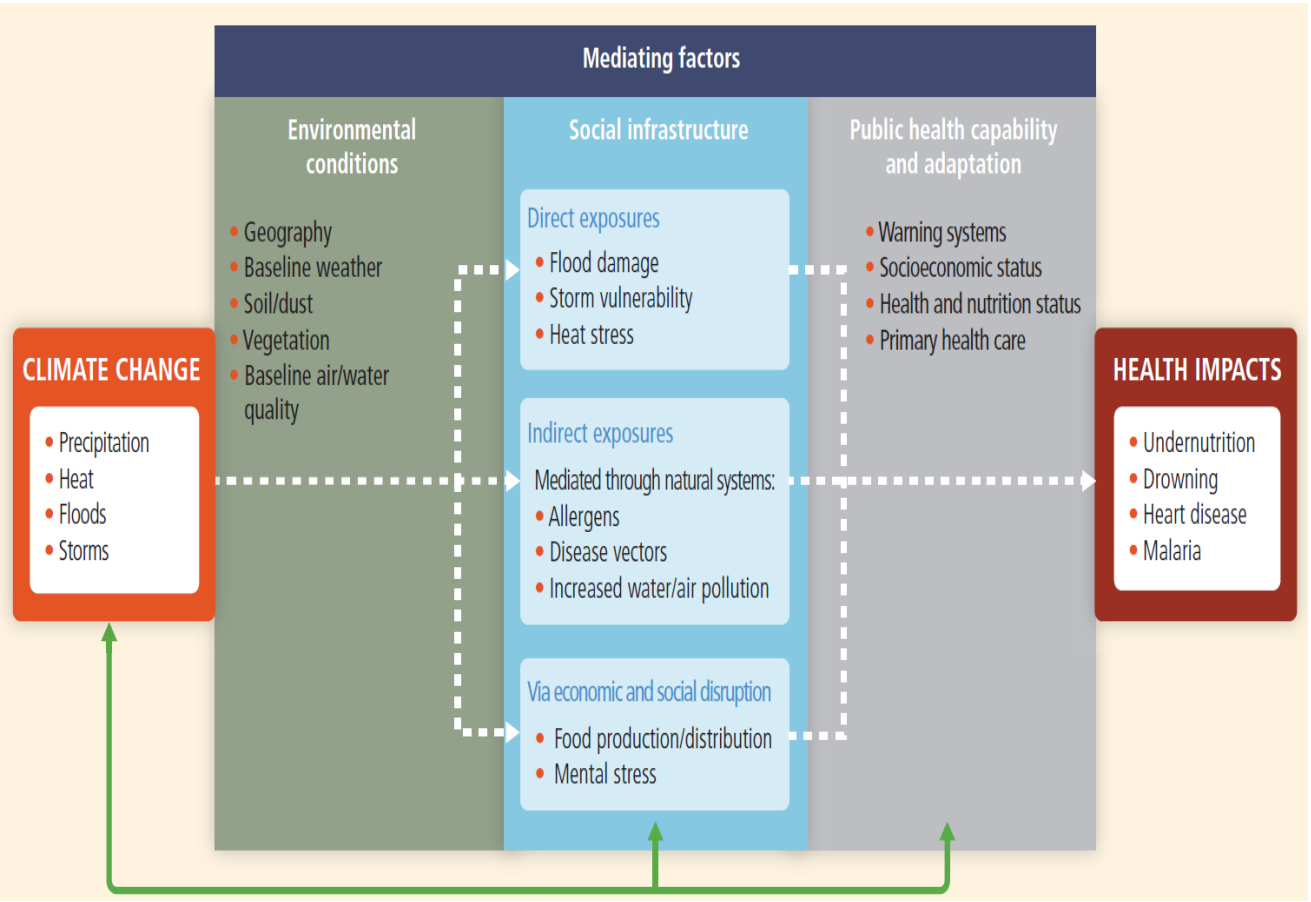
Source: Fuss et al 2014; CDIAC; Global Carbon Budget 2014; IPCC WGI & WGIII scenario database

University of East Anglia

GLOBAL CARBON PROJECT

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

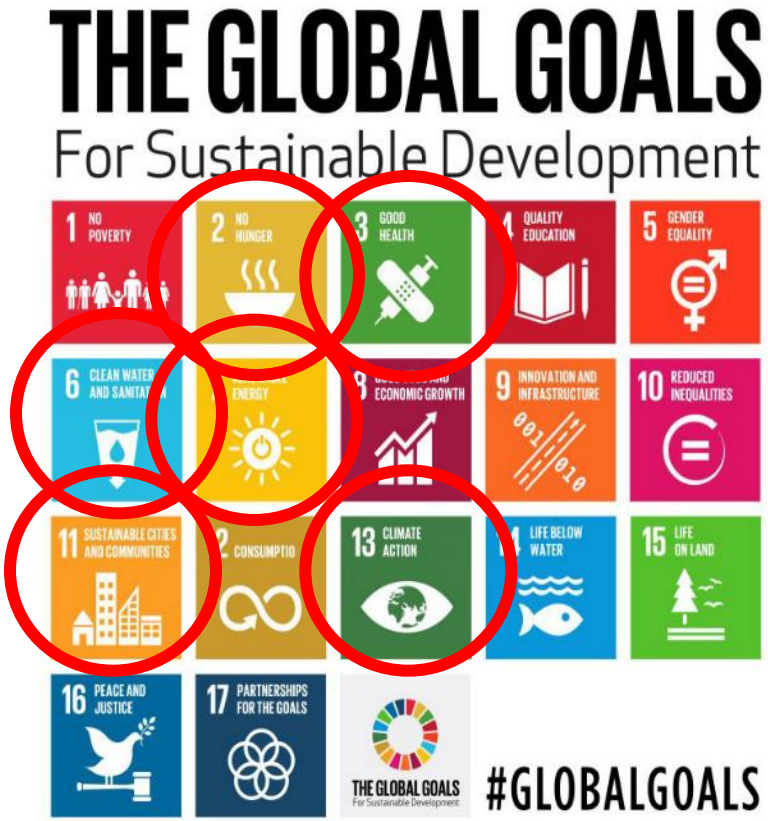
World Health Organization

Climate change is firmly on the global health agenda

One of four health priorities of WHO Director – General Tedros election. Emergencies, Universal Health Coverage, Maternal and Child Health, and **Climate and Environmental Change.**

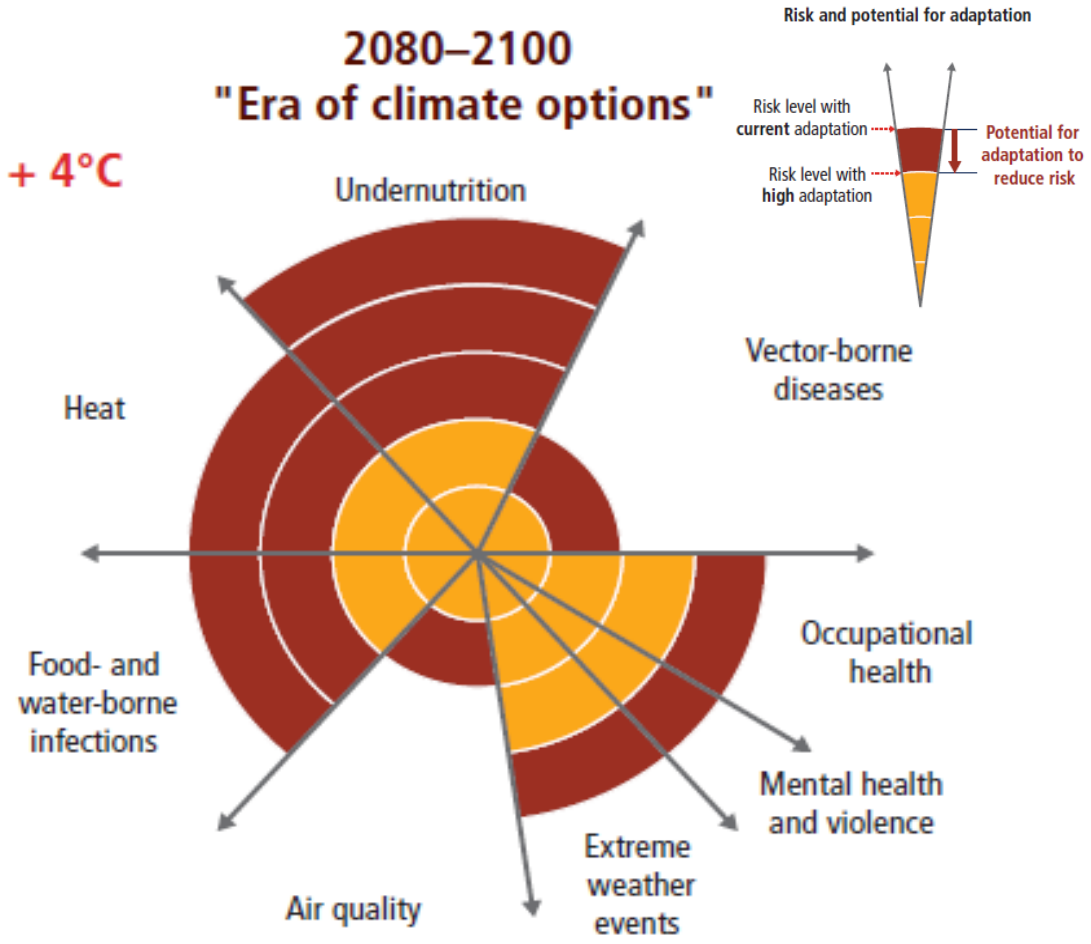
Central platform for WHO's General Programme of Work 2019- 2023.

Relevance of climate change and health to the Global Development Agenda



World Health Organization

First Priority: Primary prevention to minimize climate risks to health



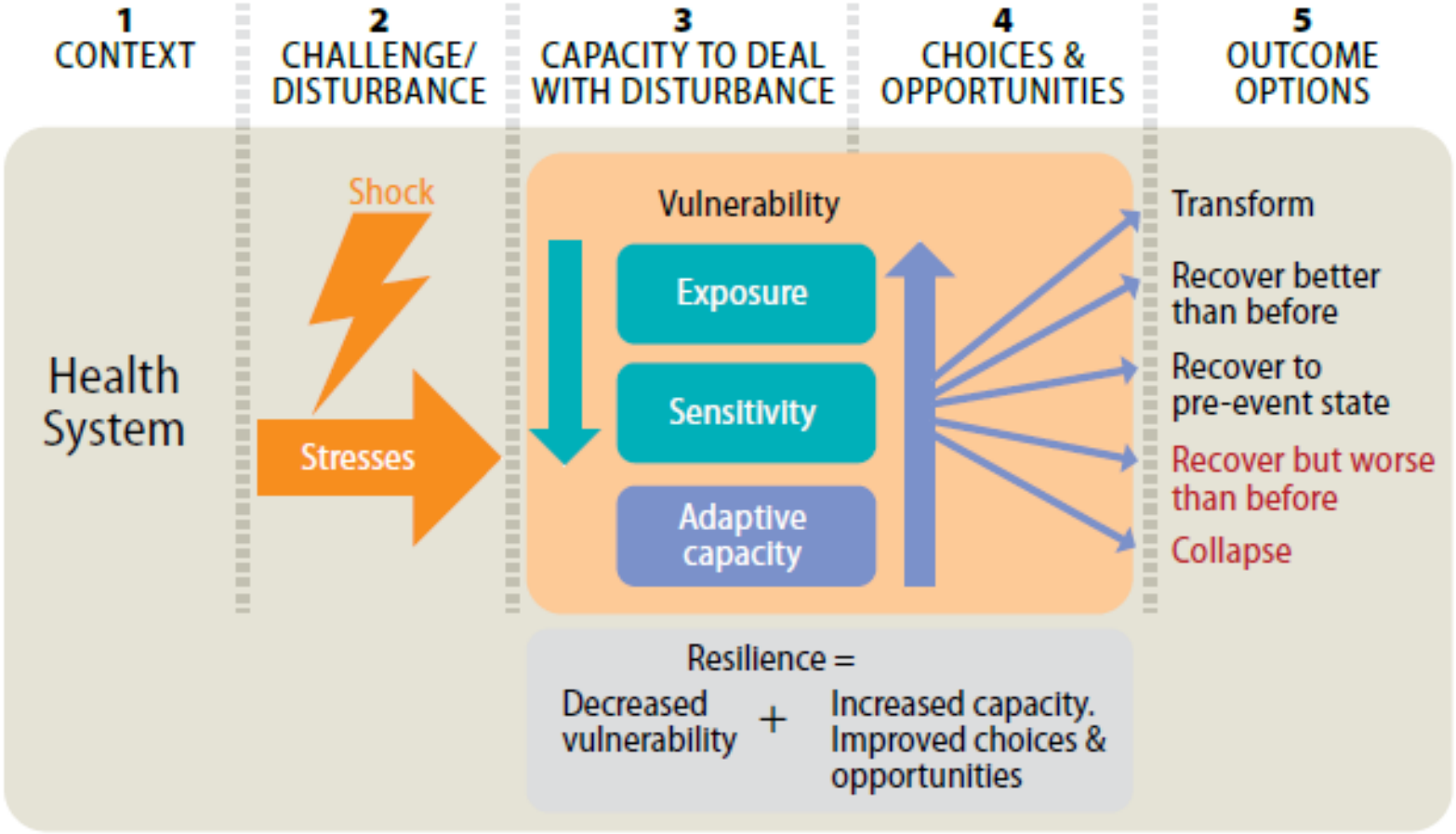
We have proven, cost-effective interventions against every climate-sensitive health impact

All of these can save lives now, and reduce vulnerability to climate change

Strengthening of preventive public health functions, including climate resilience, is the best protection for the future

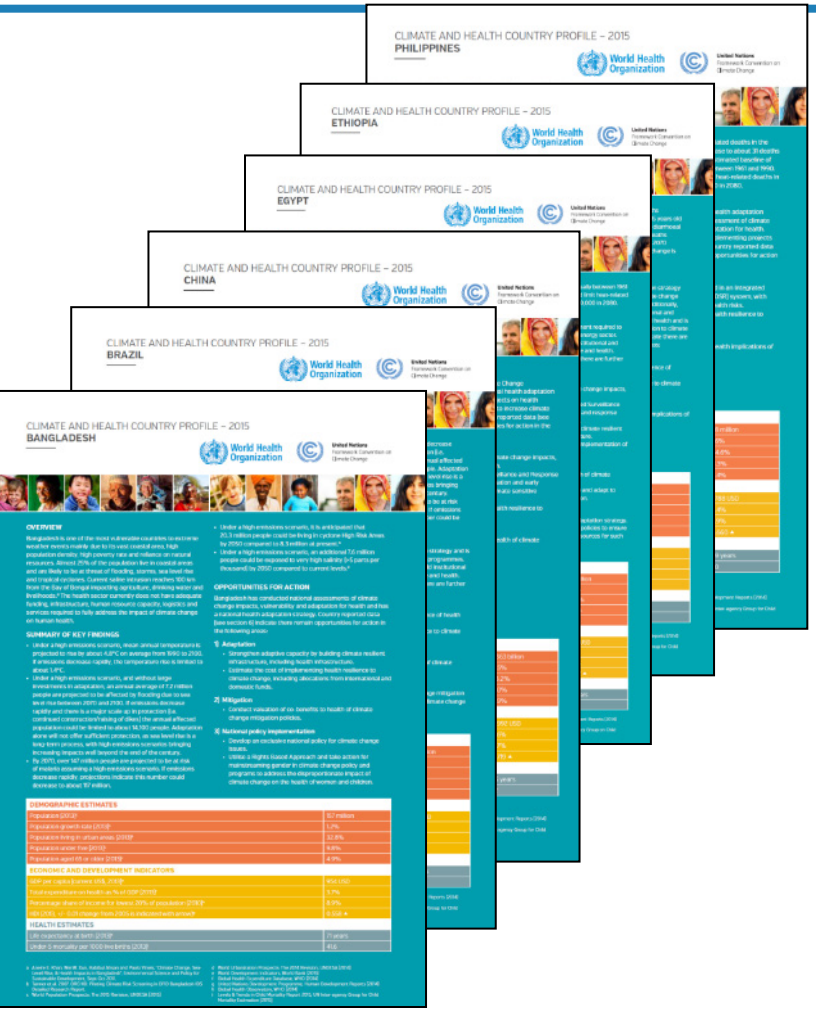
World Health Organization

Evidence: Improved understanding to build health system resilience



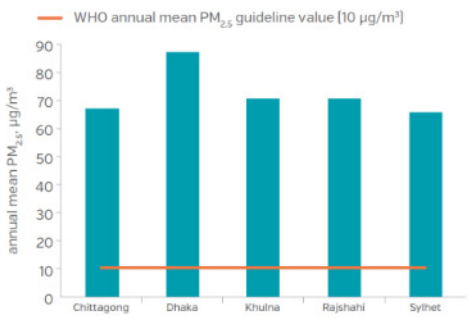
World Health Organization

Evidence: Country-specific information and investment cases



OUTDOOR AIR POLLUTION EXPOSURE

Outdoor air pollution in cities in Bangladesh annual mean $PM_{2.5}$ (μg/m³) 2013



The five most populated cities for which there is air pollution data available have annual mean $PM_{2.5}$ levels that are above the WHO guideline value of 10 μg/m³.

Source: Ambient Air Pollution Database, WHO, May 2014.

KEY IMPLICATIONS FOR HEALTH

Outdoor air pollution can have direct and sometimes severe consequences for health.

Fine particles which penetrate deep into the respiratory tract subsequently increase mortality from respiratory infections, lung cancer, and cardiovascular disease.

HOUSEHOLD AIR POLLUTION

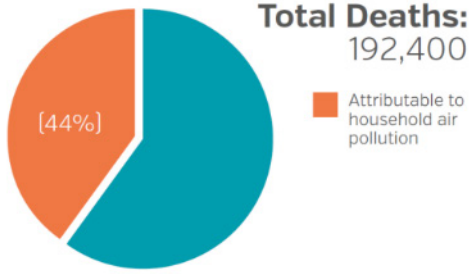
BANGLADESH

Percentage of population primarily using solid fuels for cooking (%), 2013

RURAL AREAS	URBAN AREAS	NATIONAL TOTAL
>95	59	89

Source: Global Health Observatory, data repository, World Health Organization, 2013

Percent of total deaths from ischaemic heart disease, stroke, lung cancer, chronic obstructive pulmonary disease (18 years +) and acute lower respiratory infections (under 5 years) attributable to household air pollution, 2012



Source: Global Health Observatory, data repository, World Health Organization, 2012

KEY IMPLICATIONS FOR HEALTH

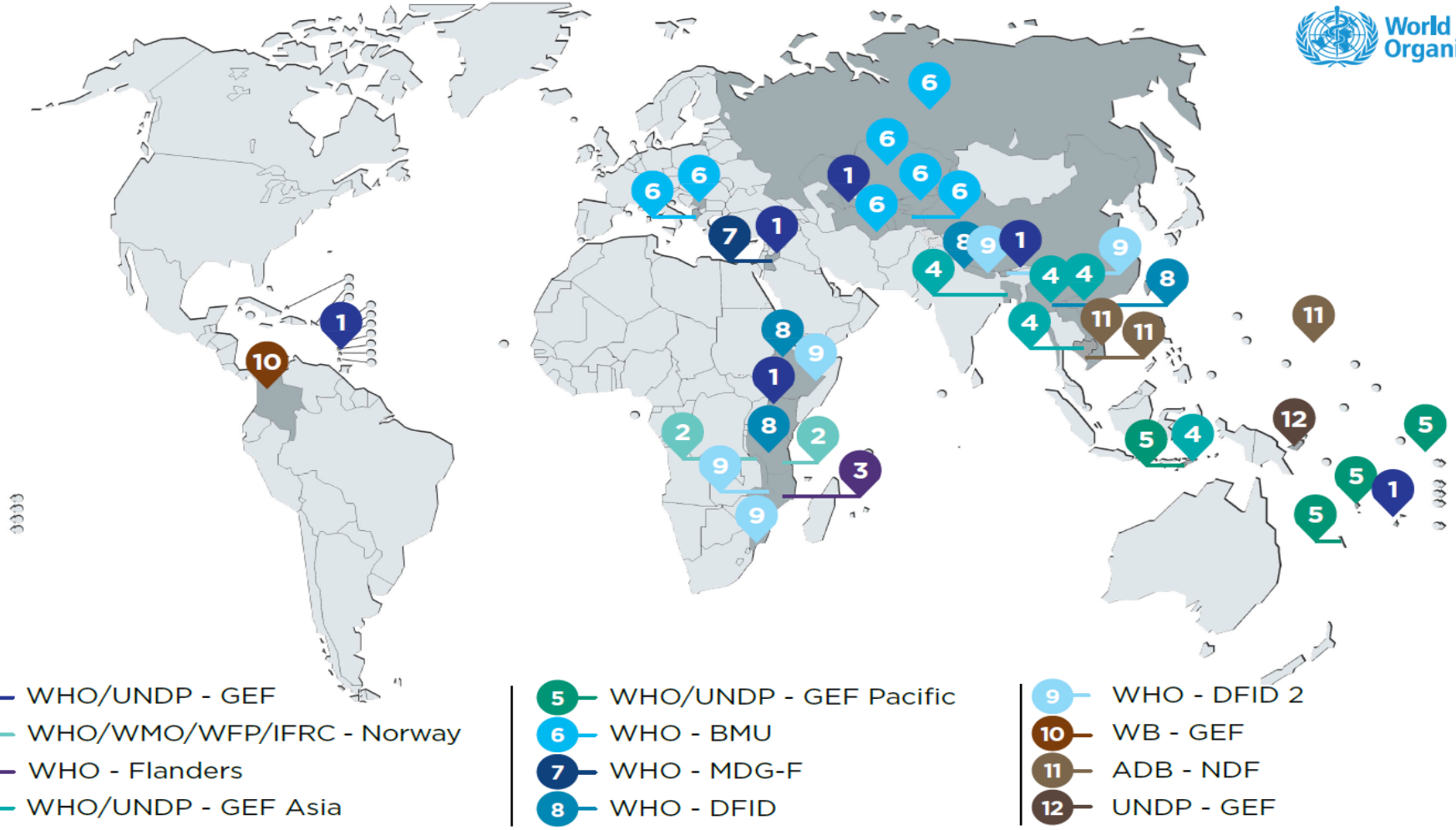
Air pollution in and around the home is largely a result of the burning of solid fuels (biomass or coal) for cooking.

Women and children are at a greater risk for disease from household air pollution. Consequently, household air pollution is responsible for a larger proportion of the total number of deaths from ischaemic heart disease, stroke, lung cancer and COPD in women compared to men.[a]

In Bangladesh, 61% percent of an estimated 17,100 child deaths due to acute lower respiratory infections is attributable to household air pollution (WHO, 2012).

a Annu. Rev. Public. Health. 2014.35:185-206. http://www.who.int/phe/health_topics/outdoorair/databases/HAP_BoD_results_March2014.pdf?ua=1

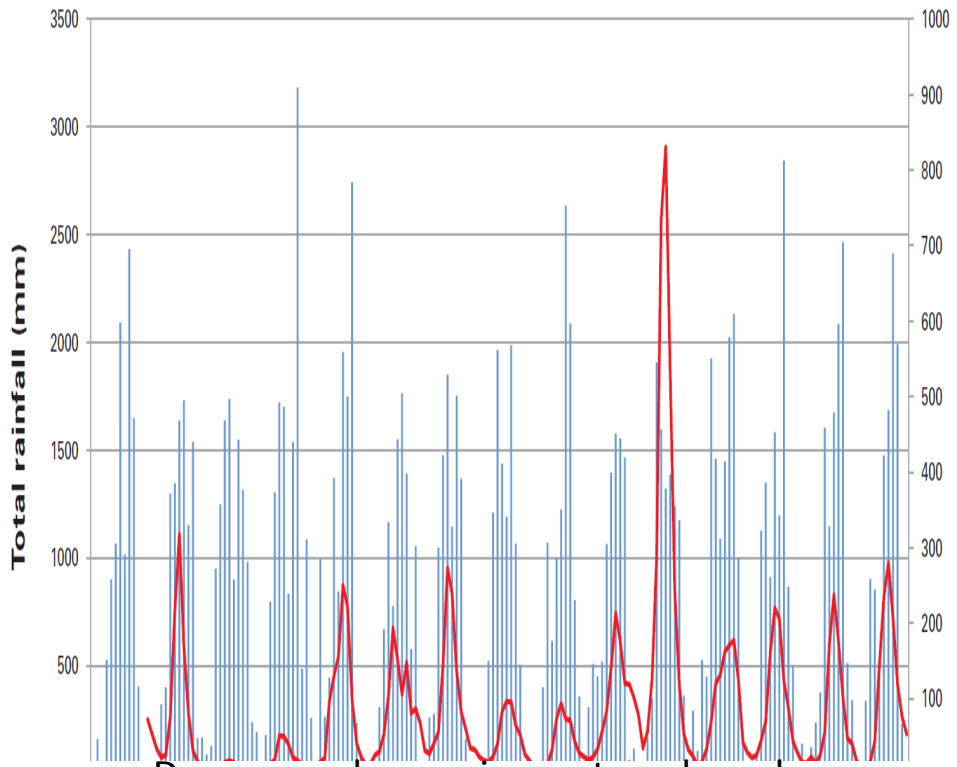
Implementation: Growing experience of health adaptation to climate change



World Health Organization

Implementation:
Scaling up and sharing best practice

"Smart " (Safe and Green) hospitals:
Georgetown Hospital in Saint Vincent & the Grenadines

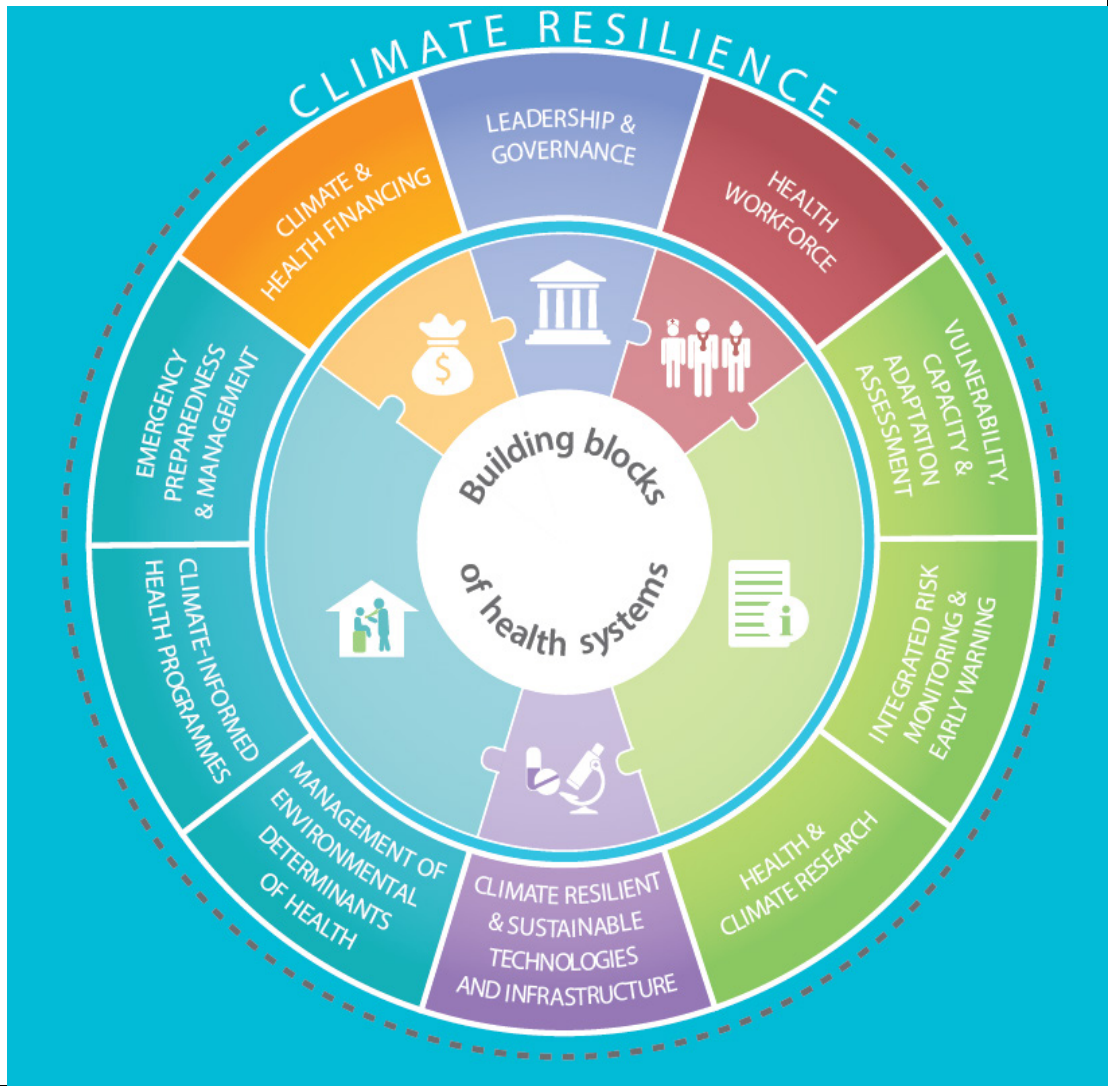


Dengue early warning system, based on precipitation

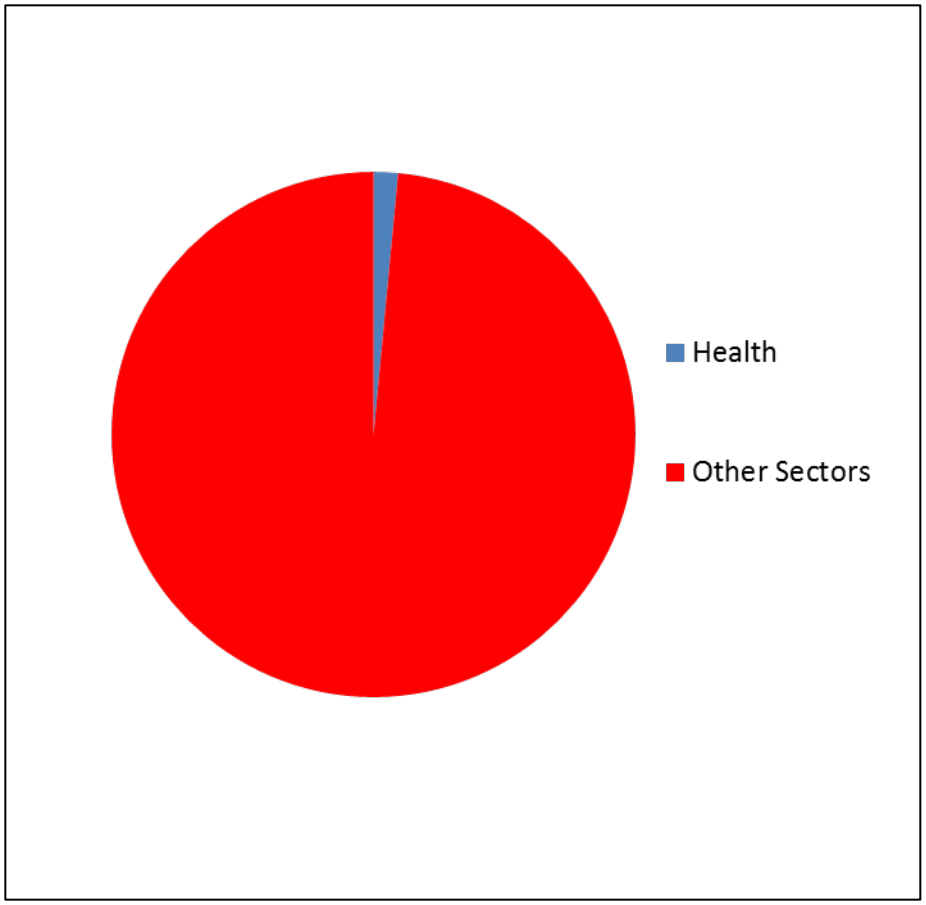
World Health Organization

Implementation:

Toolkit and process for building climate resilient health systems



Financing: Addressing the current neglect of support for climate and health

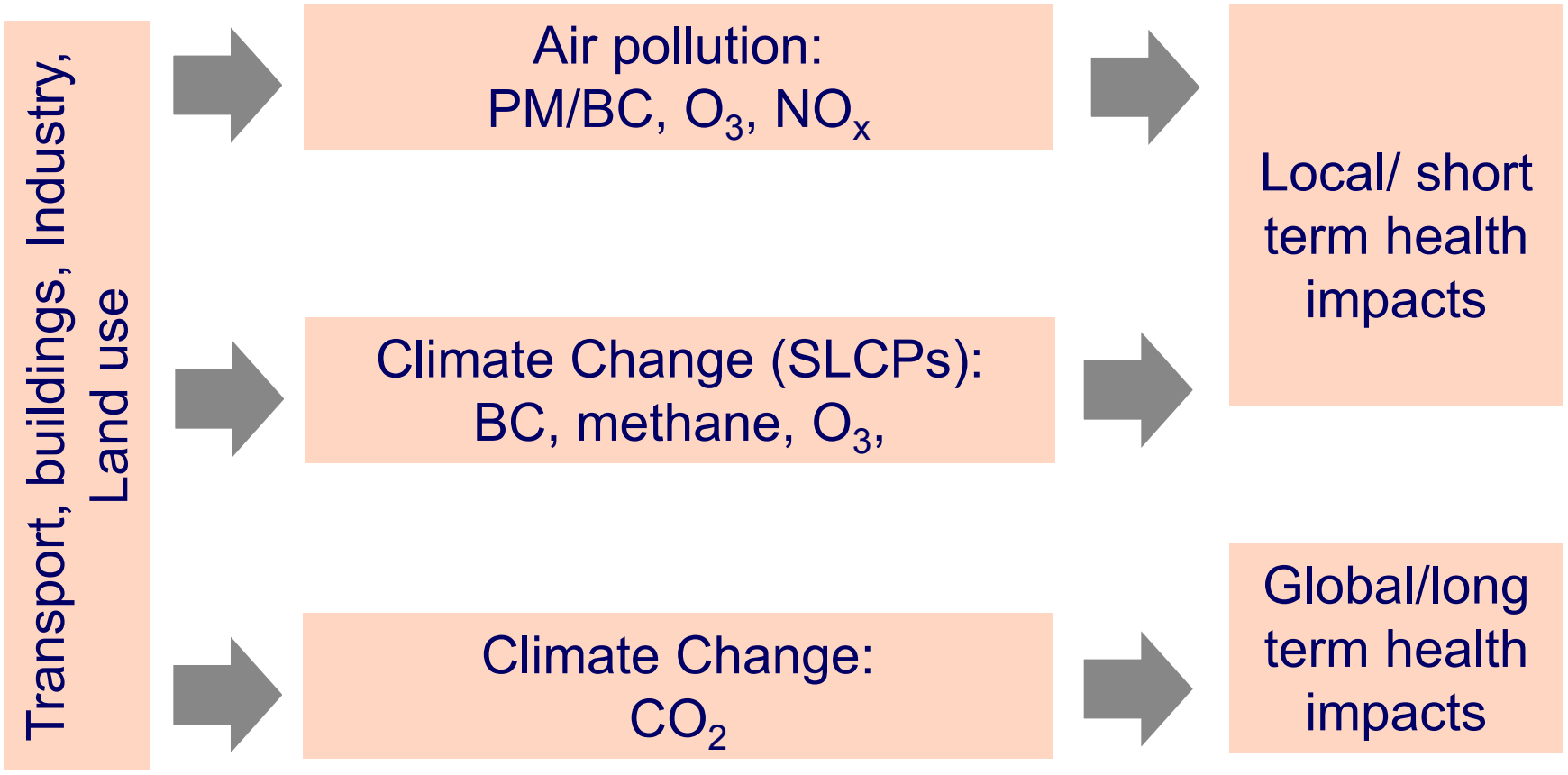


Climate change adaptation funds allocated to health projects

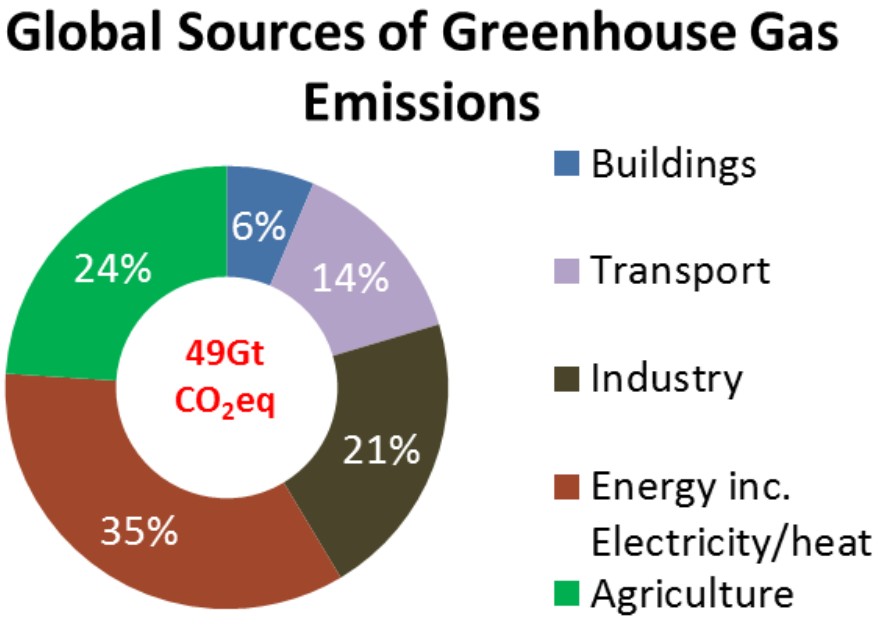
- National health budgets are overstretched, especially for prevention.
- Climate finance itself is insufficient.
- Health is poorly represented within climate project funding.


PIUS UTOMI EKPEI/AFP/AFP/GETTY IMAGES

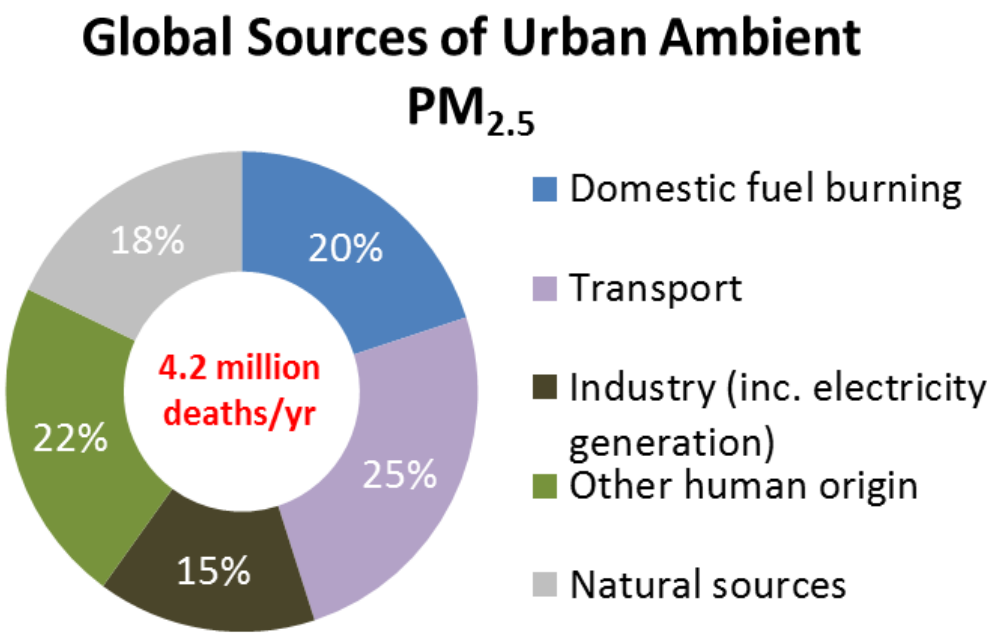
Identifying Shared Pollutants for Climate Change and Local Air pollution



Identifying Common drivers of Climate Change and Air Pollution

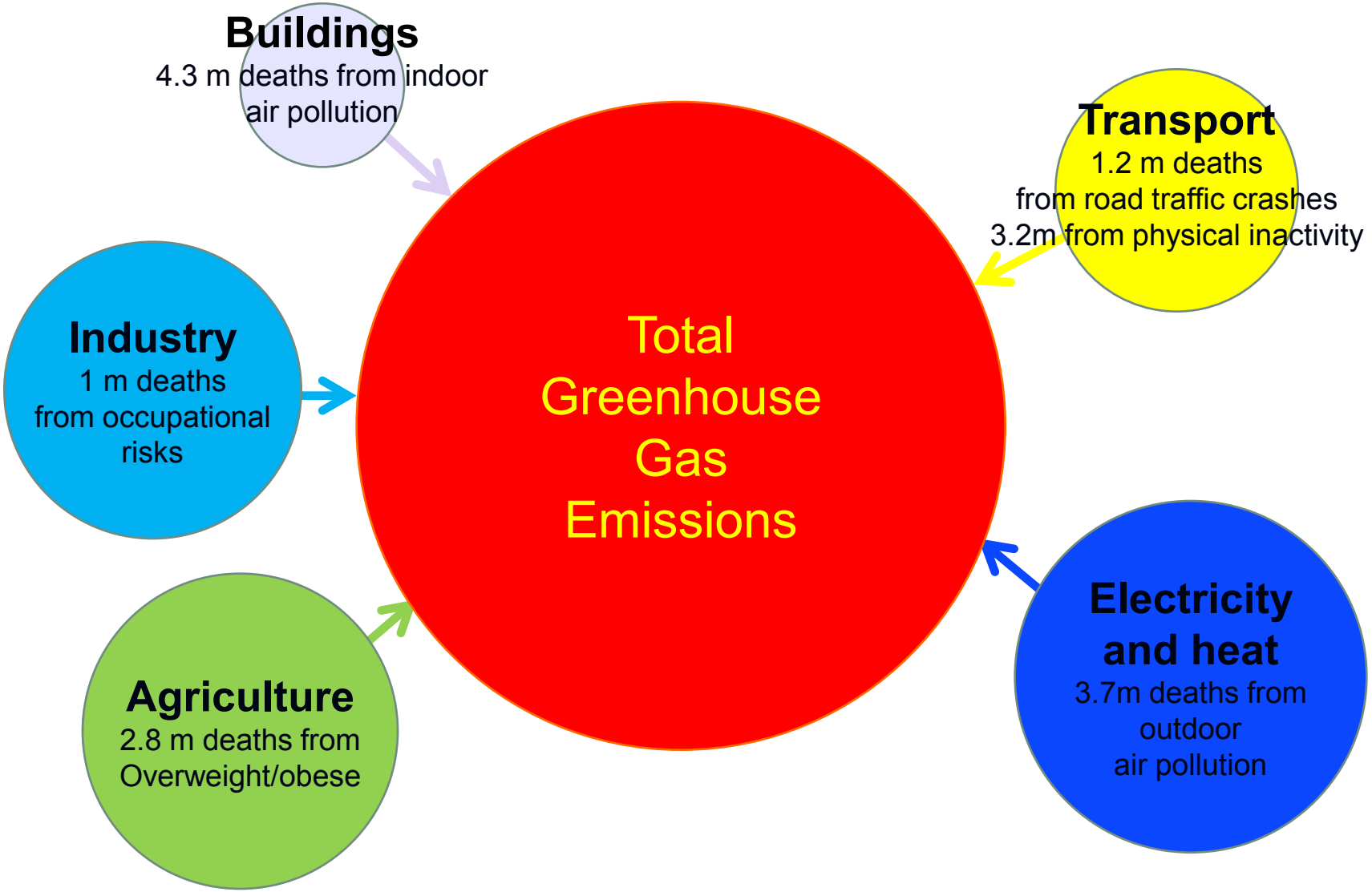


IPCC, 2014



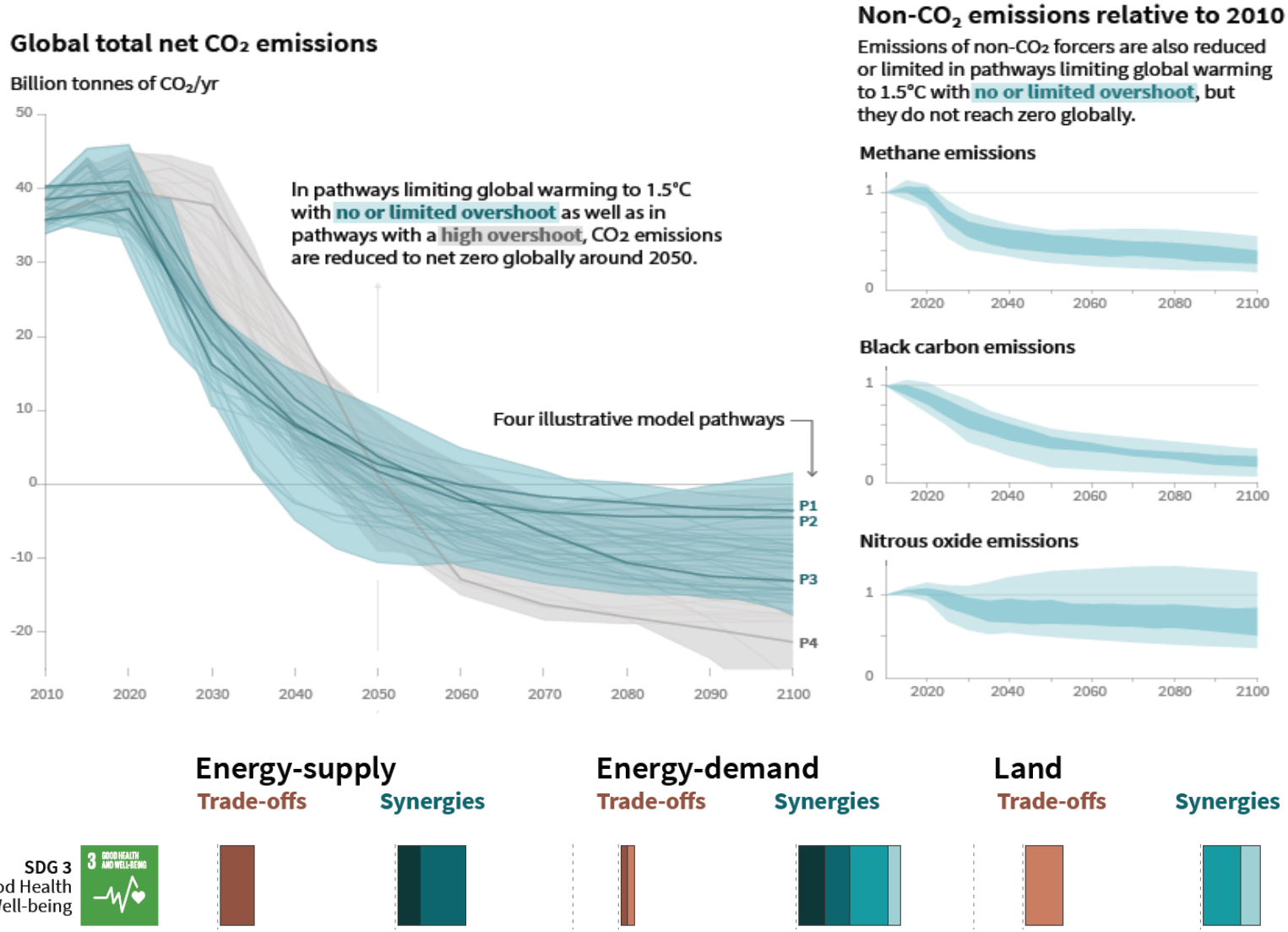
Karagulian et al, 2015

Health impacts of the causes of climate change



Circle size proportional to GHG emissions in 2010 (tonnes CO_2 equivalent).
Changes proportional to projections of changes by 2050. *Emissions data from IPCC, 2014.*

Ensuring we get the health benefits of decarbonization



IPCC report on global warming of 1.5C (2018)

SOLUTIONS

CLEAN AIR FOR HEALTH #AirPollution World Health Organization

Quantifying the health co-benefits of climate mitigation action

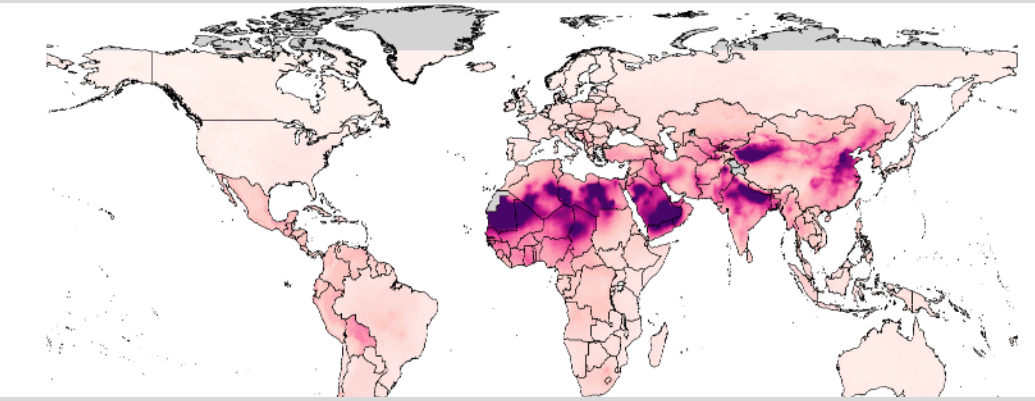
Global preliminary estimated avoided deaths attributable to $PM_{2.5}$ under two emissions scenarios

Emissions scenario	2050 (median)	Uncertainty
NDC commitments	109,308	(75,400, 158,520)
2ºC scenario	383,194	(255,511, 576,280)

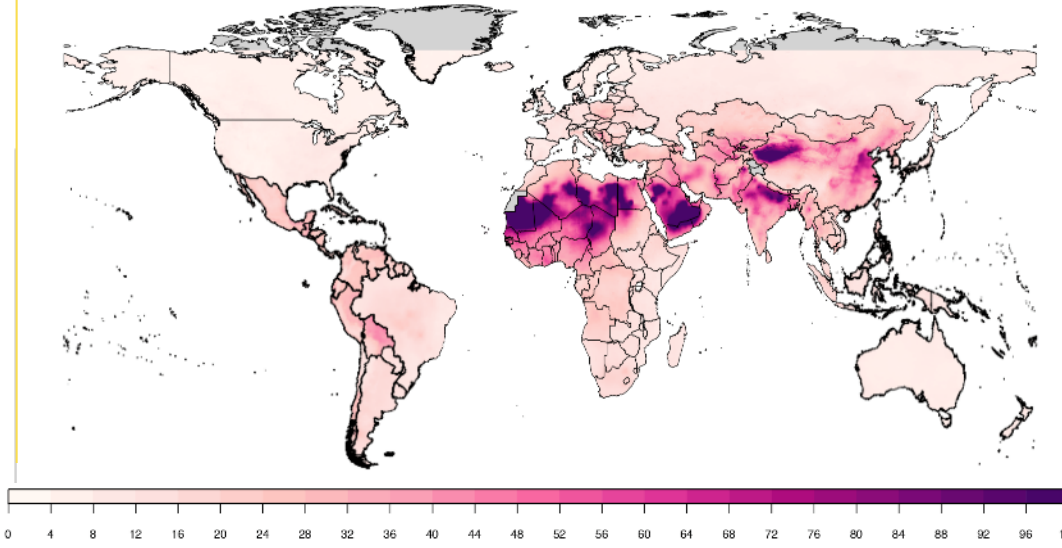
Preliminary research findings from study conducted by WHO, Basque Centre for Climate Change, University of Exeter and the EC Joint Research Centre Directorate for Energy, Transport, and Climate, Air and Climate Unit (2018)

$PM_{2.5}$ concentrations ($\mu g/m^3$)

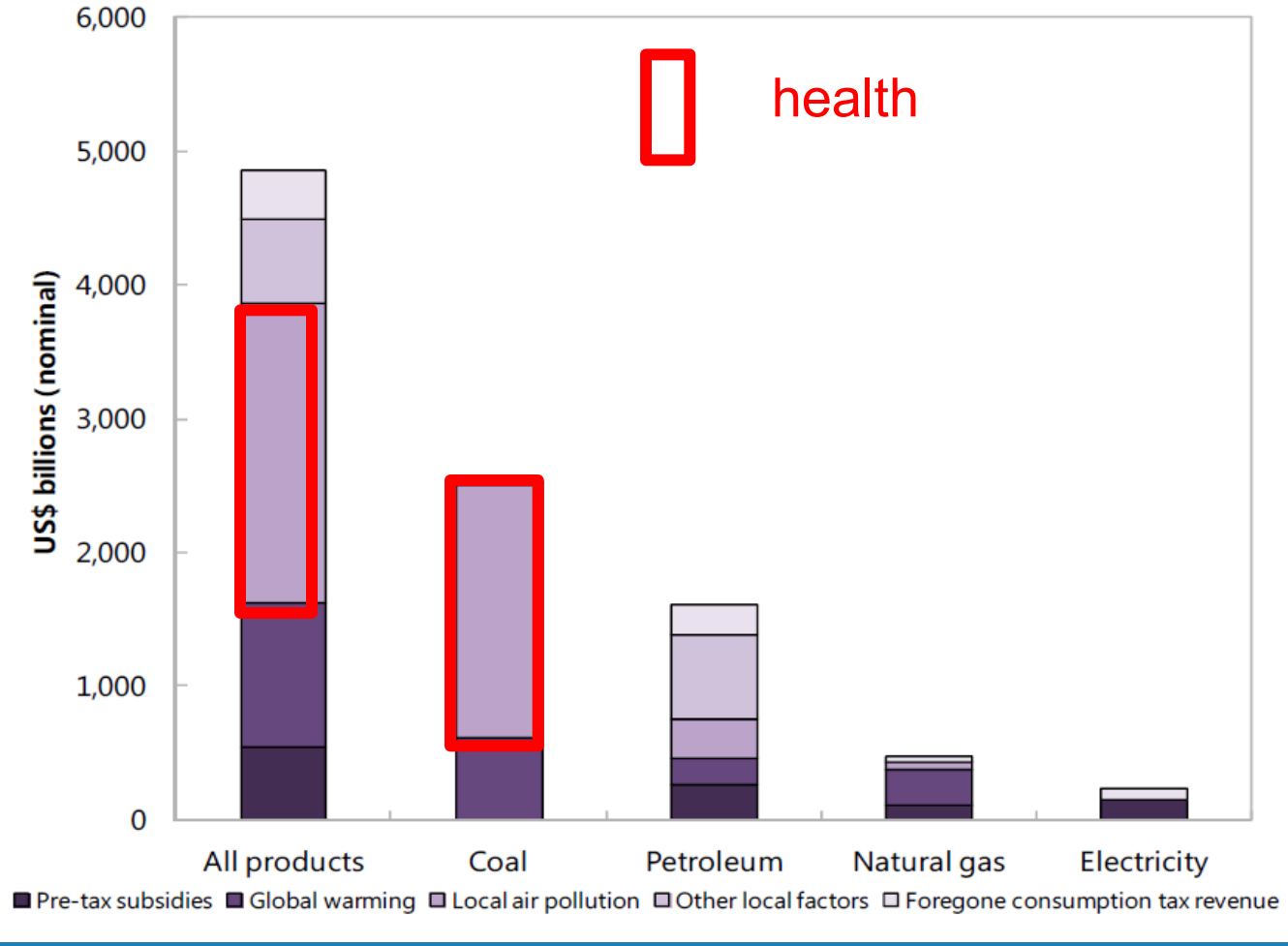
2010, reference scenario



2050, 2ºC emissions scenario



Supporting healthier economic policy



Energy subsidies US$5.3 trillion/yr - more than all governments spend on health

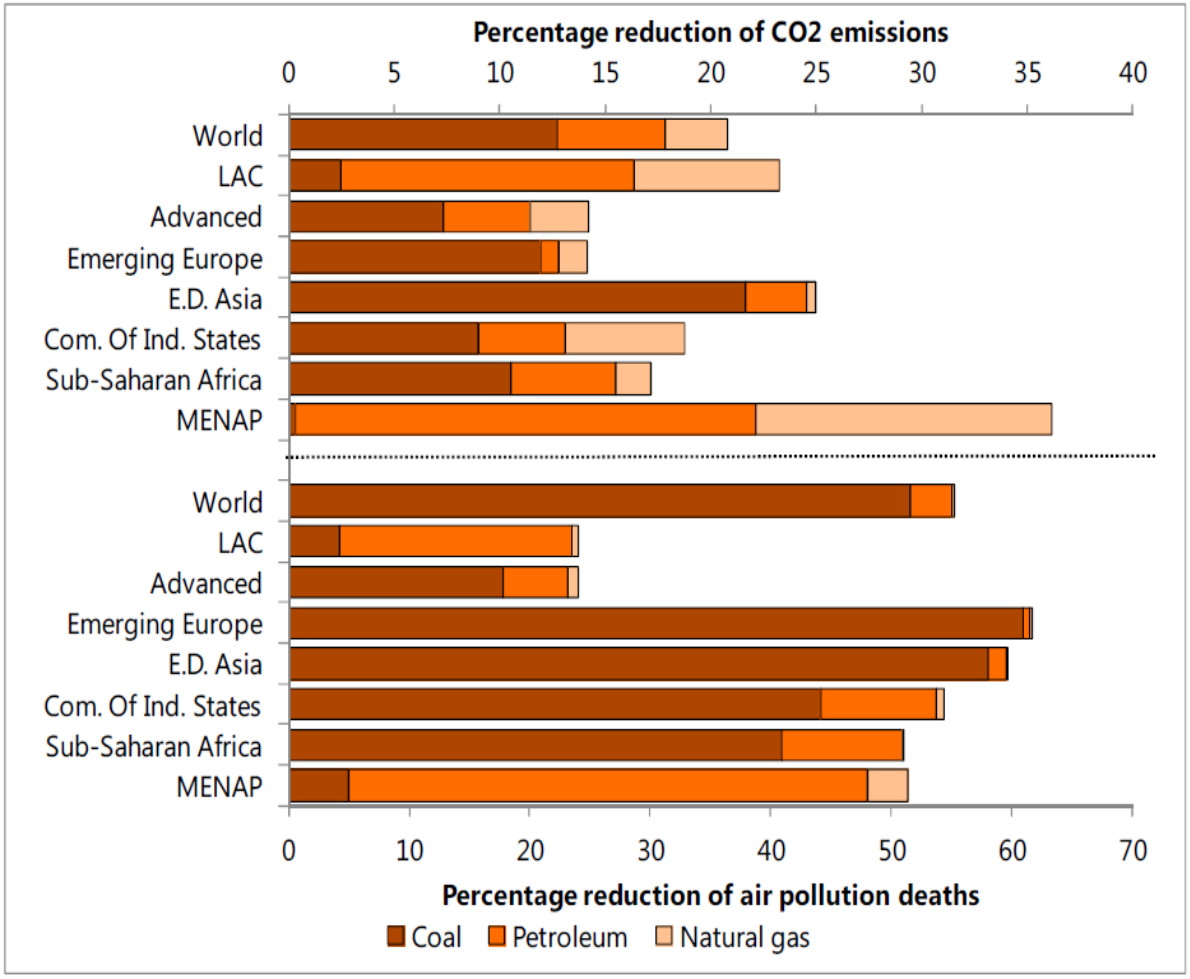
Almost 50% is "unpaid health bill" from air pollution – mainly from coal

Subsidies received mainly by richer consumers.

IMF working paper, 2015

World Health Organization

Supporting healthier economic policy



Pricing carbon in line with health and other impacts would cut ~ 50% of AP deaths, ~ 20% of CO_2 emissions, and generate ~ 3% of GDP in tax revenues

IMF, 2015

Bringing Air Pollution and Health to the Climate Negotiations


Presidency Event on Climate Change and Health:
UNFCCC COP-23, Bonn, November 2017

Engaging the health sector on climate change and air pollution

Global call to action on climate and health

COP24·KATOWICE 2018
UNITED NATIONS CLIMATE CHANGE CONFERENCE

First ever health report to UNFCCC-COP

Health/AP as priority in 2019 UNSG climate summit

Thank you