THE LANCET COUNTDOWN ON HEALTH AND CLIMATE CHANGE

Maastrich University Health & Climate Symposium

23rd April 2021

Dr Marina Romanello

LANCET COUNTDOWN: TRACKING PROGRESS ON HEALTH AND CLIMATE CHANGE

Health Impacts of Climate Change

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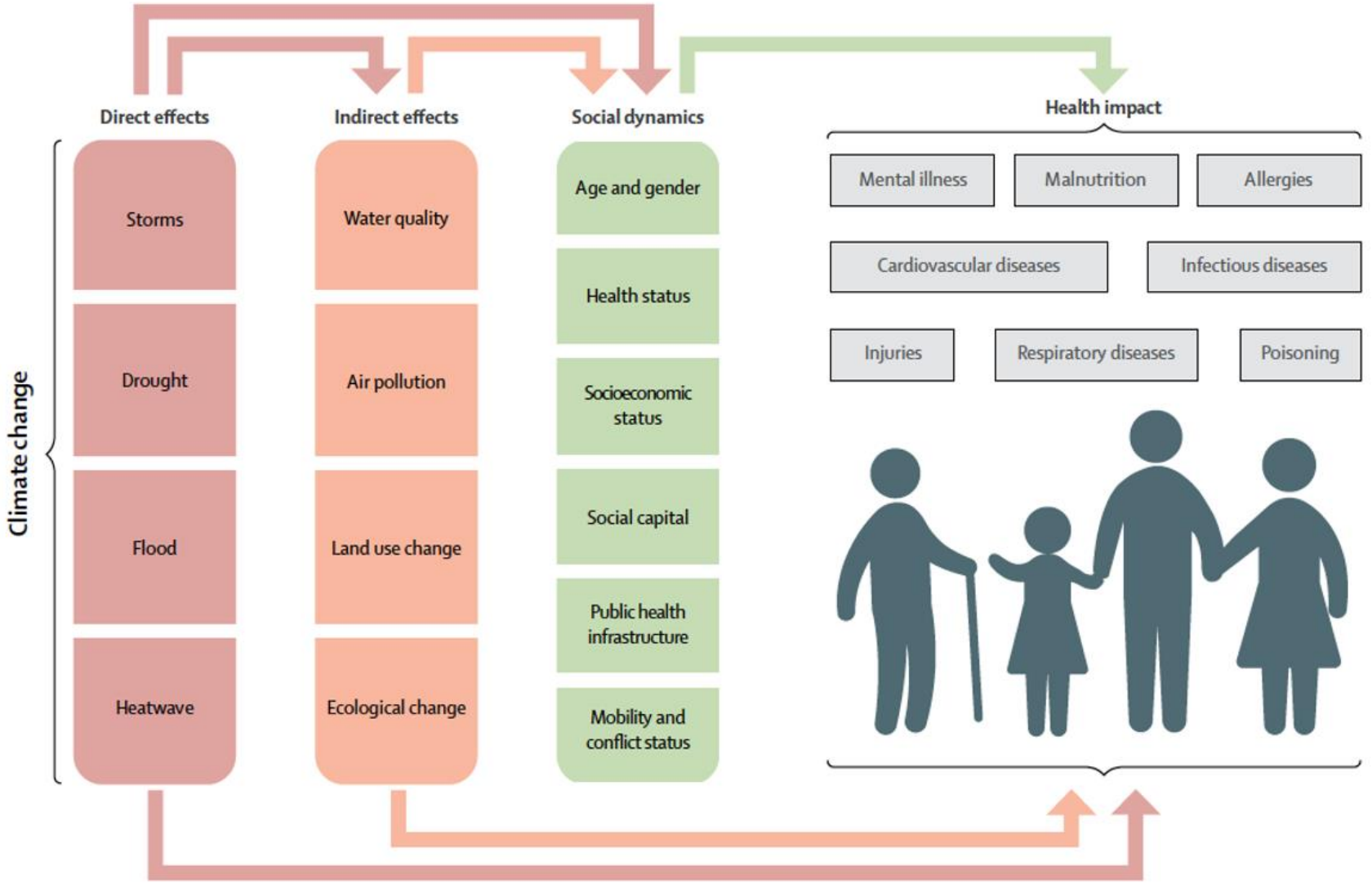

Climate Change Impacts, Exposures & Vulnerability

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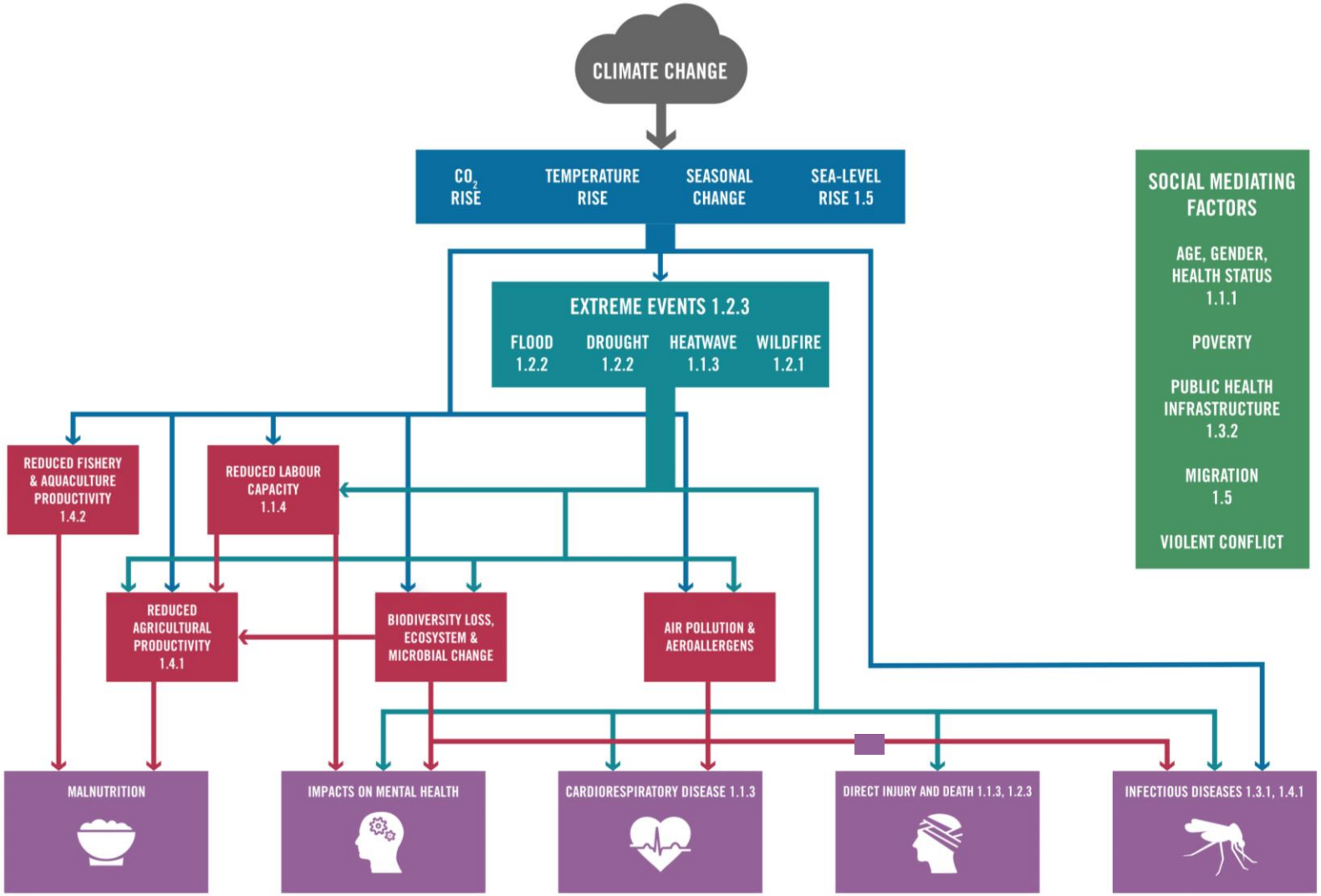
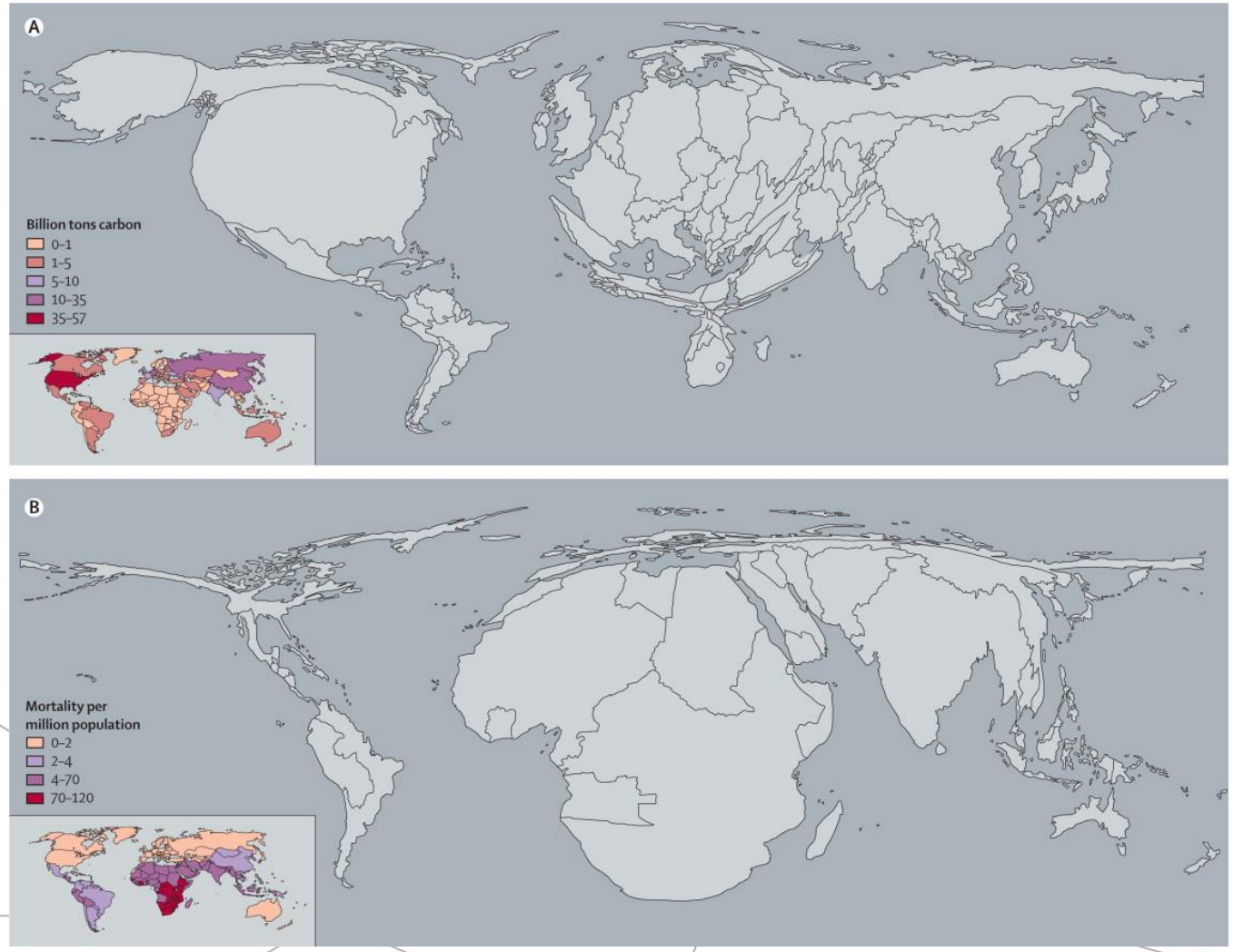
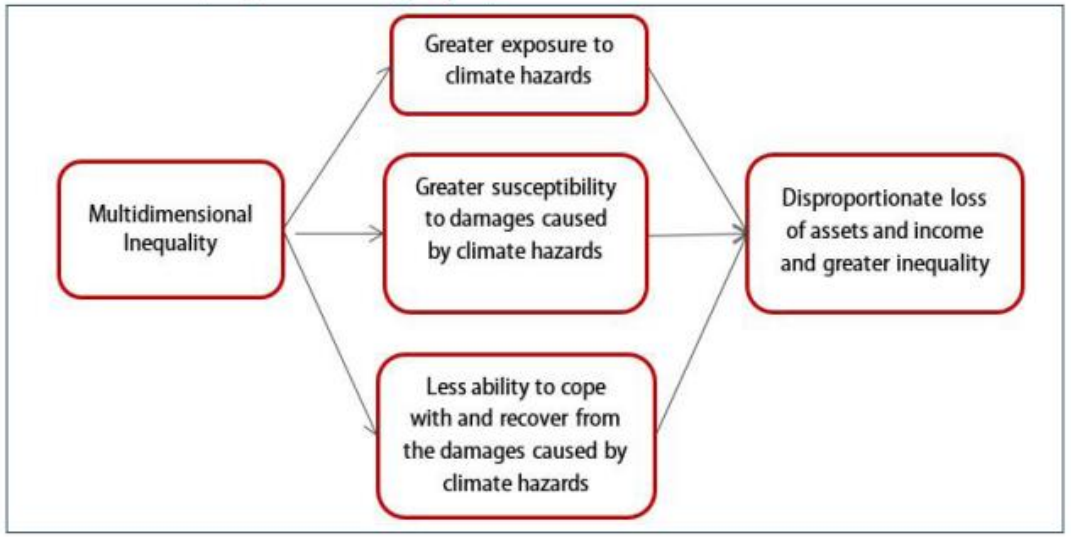


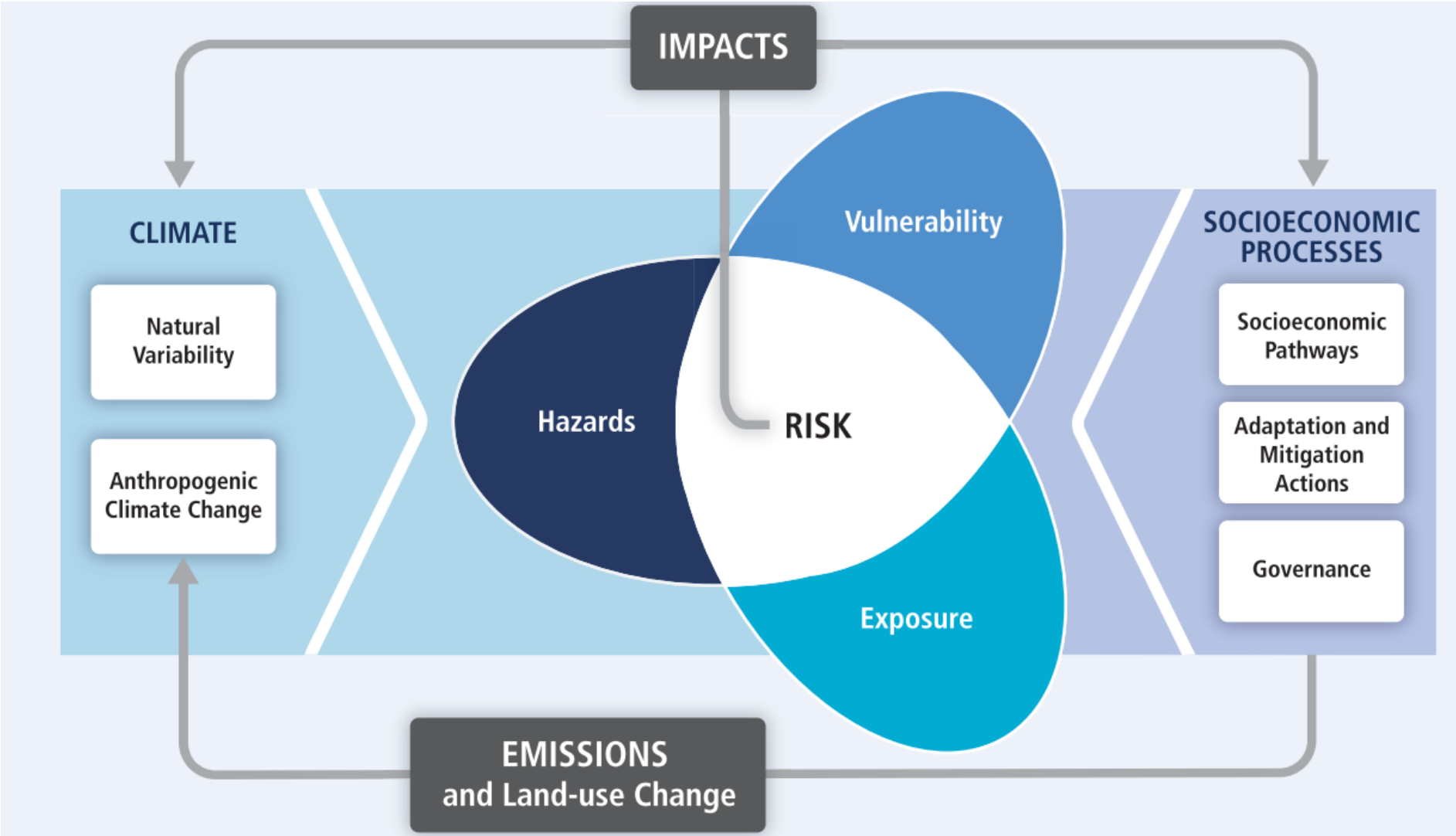
Climate change amplifies world inequalities



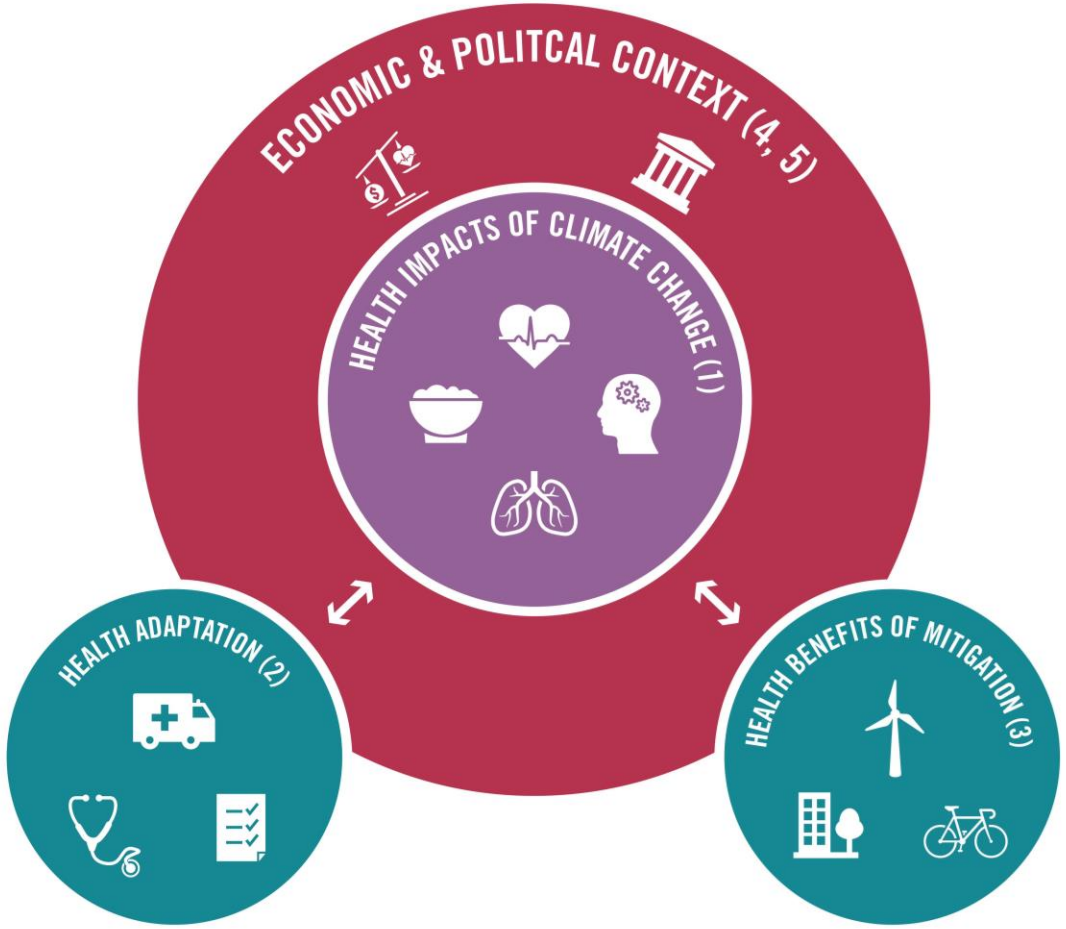
Three effects of inequality on disadvantaged groups



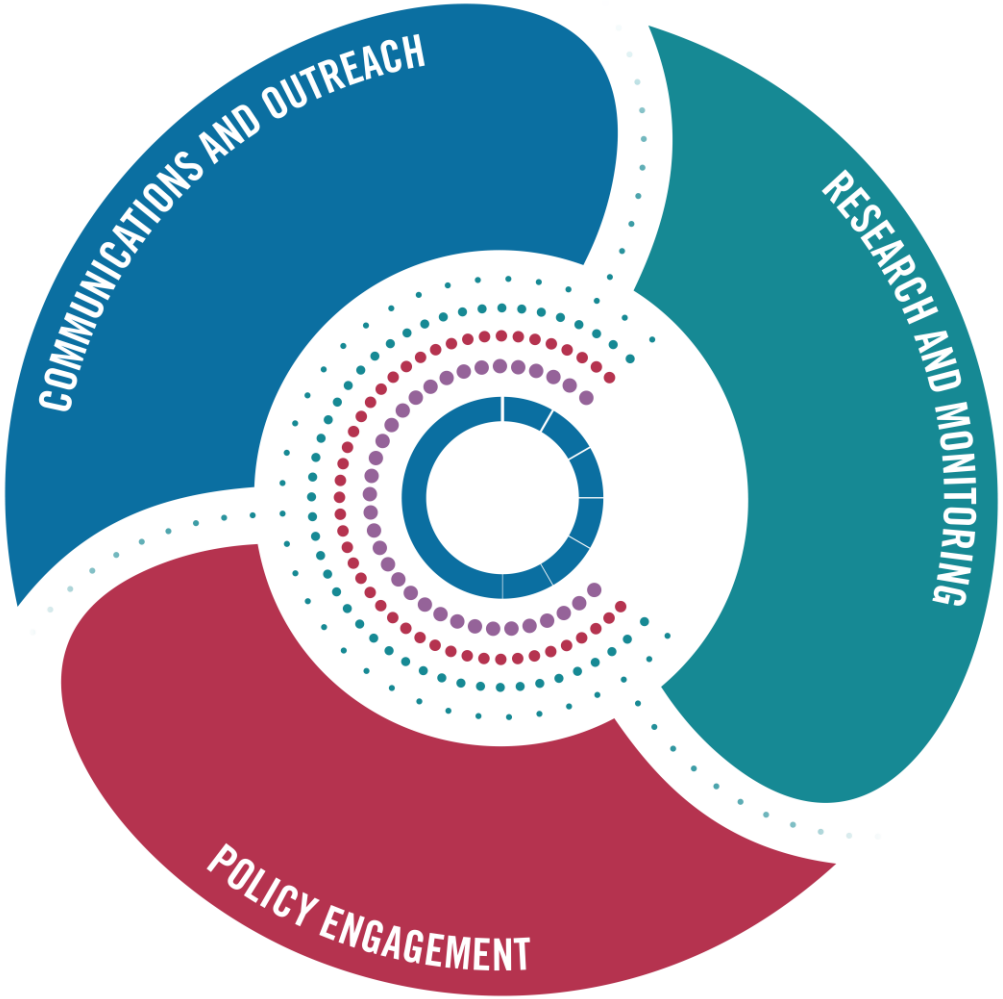
Health impacts of climate change



The five working groups of the Lancet Countdown



The Lancet Countdown



38 Lancet Countdown Partners around the world

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UCL

Universidad Peruana Cayetano Heredia
Facultad de Salud Pública y Administración

清華大學 Tsinghua University

University of Reading

University of York

Umeå Universitet

Iran University of Medical Sciences

Cardiff University
Prifysgol Caerdydd

Imperial College London

The University of Melbourne

IIASA
International Institute for Applied Systems Analysis

Oxford Martin School
University of Oxford

University of Sussex

Boston University

Tampere University

Harvard T.H. Chan

Iranian Fisheries Research Organization

University of Exeter

Yale

University of Birmingham

Université de Genève

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Universiti Malaysia Terengganu
UMT

Emory University

Northeastern University

MRC Unit The Gambia

University of Washington

nmit
Nelson Marlborough Institute of Technology
Te Whare Wānanga o Te Tau Ihu o Te Waka a Maui

University of Colorado Boulder

London School of Hygiene & Tropical Medicine

ILRI
International Livestock Research Institute

ecdc
European Centre for Disease Prevention and Control

World Meteorological Organization

World Health Organization

World Bank Group

United Nations University
UNU-EHS

cmcc
Centro Euro-Mediterraneo sui Cambiamenti Climatici

Climate Change and Global Health

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2009

THE LANCET

UCL

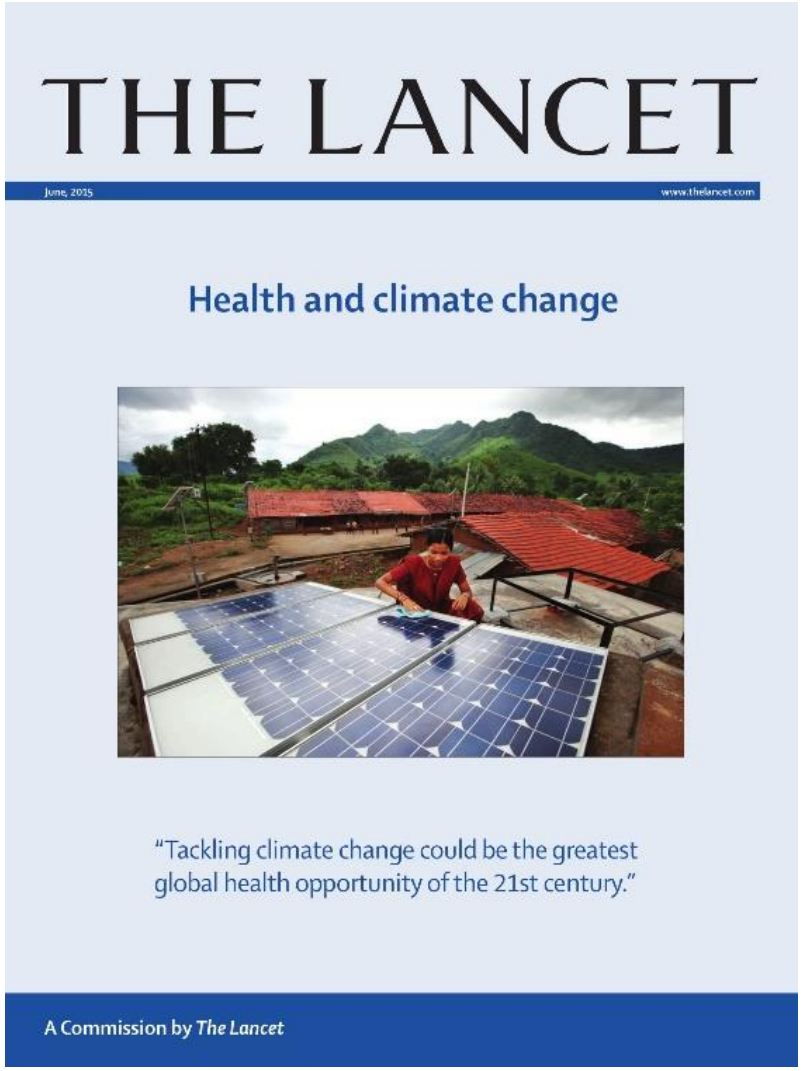
Lancet and University College London Institute for Global Health Commission

Managing the health effects of climate change

*Anthony Costello, Mustafa Abbas, Adriana Allen, Sarah Ball, Sarah Bell, Richard Bellamy, Sharon Friel, Nora Groce, Anne Johnson, Maria Kett, Maria Lee, Caren Levy, Mark Maslin, David McCoy, Bill McGuire, Hugh Montgomery, David Napier, Christina Pagel, Jinesh Patel, Jose Antonio Puppim de Oliveira, Nanneke Redclift, Hannah Rees, Daniel Rogger, Joanne Scott, Judith Stephenson, John Twigg, Jonathan Wolff, Craig Patterson**

"Climate change is the biggest global health threat of the 21st century"

2015



Health, Climate Change & The Lancet

LANCET COUNTDOWN: TRACKING PROGRESS ON HEALTH AND CLIMATE CHANGE

1.1.1: Vulnerability to the Extremes of Heat

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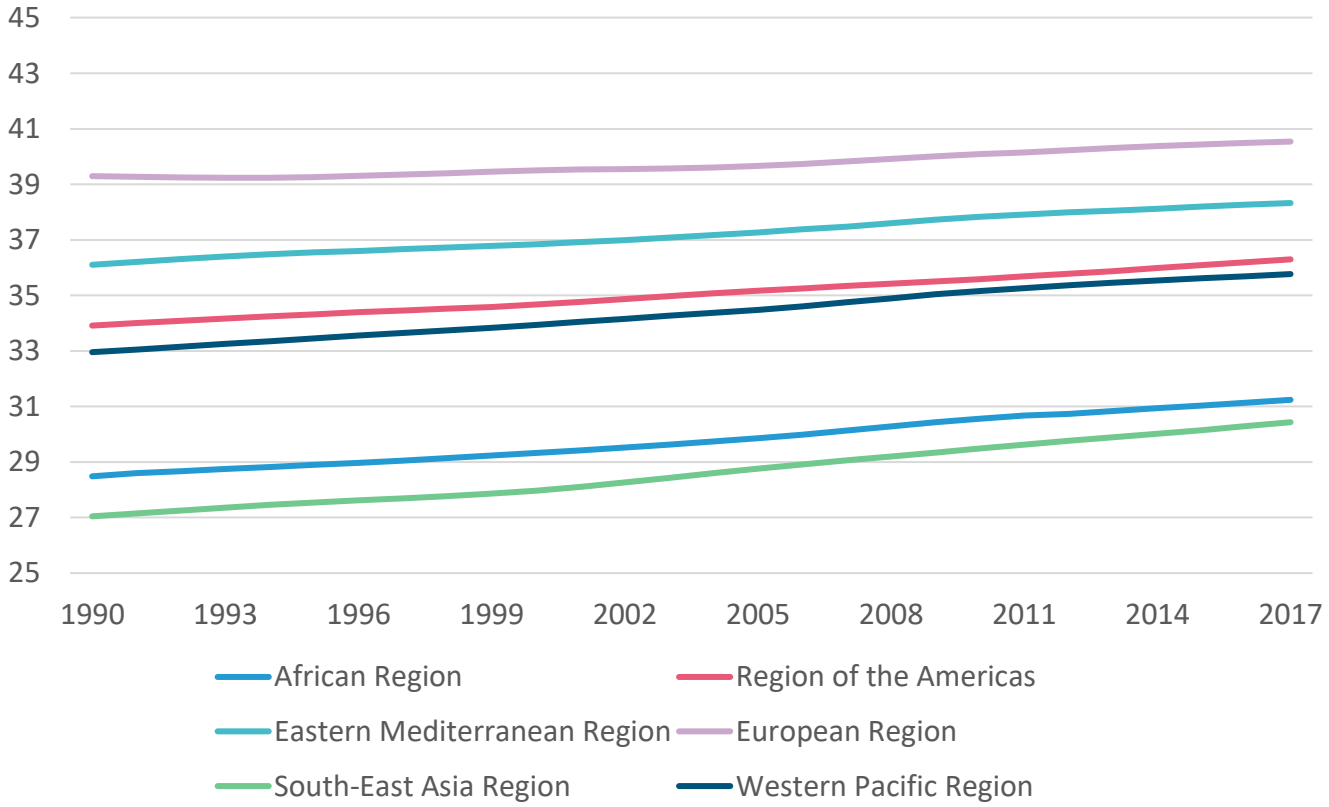
Vulnerability to the extremes of heat continues to increase in every region of the world, led by populations in Europe, with the Western Pacific region, South-East Asia region, and the African region all seeing an increase of more than 10% since 1990.



1.1.2: Exposure of Vulnerable Populations to Heatwaves

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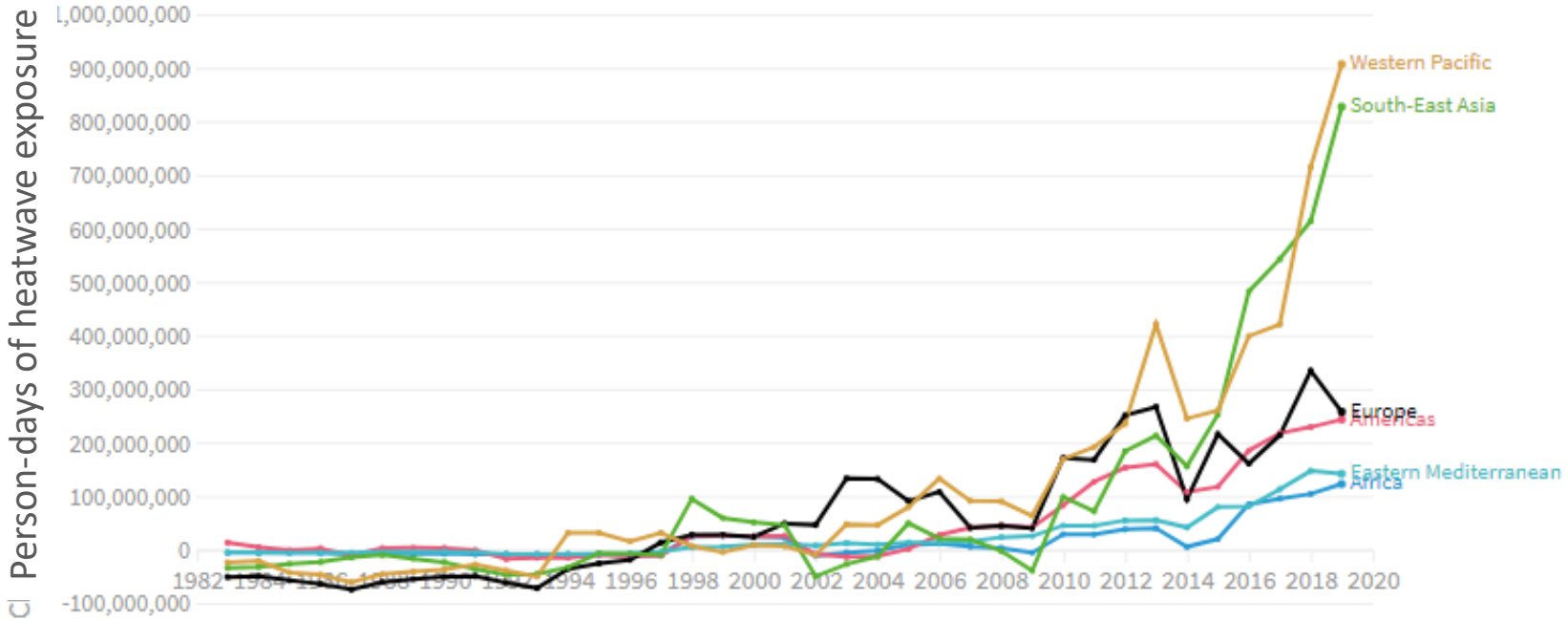
2020 was the warmest year on record.

A record additional 2.9 billion person-days of exposure to heatwaves affecting over 65s were observed in 2019 with respect to a 1986–2005 baseline



1.1.3: Heat-related Mortality

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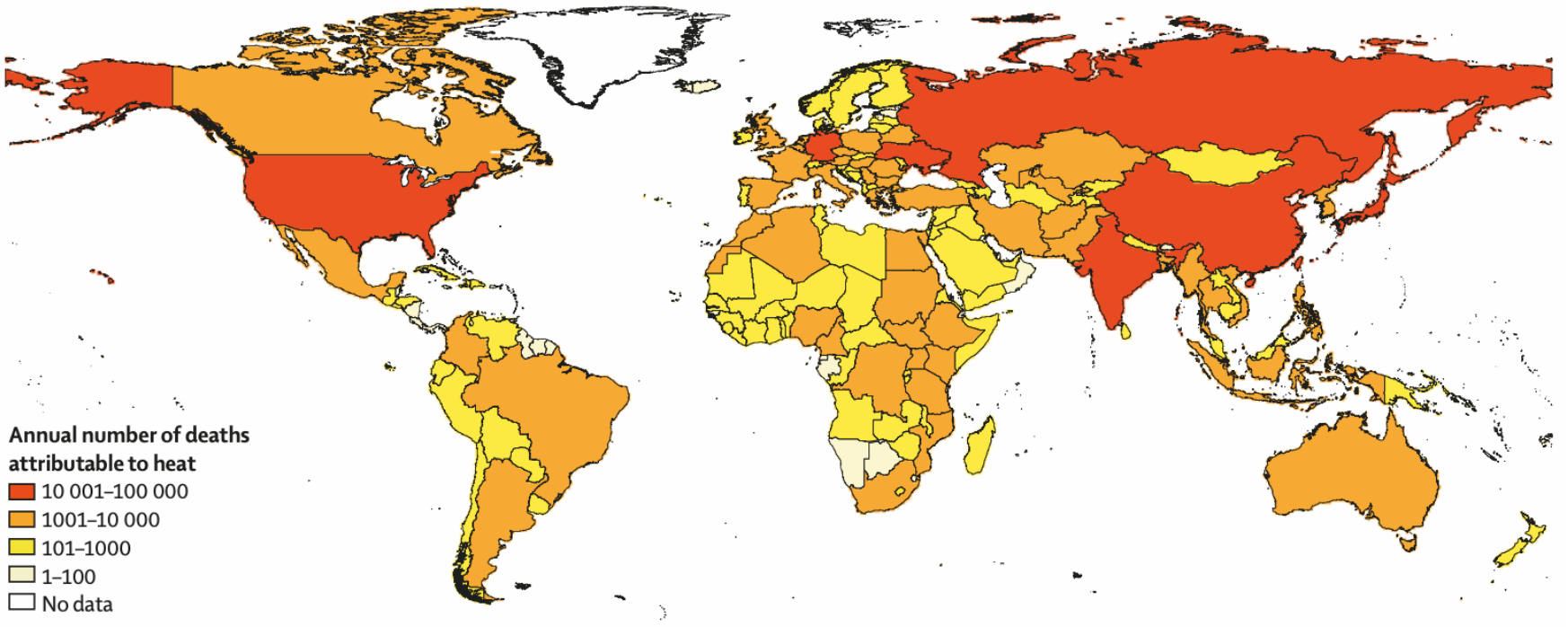
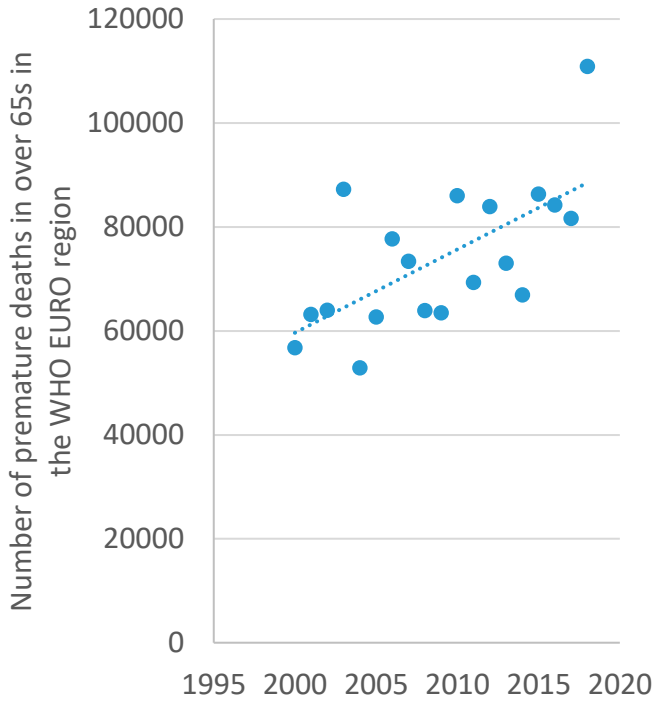
From 2000 to 2018, premature mortality attributable to heat exposure in people older than 65 years increased by 53.7%, in a continuously upward trend

In 2018 WHO's EURO region faced a record 110900 estimated premature deaths, 44% higher than in 2000





Change in Labour Capacity

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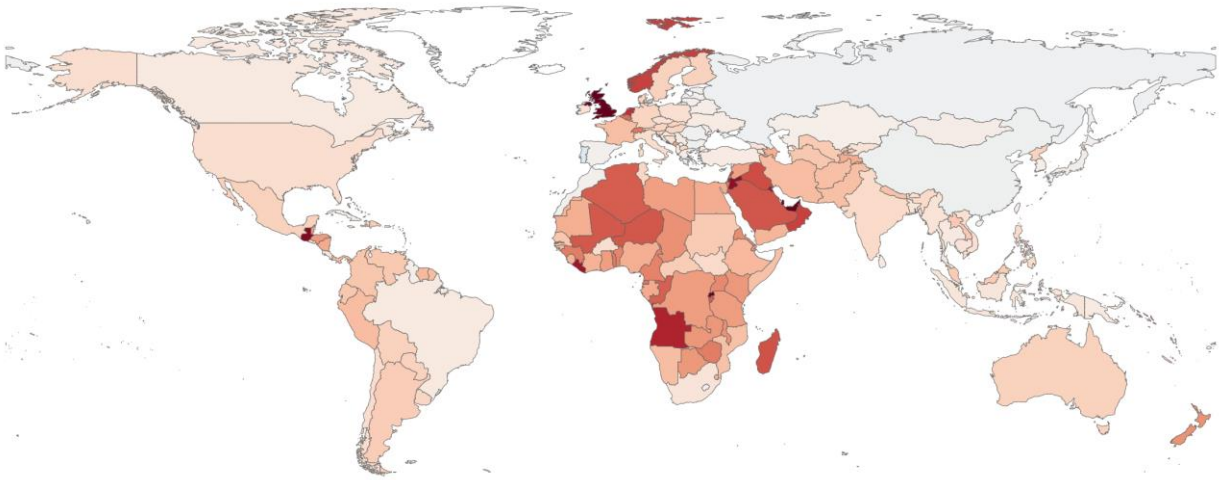
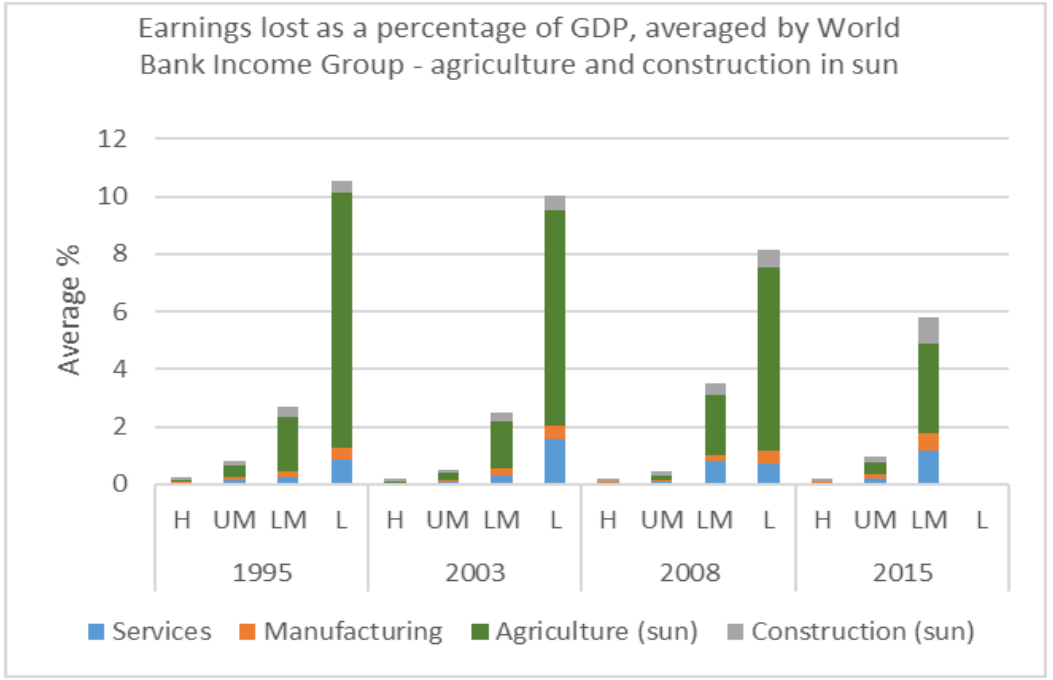
Rising temperatures were responsible for an excess of 100 billion potential work hours lost globally in 2019 compared with those lost in 2000, with India's agricultural sector among the worst affected.



Percent change in potential hours of labour lost since the 1990s

-100 0 500 1000

By 2015, heat-related reduction in labour capacity results in earnings losses equivalent to an estimated 3.9%-5.9% of GDP in the lower-middle-income countries tracked.



1.4.1: Terrestrial Food Security and Undernutrition

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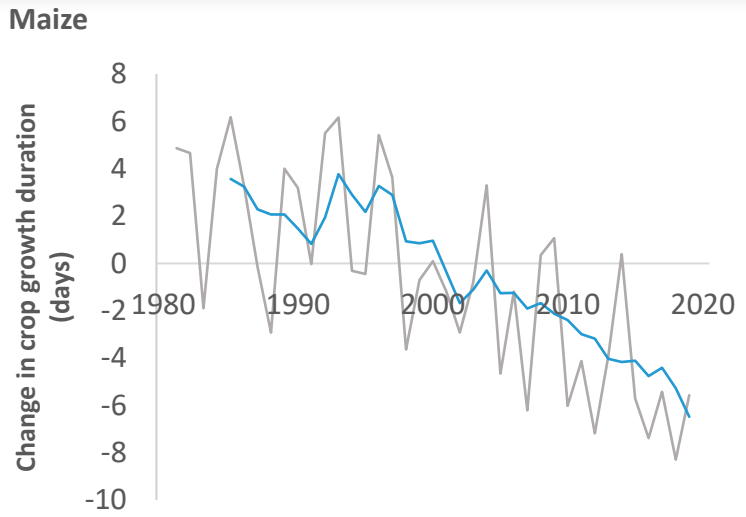
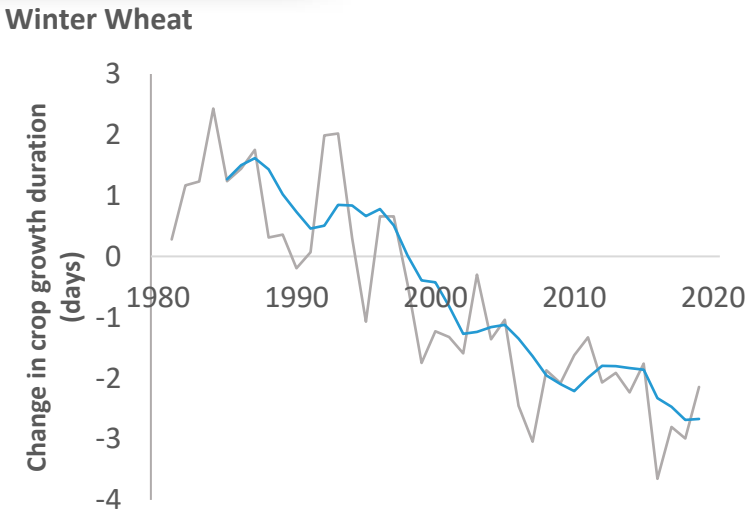
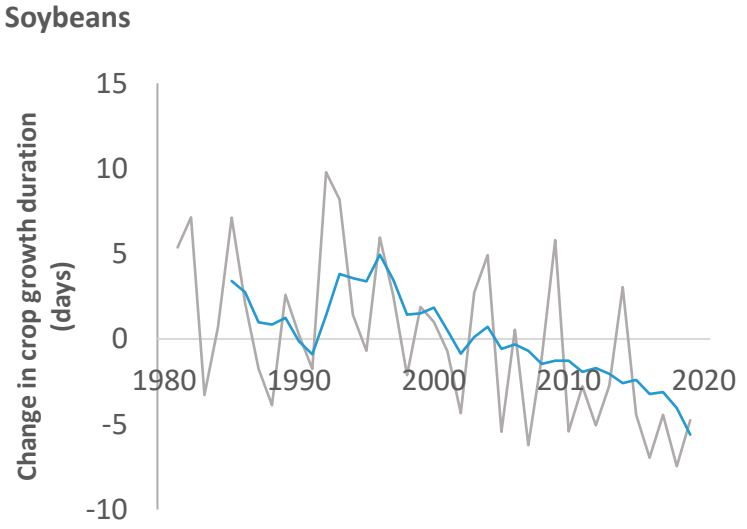
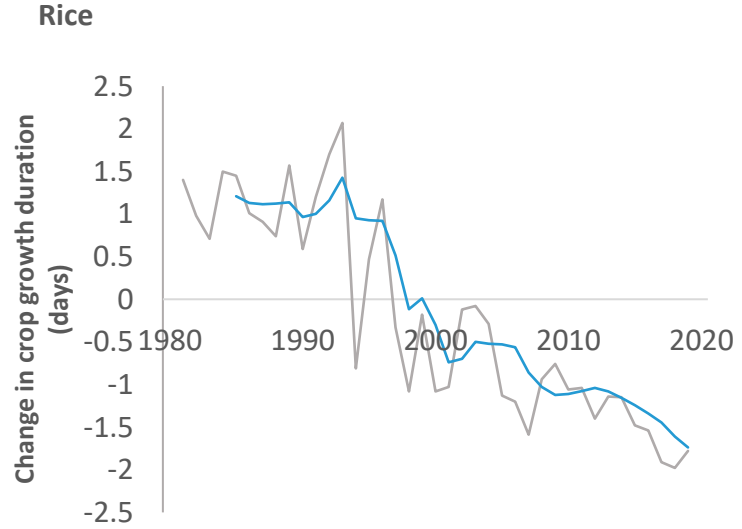
From 1981 to 2019, crop yield potential for maize, winter wheat, soybean, and rice has followed a consistently downward trend, with reductions relative to baseline of 5.6% for maize, 2.1% for winter wheat, 4.8% for soybean, and 1.8% for rice.









1.3.1: Climate Suitability for Infectious Disease Transmission

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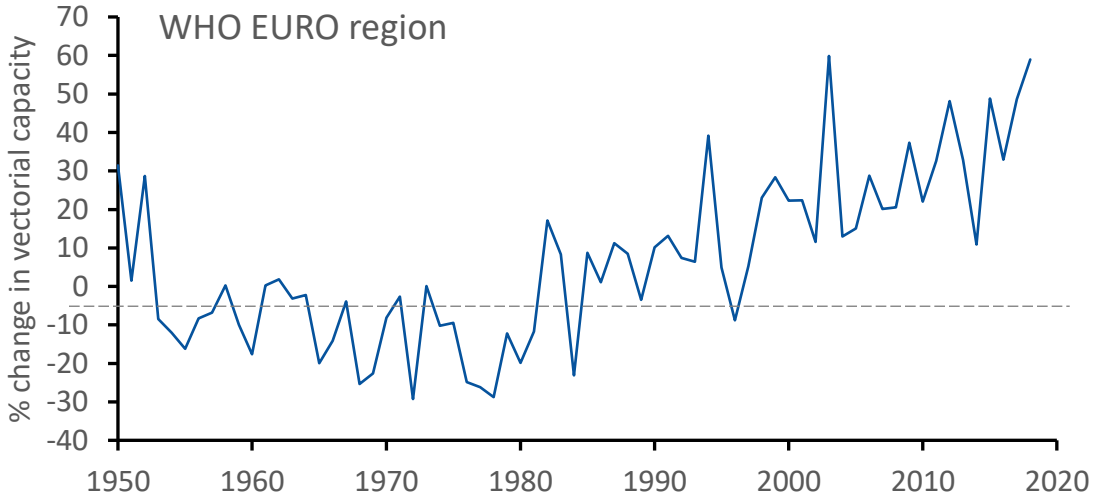
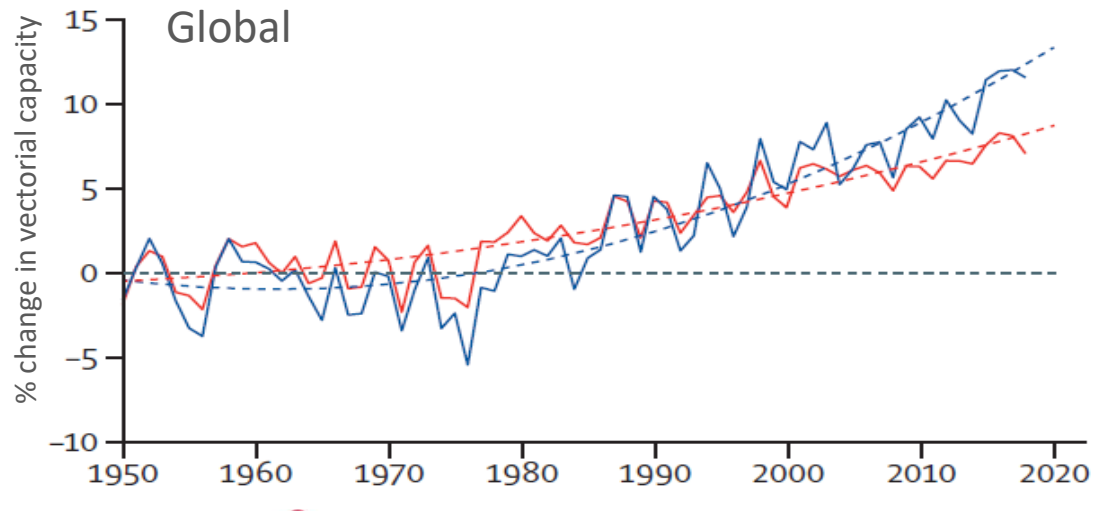
Changing climatic conditions are increasingly suitable for the transmission of numerous infectious diseases. From 1950 to 2018, the global climate suitability for the transmission of dengue increased by 8.9% for *Aedes aegypti* and 15.0% for *Aedes albopictus*.

In the WHO EURO region, the increase was of 59% for *A. albopictus*



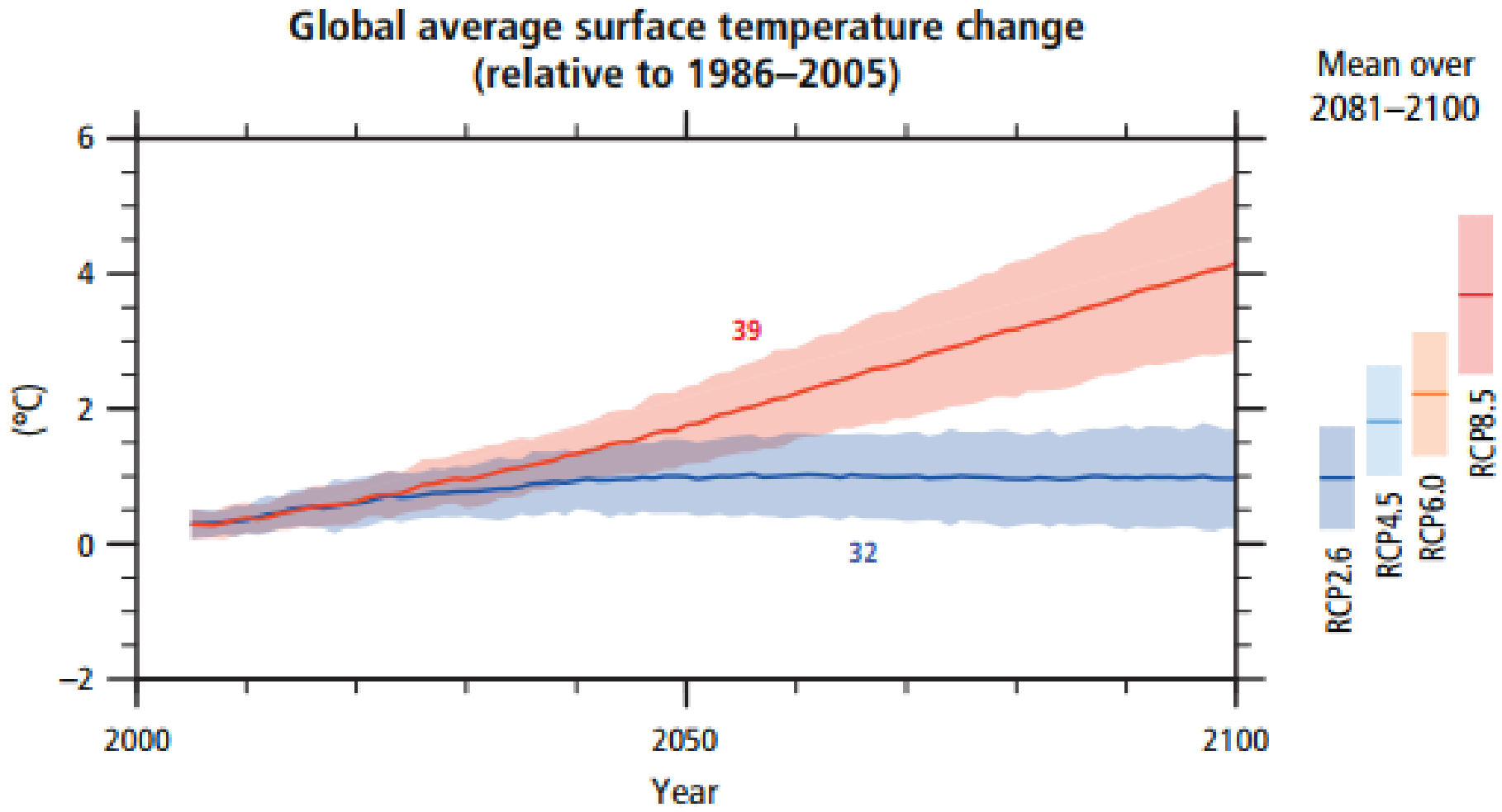


2020 Lancet Countdown report reveals worst outlook for public health yet.

No country is immune from the health impacts of climate change.

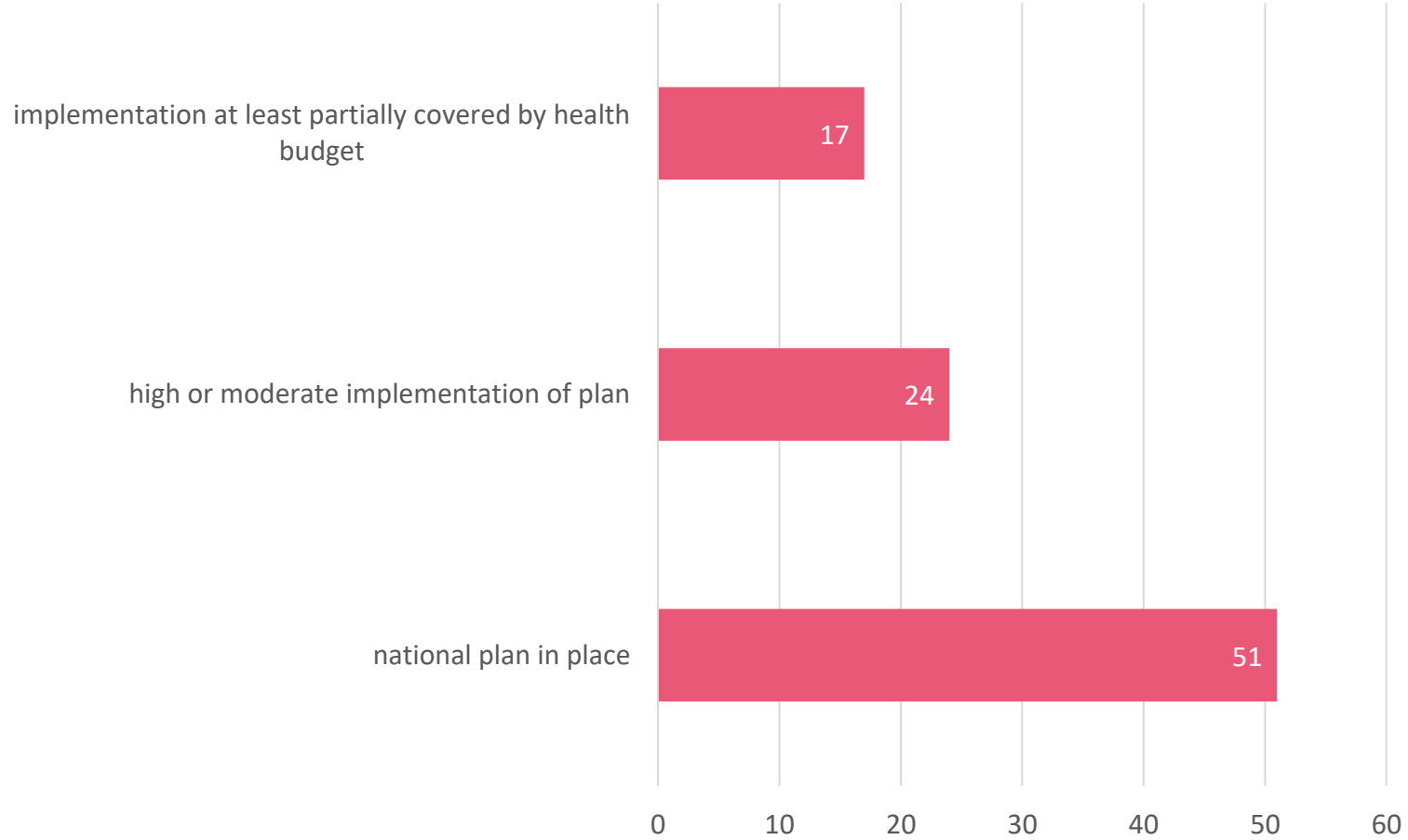
People around the world face multi-hit scenarios due to climate change, with increasing extremes of heat, food and water insecurity, and changing patterns of infectious diseases.

Representative Concentration Pathways

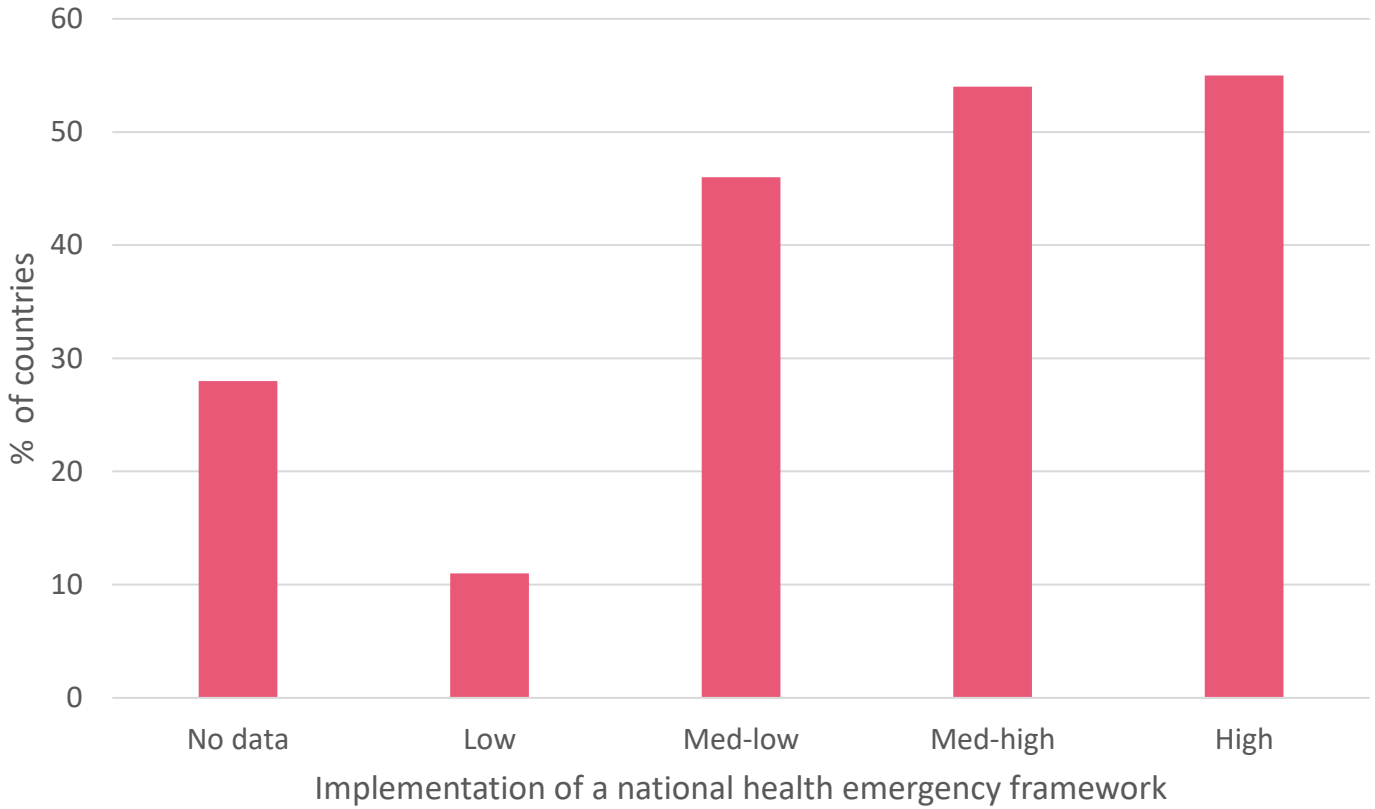


2.1.1: National Adaptation Plans for Health

50% of countries surveyed have developed national health and climate change strategies or plans. However, funding remains a key barrier to implementation of these strategies, with 9% of countries reporting to have the funds to fully implement their plans.

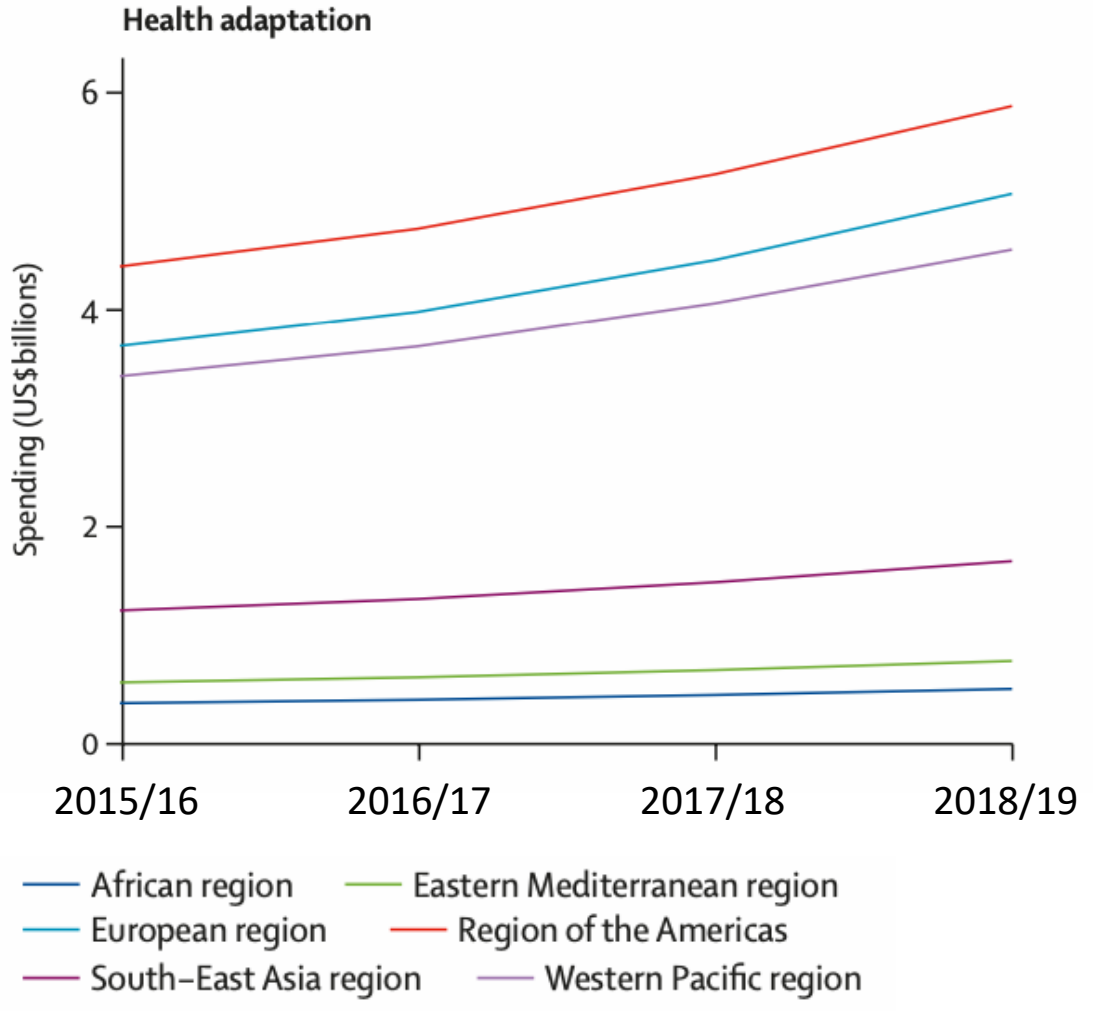


2.3.1: Detection, Preparedness and Response to Health Emergencies



In preparation for a multi-hazard public health emergency, 109 countries have reported medium-to-high implementation of a national health emergency framework.

2.4: Spending on Adaptation for Health and Health-Related Activities



Headline Finding:

While 2018–19, global spending on health adaptation has increased to $18.4 billion, it still represents only 5.3% of total spending on adaptation

2.3.3: Urban Green Space

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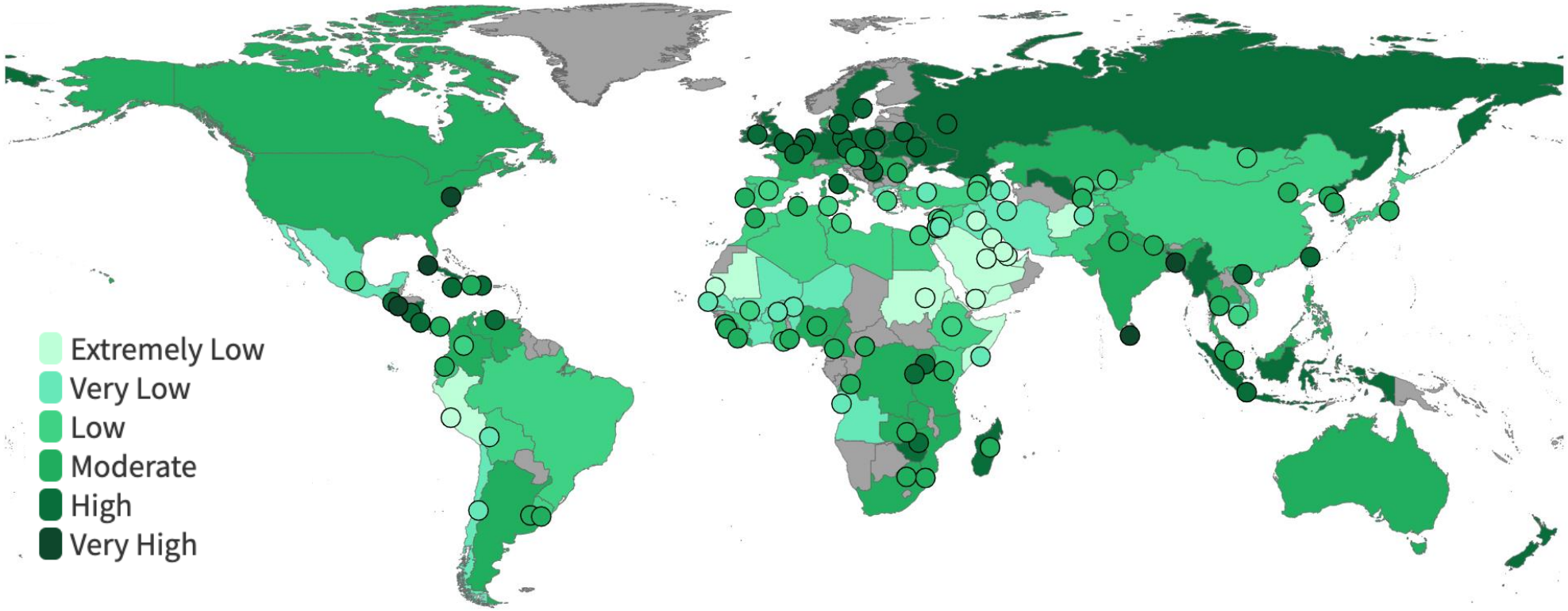
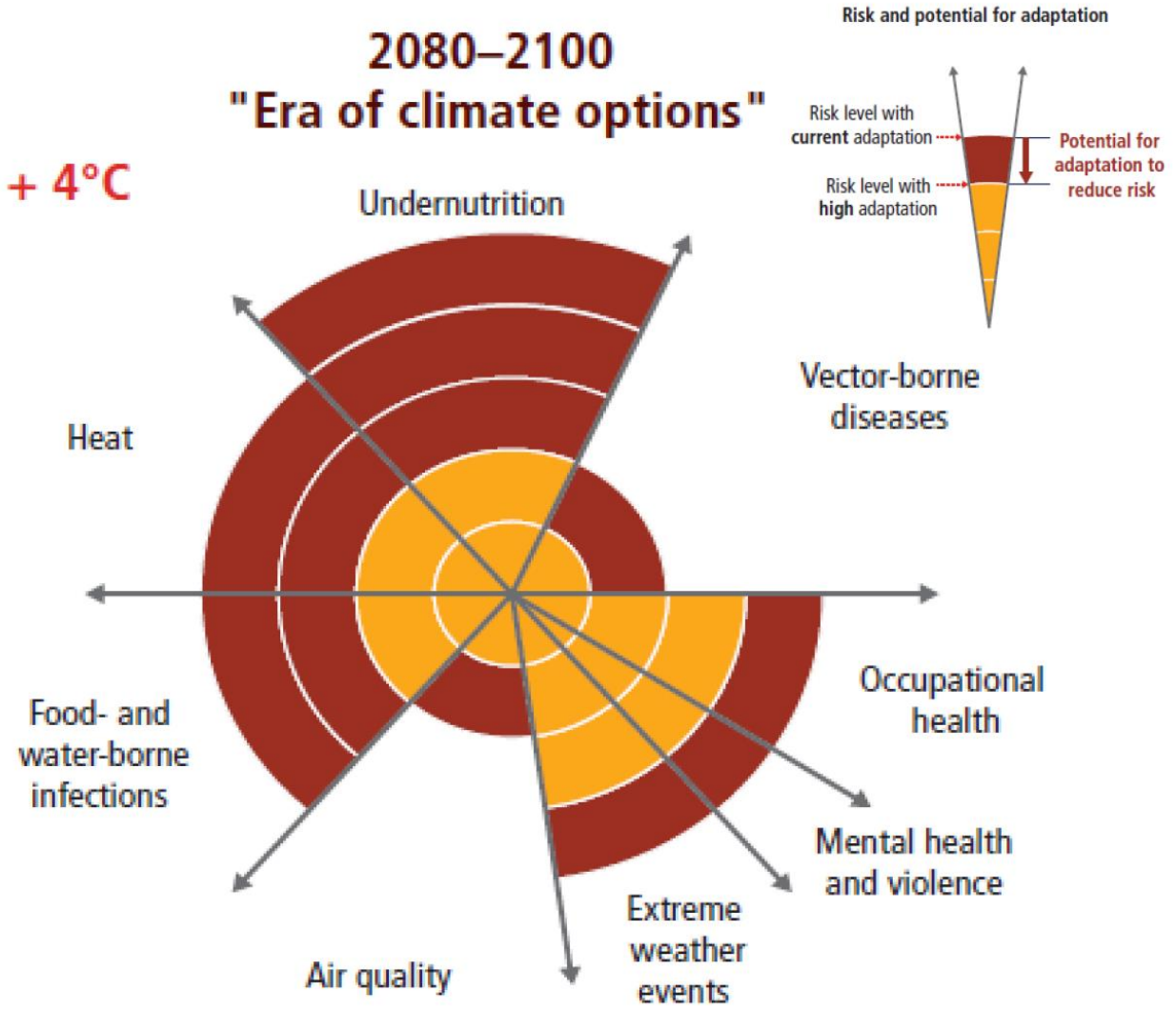
Headline Finding:

Urban green space is an important measure to reduce population exposure to heat; 9% of global urban centres had a very high or exceptionally high degree of greenness in 2019, and more than 156 million people were living in urban centres with concerningly low levels of urban green space.



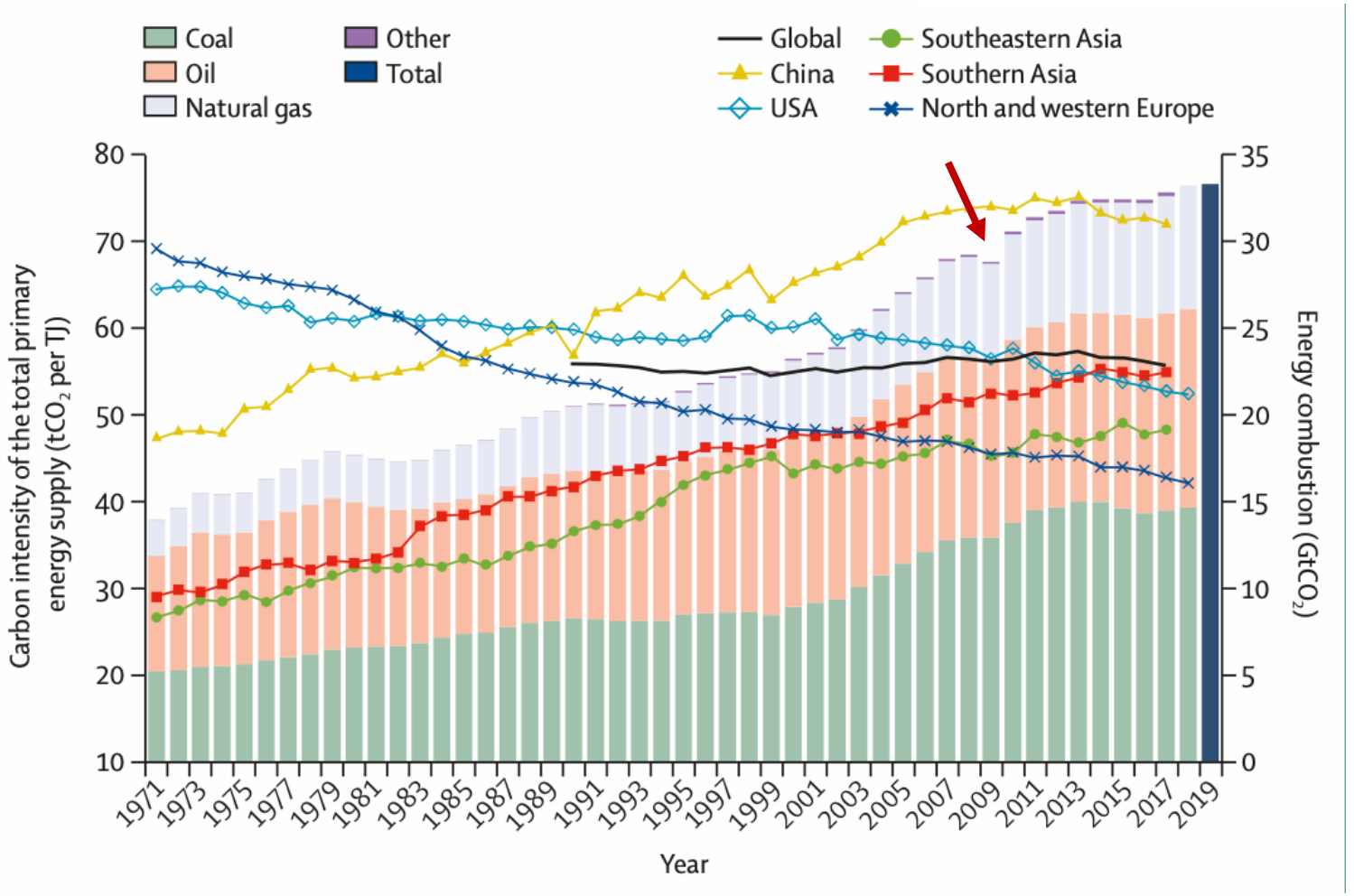
Limits to Adaptation



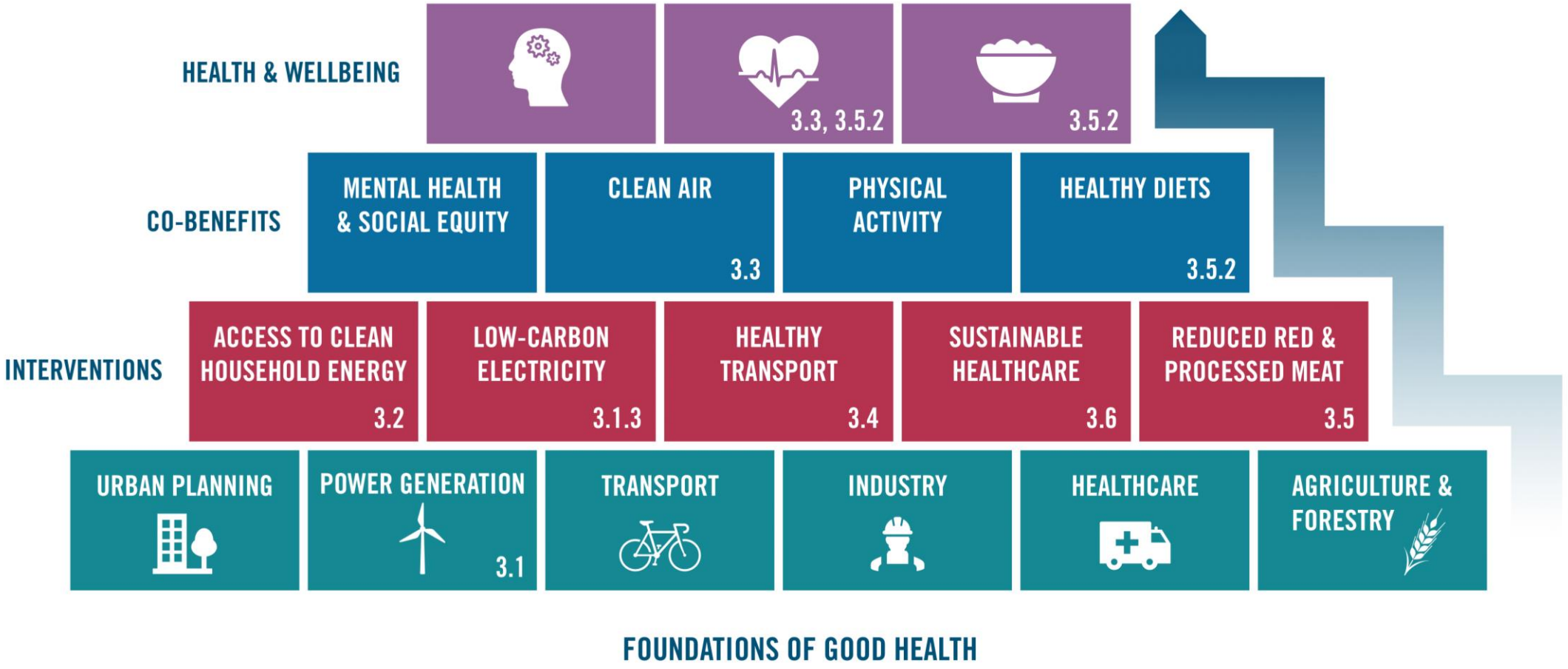
3.1.1: Carbon Intensity of the Energy System

The carbon intensity of the global primary energy supply has remained flat for the past three decades.

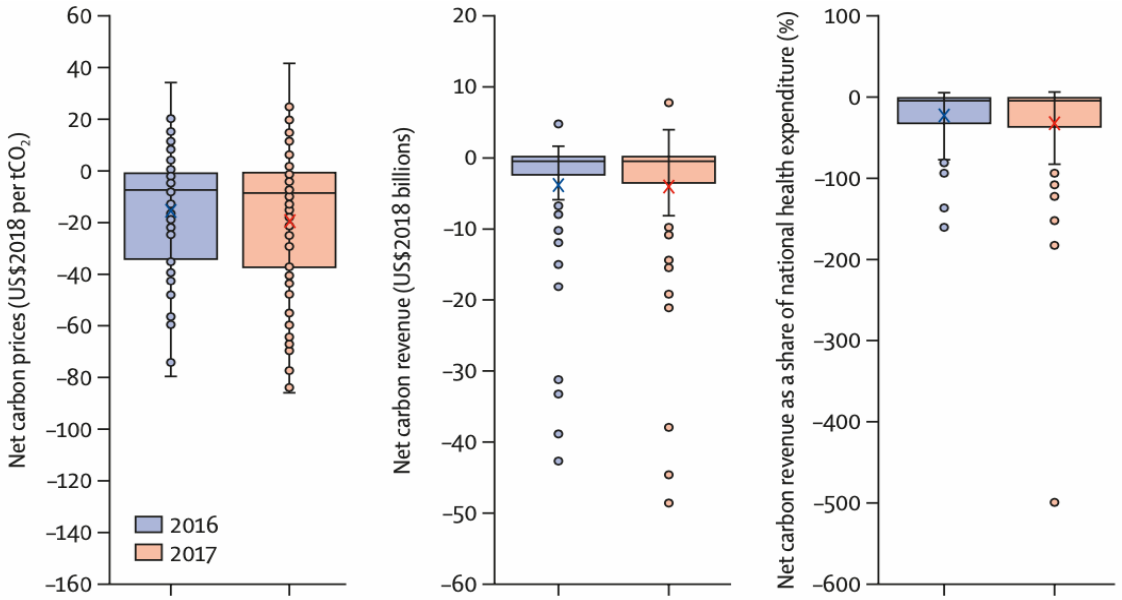
In 2018, carbon intensity was 12% lower in the USA and 20% lower in north and western Europe than the levels in 1990.



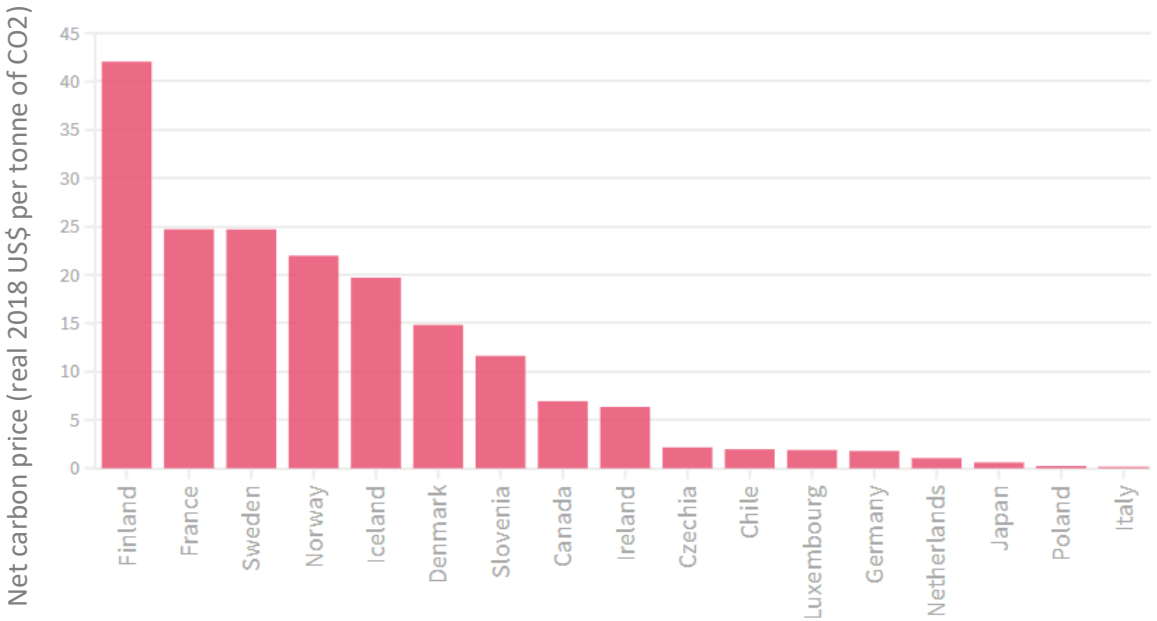
Mitigation Actions & Health Co-Benefits



4.2.5: Net Value of Fossil Fuel Subsidies and Carbon Prices



58 of the 72 countries reviewed were operating with a net negative carbon price in 2017. The resulting net loss of revenue was, in many cases, equivalent to substantial proportions of the national health budget



Globally, only 17 countries operate a positive carbon tax. Of these, 14 are European countries, with Finland topping the list.

3.5.1: Emissions and health co-benefits from Agricultural Production and Consumption

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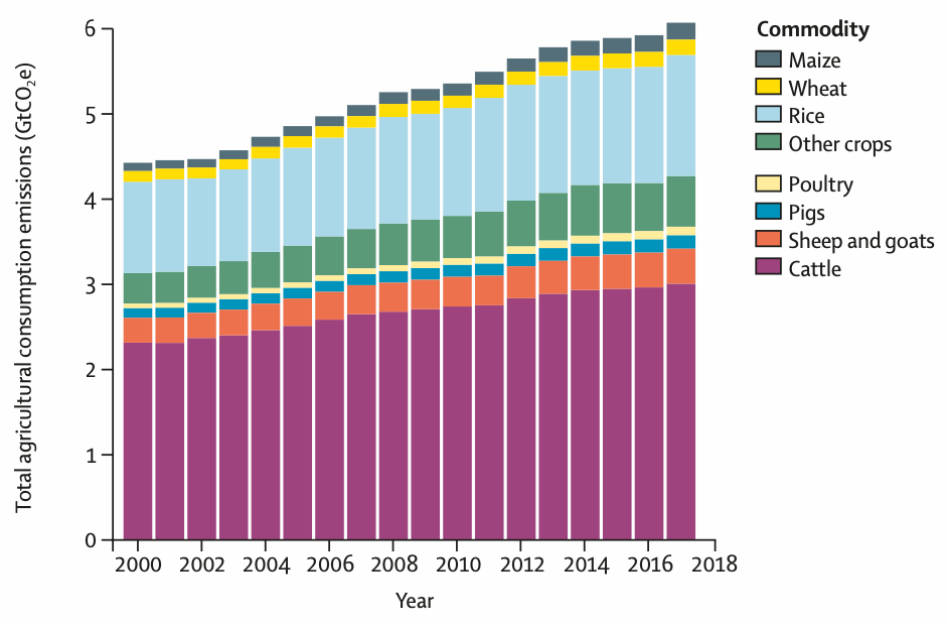
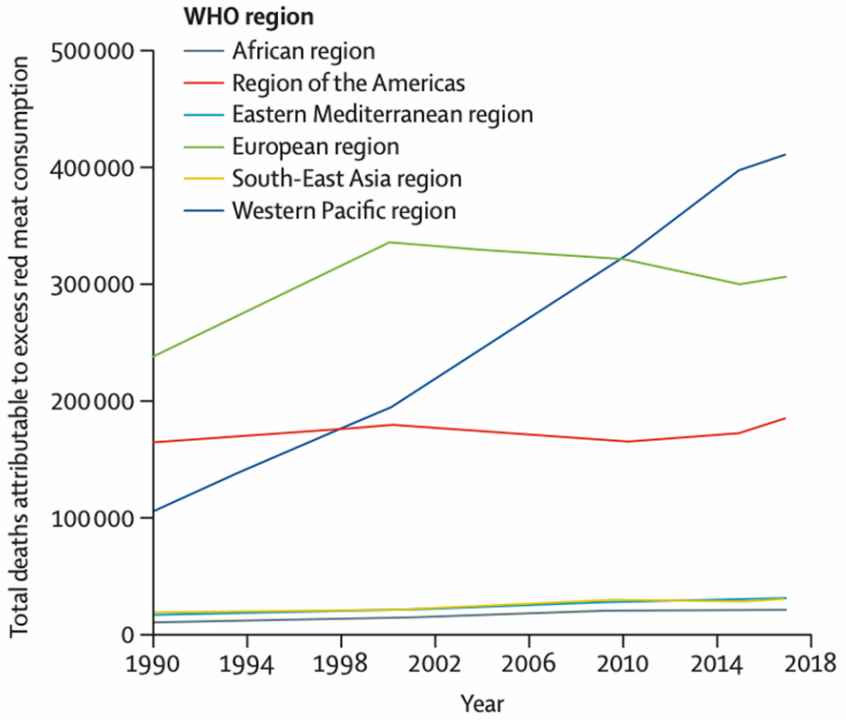
Ruminant livestock are responsible for 56% of total agricultural emissions and 93% of all livestock emissions globally. This proportion represents a 5.5% increase in the per-capita emissions from beef consumption between 2000 and 2017





The global number of deaths due to excess red meat consumption rose to 990,000 deaths in 2017, a 72% increase since 1990.

Health benefits of ambitious decarbonisation

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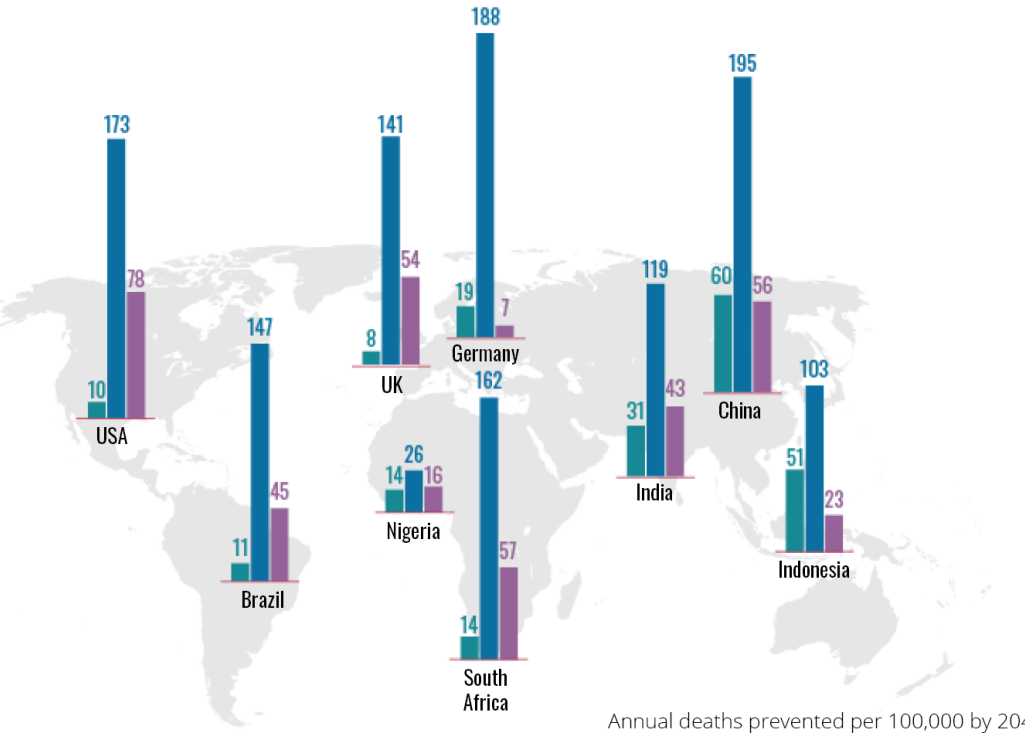
Ambitious climate action plans (NDCs) could prevent millions of deaths each year

Number of deaths prevented each year by 2040 if health is included in all climate policies

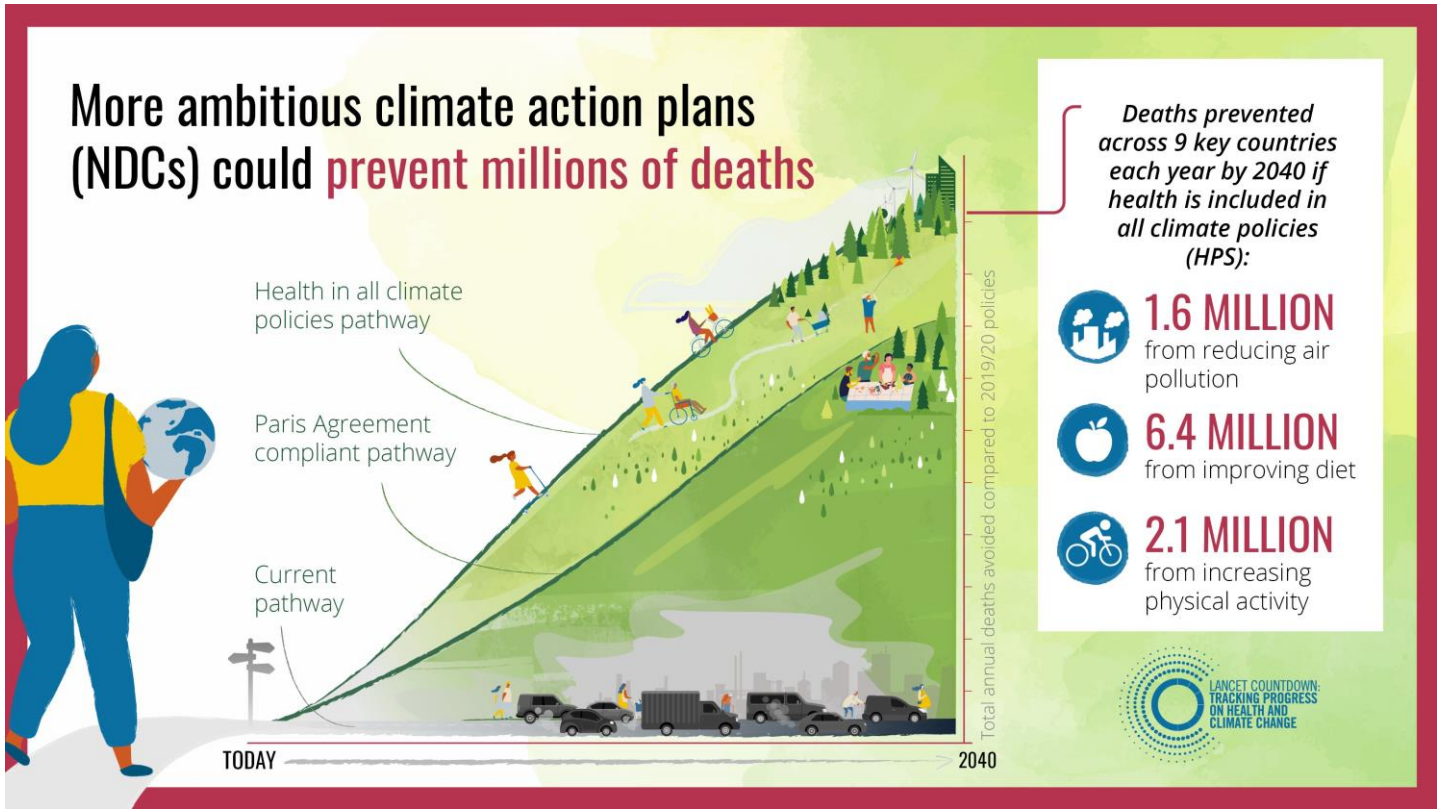
Reduced air pollution

Improved diets

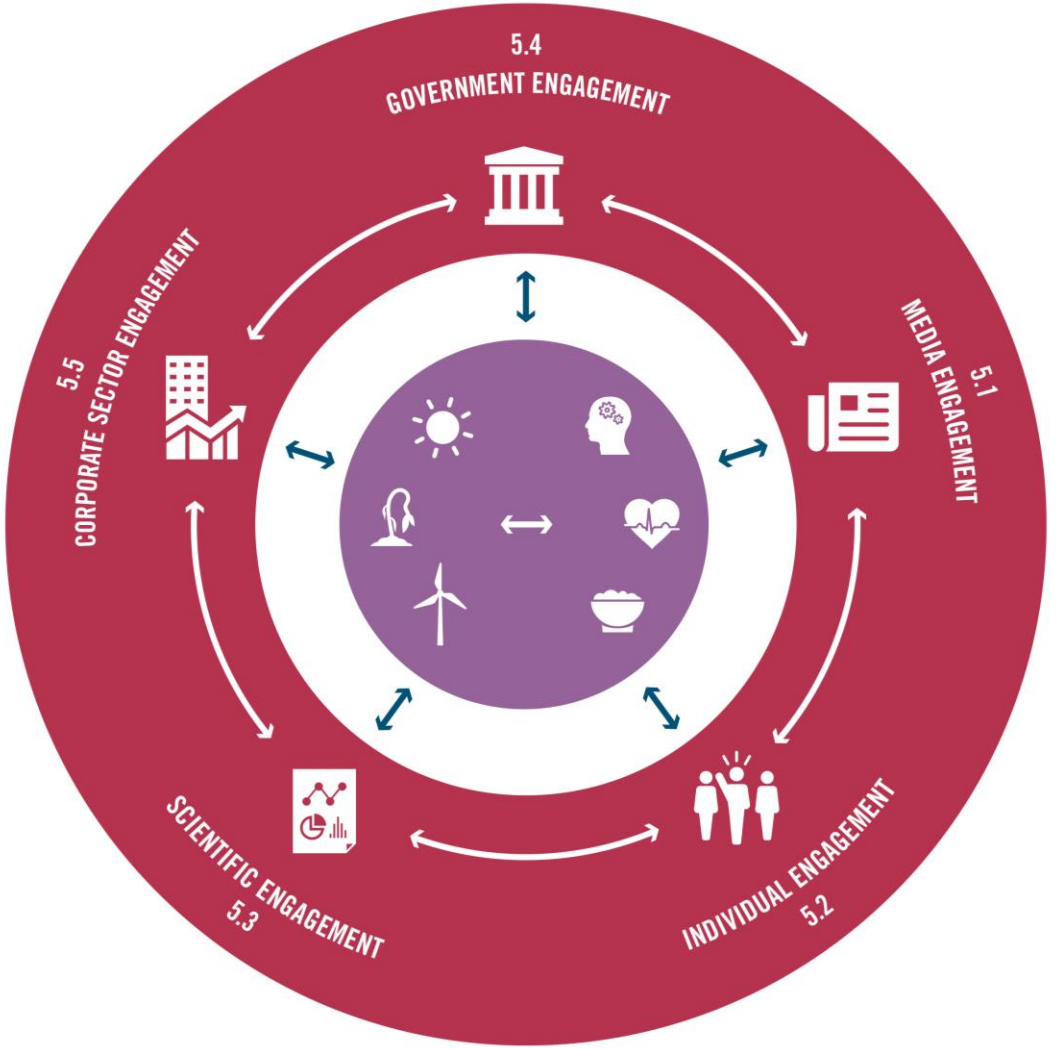
Increased physical activity



Annual deaths prevented per 100,000 by 2040, compared to policies as of mid-2019



Public and Political Engagement



5.3: Coverage of Health and Climate Change in Scientific Journals

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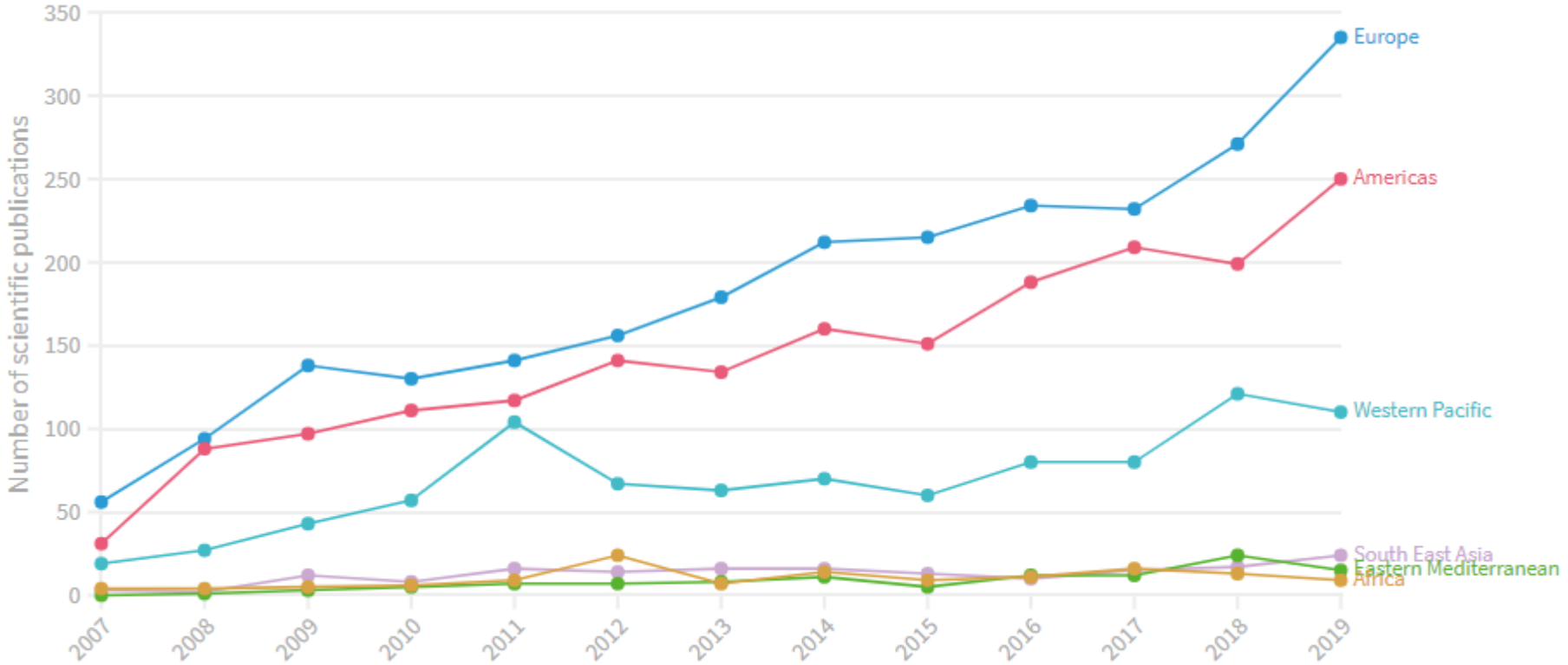
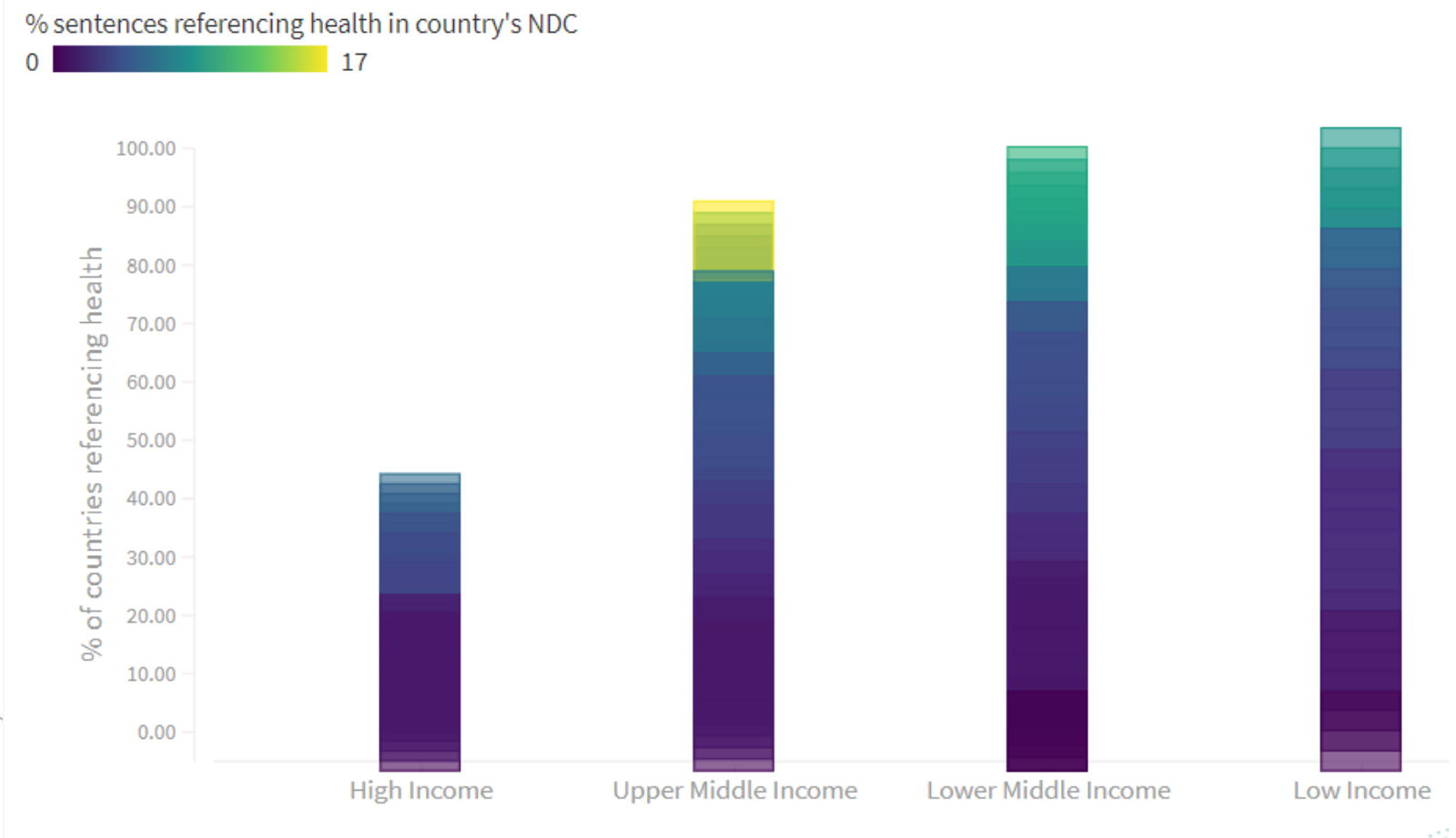
Between 2007 and 2019, original research on health and climate change increased by a factor of eight, a trend driven by research scientists in high-income countries, and led by Europe



5.4: Government Engagement in Health and Climate Change



National governments are increasingly paying attention to health and climate change. Poorer and more climate-vulnerable countries were more likely to reference health in their NDCs, with 95% of least-developed countries making these references. By contrast, the NDC of the EU did not make any references to health.

The healthcare community has to be at the forefront of the fight against climate change

3.6: Mitigation in the Healthcare Sector

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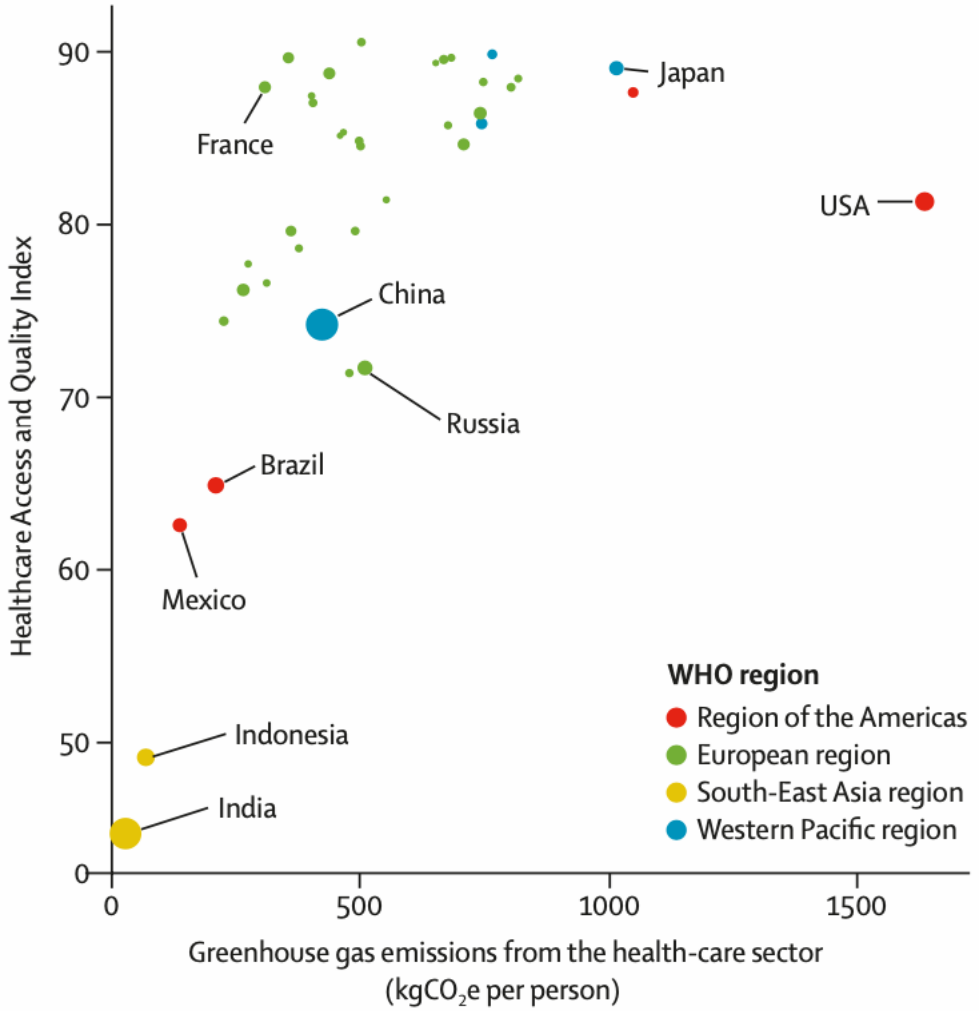
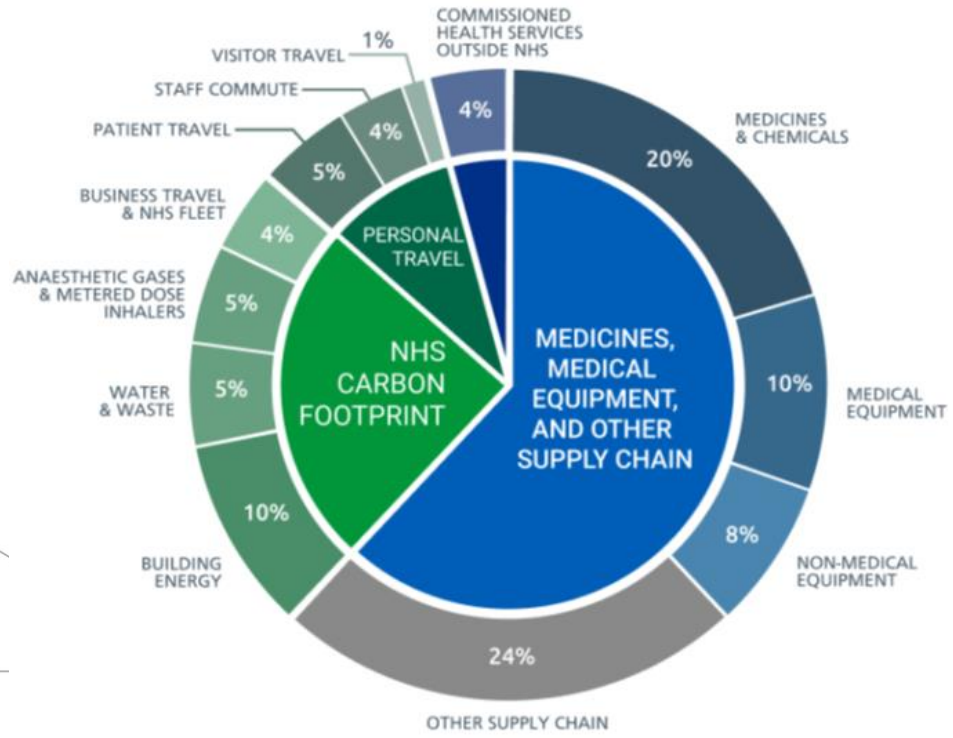
Headline Finding:

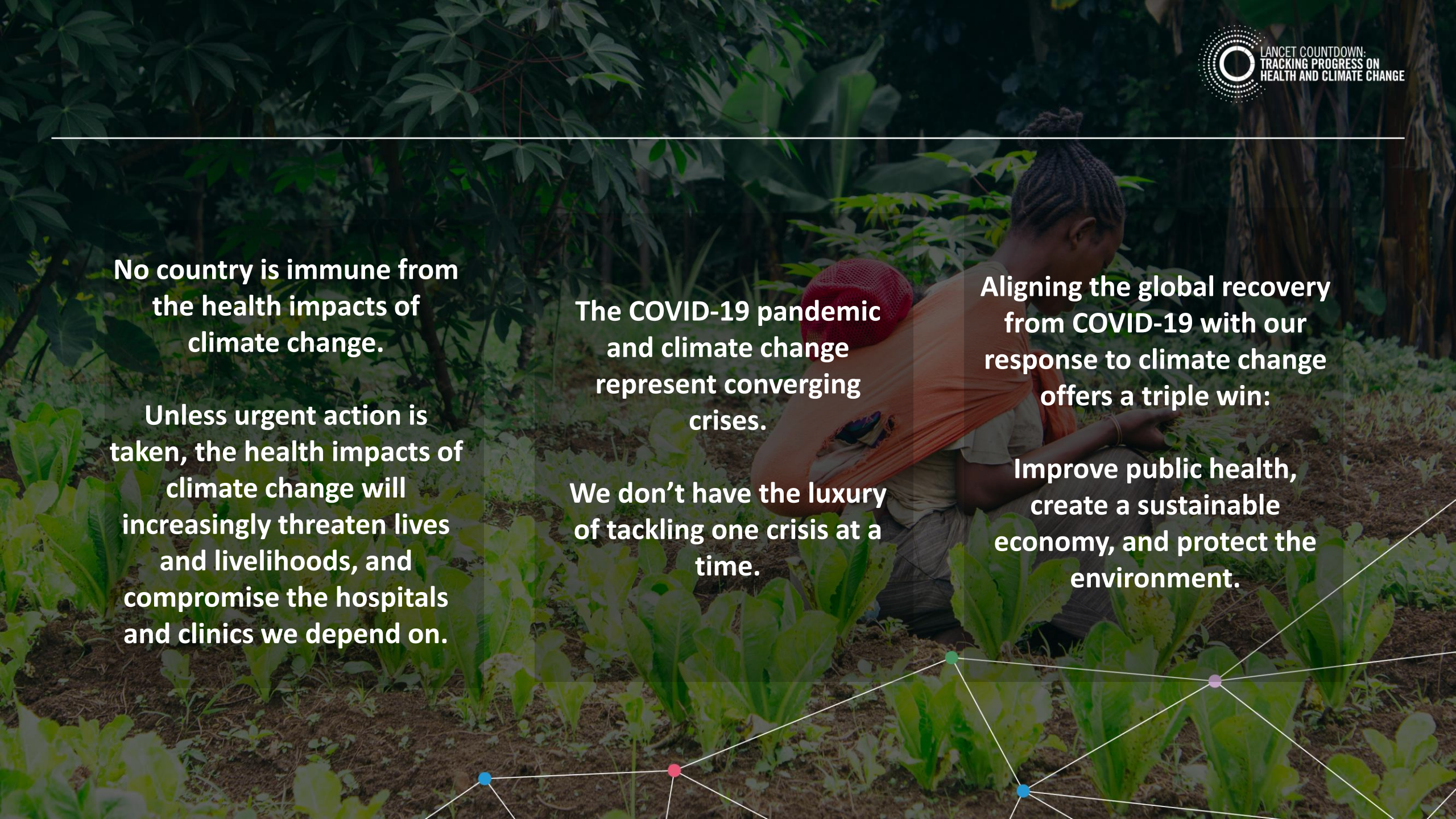
The health-care sector was responsible for approximately 4.6% of global greenhouse gas emissions in 2017, with substantial variations in per-capita emissions and health-care access and quality.



The World's first Net Zero health system

In September, the NHS committed to becoming the first net zero national health system in the world, reducing its emissions by 80% with respect to 1990 levels by 2036-2039, and reaching net zero by 2045





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No country is immune from the health impacts of climate change.

Unless urgent action is taken, the health impacts of climate change will increasingly threaten lives and livelihoods, and compromise the hospitals and clinics we depend on.

The COVID-19 pandemic and climate change represent converging crises.

We don't have the luxury of tackling one crisis at a time.

Aligning the global recovery from COVID-19 with our response to climate change offers a triple win:

Improve public health, create a sustainable economy, and protect the environment.

Thank you

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www.lancetcountdown.org
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