

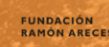
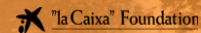
Evolving impacts of climate change on health and emerging opportunities of climate action

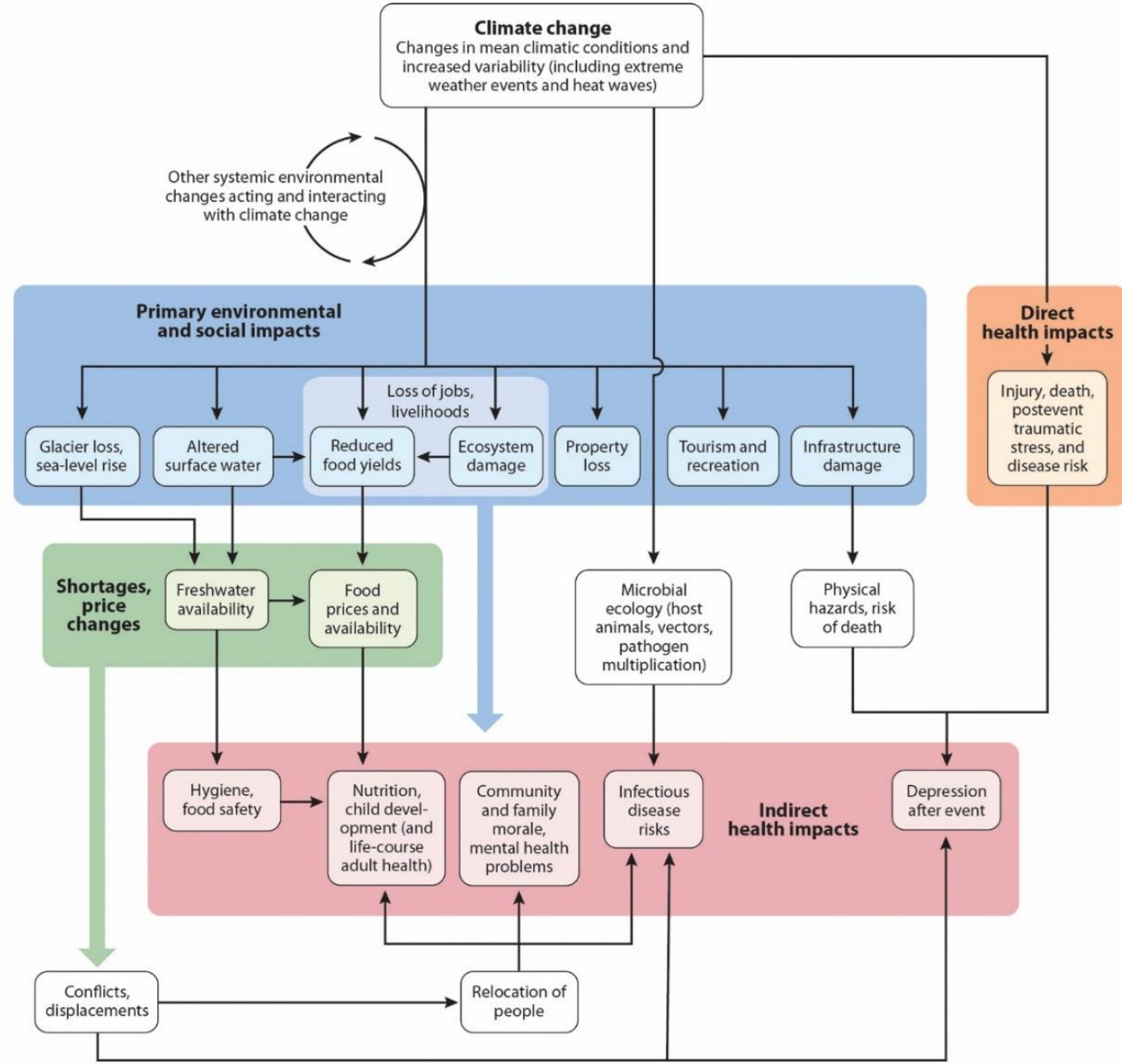
Professor Cathryn Tonne

ISGlobal
Barcelona
Institute for
Global Health



A partnership of:



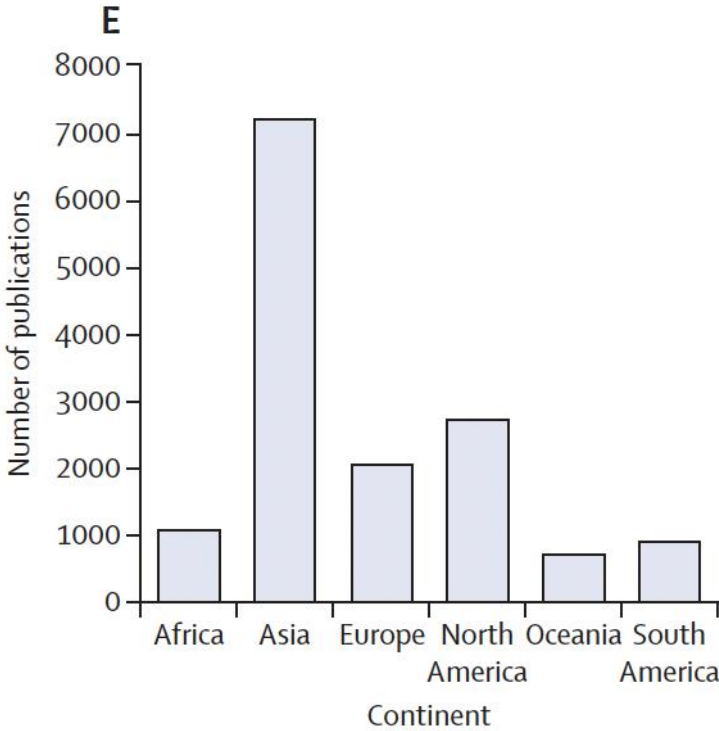
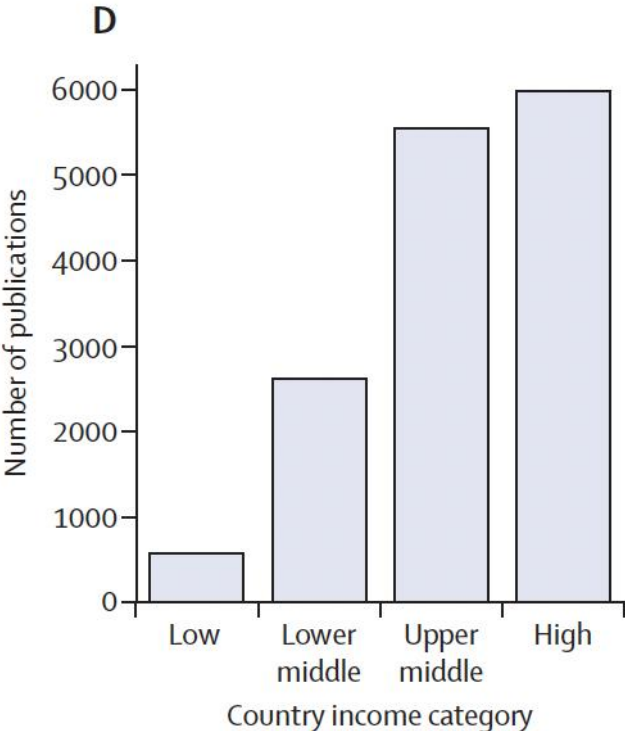
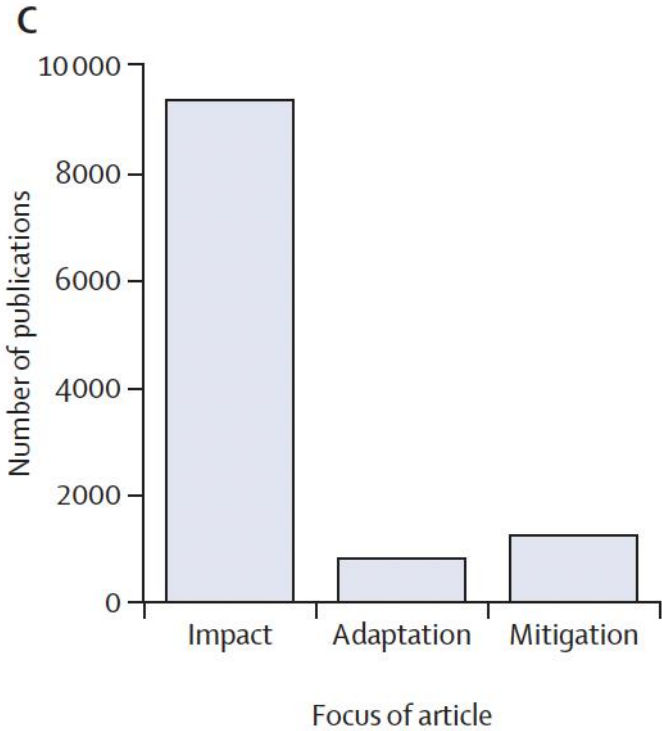


Pathways from climate change to health outcomes.

Frumkin H, Haines, A. Annual Review of Public Health. 2019; adapted from McMichael AJ.. NEJM 2013; 368:1335– 43

Systematic mapping of global research on climate and health: a machine learning review

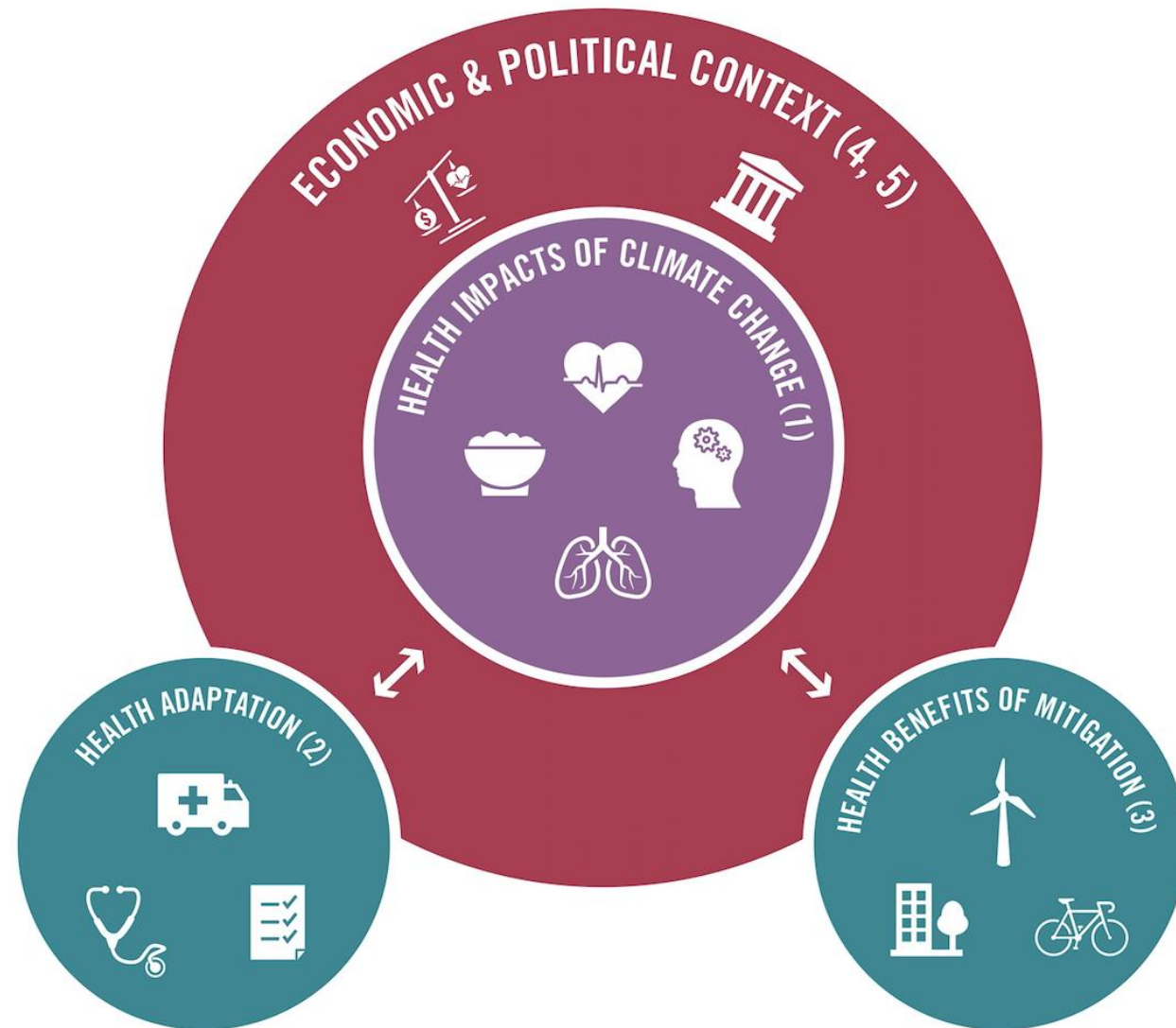
Lea Berrang-Ford, Anne J Sietsma, Max Callaghan, Jan C Minx, Pauline F D Scheelbeek, Neal R Haddaway, Andy Haines, Alan D Dangour





LANCET COUNTDOWN:
HEALTH AND
CLIMATE CHANGE
IN EUROPE

Lancet Countdown's approach





Climate change impacts, exposure and vulnerabilities

Indicators that track climate change-related risks and health outcomes, along four tiers:

- climate change related hazards
- population exposure to those hazards
- population vulnerability
- climate change-related health impacts

e.g. heat exposure, pollen, Lyme disease and West Nile Virus.

WG lead:

Prof Joacim Rocklöv





Adaptation, planning and resilience for health



Multiple-level assessment of adaptation, planning and resilience for health in Europe, with indicators monitoring

- planning and preparedness for climate hazards at national, local, and city level
- implementation of adaptation strategies for health
- implementation of early warning, monitoring and response systems for health.

WG lead:

Dr. Jan Semenza





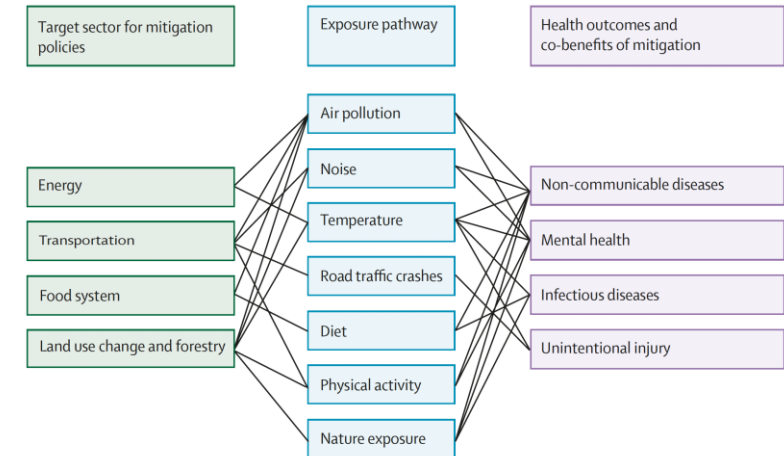
Mitigation actions and health co-benefits

Indicators of mitigation and health co-benefits:

- track progress along each mitigation sector for which health-relevant policies can be developed
- track exposures relevant to, and linked to, mitigation pathways
- monitor the attributable health burdens of exposure pathways

WG lead:

Prof. Cathryn Tonne





Economics and finance

Indicators tracking economic and financial implications of the transition to a low-carbon economy, covering :

- economic costs of climate change-related health impacts
- economic transition to a healthy, low-carbon economy

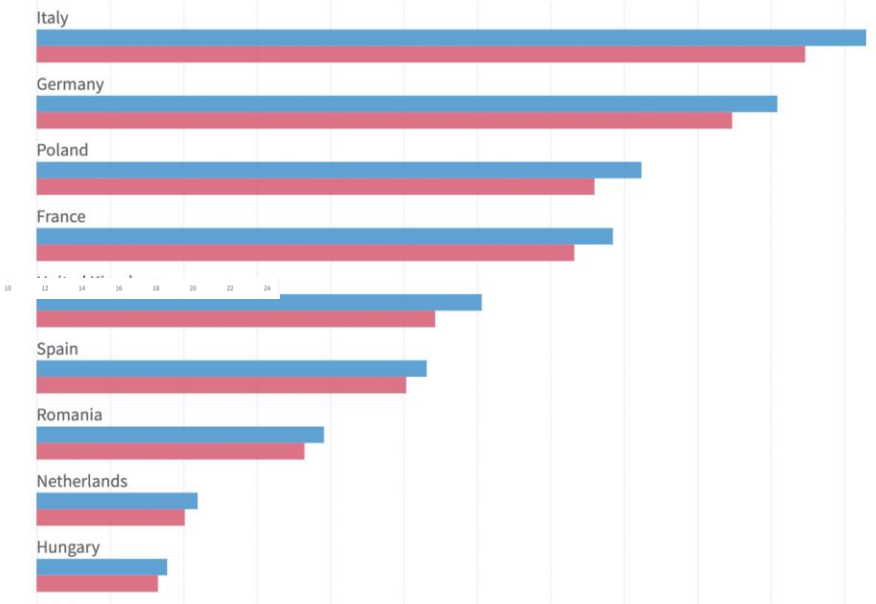
WG Lead:

Anil Markandya

Costs from Air Pollution in EU Countries

Total annual average cost from years of life lost due to exposure to PM2.5, in millions of Euros

■ 2015 Pollution Levels ■ 2018 Pollution Levels





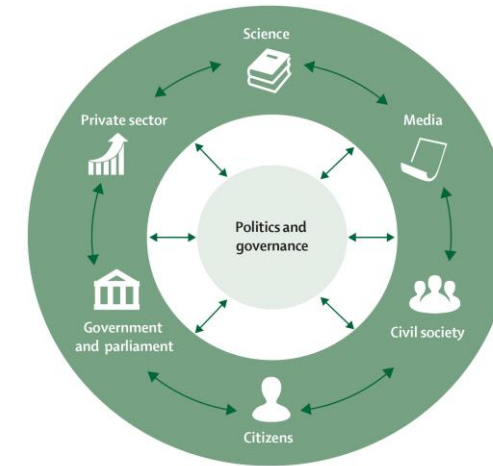
Politics and governance

Tracks engagement from the following actors:

- Citizens
- Media
- Governments
- Civil society
- Private sector
- Scientific community

WG Lead:

Prof. Slava Jankin



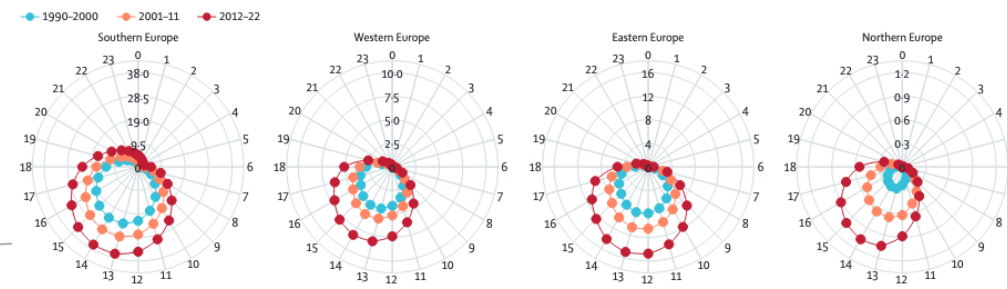
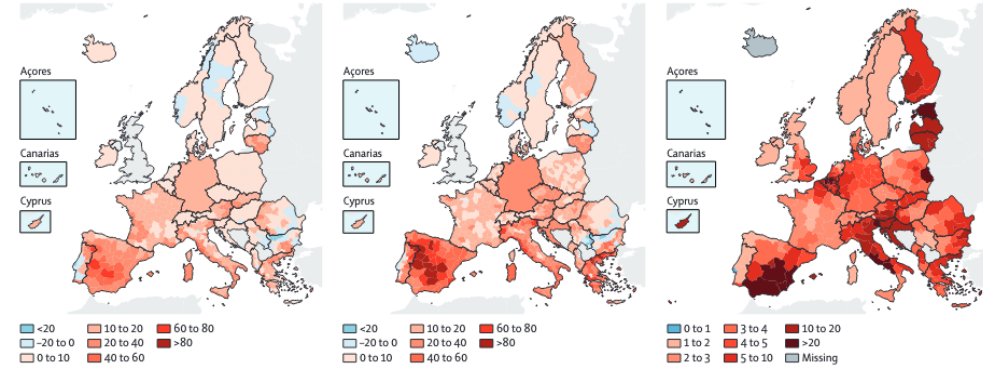
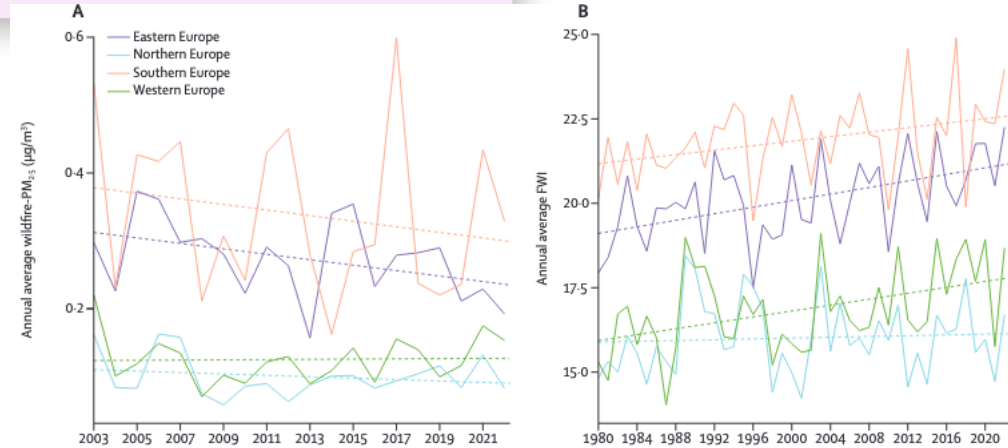


LCDE 2024 Report



Read the full report

- **42** indicators
- **69** researchers
- **42** institutions



CATALYSE SCOPE

Climate Action to Advance Healthy Societies in Europe

01.

Knowledge and tools

Support adaptation to climate hazards, such as:

- Heat
- Wildfire smoke
- Allergenic pollen



03.

Health systems

Identify features of climate resilient health systems, such as

- Monitoring and surveillance
- Early warning systems
- Trained health professionals



02.

Health Co-benefits

Show how placing health at the centre of Europe's plans to decarbonise promotes health, with focus on:

- Electricity generation
- Buildings
- Transport
- Food systems



04.

Communication strategies

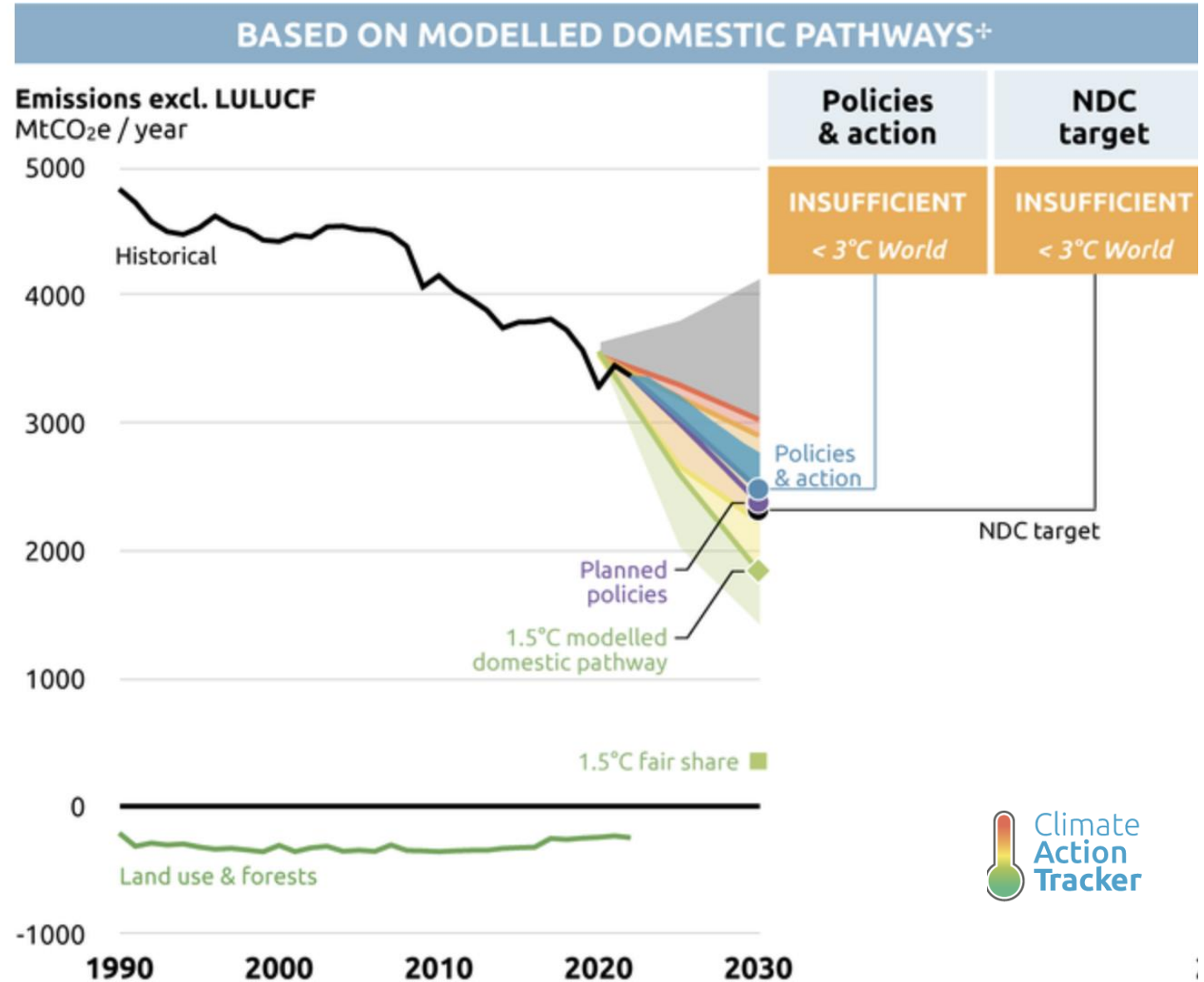
Foster engagement with climate change as a health issue and test different framing of climate change and health:

- Threat
- Opportunity
- Local
- Global



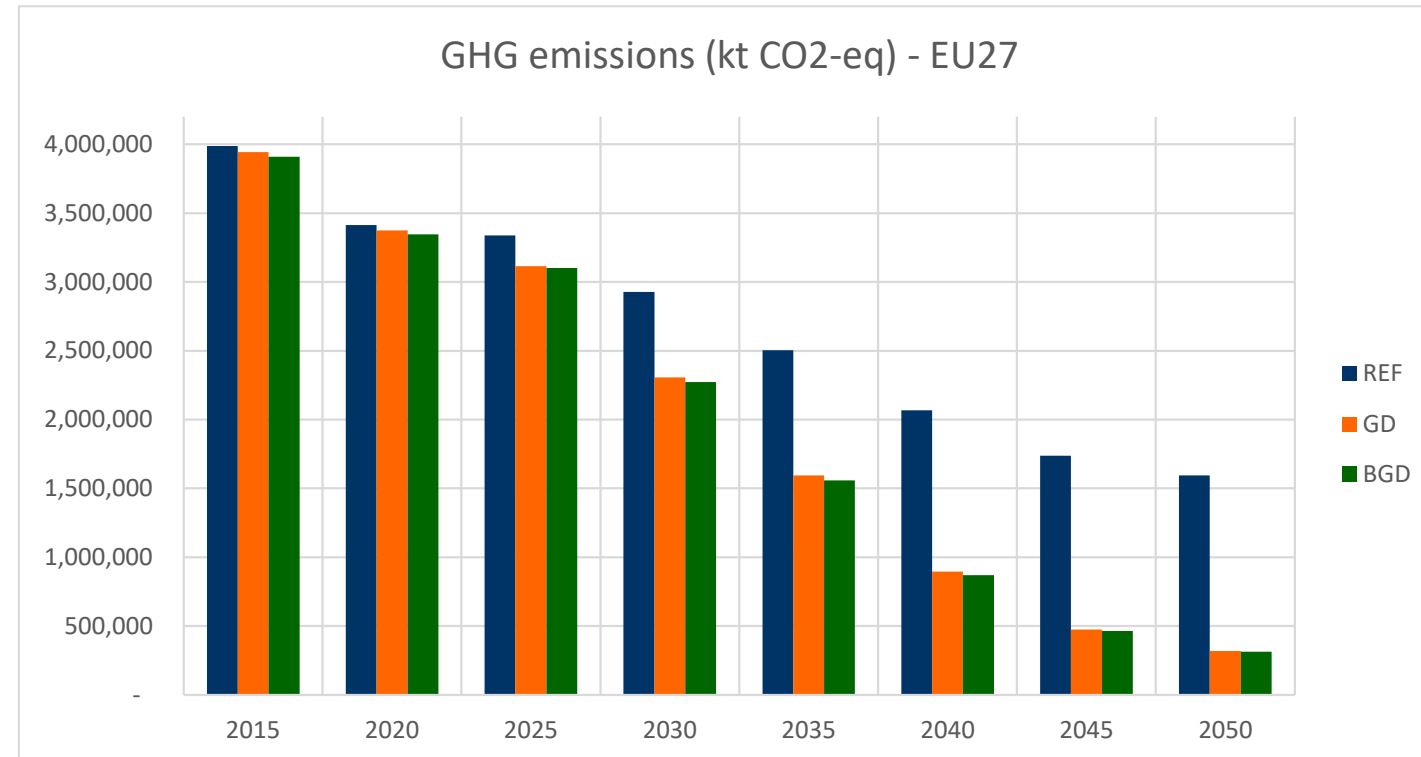
European Union

- European Climate Law (2021)
- Legal objective of climate neutrality by 2050.
- 2030 target of at least 55% reduction of net GHG emissions compared to 1990
- EU not yet on track to meet 2030 targets (CAT)

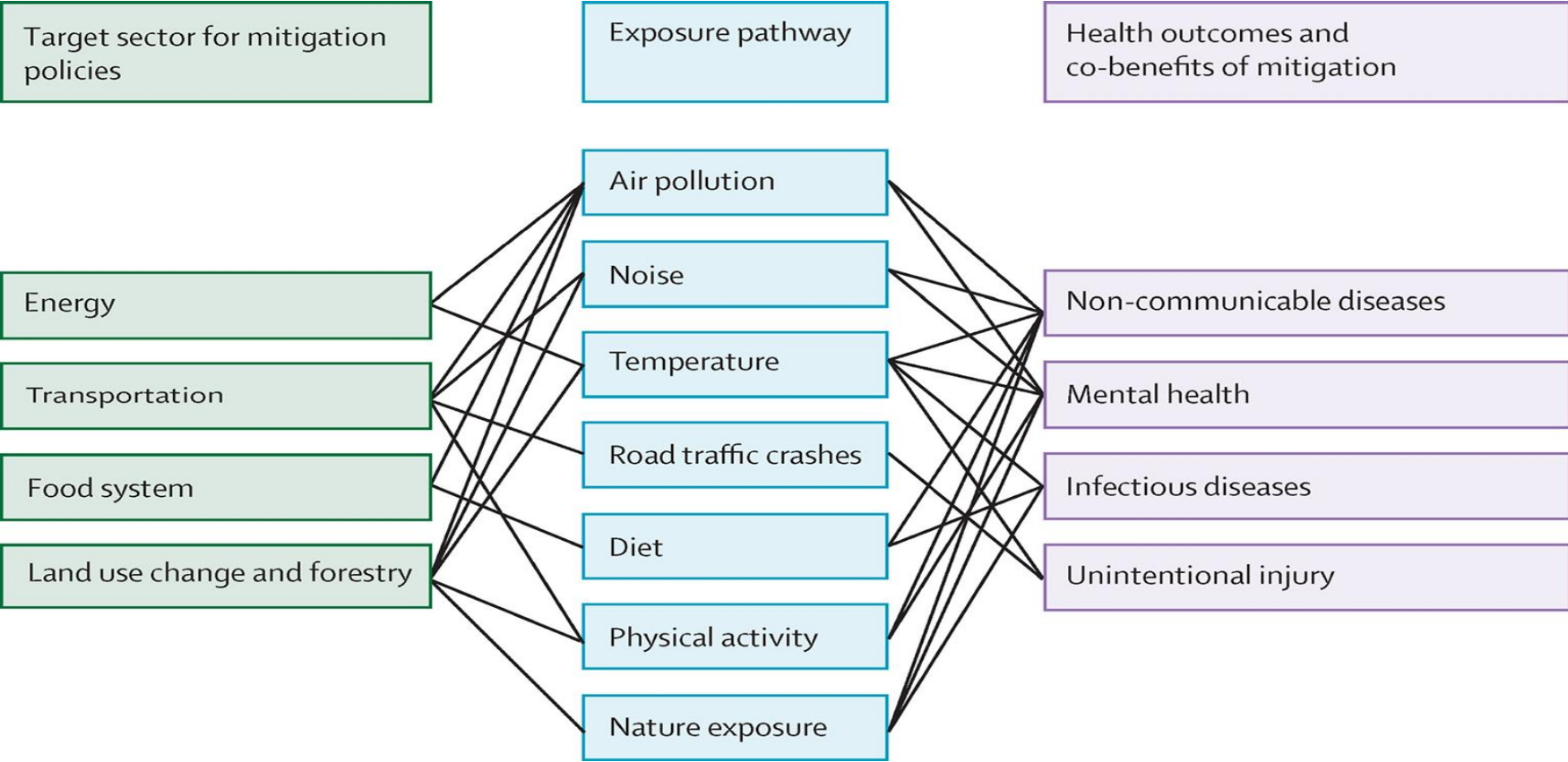




- Air pollution and GHG emissions under policy relevant scenarios
 - Reference: currently implemented policies
 - Green Deal
 - Beyond Green Deal: green deal plus additional behaviour change in transport, buildings, diet
- Health co-benefits integrated across sectors: buildings, food systems, transport
- Social cost benefit analysis



Pathways linking mitigation action and health





catalysehorizon.eu/



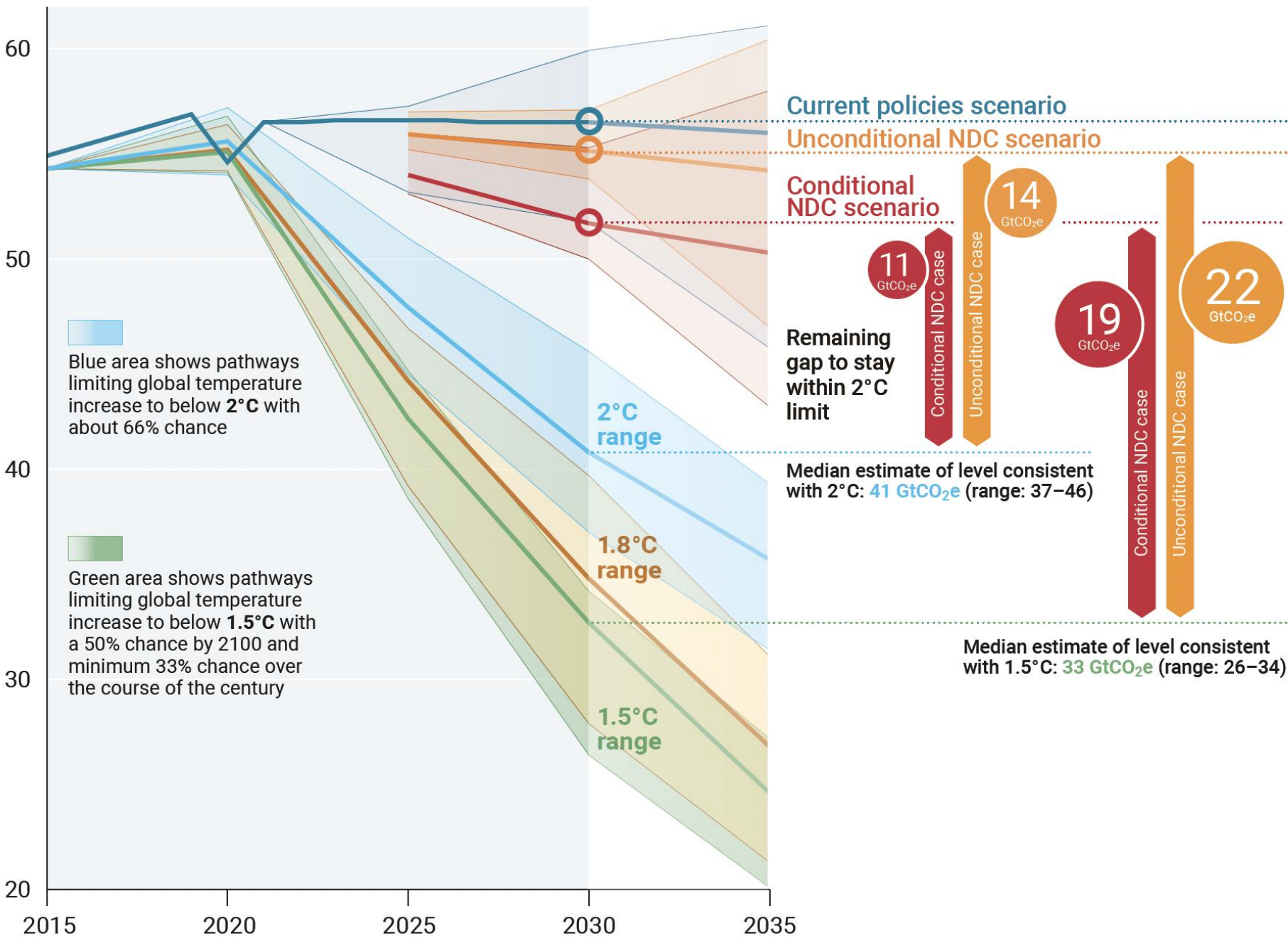
www.lancetcountdown.org/europe/



Funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101057131



GtCO₂e



Global GHG emissions under different scenarios and the emissions gap in 2030 & 2035
(median, shading 10th-90thile)

Fully implemented unconditional NDCs on track for 2.9 °C warming this century



Aims to answer three questions

1) How to optimize health in climate change mitigation and adaptation?

2) How to close the knowledge-to-action gap to accelerate climate change action?

3) How should health systems adapt to climate change and reduce their footprint?