



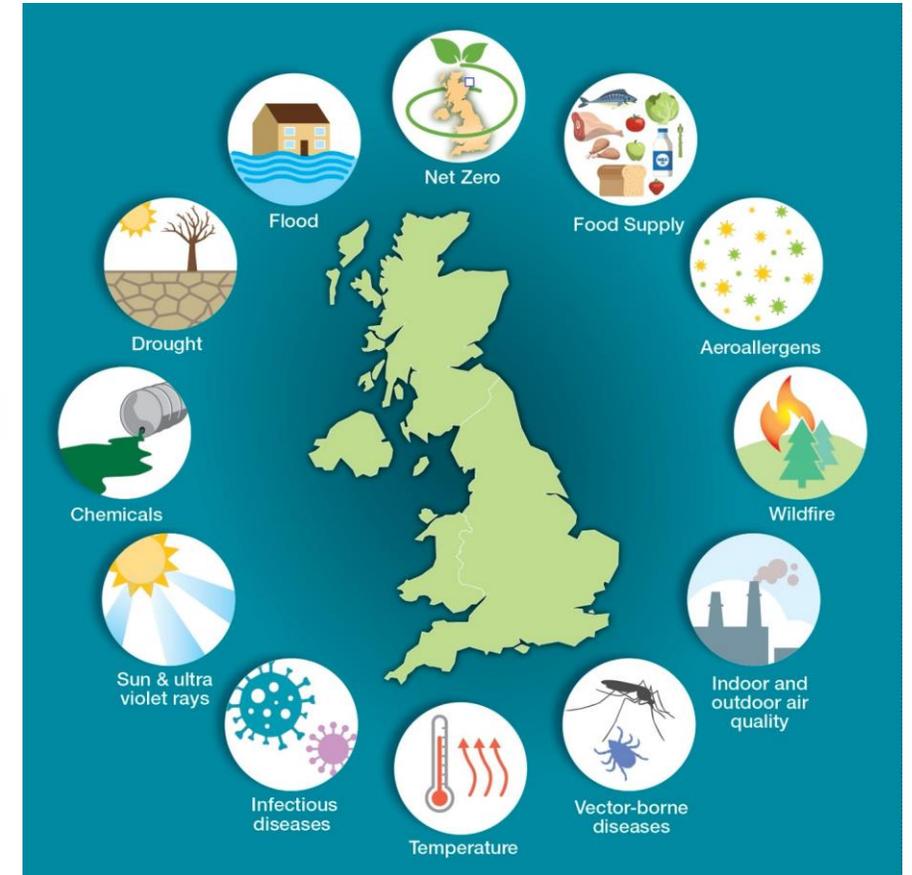
UK Health  
Security  
Agency

# Health Effects of Climate Change in the UK

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# UKHSA Centre for Climate and Health Security

- Launched in October 2022
- Led by Professor Lea Berrang Ford →
- 'Hub' of 5 teams:
  - Extreme Events and Health Protection (EEHP),
  - Climate Health and Assessment (CHAT),
  - Medical Entomology and Zoonoses (MEZE),
  - Mobilisation (MobT) and
  - Deputy Director's (DD) office



*Working to ensure the health harms from climate change and adverse weather are minimised, and health is improved for all people, across current and future generations*

# Key achievements & more to come



**Delivered statutory commitments** to publish Adverse Weather and Health Plan and Health Effects of Climate Change



**Raising the profile of the climate and health agenda** across local and national government and with international partners



**Expanding vector-borne disease surveillance system** across England, plus providing scientific support and advice internationally



**Operational response and supporting EPRR functions** to take evidence supported action and build capability. Launch of impact-based heat-health alert systems



**Improve knowledge mobilisation and use of evidence** so you find it easier to find, digest, and apply to guide decision making



Develop and deliver a **programme of work within UKHSA to reduce the health impacts of climate change**, working with other government departments, academic partners and international organisations



**Continue to build relationships and collaborate** across regions, devolved nations and local authorities; responding to your needs and challenges



Refining our approach to assessing evidence; consulting on the **next UKHSA Health Effects of Climate Change** to maximise impact

# Climate change

Climate change matters for health

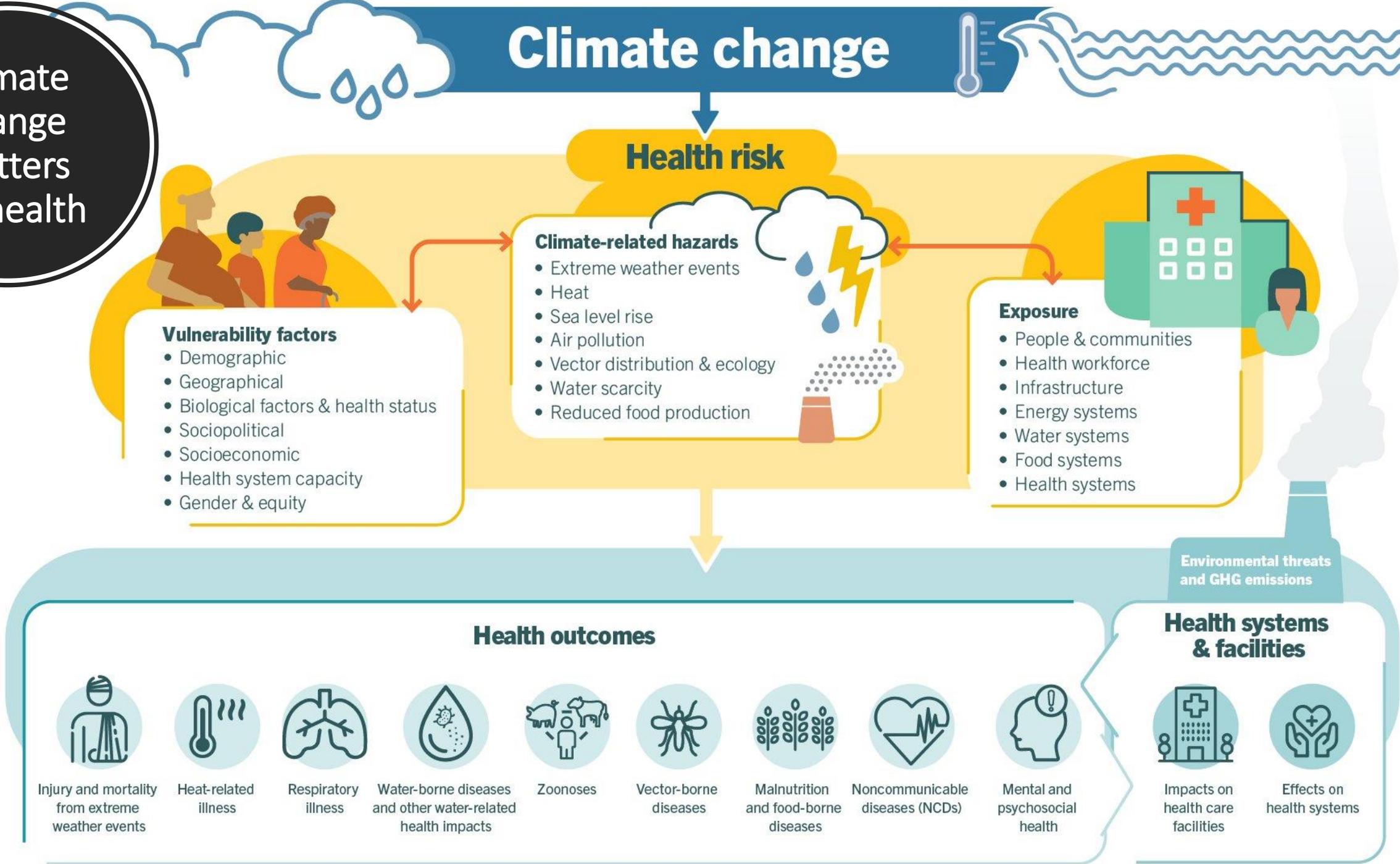
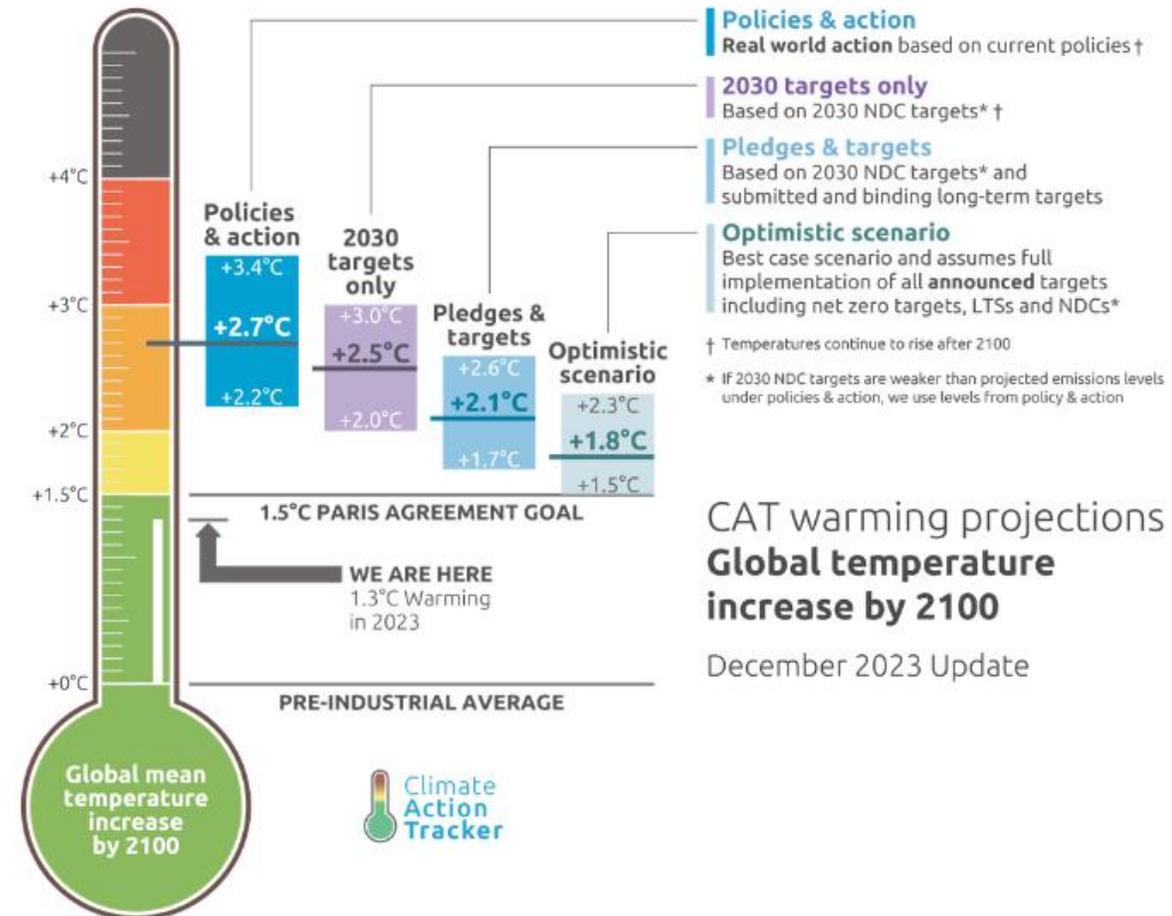


Image source: WHO

# Climate change matters for health

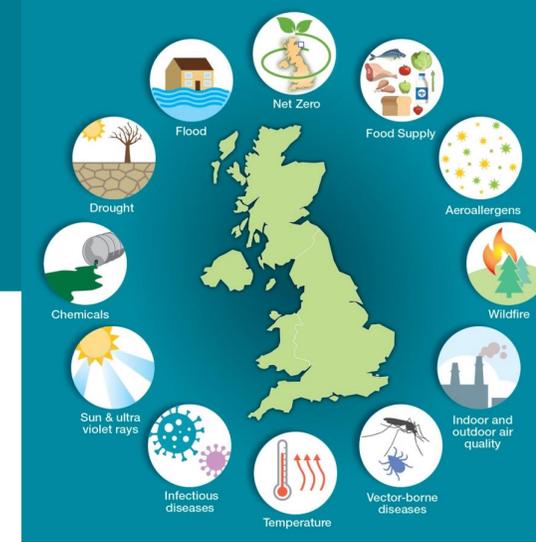
## We are on track for ~2-3°C warming

- Even if GHG emissions decline, temperatures expected to rise until at least mid-century
- All scenarios pose public health risks
- Climate is the context in which we will need to protect health, affecting a wide range of health outcomes **and the determinants of health**
- Mitigation and adaptation will be required to avoid adverse impacts and may themselves have impacts on health



# About the HECC report

- Deliverable for the second National Adaptation Programme (2018-2023)
- 15 chapters, 90 authors, 30 reviewers, covering a range of health impacts



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**Update the evidence base on climate change and health** to inform policy making by the UK government, local authorities and other public health partners

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**Highlight future climate health research needs** to improve depth and breadth of research

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**Raise awareness of the risks** of health effects of climate change and **improve understanding** of the benefits to health from Net Zero policies

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# 1. There is **substantial and growing evidence** of the effects of climate change on health in the UK - potential impacts will be significant and wide-ranging



- Evidence strongest for:
  - Health impacts due to heat and cold
  - Flooding
  - Vector-borne diseases



- Food imports and prices more volatile (particularly for fruit and vegetables)



- Emerging risks include exposure to drought and wildfires



- Evidence mixed for aeroallergens



- Insufficient evidence is available for full assessment:
  - Exposure to chemicals
  - Ultra-violet (UV) radiation

## 2. The health risks of climate change will not be distributed equally across the UK.

### Geography

Health effects from **Flooding** include:

Drowning

Physical injury

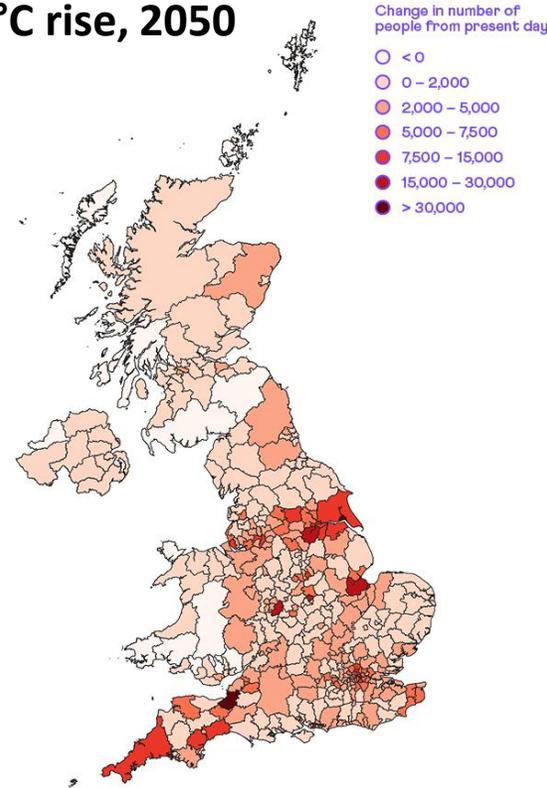
Skin and gastrointestinal infections

Mental health impacts

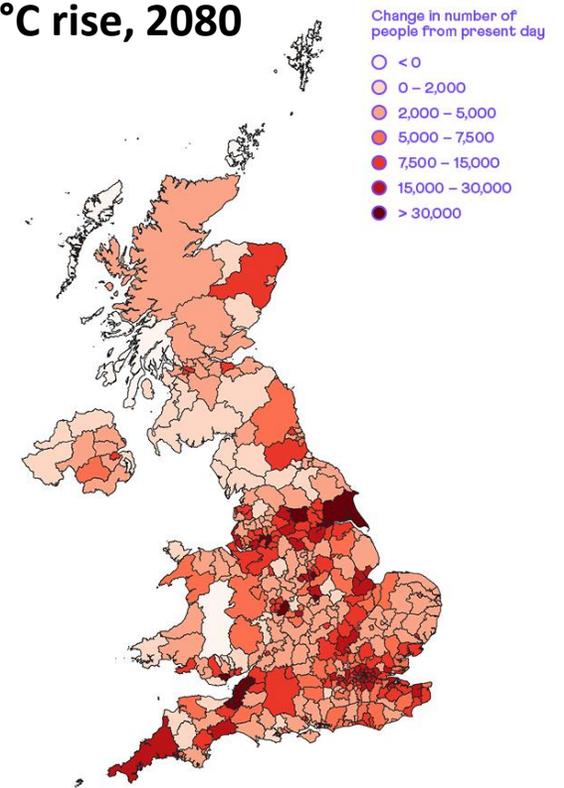
2°C rise: 61% increase in UK population exposed to flooding by 2050

4°C rise: 118% increase in UK population exposed to flooding by 2080

2°C rise, 2050



4°C rise, 2080



Figures source: Climate Change Committee

## 2. The health risks of climate change will **not be distributed equally** across the UK

### Vulnerable populations



- Climate change will **exacerbate existing inequalities**



- **Ageing population** driver of climate vulnerability



- Most **vulnerable** groups:
  - Older adults (over 65 years),
  - Children
  - Those with pre-existing medical conditions



- Individuals less able to **control environments or adapt behaviours** vulnerable:
  - Social care residents
  - Homeless populations
  - Settings (e.g. schools, prisons)

### 3. The health risks of climate change will not be distributed equally across generations

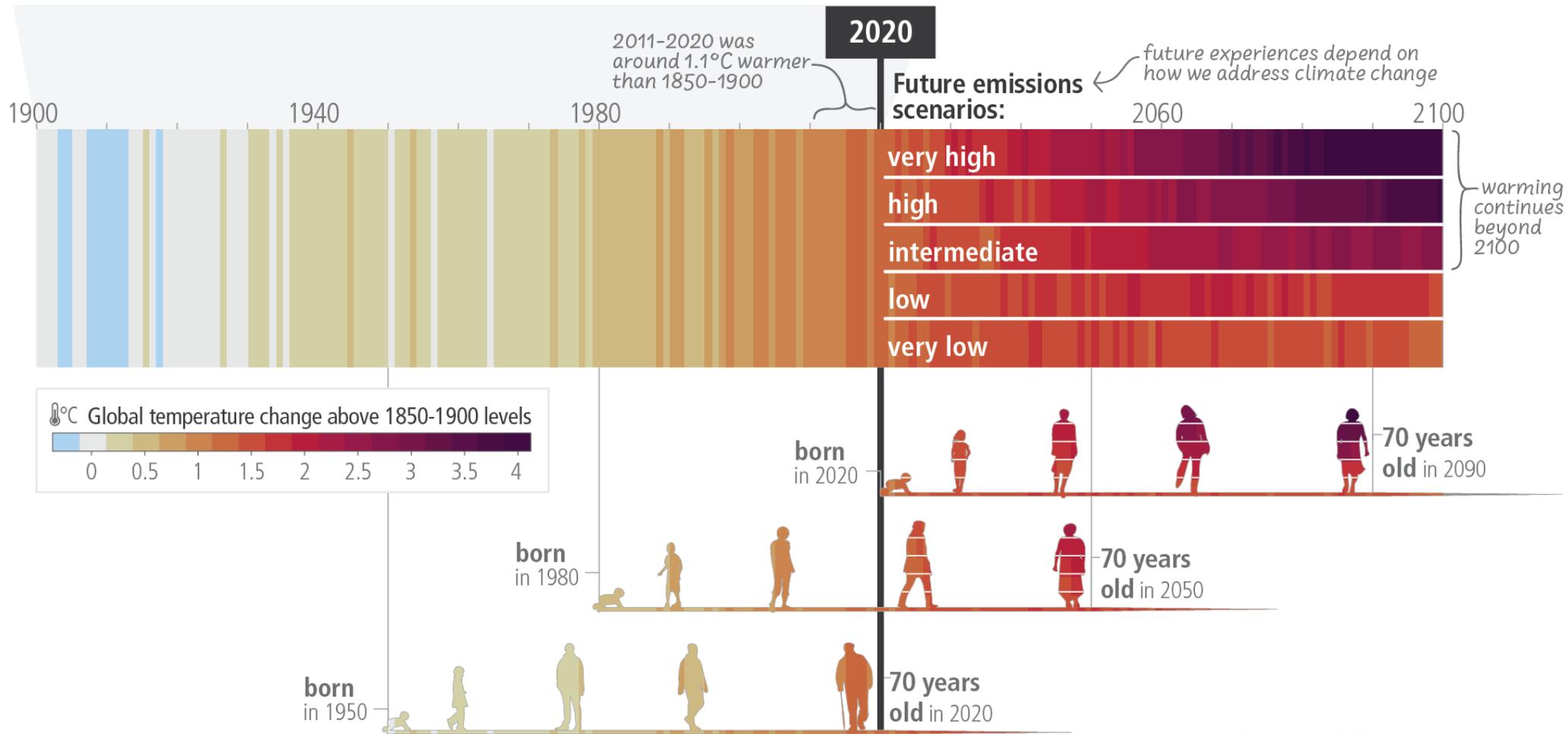
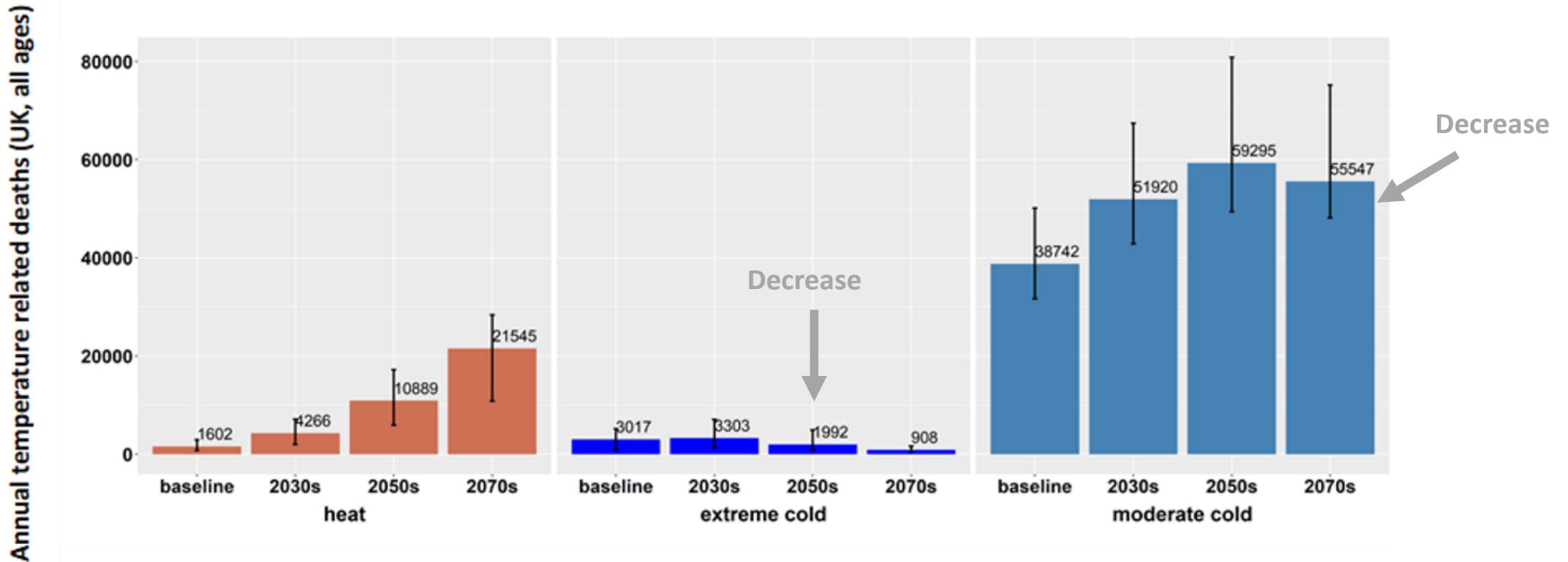


Figure source: IPCC

## 4. Health impacts will increase with progressive warming

- Estimated heat-related deaths increase per decade
- But deaths from extreme cold decrease in 2050s
- Deaths from moderate cold decrease during 2070s



## 5. Many adverse health impacts of climate change are **avoidable through climate change mitigation** and others are **preventable through effective adaptation**

- Targeted **adaptations** save lives and reduce adverse health impacts
  - National heat and cold alerting systems
  - Flood defences
  - Improvements to housing
- **‘Co-benefit’** options benefit both health and society
  - Active transport
  - Nature-based solutions



# Can CCHS support your NIHR research bid?

- **Deadline:** 23<sup>rd</sup> April (Stage 1)
- **Research Question:**

*What are the impacts of local authority led interventions aimed at climate change mitigation and/or adaptation on health and inequalities?*

The logo for the National Institute for Health Research (NIHR) is displayed. It features the acronym 'NIHR' in a large, bold, blue sans-serif font. To the right of the acronym is a vertical red bar, followed by the full name 'National Institute for Health Research' in a smaller, blue sans-serif font, arranged in two lines.

**NIHR** | National Institute  
for Health Research

If you are a Local Authority who is preparing a bid and would like to explore whether support from CCHS would be helpful, please get in touch via [CCHS@ukhsa.gov.uk](mailto:CCHS@ukhsa.gov.uk).