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Adapting to Climate Change in the UK

Identifying and supporting those most in need

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The power of kindness

About us

- The British Red Cross exists to mobilise the **power of humanity** to help people prepare for, deal with and recover from crisis.
- We have been responding to crises for over **150 years** and are a **recognised leader** in disaster preparedness, reduction and response.
- The British Red Cross has a special role as an auxiliary to the UK Government: we have **widespread connections** with emergency, civil and third sector services at local, regional and national level.
- The Charity is active **across the UK** with 17,000 volunteers and 4,000 staff.
- We are known for our fundamental principles including **neutrality and impartiality.**

Our role today

Prepare

Emergency preparedness advice and resources, including specifically for young people (Weather Together)

Respond

Support communities in the moment of crisis whether caused by heatwaves, floods, cold or other climate-driven events providing evacuations, practical support (food, shelter), and emotional support (trauma care).

Recover

Support communities for as long as they need to recover. This often includes assistance in cleaning up debris and planning for the future.

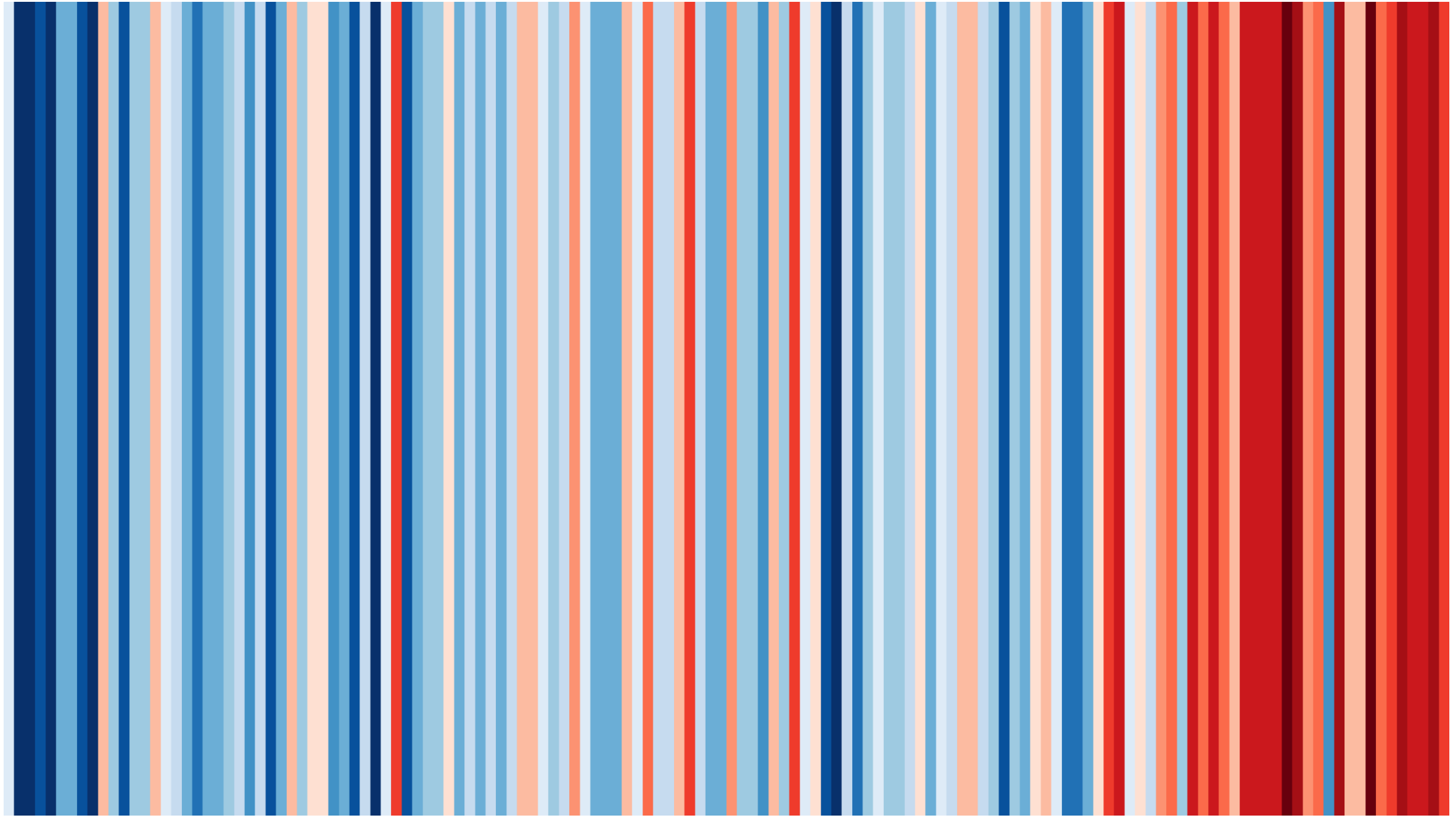
Taking action on climate challenges

Since 2020, we have responded to **over 200** severe weather and environmental flooding incidents in the UK.

The number of disasters that are weather and climate related is **growing in frequency and intensity** affecting even more people. **Demand for our support is rising**.

We need to do more so we're transforming the service to meet the changing needs and contexts in the UK.

Climate change & the UK

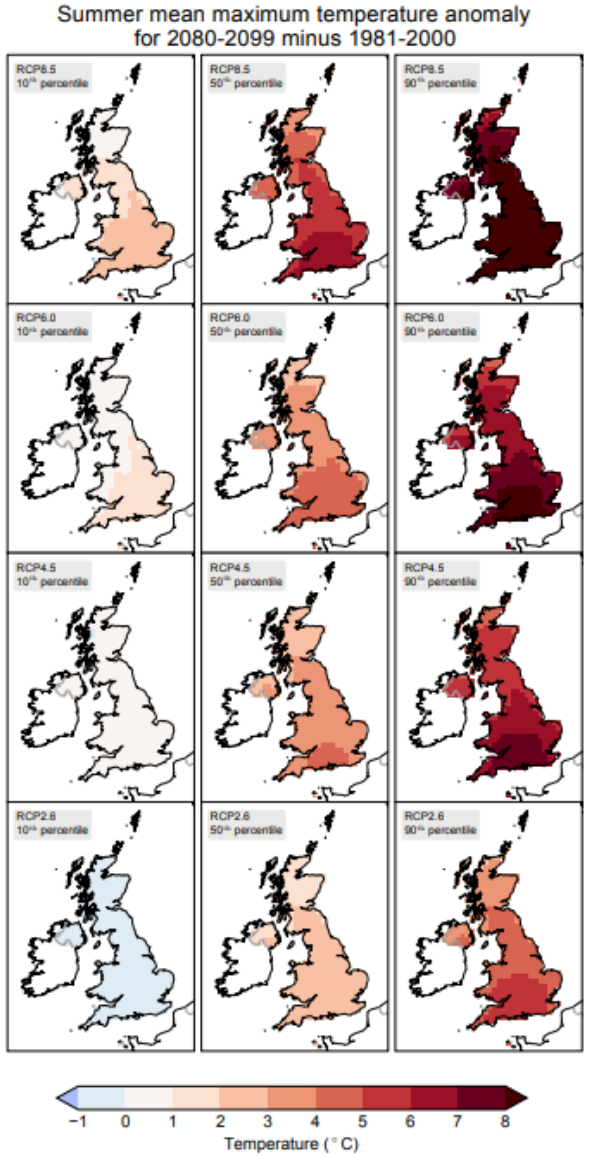


Author: Ed Hawkins Source: https://showyourstripes.info/c/europe/unitedkingdom/all

In the UK…

- By the end of the 21st century, all areas of the UK are projected to be warmer (more so in summer than in winter)
- In summer, there is a pronounced north/south contrast, with greater increases in maximum summer temperatures over the southern UK compared to northern Scotland
- By 2050 heatwaves similar to that witnessed in 2018 (35°C) could occur every other year. By 2100, heatwaves will become more intense and long lasting, with an average temperature of 40°C and a duration of 50 days
- Despite overall summer drying trends in the future, UK Climate Projections (UKCP) suggests future increases in the intensity of heavy summer rainfall events and significant increases in hourly precipitation extremes in the future.

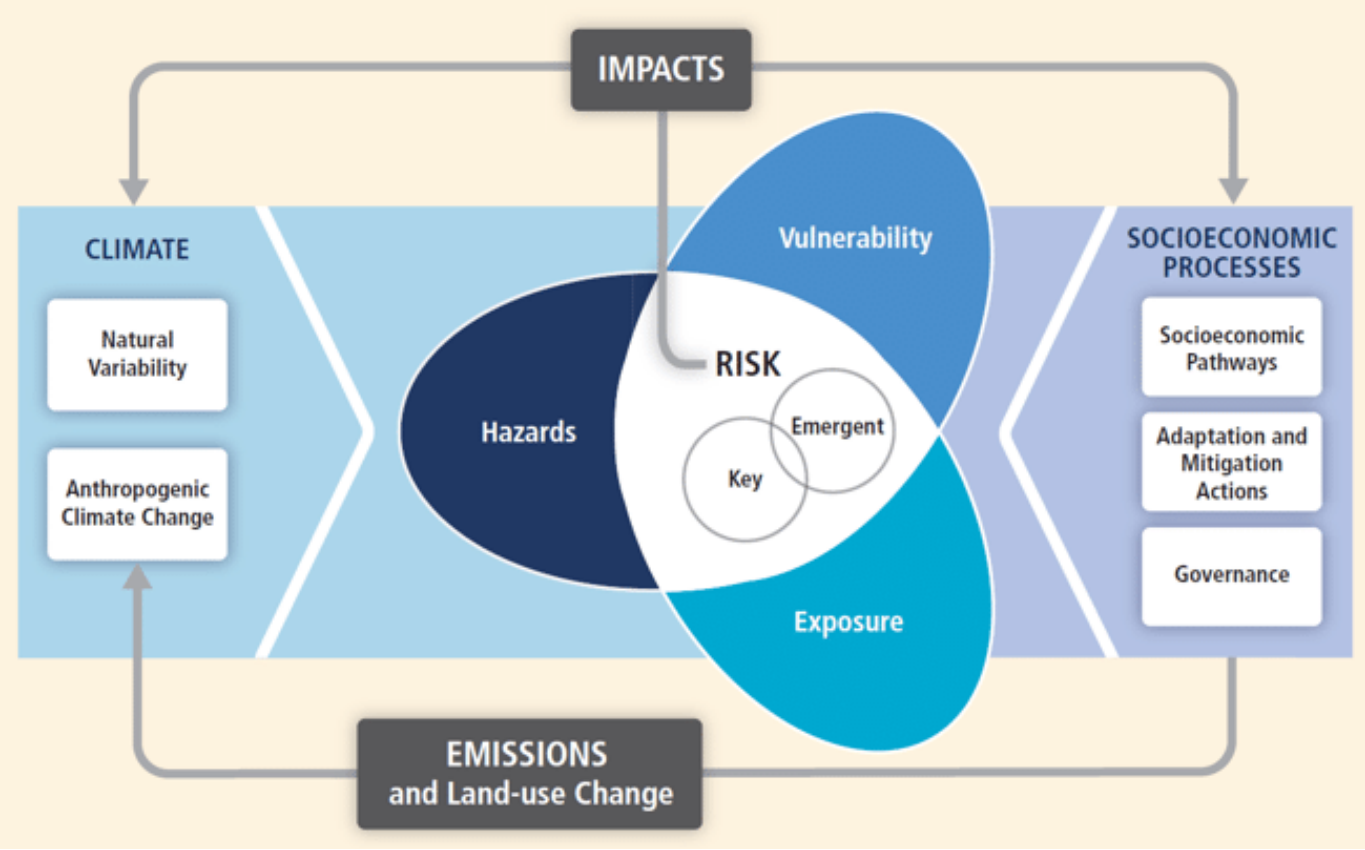
Headline result of UK Climate Projections: "a greater chance of warmer, wetter winters and hotter, drier summers"



Source:
Met Office
UKCP18
Executive
Summary

How does climate change affect people differently in the UK?

Climate change affects everyone, but it does not affect everyone equally.



Source: IPCC AR6

Future climate risks are a result of the interaction between hazard, exposure and vulnerability.

Living in Poverty or on Low-Income

People living in poverty, and people on low incomes, can be particularly vulnerable to climate impacts.

- Those living in poverty are much less likely to be able to afford products that can be used to protect themselves and their homes from extreme weather. People on lower incomes may not take out flood insurance and therefore may take longer to recover from flooding.
- They are more likely to live in poorer conditions where their housing is less resilient to floods and heatwaves, and they may not be able to make decisions to install products to protect themselves.
- Energy bills will become more expensive, both for cooling homes in summer and heating them in winter. With as many as 1 in 3 families in the UK living in fuel poverty, the added strain of extreme weather will make it even tougher for households to survive.

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Climate crisis disproportionately impacting elderly and low-income families in UK

The climate crisis is disproportionately impacting low-income households, the elderly, children and minority communities, according to new research from CDP warning of a £17bn funding gap that is stopping local authorities from protecting their communities.

CLIMATE & NATURE ENERGY

Flooding and heatwaves are just some issues authorities are trying to adapt to

The Building Local Resilience research from CDP saw 60 UK local authorities surveyed. These entities account for 45% of the UK population and one-third of the nation's greenhouse gas emissions.

The research found that the climate crisis looks set to disproportionately impact certain parts of society. It

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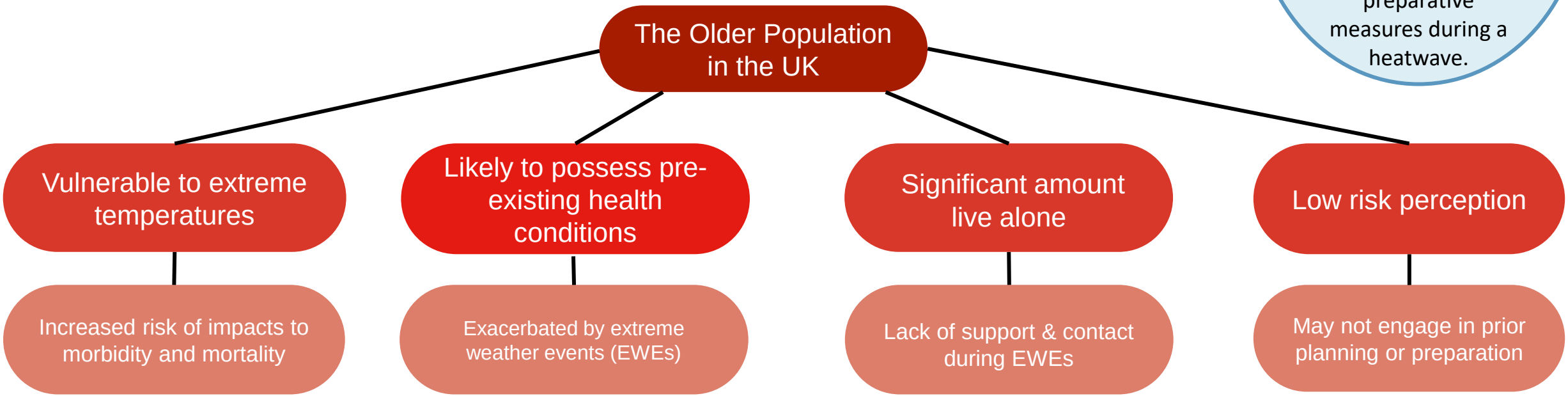
People Aged 65+

Older aged people, especially those 65+, are more likely to be physically affected by extreme heat due to the body's reduced ability to regulate temperature, and an increased likelihood of having one or more existing health risks, such as chronic illness or the use of medication.

Did You Know?
Over half of 75+ year olds (57%) do not consider themselves vulnerable to the impact of heatwaves. They are less likely than any other age group to take preparative measures during a heatwave.



Source: Oikonomou et al., 2018; Wolf et al., 2010, p. 2728; Taylor et al., 2014; Walker, 2011, p. 225; Dominelli, 2013, Mawhinney, 2016; Ilieva et al., 2016

British Red Cross. 2021. 'Feeling the heat: a British Red Cross briefing on heatwaves in the UK.' [Online]. Available at: British Red Cross report on heatwaves in the UK
Age UK. 2018. '*Life in the United Kingdom 2019.'* [Online]. Accessed: Microsoft Word - FINAL MAY LLFS.docx (ageuk.org.uk)

People with Pre-Existing Health Conditions

People with **mental health conditions** are more likely to experience severe psychological distress during periods of extreme heat. Suicide risk increases as a consequence of this.

People with **chronic or underlying health conditions** including lung, heart or kidney conditions, are more at risk of harm as these conditions can flare up during periods of extreme heat.

Certain medications can also affect temperature regulation, skin sensitivity to sunlight, electrolyte balance and kidney function.

People with **physical and learning disabilities** may have limited mobility and/or can find it harder to adapt and stay cool throughout heatwaves.

British Red Cross. 2021. 'Feeling the heat: a British Red Cross briefing on heatwaves in the UK.' [Online]. Available at: British Red Cross report on heatwaves in the UK

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Pregnant and Postpartum People

- During pregnancy, the body has to work harder to maintain a cool temperature. Risk of overheating, heat exhaustion and heat stroke is higher in pregnant and postpartum people.
- This feeds into an increased vulnerability to dehydration, malnutrition and diarrhoea.
- More likely to go into early labour in the week following a heatwave.

British Red Cross. 2021. 'Feeling the heat: a British Red Cross briefing on heatwaves in the UK.' [Online]. Available at: British Red Cross report on heatwaves in the UK
British Red Cross. 2021. *'The Humanitarian Impact of Extreme Weather and Climate Change in the United Kingdom'. Available: https://brcsbrms-my.sharepoint.com/personal/elladonald_redcross_org_uk/Documents/Documents/Climate%20Adaptation/Heatwaves/Humanitarian%20Impact%20of%20Climate%20Change%201_%20(002).pptx*

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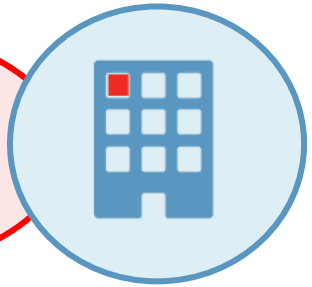
Housing

People **who live alone or who are socially isolated** are less able to access help, especially in an emergency.

People who live on the **top floor of a flat**, in a **south-facing property**, in a **dense urban area**, or in **poor-quality housing** are more vulnerable to heatwaves. **One in five homes in England are prone to overheating**.



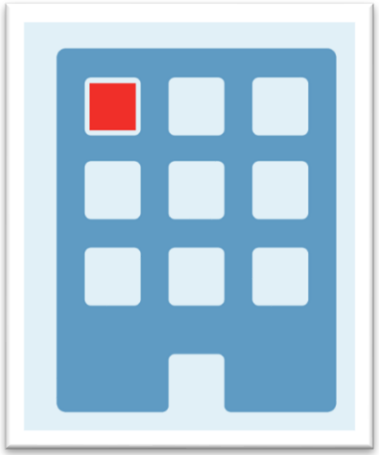
People **who live in care homes** are at risk of severe consequences during heatwaves. Significant mortality in care homes was witnessed in heatwaves in 2020. Concerns have been raised around indoor temperatures getting too high in care homes.

Homeless people are more exposed to the impacts of outdoor extreme heat and usually reside in areas defenceless against environmental hazards.

British Red Cross. 2021. 'Feeling the heat: a British Red Cross briefing on heatwaves in the UK.' [Online]. Available at: British Red Cross report on heatwaves in the UK

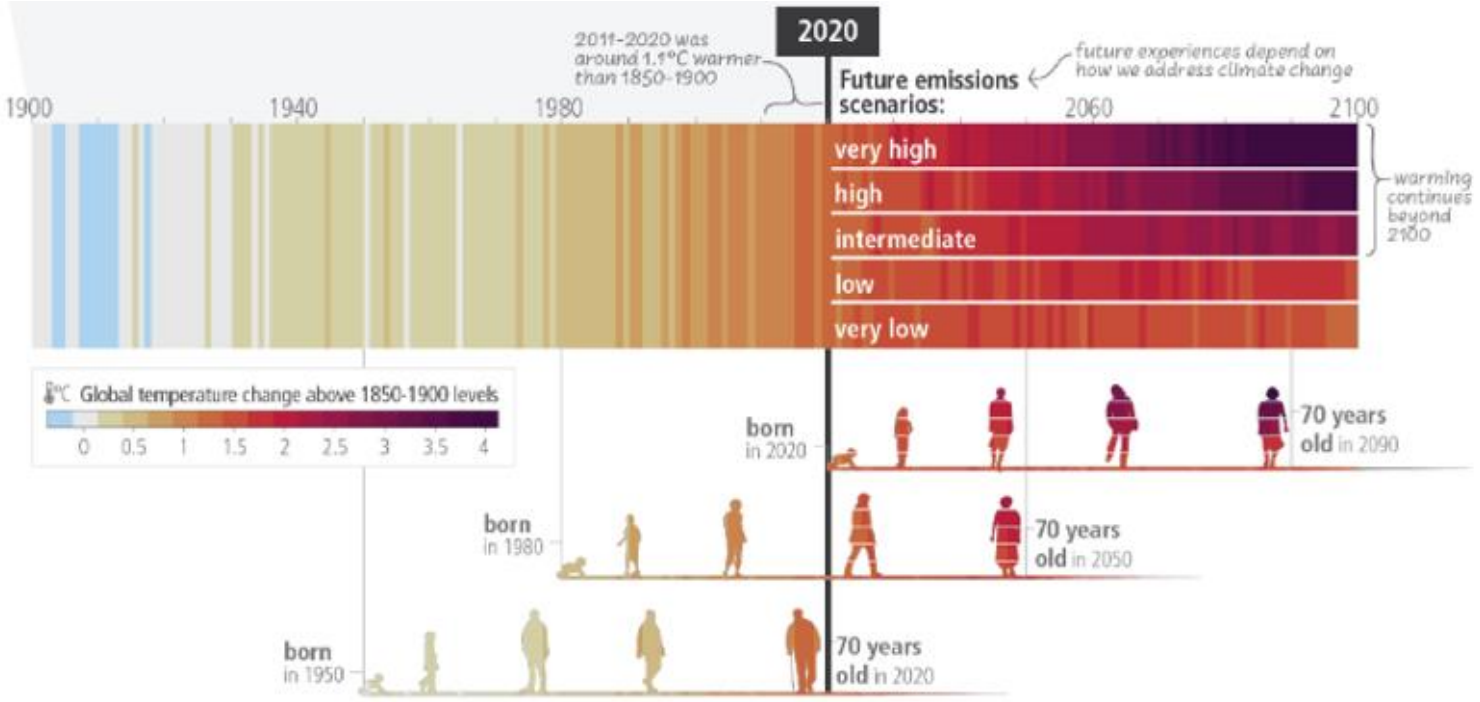
Work Environment

- Outdoor workers, those who work in hot places, and those whose job requires physical exertion or restrictive uniforms are more likely to suffer from heat-related illness.
  - This includes those working in kitchens, security, construction, manufacturing, nursing and the armed forces.
- People who are less able to control their environment or adapt their behaviours will also be particularly vulnerable including people in settings such as schools, care homes or prisons.



Children & Young People

- Health **risks of climate change not distributed equally across generations**. Climate change will happen over near and long-term so will affect different generations differently.
- **Children and young people will experience increasingly severe weather into their retirement, with effects persisting or increasing for their children**. (UKHSA, 2023).
- Researchers estimate that globally, **children born in 2020 will face twice as many wildfires, 2.8 times more crop failures, 2.6 times more droughts, 2.8 times more river floods, and 6.8 times as many heatwaves during their lives than people born in 1960**, negatively affecting their health, welfare and development (NPC, 2023)



What can we do to adapt?

An overview of adaptation examples and case studies

What is climate adaptation?

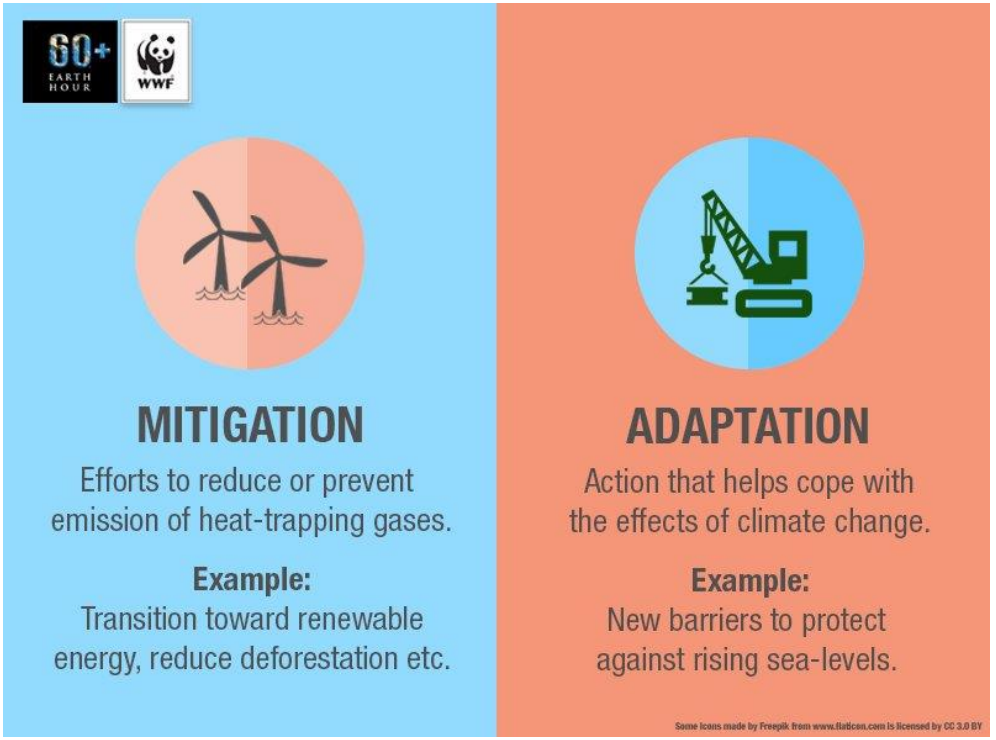
- Adaptation is the adjustment to and preparation for climate change and its impacts, both now and in the future. Adaptation aims to minimise harm, as well as take advantage of any opportunities, associated with a changing climate.

- Example adaptation actions include:
  - Property Level Flood protection
  - Nature Based Solutions
  - Sustainable Urban Drainage systems
  - Air conditioning / Natural Cooling
  - Relocating assets
  - Enhancing adaptive capacity of communities
  - Awareness Raising

Not to be confused with mitigation…

Mitigation - Reducing greenhouse gas emissions in order to slow or stop global climate change, *i.e. using the car less, flying less and buying local food.*

Adaptation - Adjusting to the impacts of climate change to reduce the negative impacts and exploit any opportunities, *i.e. building sea walls or removing carpets from accommodation that is at risk from flooding*.



Source: Adaptation Scotland (2017)

Nature Based Solutions

Actions or policies that harness the power of nature

Tree planting - Trees and woods play a vital role in reducing flooding by slowing down the flow of rainwater, absorbing rainwater and reducing erosion

The Maharees Environment and Community

Sand dune management - works with coastal habitats to provide adaptation to extreme weather and sea-level rise

Property Level Adaptation

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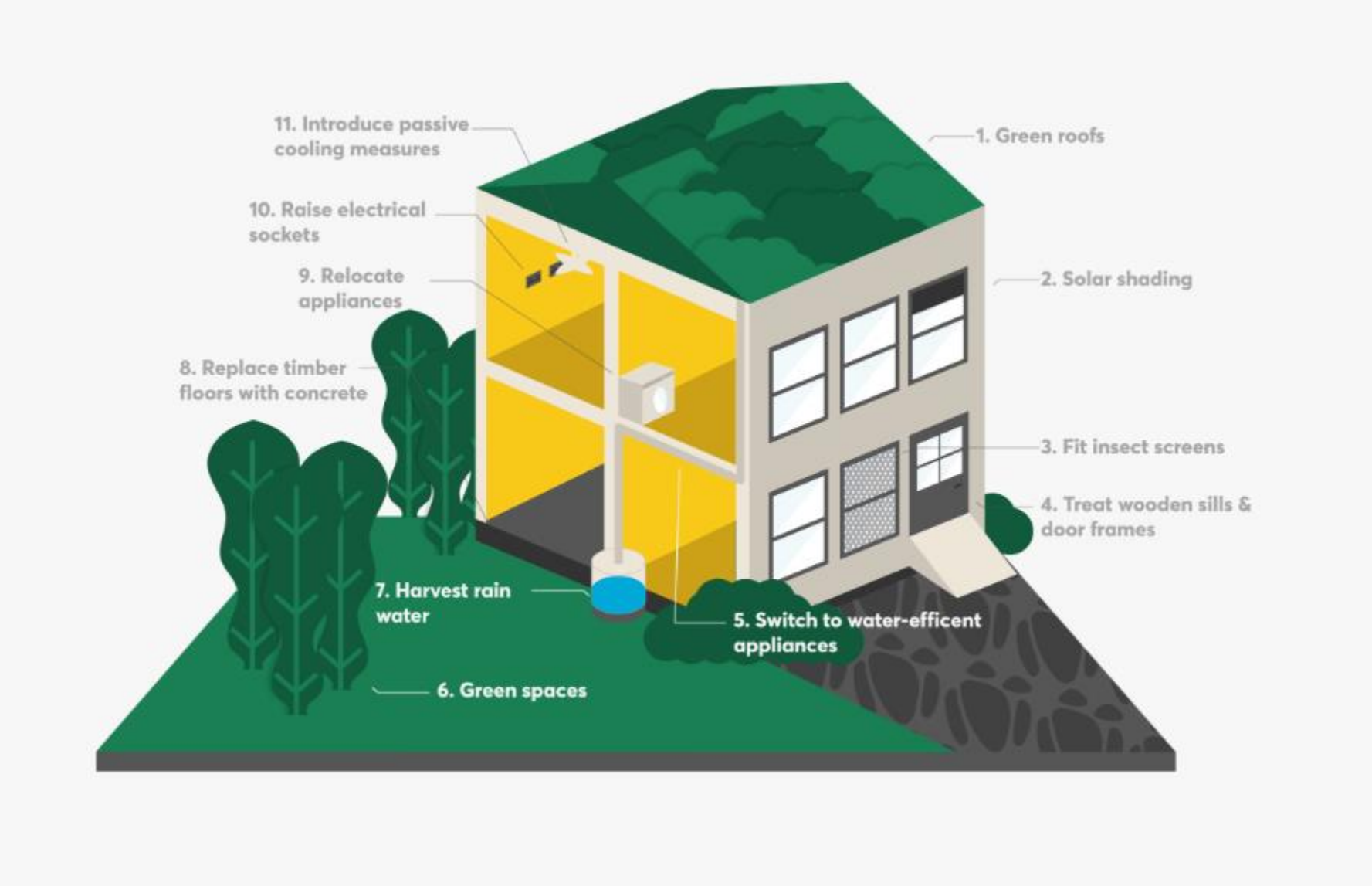

Source:
Hilary's 2023.

Supporting people during extreme temperatures

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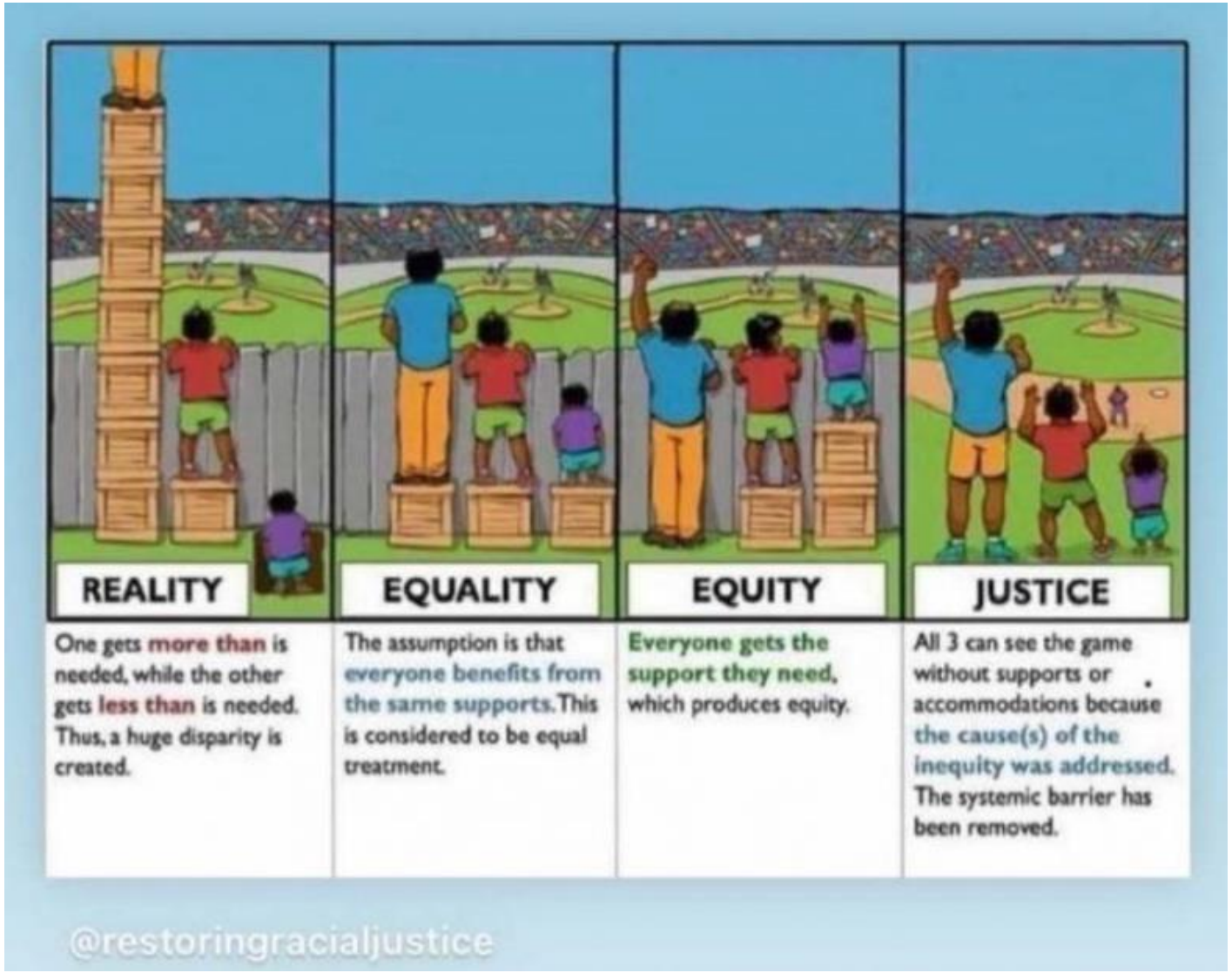
- Pre-emptive care for vulnerable individuals via phone calls and home visits can share information on how to respond and behave during extreme weather.
- **Cooling centres** are public or private spaces such as libraries, museums or parks, which cities set up temporarily to provide cooling shelter for citizens. **Cool routes** are shaded walkways to get to the centres.

Socially Just Adaptation

- Climate change impacts different groups in society differently. These impacts will be unequally distributed across society with the poor and vulnerable often experiencing the largest impacts
- Adaptation actions will need to consider this to be most effective.
  - Targeted to settings where people are most at risk or unable to self-regulate their environment,
  - Addressing risks which are geographically focused would be suitable for targeted messaging and work (e.g. property flood resilience)
- Socially just adaptation responses require, first, an understanding of which groups are most vulnerable to climate change impacts and, second, adaptation to ensure the needs of these groups are met.
- Social issues related to adaptation are diverse and contextually specific.



Wrap Up + Close

Recap and next steps

There is an urgent need for climate adaptation action in the UK

N1 Risks to terrestrial species and habitats	N2 Risks to terrestrial species and habitats from pests, pathogens and INNS	N4 Risk to soils from changing conditions, including seasonal aridity and wetness	N5 Risks to natural carbon stores and sequestration from changing conditions	N6 Risks to and opportunities
N7 Risks to agriculture from pests, pathogens and INNS	N8 Risks to forestry from pests, pathogens and INNS	N11 Risks to freshwater species and habitats	N12 Risks to freshwater species and habitats from pests, pathogens and INNS	
N16 Risks to marine species and habitats from pests, pathogens and INNS	N17 Risks and opportunities to coastal species and habitats	I1 Risks to infrastructure networks from cascading failures	I2 Risks to infrastructure services from river and surface water flooding	
I8 Risks to public water supplies from reduced water availability	I12 Risks to transport from high and low temperatures, high winds, lightning	H1 Risks to health and wellbeing from high temperatures	H3 Risks to people, communities and buildings from flooding	
H6 Risks and opportunities from summer and winter household energy demand	H8 Risks to health from vector-borne diseases	H11 Risks to cultural heritage	H12 Risks to health and social care delivery	
B1 Risks to business sites from flooding	B2 Risks to business locations and infrastructure from coastal change	B6 Risks to business from disruption to supply chains and distribution networks	ID1 Risks to UK food availability, safety, and quality from climate change overseas	
ID4 Risks to the UK from international violent conflict resulting from climate change	ID9 Risk to UK public health from climate change overseas	ID7 Risks from climate change on international trade routes	ID10 Risk multiplication from the interactions and cascades of named risks across systems and geographies	
N9 Opportunities for agricultural and forestry productivity from new species	N10 Risks to aquifers and agricultural land from sea level rise, saltwater intrusion	N15 Opportunities for marine species, habitats and fisheries	N18 Risks and opportunities from climate change to landscape character	
I4 Risks to bridges and pipelines from flooding and erosion	I6 Risks to hydroelectric generation from low or high river flows	I7 Risks to subterranean and surface infrastructure from subsidence	I9 Risks to energy generation from reduced water availability	
I13 Risks to digital from high and low temperatures, high winds, lightning	H2 Opportunities for health and wellbeing from higher temperatures	H5 Risks to building fabric	H7 Risks to health and wellbeing from changes in air quality	
H10 Risks to health from poor water quality and household water supply interruptions	B3 Risks to businesses from water scarcity	B5 Risks to business from reduced employee productivity – infrastructure disruption and higher temperatures	B7 Opportunities for business - changing demand for goods and services	
I11 Risks to offshore infrastructure from storms and high waves	B4 Risks to finance, investment, insurance, access to capital	ID8 Risk to the UK finance sector from climate change overseas	ID2 Opportunities for UK food availability and exports	
ID6 Opportunities (including Arctic ice melt) on international trade routes				

More Action Needed

Further Investigation

Sustain Current Action, Watching Brief

Risks and opportunities grouped by UK-wide urgency score. Only seven of the risks being addressed via action. Source: CCC (2021).

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Climate crisis

UK 'strikingly unprepared' for impacts of climate crisis

Government's official advisers point to 'lost decade' in efforts to protect lives and livelihoods

Damian Carrington
Environment editor
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UK struggling to keep pace with climate change impacts

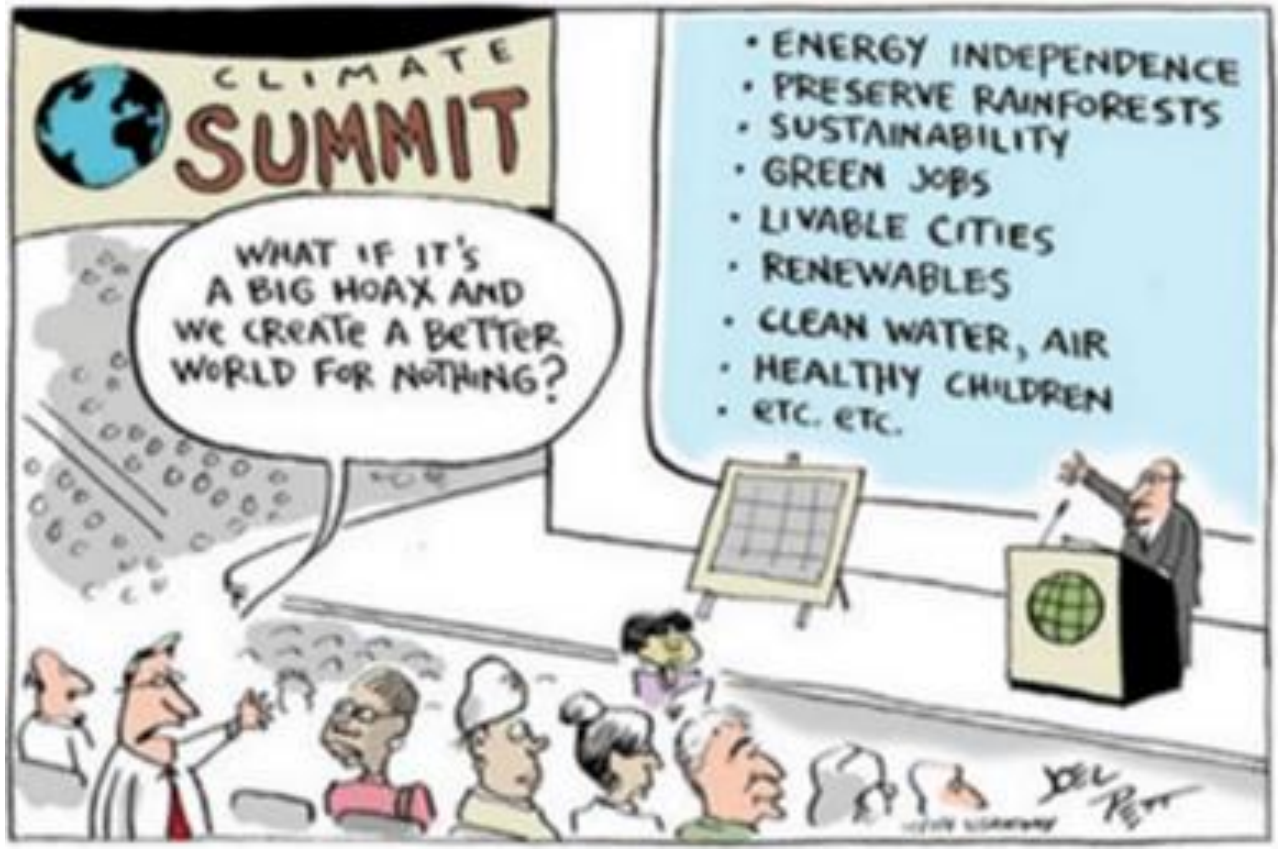
Action to improve the nation's resilience is failing to keep pace with the impacts of a warming planet and increasing climate risks facing the UK. That is the conclusion of a comprehensive independent assessment led by the Climate Change Committee (CCC) which considered a catalogue of risks and opportunities affecting every aspect of life in the UK.

The UK is experiencing widespread changes in the climate; average land temperature has risen by around 1.2°C from pre-industrial levels, UK sea levels have risen by 16cm since 1900 and episodes of extreme heat are becoming more frequent. Since the CCC's last assessment 5 years ago, over 570,000 new homes have been built that are not resilient to future high temperatures and since 2018 over 4,000 heat-related deaths have been recorded in England.

People, nature, and infrastructure are already vulnerable to a range of climate impacts today and these will only increase in the coming years as the climate continues to change. The longer action to address these risks is delayed, the higher the costs the Government and the UK public will face. Leadership from the UK Government and Governments in Wales, Scotland and Northern Ireland must result in increasing efforts to adapt to climate change to ensure that societal, economic, and

There are benefits in adapting early

- It protects the most vulnerable
- Adaptation makes financial sense
- Climate adaptation (if done right) can create better places and stronger communities



Recap

1. No more ‘maybe’. It’s a fact. It’s us, and it’s bad
2. Impacts are already being felt – everywhere
3. It will get worse
4. We can, and must, get ready for our changing climate through adaptation
5. There are multiple benefits of climate change adaptation

*Climate Centre IPCC Briefing 2022