Health and wellbeing impacts of climate change

Climate change means that extreme weather, flooding and heatwave events are likely to occur more often in Wales

Climate change affects all parts of Wales. Some examples of health impacts for specific groups are shown below

Climate change is happening in Wales

- **Extreme weather and flooding**
  - Disruption to education, outdoor sport and play
  - Displacement from their homes, friends and community
  - Stress and anxiety for themselves and their families

- **Mental wellbeing**
  - Anxiety about how climate change will impact their future

- **Air quality**
  - More susceptible to poor air quality and wildfire smoke

- **Positives**
  - Have a positive role in reducing carbon emissions and adaptation to climate change
  - Can be positive agents of change
  - Practical and creative ideas to help communities recover from disasters

Climate change affects us all

- **Older adults**
  - Higher risk of heat related illness
  - Social isolation may increase during heat waves

- **Increased heat**
  - Higher risk of heat related illness and mortality

- **Air quality**
  - Older adults are more susceptible to poor air quality and wildfire smoke

- **Positives**
  - Warmer winters are projected to decrease cold related deaths

- **Children and young people**
  - Higher risk of heat related illness

- **Increased heat**
  - Disruption to access to health, social care and support services
  - Displacement from their home and support networks
  - More vulnerable in emergency situations such as flooding
  - Increase in mental distress

- **Positives**
  - Have a positive role in reducing carbon emissions and adaptation to climate change
  - Can be positive agents of change
  - Practical and creative ideas to help communities recover from disasters

- **People with disabilities and long-term health conditions**
  - Negative impacts on some conditions such as mental health problems, cardiovascular and respiratory disease, and diabetes
  - Some medications can increase vulnerability to heat related illness
  - Social isolation
  - Sleep disturbance

- **Air quality**
  - Those with respiratory conditions are more susceptible to poor air quality and wildfire smoke

- **Positives**
  - Have a positive role in reducing carbon emissions and adaptation to climate change
  - Can be positive agents of change
  - Practical and creative ideas to help communities recover from disasters

- **People on low income**
  - Air pollutant concentrations are currently higher in areas of socioeconomic disadvantage
  - Less resources to prepare, respond and recover from floods or other extreme weather

- **Food and nutrition**
  - Potential for increase in food costs

- **Positives**
  - Potential in the long term for reduced heating costs

- **Increased heat**
  - Disruption to access to health, social care and support services
  - Displacement from their home and support networks
  - More vulnerable in emergency situations such as flooding

By the 2050s in Wales:

- Annual temperatures are projected to rise by 1.2°C
- Summer rainfall is expected to decrease by around 15%
- Winter rainfall is projected to rise by 6%
- Sea level is projected to rise by 22 cm


Health and wellbeing impacts of increased heat

The 2021 Independent Assessment of UK Climate Risk says:
• Heat risk in homes and buildings is a top priority for action in the next 2 years
• More action is needed to address risks to human health, wellbeing and productivity

Cross sector action is needed

We need to plan and adapt

Schools and other educational settings:
• Heat related illness
• Loss of concentration
• Reduced ability to learn

Workplaces:
• Heat related illness
• Reduced productivity
• Decreased safety

Homes:
• Heat related illness
• Sleep disturbance
• Potential long term reduced heating costs

Hospitals and care homes:
• Thermal discomfort of patients/residents and staff
• Heat related illness of patients/residents and staff
• Sleep disturbance
• Negative impacts on conditions such as mental health problems, cardiovascular and respiratory diseases
• Failure of equipment and IT systems
• Disruption to laboratory equipment
• Damage to medicines

Factors affecting heat in buildings include:
• Building design and materials
• Type of building
• Location and positioning
• Room occupancy levels
• IT and electrical equipment generating heat
• Insulation
• Ventilation
• Outdoor shade
• Type of activities

Factors affecting heat in buildings include:

More action is needed across sectors to plan for increased heat:
• New schools, homes, hospitals and care settings need to be designed to prevent health impacts from increased heat
• There is a need to increase incentives for retrofitting existing homes
• Well planned tree planting can provide shade to reduce exposure to heat in urban areas, care settings, homes, schools, and playgrounds

Extreme Weather Advice
• Public Health Wales Environmental Health Protection Team provide extreme weather advice for the public and organisations across Wales on how to protect health during extreme weather, heatwaves and flooding. Find out more at: Extreme Weather Events - Public Health Wales (nhs.wales)

Climate change impacts on access to healthy food

A healthy, nutritious diet is essential for:
- Healthy growth and development in children
- Good physical and mental health and wellbeing
- Preventing obesity, cardiovascular disease and cancer

Food is essential for life

Healthy eating is already a public health priority in Wales because:
- 61% of adults are overweight or obese
- 27% of children aged 4 to 5 years are overweight or obese
- 25% of people eat the recommended five portions of fruit or vegetables a day

Poverty and the cost of food were already barriers to a healthy diet in Wales before 2020:
- 10% of households had low or very low food security and another 10% had weak food security
- Families with children under 16 were less likely to have high food security
- Low income families would have needed to spend 42% of their after-housing income on food to meet the costs of healthy eating guidelines

Changes to how we eat can promote health and help the planet:
- Eating less meat and dairy products
- Eating more fruit, vegetables and legumes
- Cutting down on food waste

Our planet is essential for food

Climate change is likely to impact on access to healthy food in Wales in a number of ways:
- Extreme weather can disrupt food production and supply in the UK and internationally, leading to food price spikes in the UK
- Increased risk of pests, invasive species and diseases impact on crop yields and livestock health
- Poorer soil quality and less water impact on crop yields
- Higher water temperatures and ocean acidification impact on the availability of fish

More action is needed to develop resilient food systems to protect health in Wales in response to climate change

- More investigation and improved data are needed to plan for present and future climate risks to food systems to ensure vulnerable groups are protected and the impacts to health are minimised.
- Food security for health and wellbeing can only be achieved by a wide range of sectors including health, environment, government, civil society, farmers, trade and food producers / retailers working together.

Nature supports our health and wellbeing

**Physical wellbeing**
Keeping active in green and natural spaces like beaches, forests, parks and the countryside by walking, running, cycling, conservation work and playing

- **Health outcomes:**
  - General physical health
  - Cardiovascular health
  - Healthier immune systems
  - Healthier weight
  - Mental wellbeing

**Mental wellbeing**
Peaceful places; keeping active; taking notice of nature; feeling connected to nature; appreciating beauty

- **Health outcomes of access to green and natural spaces:**
  - For children and young people:
    - Better emotional wellbeing
    - Reduced stress and hyperactivity
    - Improved resilience
  - For adults:
    - Lower stress, depression and anxiety;
    - Higher positive emotions and mental wellbeing

**Social wellbeing**
Places to meet with others; shared activities and experiences

- **Health outcomes:**
  - Reduce social isolation
  - Sense of belonging
  - Improved mental wellbeing

**Cut down on waste**
Reduce, repair, reuse and recycle

- **Switch to active travel**
  Walk or cycle for your short distance journeys instead of going by car. All local authorities in Wales are producing active travel maps to help people plan car free journeys

- **Reduce energy use**
  Save money on your bills at the same time as reducing your carbon footprint

- **Support nature and biodiversity**
  Make your garden wildlife friendly

- **Volunteer for a local environmental charity**
  You could be food growing, fundraising, litter picking or conserving nature

- **Work together**
  Find out how communities across Wales are tackling climate change and helping nature together

**Essentials for life**
Clean air | Water | Food

**Taking care of yourself and others**

**Taking care of nature**

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*In the UK, 40% of species are in decline, and 25% of mammals are at risk of extinction*