

Introduction

Part of the Protecting our Health in a Changing
Climate: Health Needs Assessment (HNA)



A collaboration between the Place Making and Knowledge Intelligence and Evidence teams within the Public Health, Communities and Public Safety directorate.

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Introduction

About this Health Needs Assessment:

This ‘Protecting our Health in a Changing Climate: Health Needs Assessment (HNA)’ is a strategic document developed to:

1. Outline and share the evidence for the ways in which the changing climate is already affecting—and will increasingly affect—the health and wellbeing of Suffolk’s population.
2. Inform and enable individuals and communities to make the changes they wish to make to reduce the risks.
3. Support system leaders and decision makers to make informed and evidence-based choices that protect people’s health.

Health Needs Assessments (HNA) provide a structured approach to identifying and prioritising the health issues affecting a population, with the goal of improving health and reducing inequalities. This local HNA was developed in response to the growing understanding across the health system (e.g. the [World Health Organization \(WHO\)](#), [NHS England](#), [British Medical Association](#), [Faculty of Public Health](#), [Royal College of Physicians](#)), that while changes in our climate are often framed primarily as an environmental concern, linked to rising sea levels and extreme weather, these changes carry profound consequences for human health.

This local assessment therefore uses available evidence to set out how changes in weather patterns and environmental conditions are affecting, and are expected to affect, the health and wellbeing of Suffolk residents, both now and in the future. It also aims to increase understanding of how this change will impact health and wellbeing at a local level – within our Suffolk communities. Lastly, and based on the evidence, it will set out recommendations to support our local communities and leaders take action to prioritise the health and wellbeing risks from changes to the climate and environment.

It should be noted that this assessment is based on the best evidence and data available at the time of writing and reflects the current understanding about climate-related health risks in Suffolk. If climate impacts, evidence and local responses change, this Health Needs Assessment can be updated in this online format.

The assessment is structured around local data, national frameworks, and stakeholder input, all of which are referenced. We have purposely provided references to key sources in the form of hyperlinks, as this document is designed to be accessed online. However, if you need any of this information in a different format, please contact: knowledgeandintelligence@suffolk.gov.uk.

A note on language used

In this report terms such as “vulnerable” or “at risk” may occasionally be used to describe groups who face a higher risk of poor outcomes. It is recognised this terminology is not ideal. It can unintentionally imply weakness or blame, which is not the intention. However, many of the data sources, national indicators, and statutory frameworks drawn on still use this wording. Where possible, in this HNA the focus is on the underlying factors—such as exposure to risk, structural barriers, or reduced access to support—that increase the likelihood of harm. When terms such as “vulnerable” or “at risk” appear, it is used only to reflect the language of the evidence base, not to label people or communities.

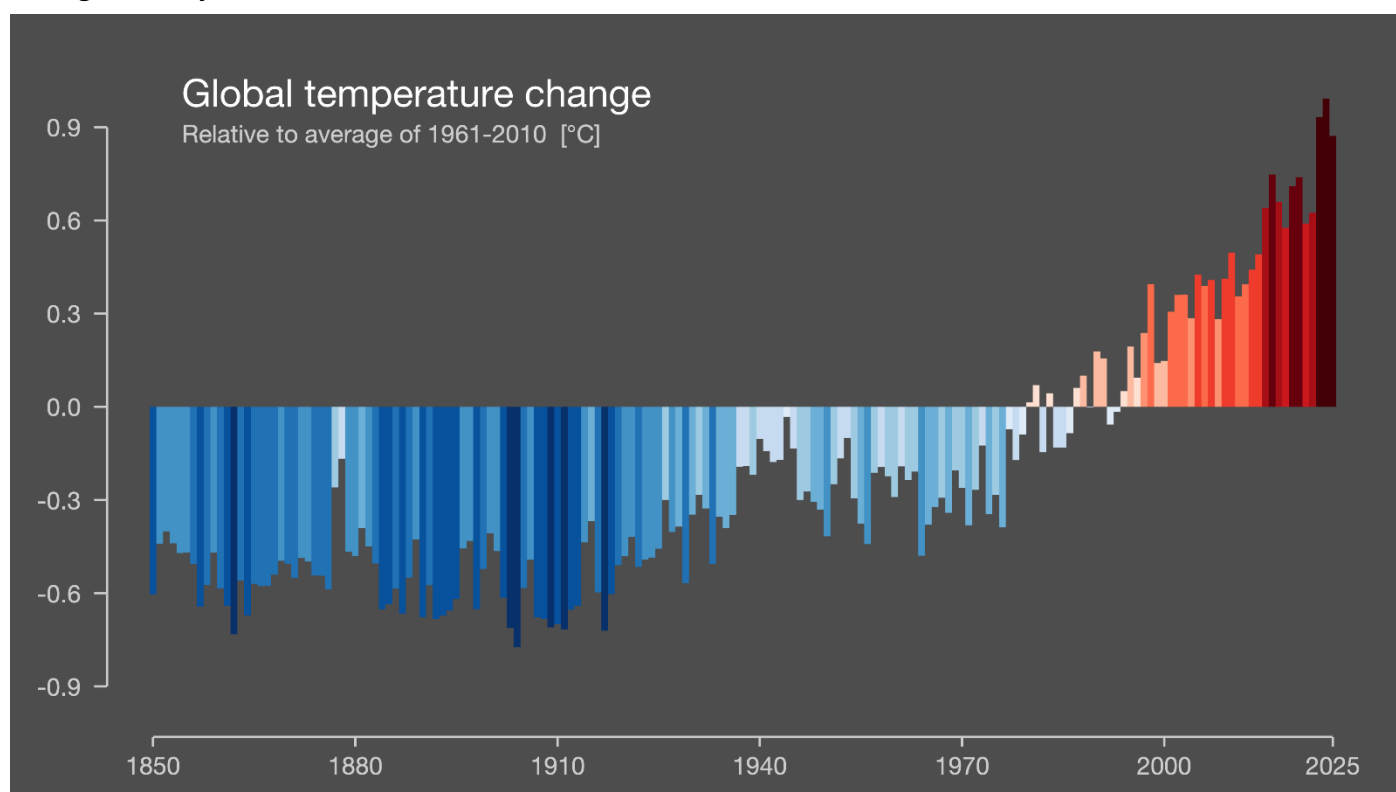


Some of the topics covered in this Health Needs Assessment are complex and may involve technical or specialist terminology. Where possible, we have sought to use clear, accessible language throughout. A glossary of key terms has been published online, to support understanding and ensure consistent use of terminology across the assessment, which can be accessed here: [Suffolk JSNA: Protecting our Health in a Changing Climate](#).

Setting the scene:

The [Met Office](#) defines climate change as a ‘large-scale, long-term shift in the planet’s weather patterns and average temperatures’. Recent global data shows that temperatures continue to rise, with multiple recent years among the warmest on record ([Met Office](#)). This can be seen in figure 1 below, which shows the annual average global temperature from 1850-2025, compared to the average temperature for the period 1961-2010. This warming trend is associated with an increasing likelihood of more frequent and intense extreme weather events ([World Meteorological Organisation](#); [Intergovernmental Panel on Climate Change](#)).

Figure 1: Global temperature change: average annual global temperature from 1850 to 2025, relative to the average for the years 1961-2010

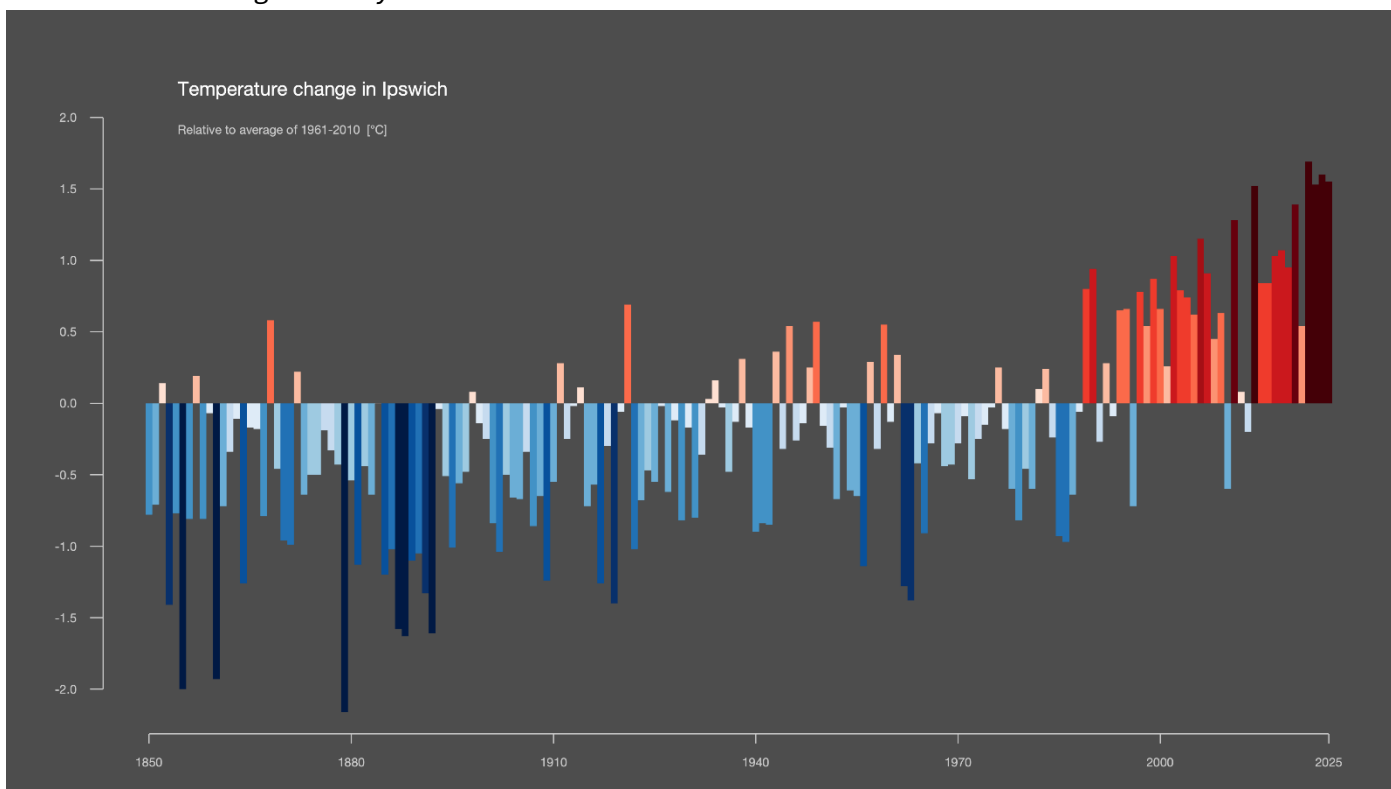


Source: [Hawkins, National Centre for Atmospheric Science, University of Reading](#).

This warming trend is also mirrored in the UK, and in Suffolk, where changes in temperature patterns are already being observed. These changes have direct implications for Suffolk’s natural environment, local services, and communities. Figure 2 below shows the change in the annual average temperature for Ipswich (a graph covering all of Suffolk is not currently available), compared to the average temperature for the period 1961-2010.



Figure 2: Warming trend in Ipswich: change in average annual temperature from 1850 to 2025 in Ipswich, relative to the average for the years 1961-2010



Source: [Hawkins, National Centre for Atmospheric Science, University of Reading](#).

As temperatures continue to rise, the UK is expected to see warmer and wetter winters, hotter and drier summers, and more frequent and intense extreme weather events such as flooding, drought, wildfires and storms ([Met Office](#)), with implications for homes, businesses, infrastructure, and farmland. These changes are already being observed, with the [Met Office](#) reporting that record-breaking weather events have become a regular feature of the UK climate.

Four of the UK's last five years (2022, 2023, 2024, and 2025) were among the UK's five warmest on record: 2025 not only brought the warmest summer on record but was also the warmest and sunniest year to date, breaking the previous record set in 2022 ([Met Office](#)). During the heatwaves of summer 2022, the UK experienced its highest daily temperature recorded to date of 40.3°C, in Coningsby, Lincolnshire ([Met Office](#)). UK wildfires were also six times more likely during 2022 ([Met Office](#)).

More recently, 2026 has continued this trend. The UK recorded its highest May temperature on record of 35.1°C ([Met Office](#)). England recorded its highest June temperature on record of 38.0°C in Lingwood, Norfolk – surpassing the previous June record set in the notable 1976 heatwave ([Met Office](#)). Provisional records show that June 2026 was England's warmest June on record, with East Anglia experiencing the highest average temperatures of any UK region: 3.2°C above average ([Met Office](#)). The trend continued throughout the summer, with provisional data indicating that summer 2026 was the hottest summer on record for the UK, exceeding the previous record set in 2025 ([Met Office](#)).



Implications of a changing climate for public health:

There is significant evidence which demonstrates that the climate is changing, and that further change is already unavoidable in the future. Strengthening resilience and preparedness across homes, infrastructure, public services, and health and care systems is widely recognised as essential to manage current and future climate-related risks and protect population health ([WHO](#)). Within this context, public health and partner organisations in Suffolk have a role in understanding climate-related health risks and ensuring these are reflected in planning, service design, and longer-term decision-making. This includes identifying where practical, evidence-based action can help protect residents, support services, and strengthen local preparedness.

How we identify the health impacts of a changing climate:

To help describe and prioritise health needs in this Health Needs Assessment, climate-related health impacts are grouped into direct or indirect effects. This distinction reflects the different ways that changes to our weather and climate impact individuals, services, and systems. According to the [World Health Organization](#) (WHO), these extreme weather events have a range of direct and indirect impacts on human health.

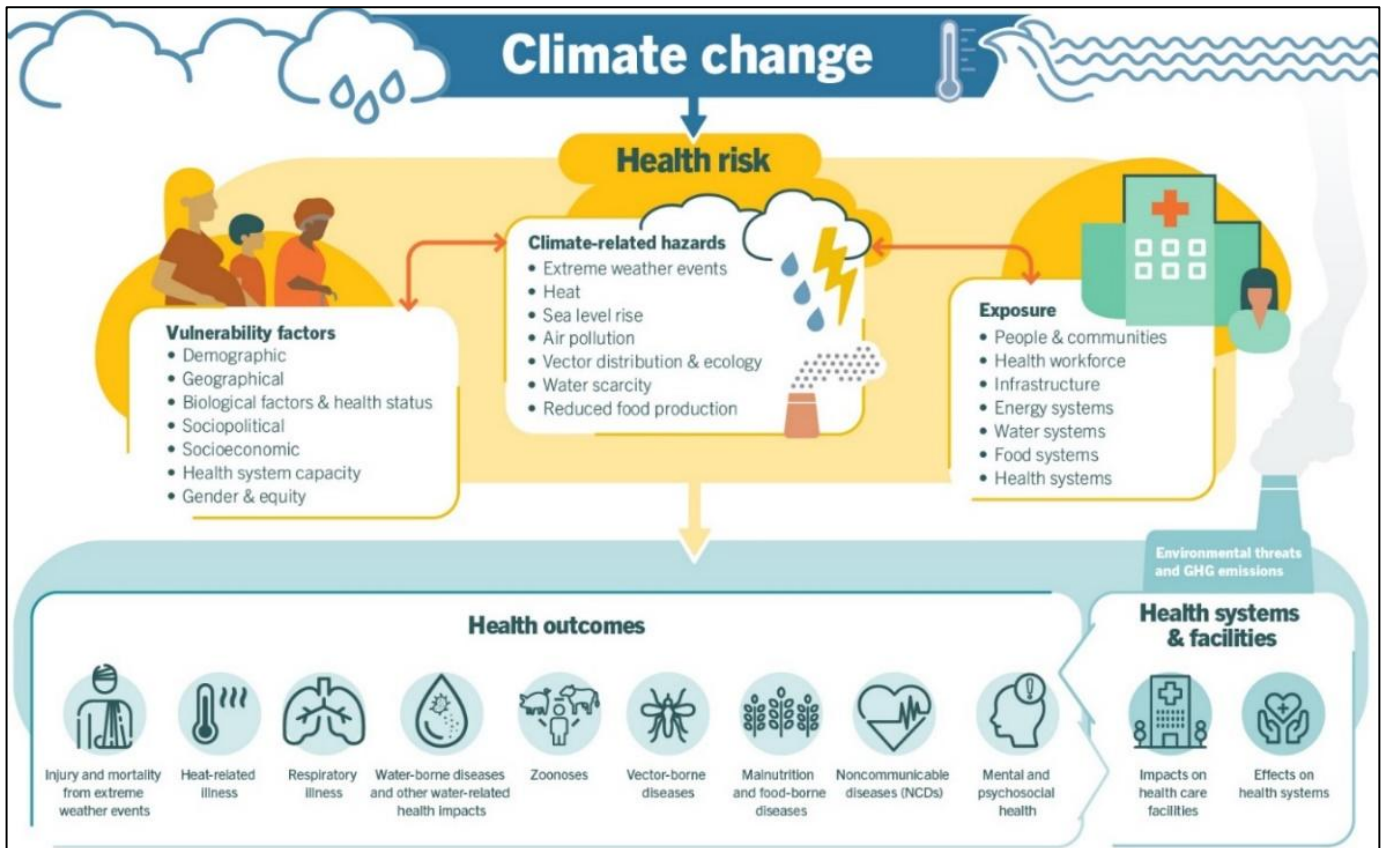
Direct health impacts are immediate illnesses or injuries caused directly by exposure to a climate risk or weather event – for example, increased prevalence of heat-related illness (heatstroke) during extreme heat.

Indirect health impacts occur as a consequence of a weather event or exposure to a climate risk, rather than from the hazard itself. For example, changes in local climate may alter the spread of infectious vector- and water-borne diseases, and increase the prevalence of non-communicable diseases, such as respiratory disease, through worsening air quality. Indirect effects can also arise from wider impacts on society and the environment, including food and water shortages, rising costs, supply chain disruption, and pressure on healthcare facilities and services.

Climate-related hazards can also affect mental health. Exposure to heat, flooding, drought, and wildfires can be associated with impacts such as anxiety, depression, and post-traumatic stress. Mental health can also be affected indirectly through trauma, displacement from homes, and disruption to livelihoods, relationships, and community support networks ([UKHSA](#)). Figure 3 below shows how climate risks can have direct and indirect impacts on health, and can be mediated by environmental, social, and public health determinants.



Figure 3: How climate risks directly and indirectly impact health and are mediated by vulnerability factors



Source: [WHO \(2023\); Climate Change impacts on health](#)

Health inequalities – who is most at risk:

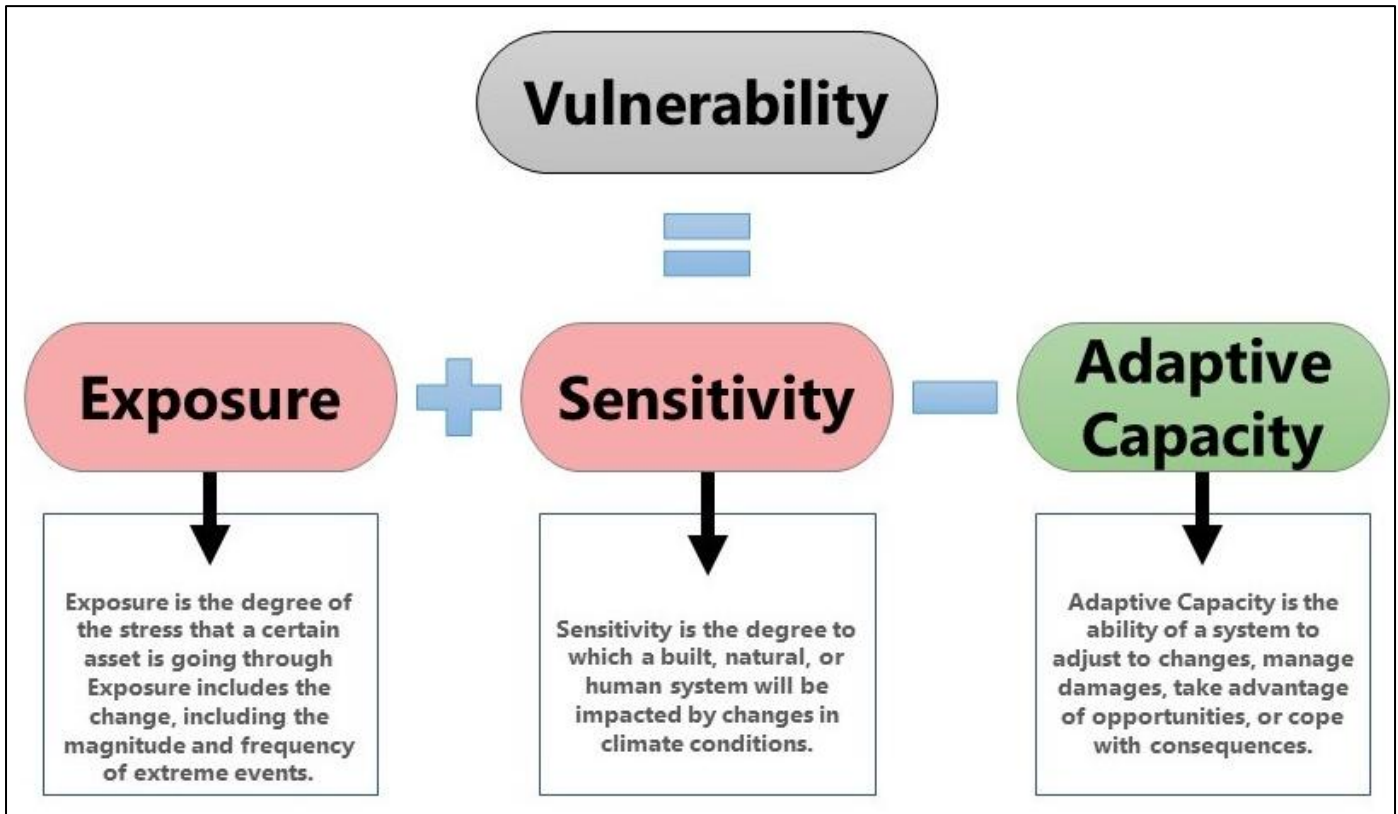
The extent to which an individual or a community is affected by different climate risks – and the extent to which they will impact their health – will depend on their relative levels of exposure and sensitivity, and the degree to which they are able to adapt to our changing climate ([UKHSA](#)).

These impacts will not be experienced equally across population groups or places. Many of these differences are shaped by wider factors such as income, housing, and environment. Where these are systematic, unfair, and avoidable, these are described as health inequalities. In the context of a changing climate, this means that those most exposed, most sensitive, and least able to adapt (often those already facing disadvantage), will be the most vulnerable to the health impacts. Climate risks can overlap with different sensitivity factors, which can lead to cumulative impacts in individuals and communities ([WHO](#)).

Figure 4 below illustrates how exposure, sensitivity, and adaptive capacity (ability to adapt) can interact to determine the extent of vulnerability to a changing climate, and how these changes are likely to exacerbate health inequalities ([WHO](#)). In this context, an asset can mean a person, household, community, service, building, or infrastructure that may be exposed to climate-related risks. A system refers to the natural, built, social, or organisational structures that support communities, such as healthcare services or transport networks.



Figure 4: Climate vulnerability can be calculated as exposure plus sensitivity, minus adaptive capacity



Source: [Connecticut Institute for Resilience and Climate Adaptation](#)

For example, a person may be more exposed to heat during a heatwave if they live in a home with poor ventilation. If that individual is older (aged 65 years or over), they are also more likely to be sensitive to the health effects of prolonged exposure to heat, and this sensitivity is further intensified if they have a pre-existing health condition such as cardiovascular disease. When exposure and sensitivity are combined with a limited ability to adapt, for example, by being unable to cool their home during a heatwave, their vulnerability is increased even further.

As a result, some groups may be disproportionately affected by climate-related health risks, including women, children, ethnic minorities, people experiencing poverty, displaced persons, older populations, and those with existing underlying health conditions ([WHO](#)).

However, while these groups are often highlighted as more at risk, the degree of impact varies with the specific climate hazard, local context, and the interplay of exposure, sensitivity, and adaptive capacity at an individual level. In other words, vulnerability is dynamic and risk-specific—something that will be explored further in the following chapters.

The impact of these risks is also important to Suffolk residents. Recent public engagement for this needs assessment found that around two thirds (67%) of Suffolk residents who took part were concerned about the effects that climate hazards will have on their health or the health of someone they know, either now or in the future. Full analysis of our public engagement is included in this Health Needs Assessment.



Key risks associated with a changing climate in Suffolk:

Different climate risks will impact different people in different ways. The following sections of this HNA consider the key climate risks predicted to affect Suffolk, who will be most affected and how, and what can be done to minimise these health impacts.

[The UK Health Security Agency's fourth Health Effects of Climate Change report](#) highlights that while impacts are wide-ranging, evidence is currently strongest around the health impacts of temperature (heat and cold), water (flooding), and vector-borne disease, along with emerging risks around food security, wildfires, drought, and solar radiation (sun exposure).

Additionally, the [Local Climate Adaptation Tool](#) reports that Suffolk's key climate hazards are heatwaves, wildfires, air quality, flooding, and coastal erosion.

Suffolk's location and geography mean it is particularly at risk from these climate hazards, compared to other areas of the country. One fifth of the East Anglian region is below sea level, and Suffolk contains some of the fastest eroding coastline in Europe ([UK Parliament](#)), making coastal and low-lying areas in Suffolk particularly susceptible to coastal erosion and flooding. Suffolk is also located in a region at relatively higher risk of drought and heatwaves compared to the rest of the country ([Essex and Suffolk Water](#)), which may also increase the likelihood of wildfires, worsening air quality, and water scarcity.

These geographic and environmental risks may also have greater population health impacts in Suffolk, because the county's population is comparatively older than England, and is getting older. Currently almost one in four people in Suffolk are aged 65 years and over, and this is predicted to increase to one in three in 20 years' time ([Suffolk in 20 years](#)). This means that Suffolk has a higher proportion of residents who are likely to be more sensitive to climate hazards, both now and in the future.

Structure of this Health Needs Assessment:

This HNA will therefore consider how each of these key factors could affect Suffolk and its residents' health and wellbeing. It will also look at ways to reduce, prepare for, and manage the impacts of these identified risks.

It is structured into chapters related to the following climate risks:

- 1. Introduction:** setting the context of this HNA (*this document*).
- 2. Executive summary and recommendations:** summarises findings across all climate risks and sets out recommendations for tackling the identified health impacts in order to improve wellbeing outcomes for communities and reduce health inequalities in Suffolk.
- 3. Temperature:** how extreme heat and cold is likely to increase risks of temperature-related illness and mortality in Suffolk.
- 4. Air quality:** how air pollution worsens respiratory and cardiovascular conditions, and how a changing climate is likely to impact Suffolk's air quality in the future.
- 5. Water:** how flooding, drought, water contamination, and coastal erosion are likely to increase the risk of physical and mental health impacts.
- 6. Disease:** how changing climates can influence the spread of infectious diseases, including food-borne, water-borne, and vector-borne infections, and how these changes may affect risk of existing diseases (e.g. Lyme disease) and support the emergence or spread of diseases previously uncommon in the UK.



7. **Food:** how food supply, security and affordability are likely to be affected by changing climates in the UK, increasing the risk of malnutrition and diet-related health inequalities.
8. **Nature:** how access to green and blue space is essential for health and wellbeing, and how nature-based solutions are essential to mitigating and adapting to many climate risks – for example, to reduce heat, improve air quality, manage water, and to support biodiversity.
9. **What do Suffolk residents think about the health impacts of a changing climate:** analysis of a public survey of what Suffolk residents understand about the health impacts of a changing climate.