

Summary of climate risks and opportunities for England

The Independent Assessment used to help inform the third UK Climate Change Risk Assessment (CCRA3) assesses 61 risks and opportunities from climate change to England, including to business, infrastructure, housing, the natural environment, our health and risks from the impacts of climate change internationally. Risks categorised as “More action needed” and “Further investigation” are more urgent than “Watching brief” and “Sustain current action.” Of these 61 risks and opportunities, more action is needed in England now to address 34 of them, with sustaining current action only deemed appropriate in four cases. Of the 61, six issues are deemed to be both a risk and opportunity, four of which are associated with the natural environment and each of these require more action or further investigation. There are also eight opportunities that could arise from climate change in England, with half of these also related to the natural environment.

In total, 23 risks from climate change in England have increased in urgency score since the previous CCRA five years ago; these are summarised at the start of each section of this report. Only one risk has decreased in urgency score since the previous CCRA. There are also some new risks that were not covered in CCRA2.

When compared to the other UK nations, there is increasing evidence that risks from extreme heat are greater in England than elsewhere, especially in the south-east, affecting health, infrastructure and the natural environment. The potential for water scarcity and subsidence also appears to be a greater issue here, again with south-east England being at greatest risk. Flooding (coastal and inland), storms, lightning and high winds also play their part in the present and future climate related risks across the whole of England.

In summary, risks in England that have a high future magnitude score and where more action is required now to address them, after considering any existing adaptation responses, include the following:

- The impacts of climate change on the natural environment, including terrestrial, freshwater, coastal and marine species, forests and agriculture.
- An increase in the range, quantities and consequences of pests, pathogens and invasive species, negatively affecting terrestrial, freshwater and marine priority habitats species, forestry and agriculture.
- The risk of climate change impacts, especially more frequent flooding and coastal erosion, causing damage to our infrastructure services, including energy, transport, water and Information and Communication Technologies (ICT).
- A reduction in public water supplies due to increasing periods of water scarcity.
- The impact of extreme temperatures, high winds and lightning on the transport network.
- The impact of increasing high temperatures on people’s health and wellbeing and changes in household energy demand due to seasonal temperature changes.
- Increased severity and frequency of flooding of homes, communities and businesses.
- The viability of coastal communities and the impact on coastal businesses due to sea level rise, coastal flooding and erosion.
- Disruption to the delivery of health and social care services due to a greater frequency of extreme weather.
- Damage to our cultural heritage assets as a result of temperature, precipitation, groundwater and landscape changes.
- Impacts internationally that may affect the UK, such as risks to food availability, safety and security, risks to international law and governance from climate change that will affect the UK, international trade routes, public health and the multiplication of risks across systems and geographies.

The rest of this report outlines what the risks and opportunities are in England associated with climate change, their urgency scores, the evidence for this and the benefits for further adaptation action in the next five years.