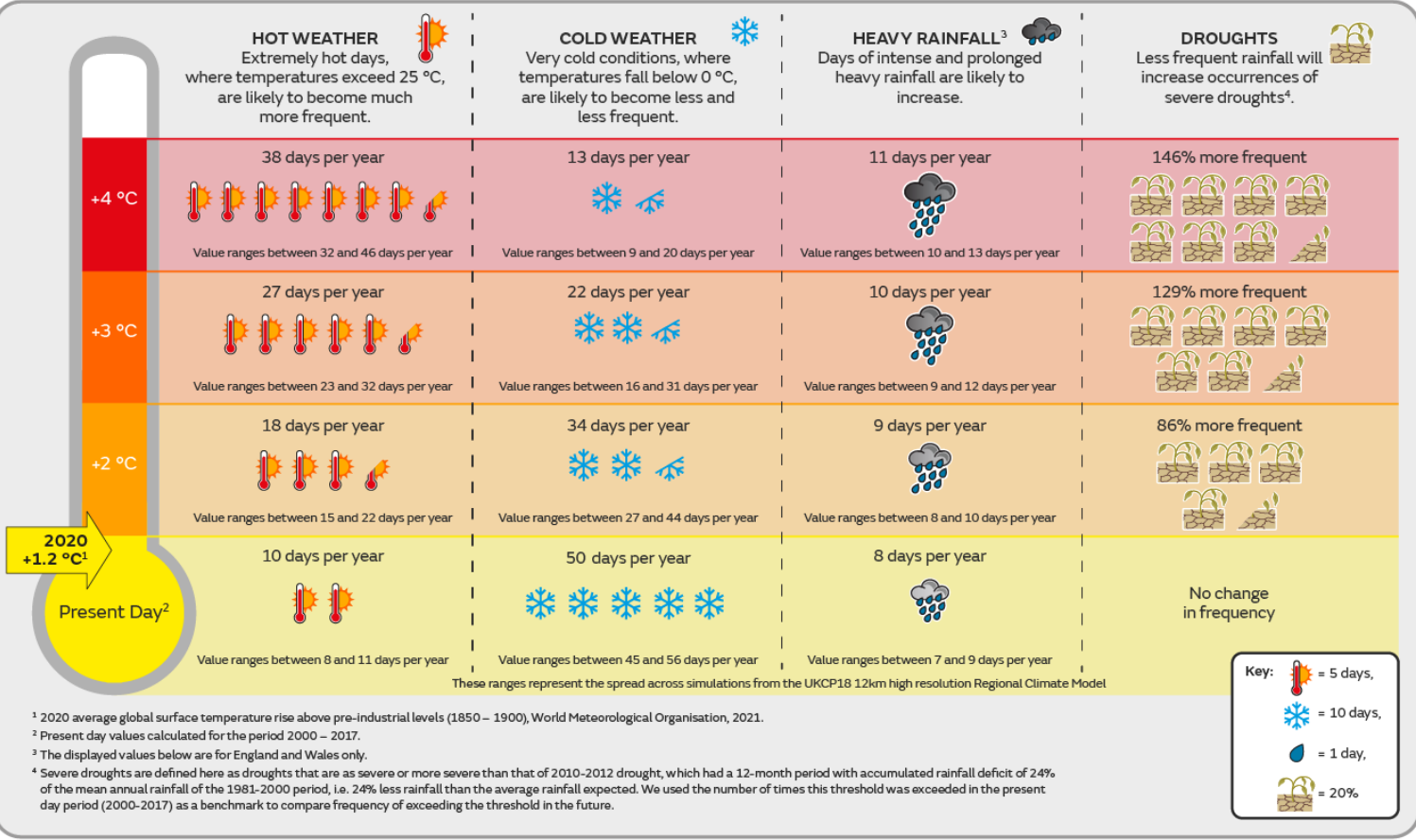


Global warming and future high-impact weather in the UK



¹ 2020 average global surface temperature rise above pre-industrial levels (1850 – 1900), World Meteorological Organisation, 2021.
² Present day values calculated for the period 2000 – 2017.
³ The displayed values below are for England and Wales only.
⁴ Severe droughts are defined here as droughts that are as severe or more severe than that of 2010-2012 drought, which had a 12-month period with accumulated rainfall deficit of 24% of the mean annual rainfall of the 1981-2000 period, i.e. 24% less rainfall than the average rainfall expected. We used the number of times this threshold was exceeded in the present day period (2000-2017) as a benchmark to compare frequency of exceeding the threshold in the future.

IMPACTS

<p>HOT WEATHER</p> <ul style="list-style-type: none"> Health Increased risk of heat-related health conditions and mortality Transport Increase of disruption due to heat e.g. rail buckling Energy demand Increase of summer demand for cooling 	<p>COLD WEATHER</p> <ul style="list-style-type: none"> Energy demand Reduction of winter demand for heating Transport Reduction of cold weather disruptions to road, rail and aviation Health Reduction of cold-related health risks (heart attacks, strokes, lung illnesses, flu and other diseases) 	<p>HEAVY RAINFALL</p> <ul style="list-style-type: none"> Infrastructure Increased risk of building & structural damage from river flooding Transport Increased disruptions and dangerous driving conditions Water Overwhelmed urban drainage systems increase disruption 	<p>DROUGHTS</p> <ul style="list-style-type: none"> Agriculture Uncertain changes to crop growth Water Reduced water availability and risks to supplies Property Increased risk of subsidence
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RESPONSE

MITIGATION
Actions to reduce emissions to curtail warming and severity of climate change impacts

Global temperature rise above pre-industrial period (1850 - 1900) °C

Met Office graph derived from MAGICC data. Lines indicate 50th percentile, not full range, for use for indicative purposes only

ADAPTATION
Measures to reduce vulnerability and increase resilience to the impacts of climate change

Flood protection

Reinforced rail network

Sustainable buildings

Water management