

# UKCP18 CLIMATE CHANGE OVER LAND

## UKCP18 projects greater chance of hotter, drier summers and warmer, wetter winters

This is broadly consistent with UKCP09


### Summer and winter changes by the 2070s

Summer rainfall change	Winter precipitation change	Summer temperature change	Winter temperature change
<b>For a location in central England</b>			
41% drier to 9% wetter	3% drier to 22% wetter	No change to 3.3 °C warmer	-0.1 °C cooler to 2.4 °C warmer
57% drier to 3% wetter	2% drier to 33% wetter	1.1 °C warmer to 5.8 °C warmer	0.7 °C warmer to 4.2 °C warmer
<b>For a location in central Scotland</b>			
30% drier to 6% wetter	4% drier to 9% wetter	-0.1 °C cooler to 2.8°C warmer	-0.3°C cooler to 2.7°C warmer
40% drier to 8% wetter	3% drier to 12% wetter	0.6 °C warmer to 4.8 °C warmer	0.6 °C warmer to 4.5 °C warmer
<b>For a location in central Wales</b>			
39% drier to 3% wetter	2% drier to 19% wetter	No change to 3.3°C warmer	0.1 °C warmer to 2.4 °C warmer
56% drier to 2% wetter	No change to 29% wetter	0.9 °C warmer to 5.9 °C warmer	0.7 °C warmer to 4.1 °C warmer
<b>For a location in central Northern Ireland</b>			
28% drier to 6% wetter	3% drier to 17% wetter	No change to 2.8 °C warmer	0.1 °C warmer to 2.2 °C warmer
38% drier to 3% wetter	2% drier to 25% wetter	0.8 °C warmer to 4.9 °C warmer	0.6 °C warmer to 3.9 °C warmer

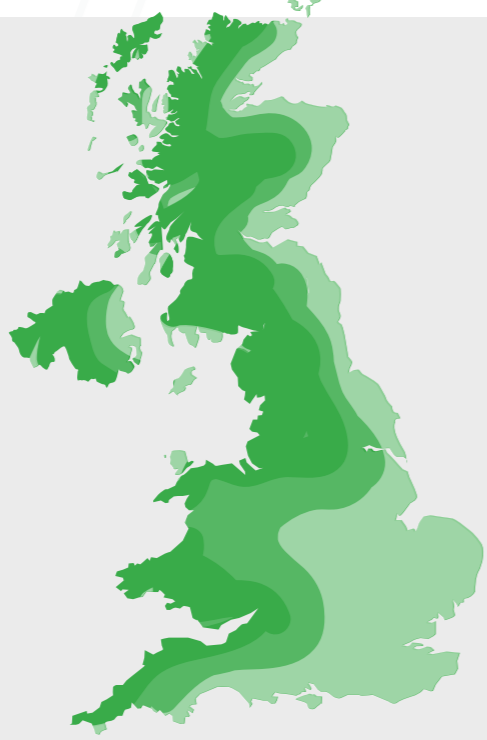
Low emission scenario High emission scenario

\*All results are for the 10th-90th percentile range for the 2060-2079 period relative to 1981-2000

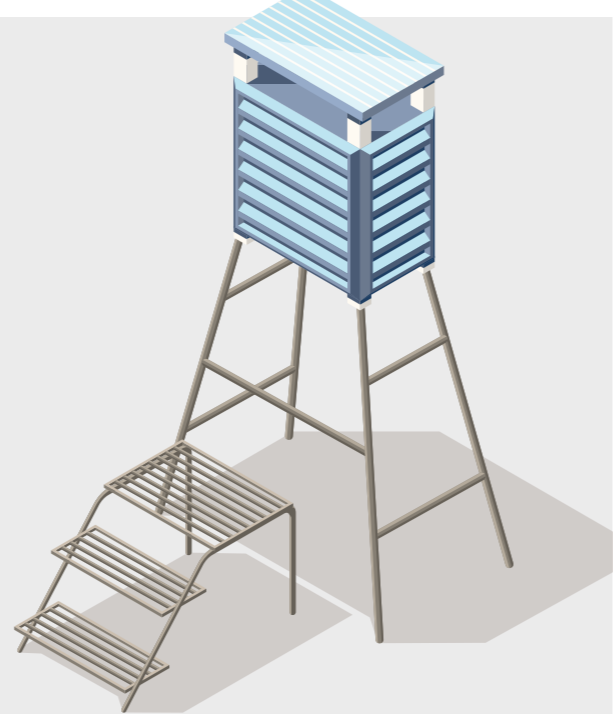
### New advances in UKCP18




State-of-the-art global climate models



Innovative regional climate models



Up to date observational data



Significant user engagement

### Greater chance of summers being hotter than 2018 in future

- In the recent past, the chance of seeing a summer as hot as 2018 was low (<10%)
- By mid-century, hot summers could become common (~50%)
- By the end of the century, if we continue with high greenhouse gas emissions, these hot summers will become even more likely