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Ask for:
Date: 12 March 2019

Dear Member

KENT FLOOD RISK MANAGEMENT COMMITTEE - MONDAY, 11 MARCH 2019

I am now able to enclose the following presentation that was given to the meeting of the Kent Flood Risk Management Committee on Monday, 11 March 2019.

Agenda Item No

4

Climate Change Impacts Forecast (UKPC 18) - Presentation by Mark Rogers, Met Office Advisor Civil Contingencies (Pages 3 - 24)

Yours sincerely

A handwritten signature in black ink, appearing to read 'Ben Watts', is written over a faint, larger version of the same signature.

Benjamin Watts
General Counsel

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Met Office

KCP18

Page 3

What is UKCP18?

The UKCP (UK Climate projections) were launched in 2018. First update since 2009.

The UK's most comprehensive picture of how the climate could change by the end of this century, using the most recent scientific evidence.

Who's involved?

led by DEFRA with the Environment Agency and the Met Office as delivery partners.



Why were they produced?

These climate change projections for the UK help to inform decision-making so adaptations can be made and resilience built.” (UKCP18)

What are they based on?

Page 7
Latest Developments
climate science



State-of-the-art
global climate
models



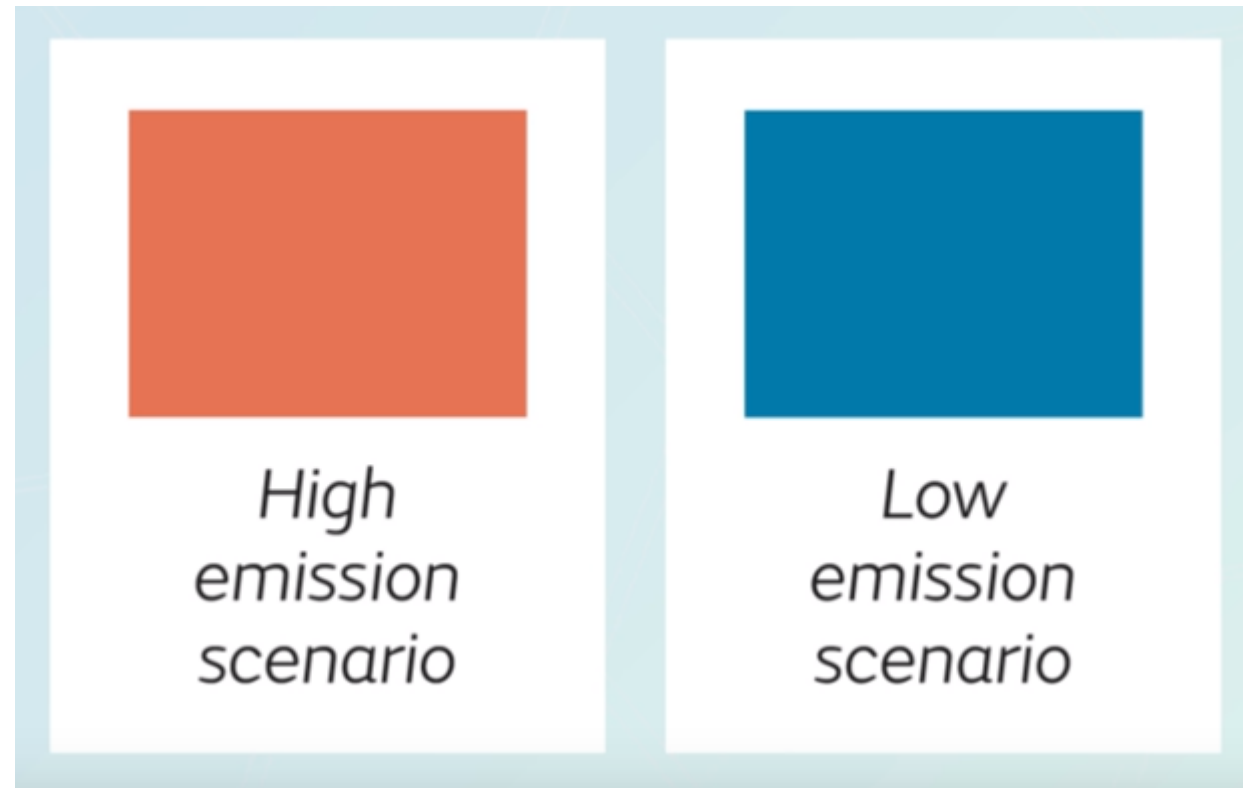
Innovative
regional climate
models



Up to date
observational
data

What are they based on?

Page 8
Different emission scenarios to analyse the climate risk.



Representative Concentration Pathway

Representative Concentration Pathways (RCP) is a greenhouse gas concentration and UKCP18 uses four RCP levels as scenarios:

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RCP2.6 – Compatible with aims to limit global warming since pre-industrial levels to below 2°C

RCP4.5

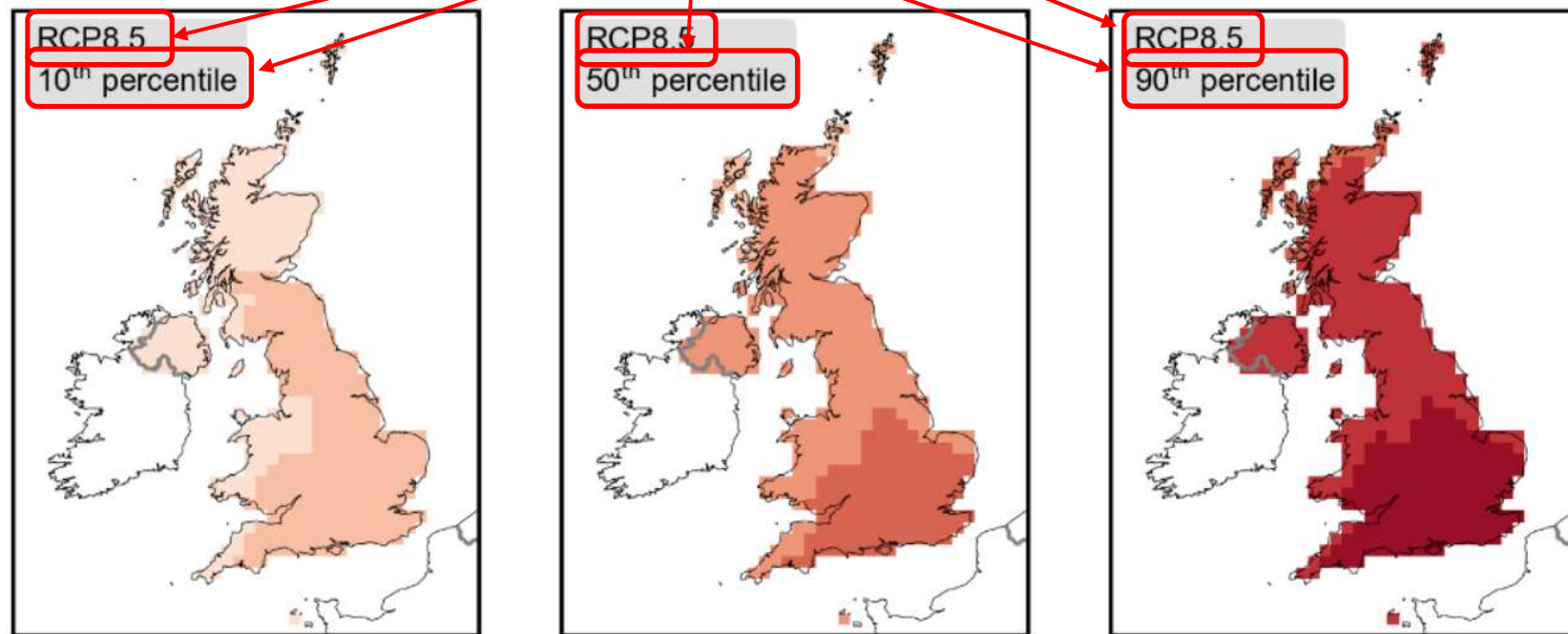
RCP6.0

RCP8.5 – Reasonable worst case scenario

Output and results

Maps explained

The RCP scenario



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Legend



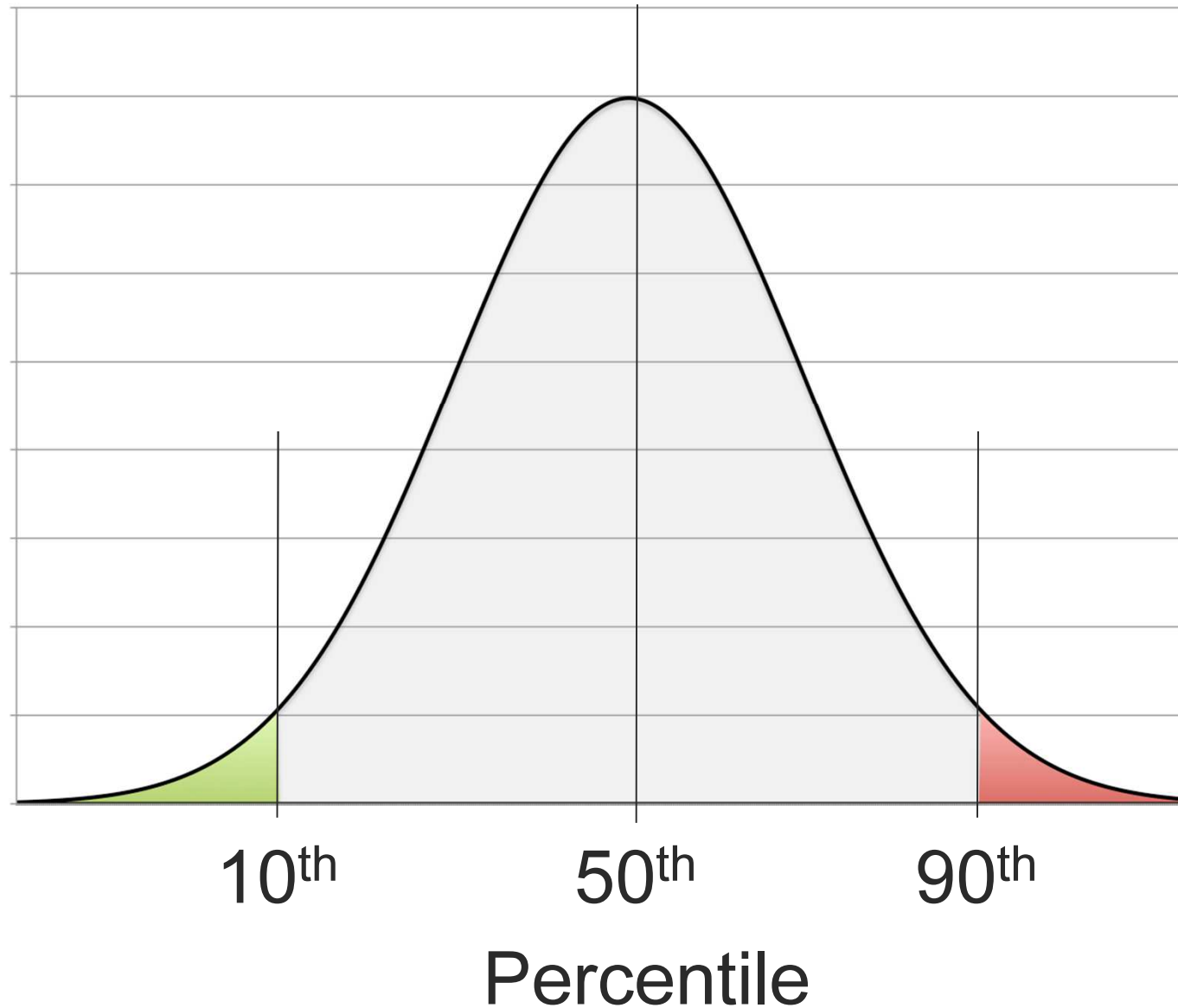
Met Office

Output shown for each CP scenario and 10th, 50th & 90th percentile.

10th percentile means 10% of solutions are all below the lowest provided figure.

50th percentile means that half the solutions are lower and half are higher than the figure given.

90th percentile means 10% of solutions are all above the highest provided figure.



20 year periods

Page 13

2020-2039

2040-2059

2060-2079

2080-2099

Results for these 2 periods will be shown later

Met Office

K-wide

Page 14

K Headlines

Greater frequency of hotter, drier summers across the UK.

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Greater frequency of milder, wetter winters across the UK.

Further rises in sea level around the UK coastline.

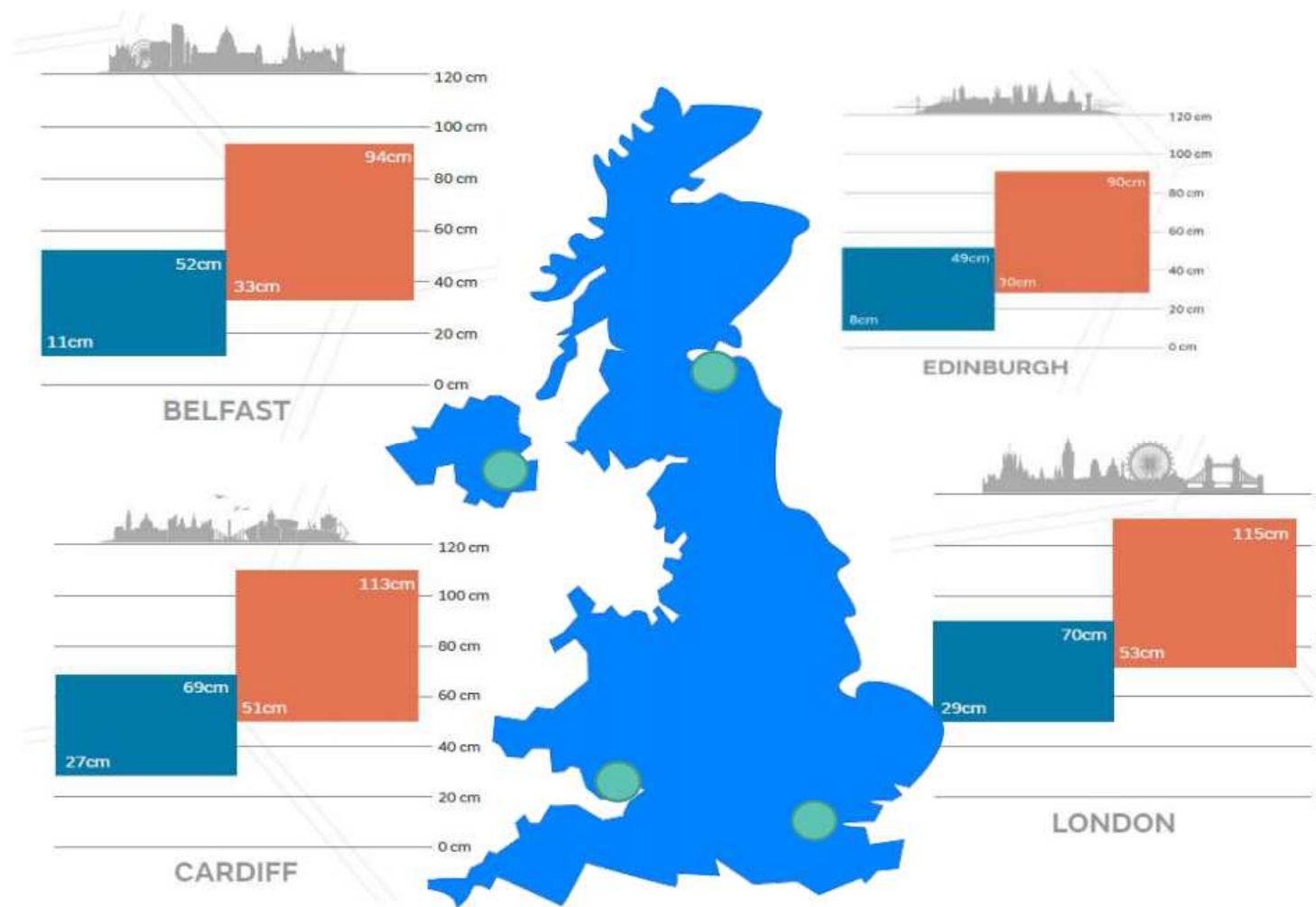
Sea-level rise

Page 16

Increase will generally be greater in the south than in the north

■ Range in low emission scenario ■ Range in high emission scenario

(by 2100 relative to 1981-2000)



Met Office

E England Results

(Compared to 1981-2000 Long Term Averages)

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Met Office

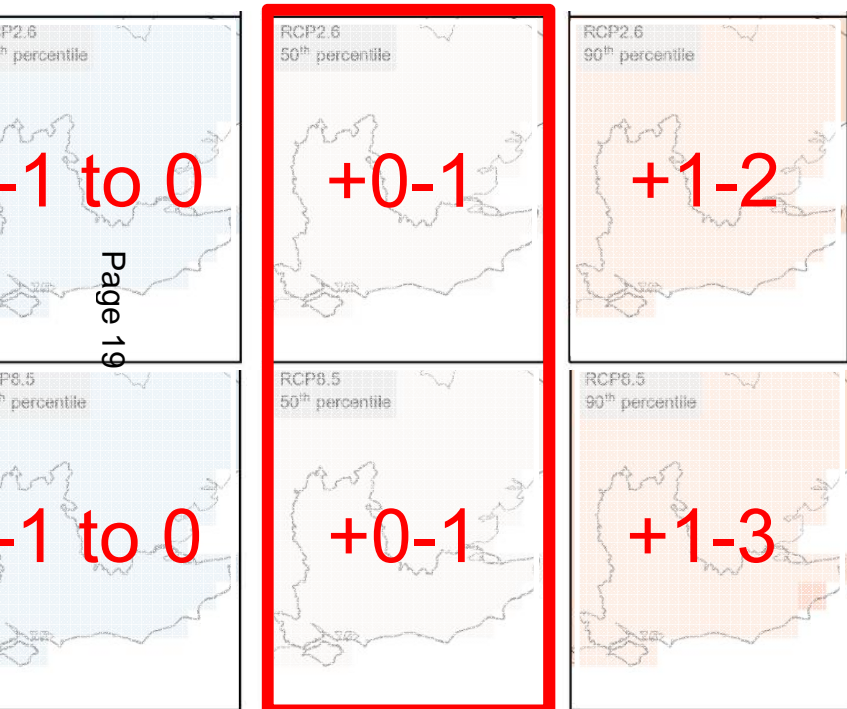
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Page 18

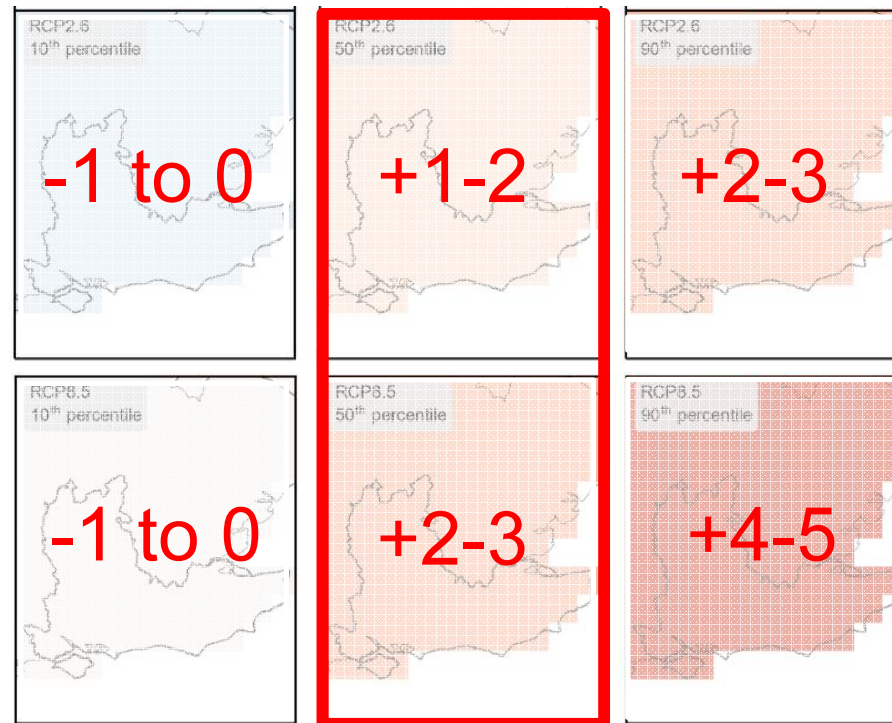
Met Office Temperatures

2020-2039

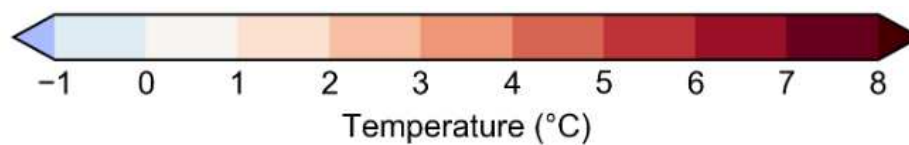
2060-2079



RCP2.6
Best Case



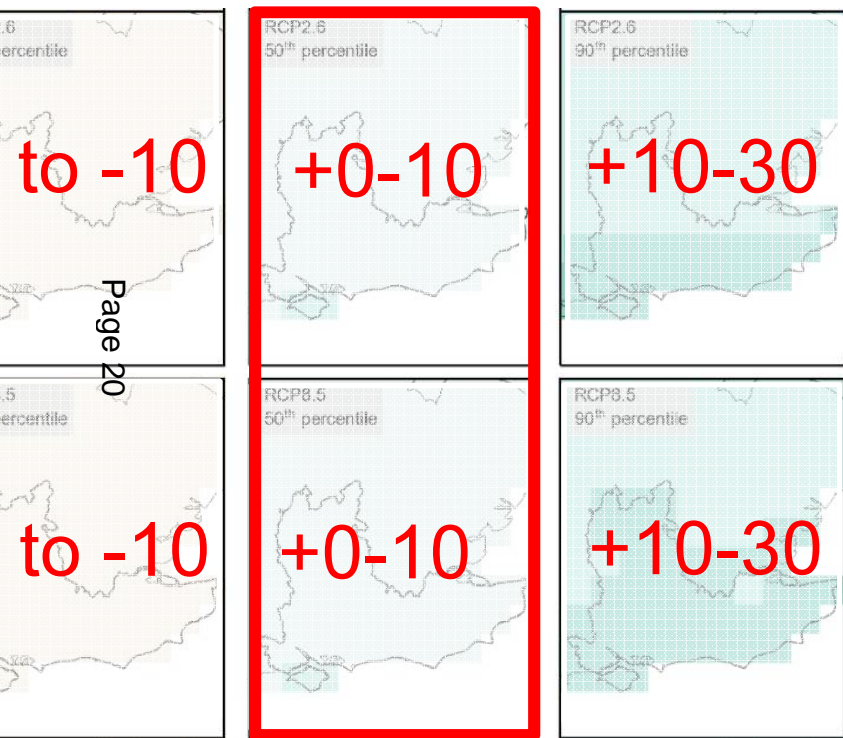
RCP8.5
Worst Case



Met Office Precipitation

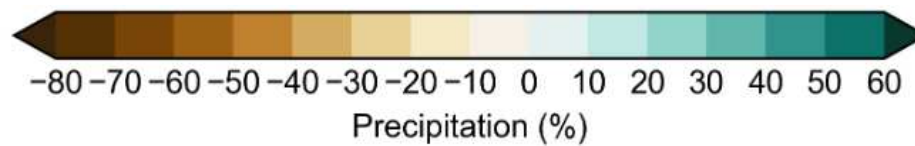
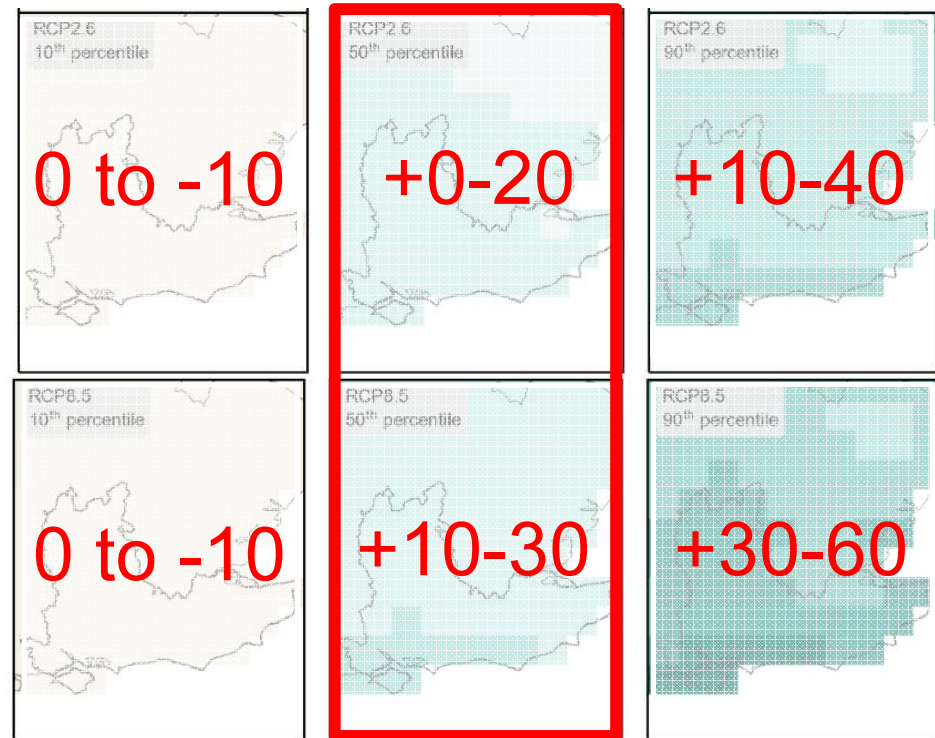
2020-2039

2060-2079



RCP2.6
Best Case

RCP8.5
Worst Case



Met Office

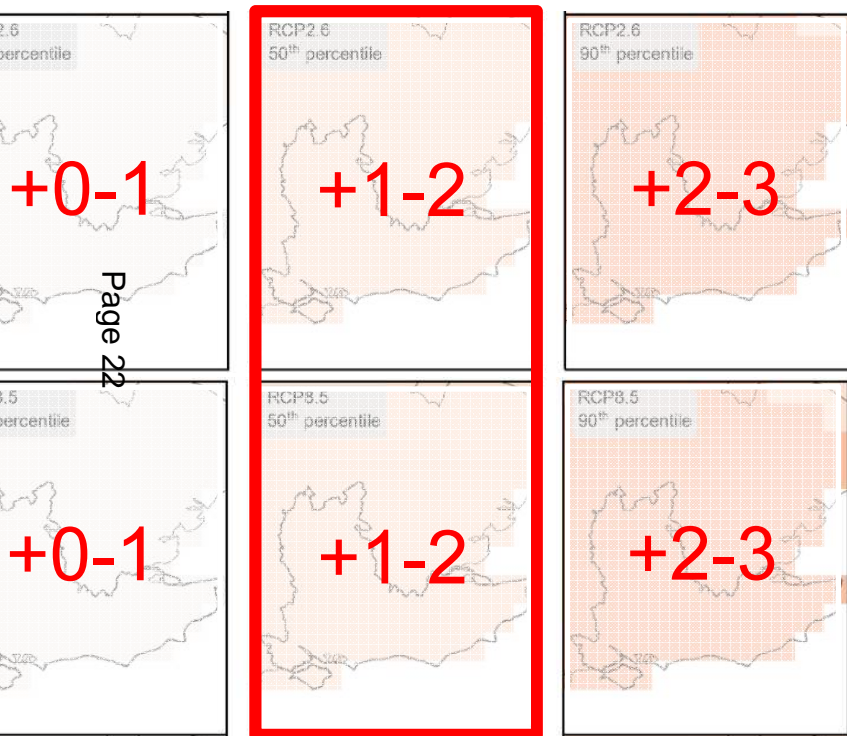
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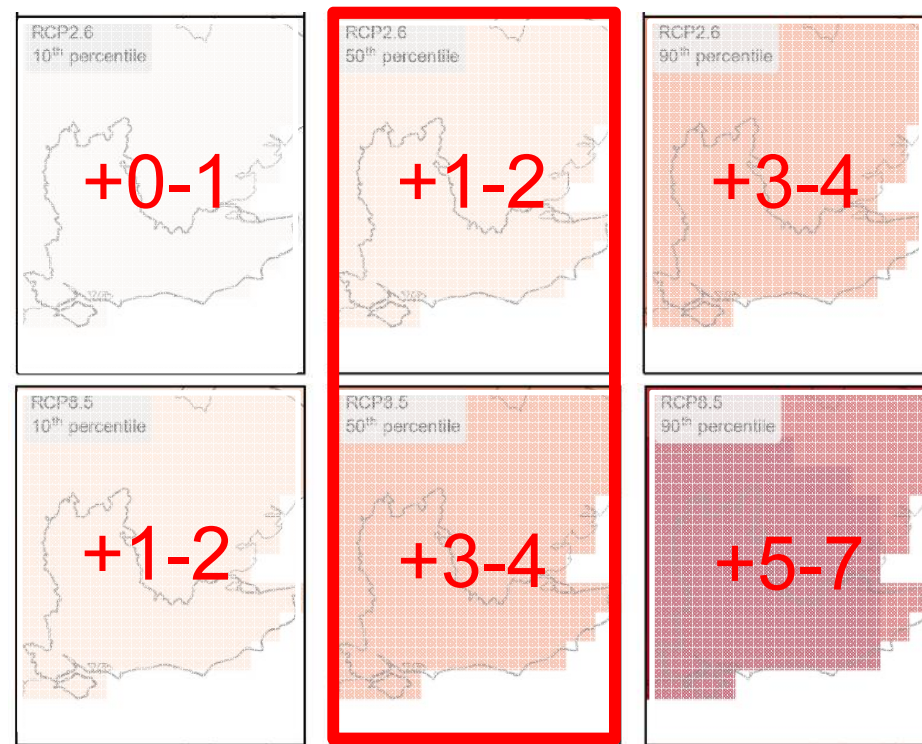
Met Office Temperatures

2020-2039

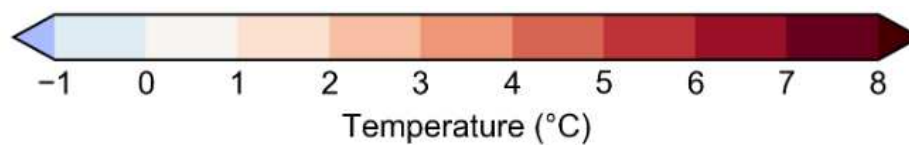
2060-2079



RCP2.6
Best Case



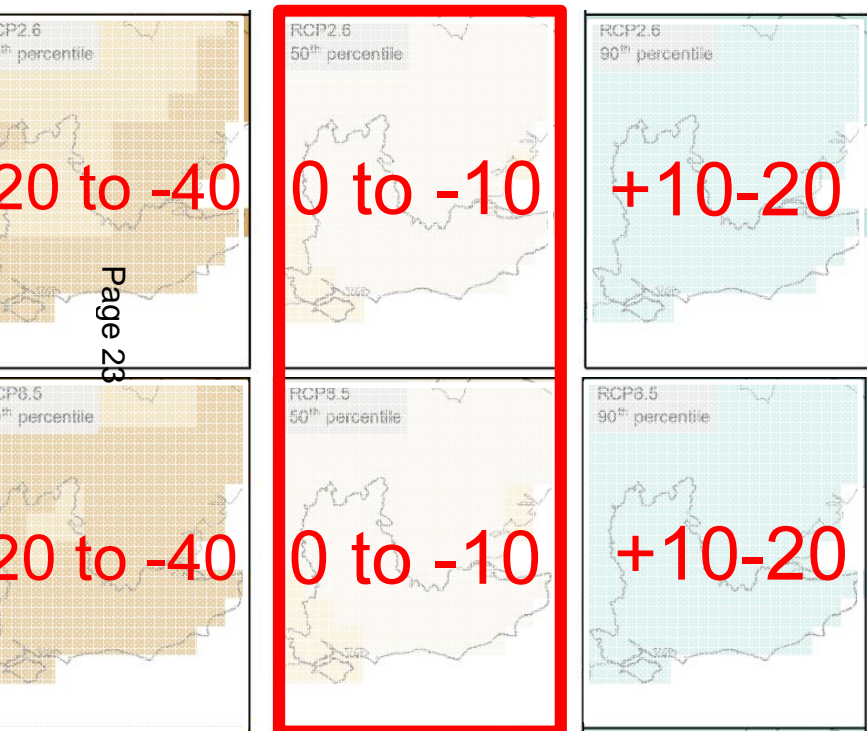
RCP8.5
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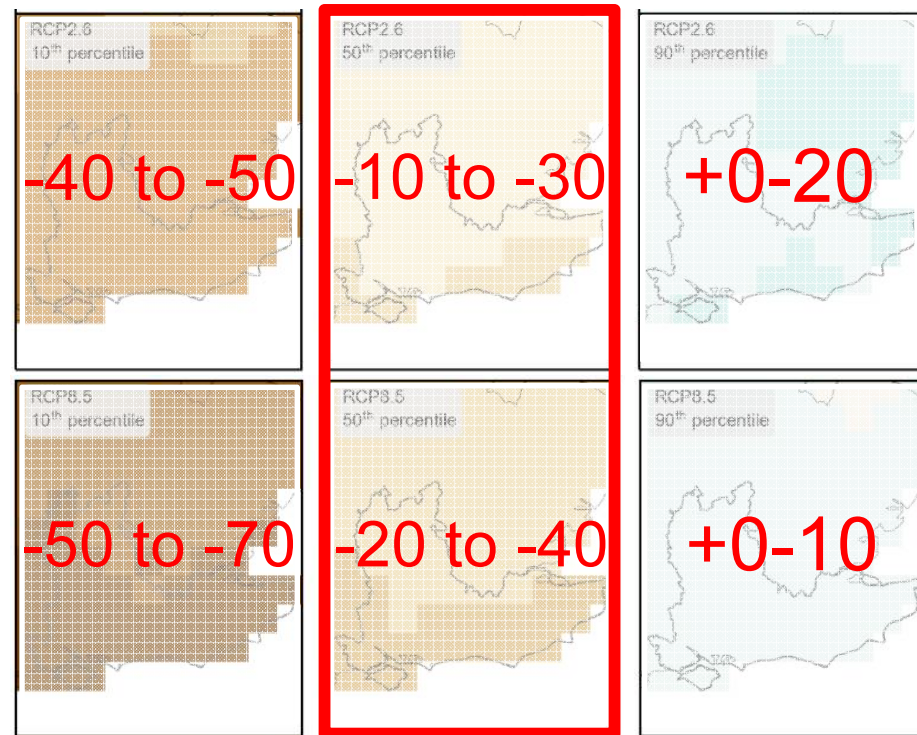
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2020-2039

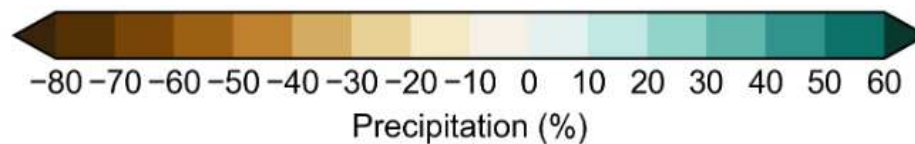
2060-2079



RCP2.6
Best Case



RCP8.5
Worst Case



Questions