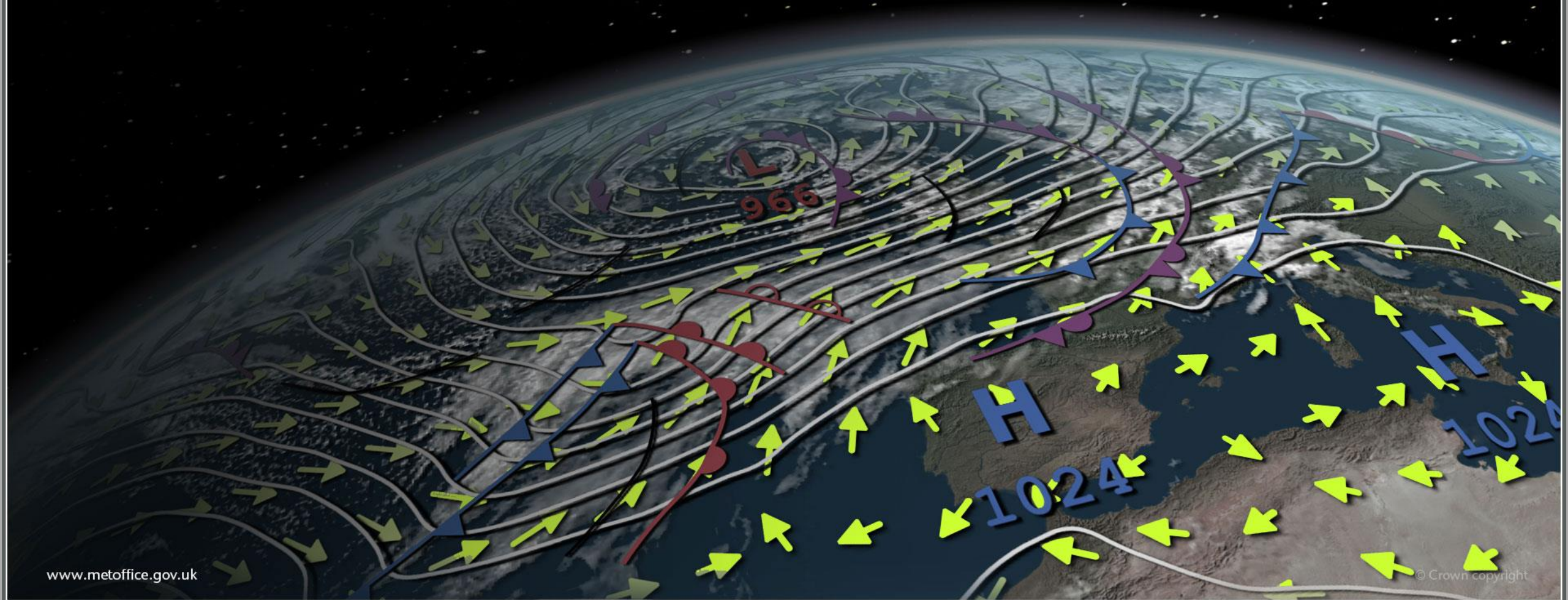


Weather Forecast Development – Ensuring Local Resilience

Hazel Reeve – Met Office Advisor (Civil Contingencies)





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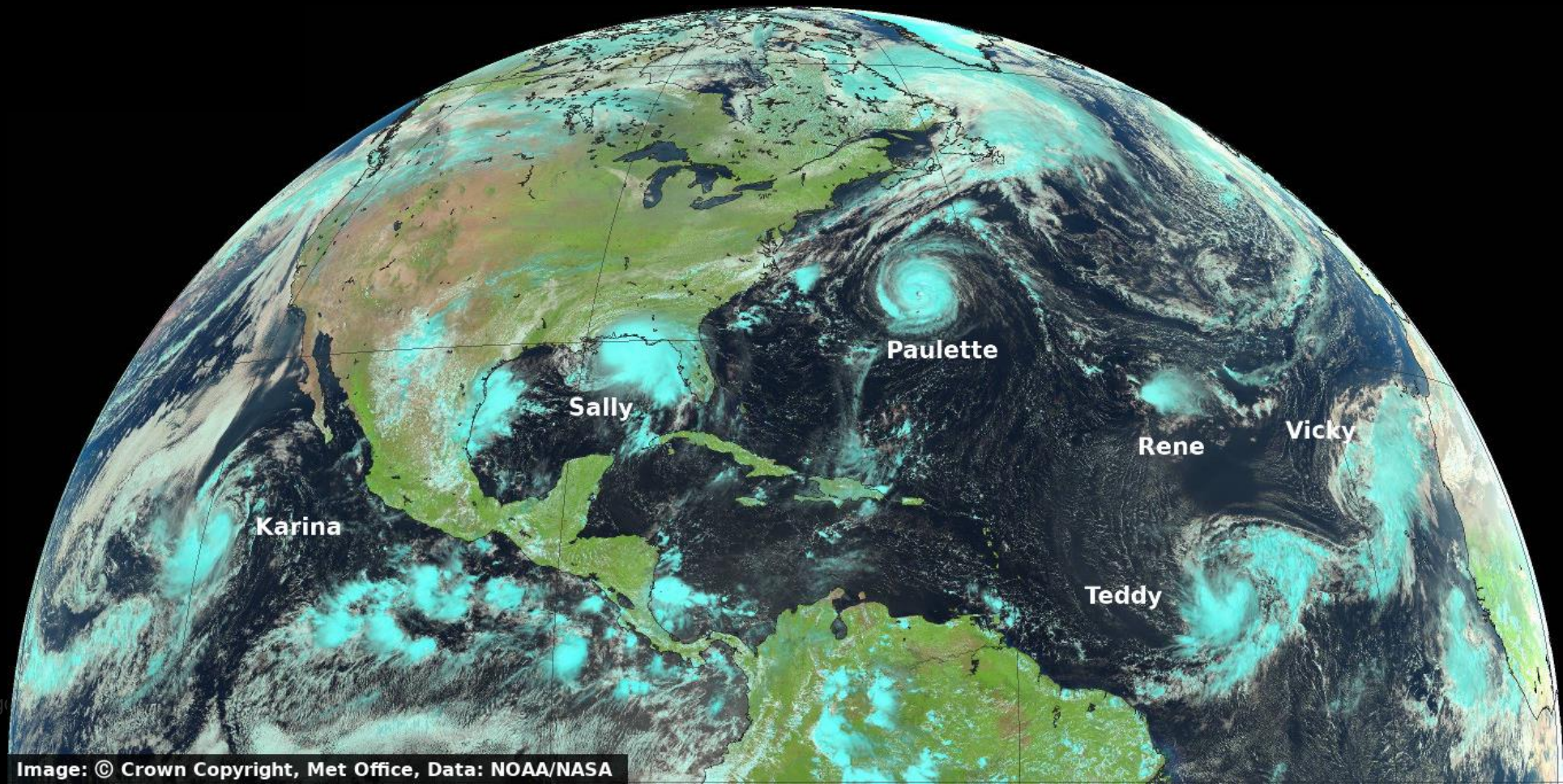
The map shows the United Kingdom divided into regions, with black dots indicating the location of each regional advisor. The regions are: Scotland, Northern Ireland, N England, E Midlands, Humber, S&W Yorkshire, Wales, W Midlands & SW England, and E of England & SE England.

Subject areas.....

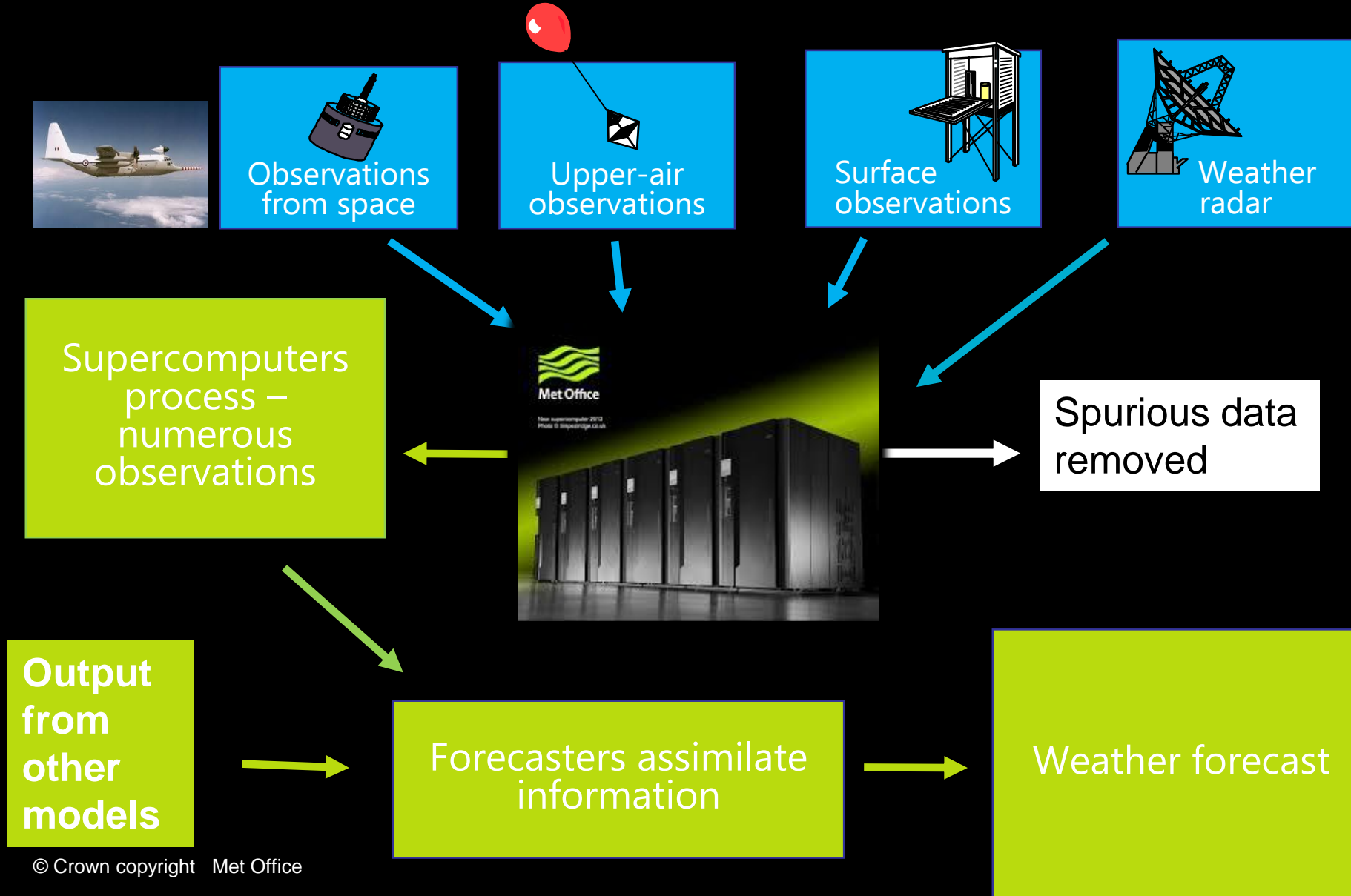
- National Severe Weather Warnings
- Understanding the Weather
- Exercises
- Incident telecons and debriefs
- School activities
- Conferences
- Climate Change
- and much more



Factors Influencing Weather Predictability



The forecasting process





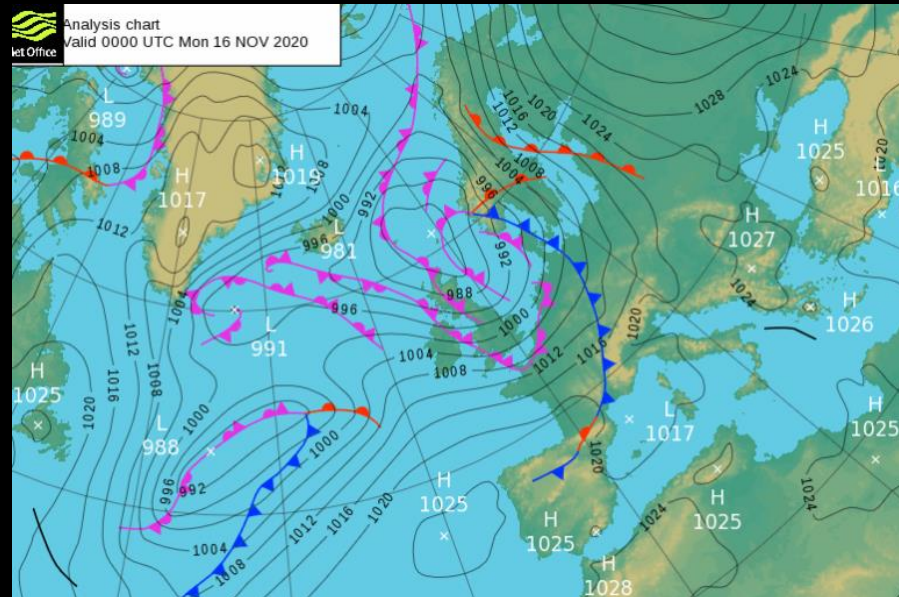
Important Points

- Getting the starting conditions correct is critical
- Identify errors in starting conditions
- Weather in 3 dimensions
- Many models running for different layers of the atmosphere. Gridded data.
- Consideration given to the 'best fit'
- The forecast becomes less reliable further into the future



What factors influence weather predictability?

- Teleconnections
- La Niña - Pacific Ocean
- Jet stream
- North Atlantic Oscillation
- Polar vortex





Met Office

Accuracy of Local Forecasting and Available Data



Accuracy of localised forecasting and available data

- **Largescale** – teleconnections
- La Nina
- **Local**
- Where the weather is coming from
- physical geography
- Lay of the land

UK weather

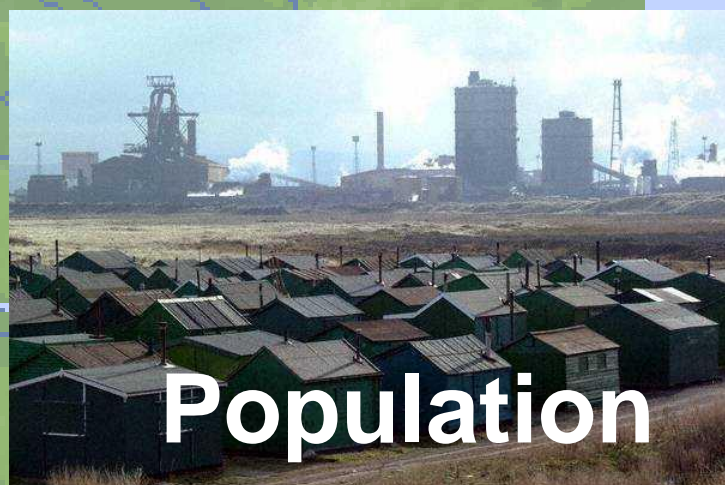
Britain braces for 'rollercoaster' weather cycle this week

www.metoffice.gov.uk

Mobile Apps



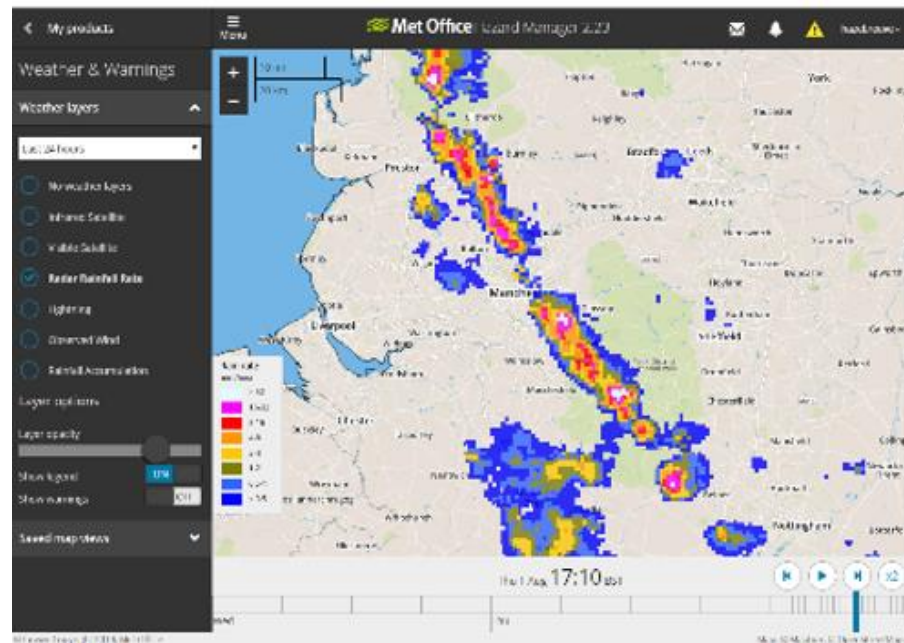
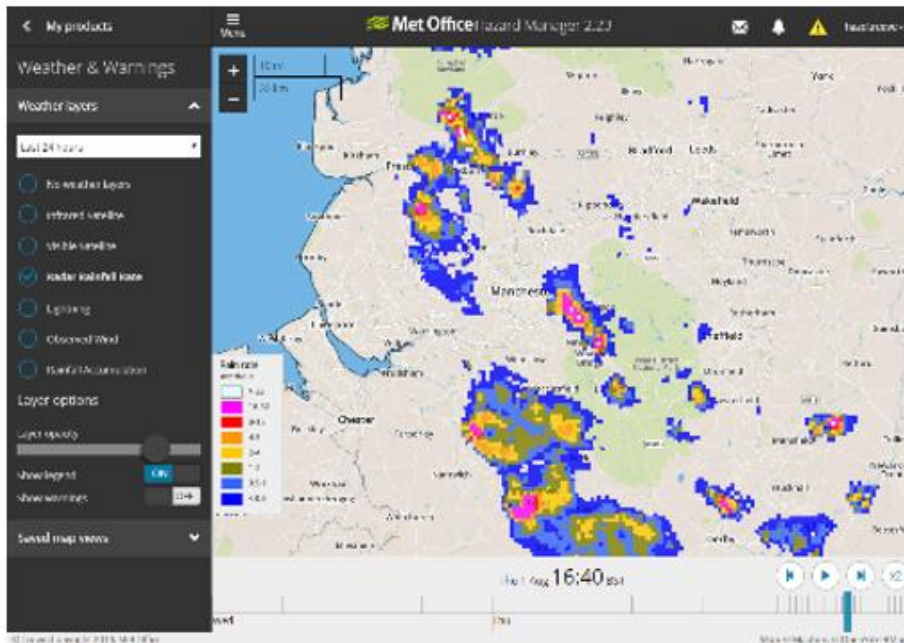
Features Influencing the Weather





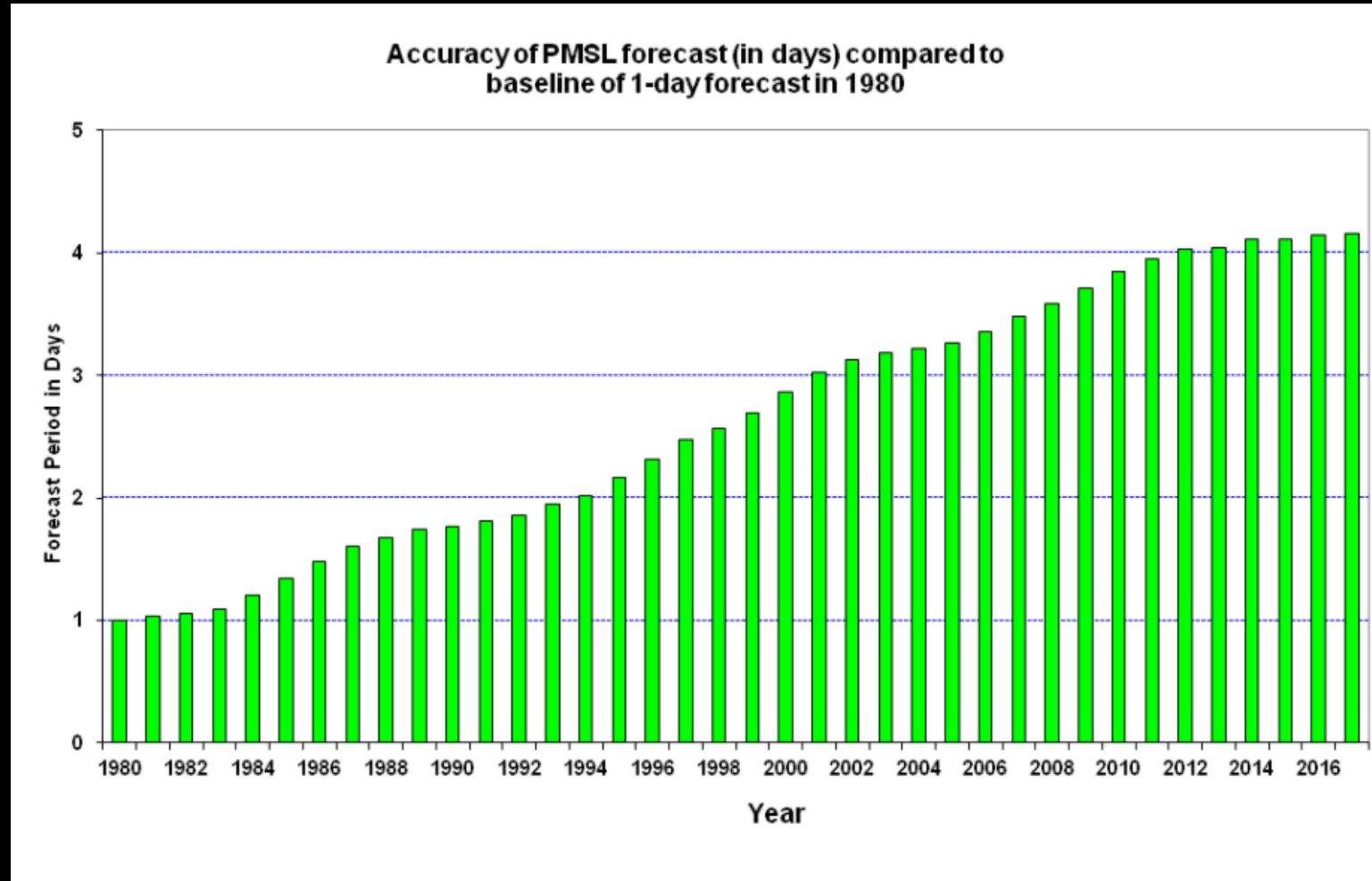
Nowcasting – 6 Hours Ahead

- For the UK
- Blend of observations and the Hi-Res model
- Model run every 60 mins
- 2KM resolution





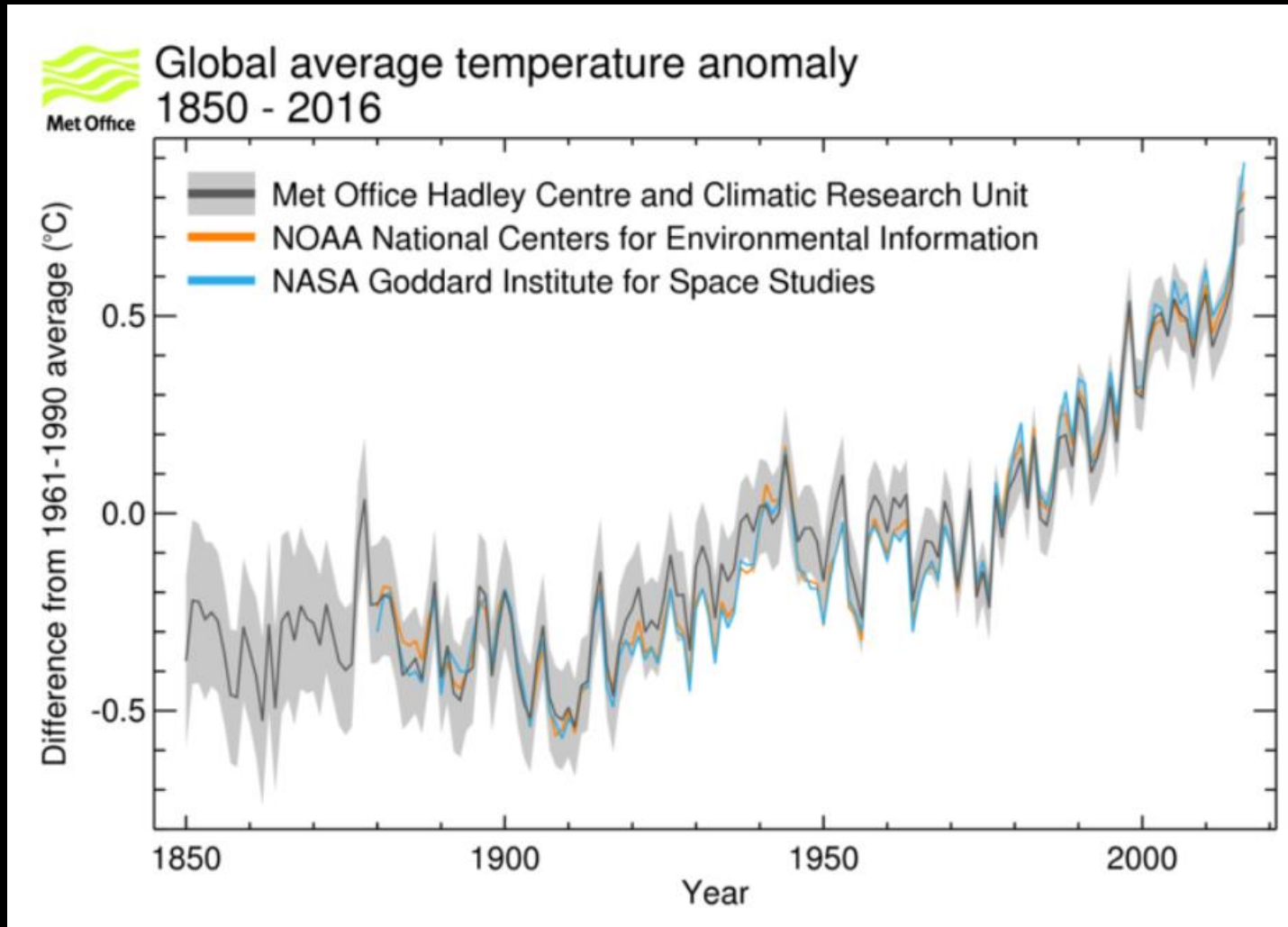
Our Forecast Accuracy





Emerging Weather Patterns and Expectations for the future

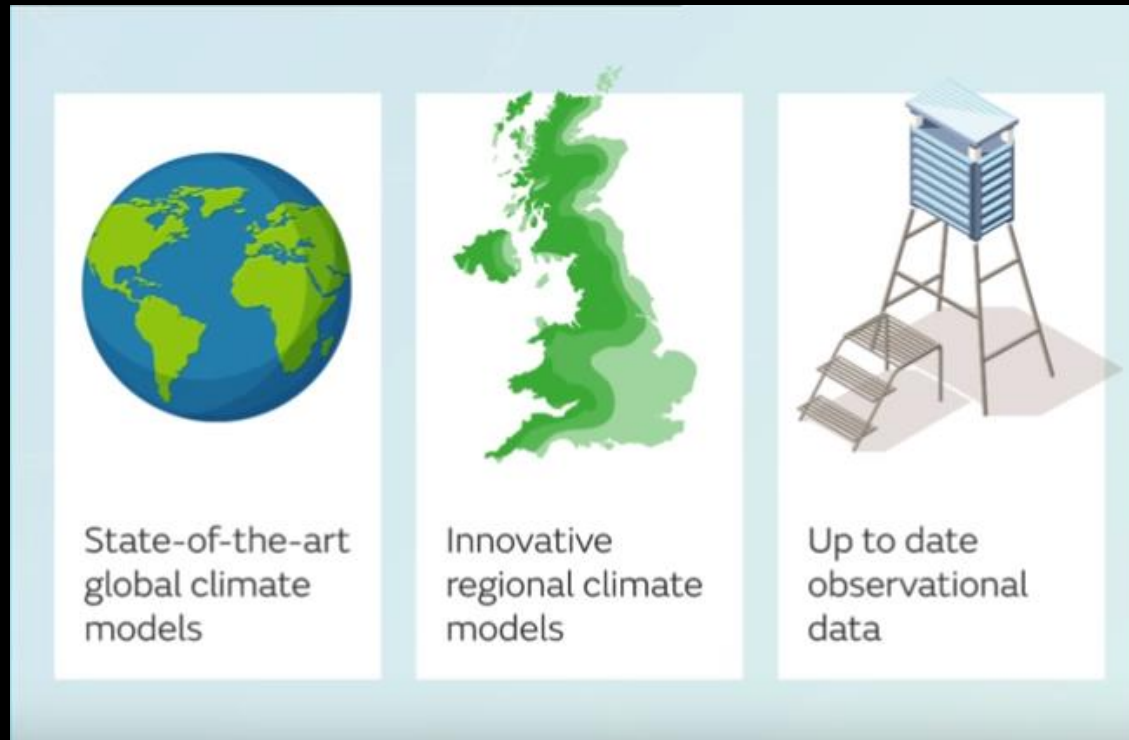
Global Temperature Rise



What is UKCP18?

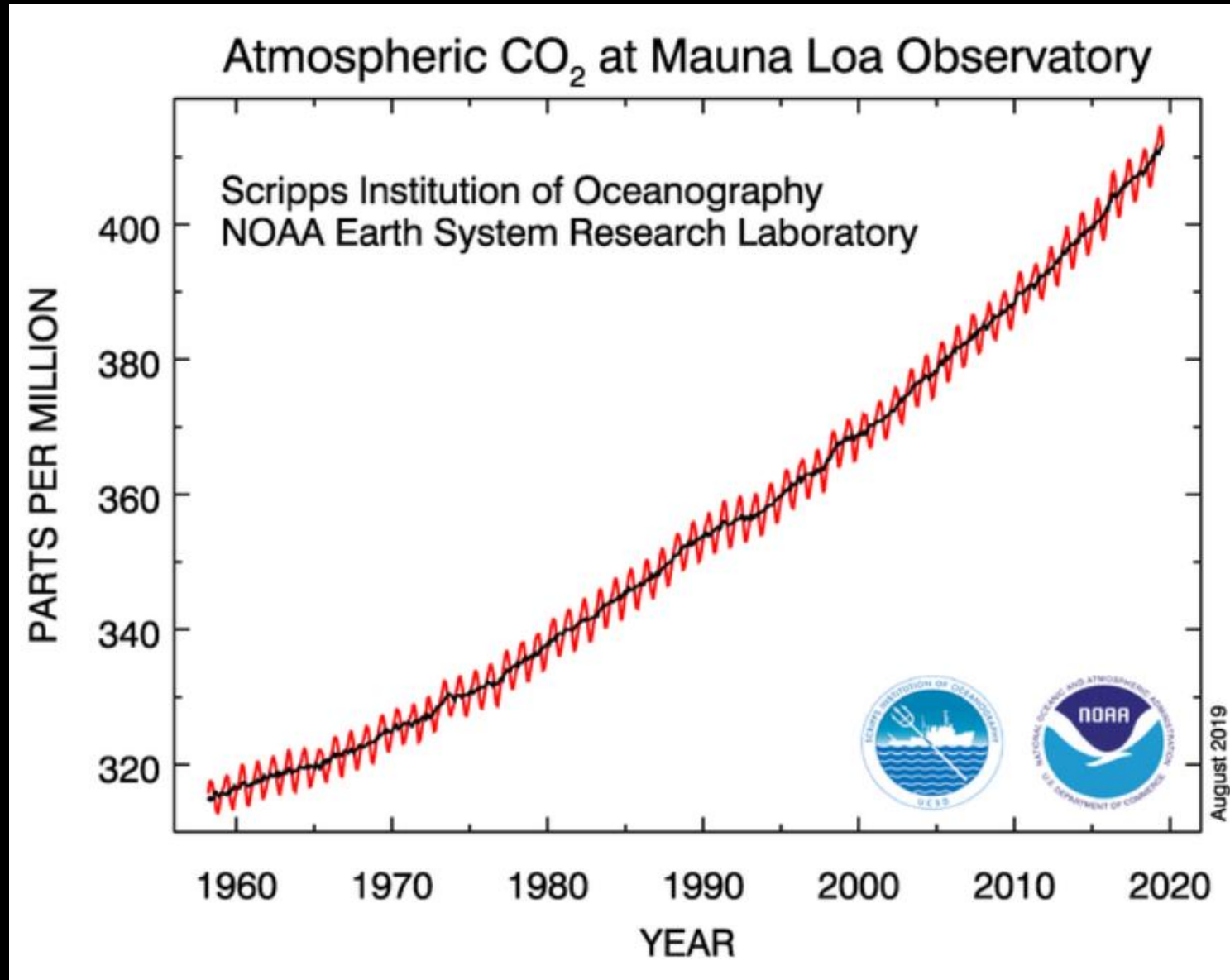
The latest **UK** **C**limate **P**rojections were launched in 2018.

Provides the most up-to-date assessment of how the climate of the UK may change over the 21st century.

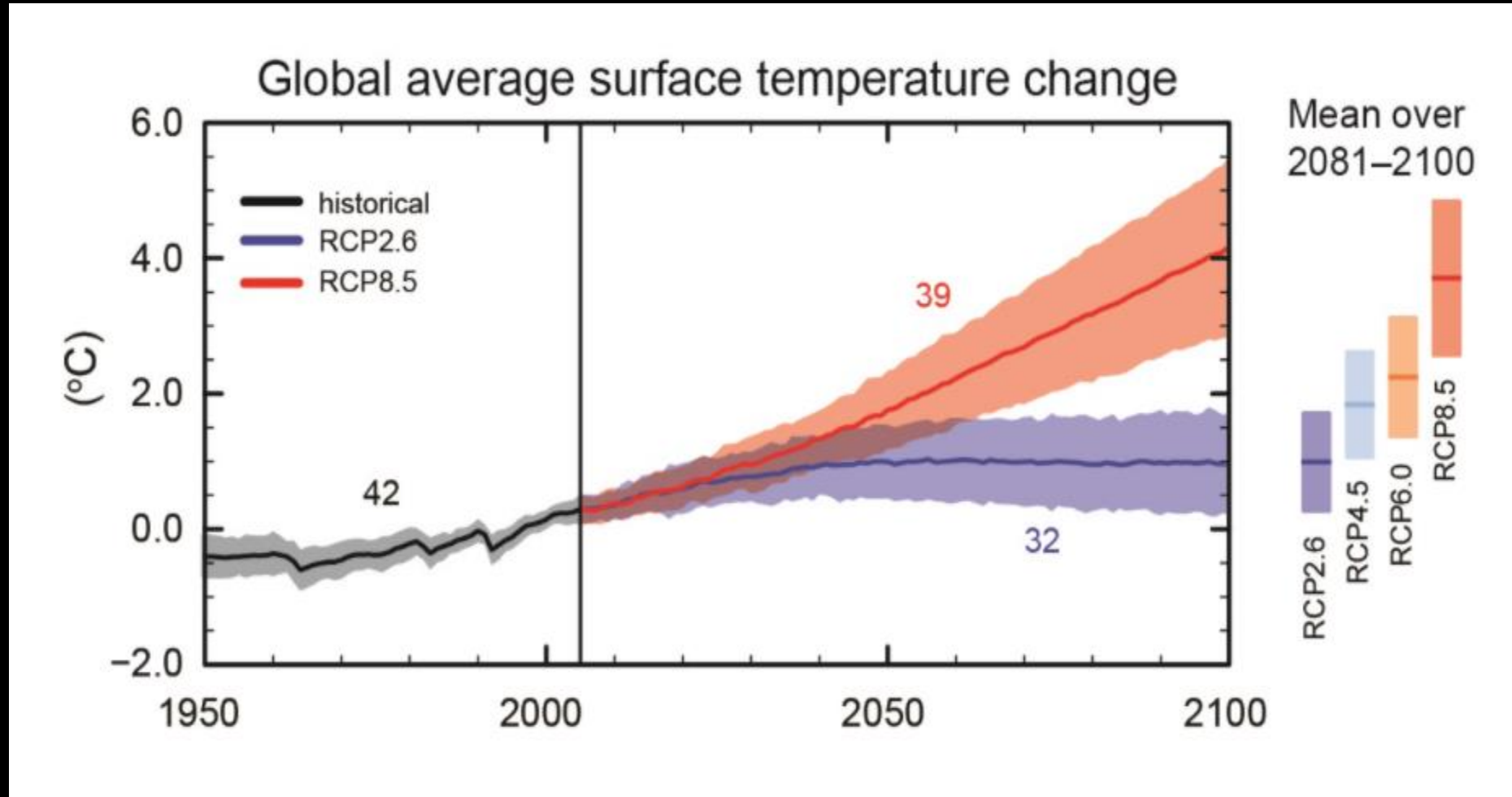




Climate Change



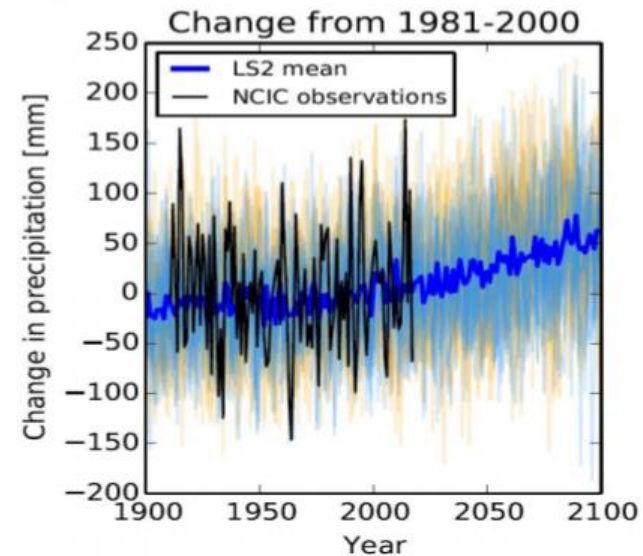
Projected Outlook to 2100



Future UK Future UK Precipitation

- Winter precipitation is expected to increase significantly
- Summer rainfall is expected to decrease significantly
 - But when it rains in summer there may be more intense storms

England mean winter precipitation



We will still get some dry winters, but wet winters will become wetter

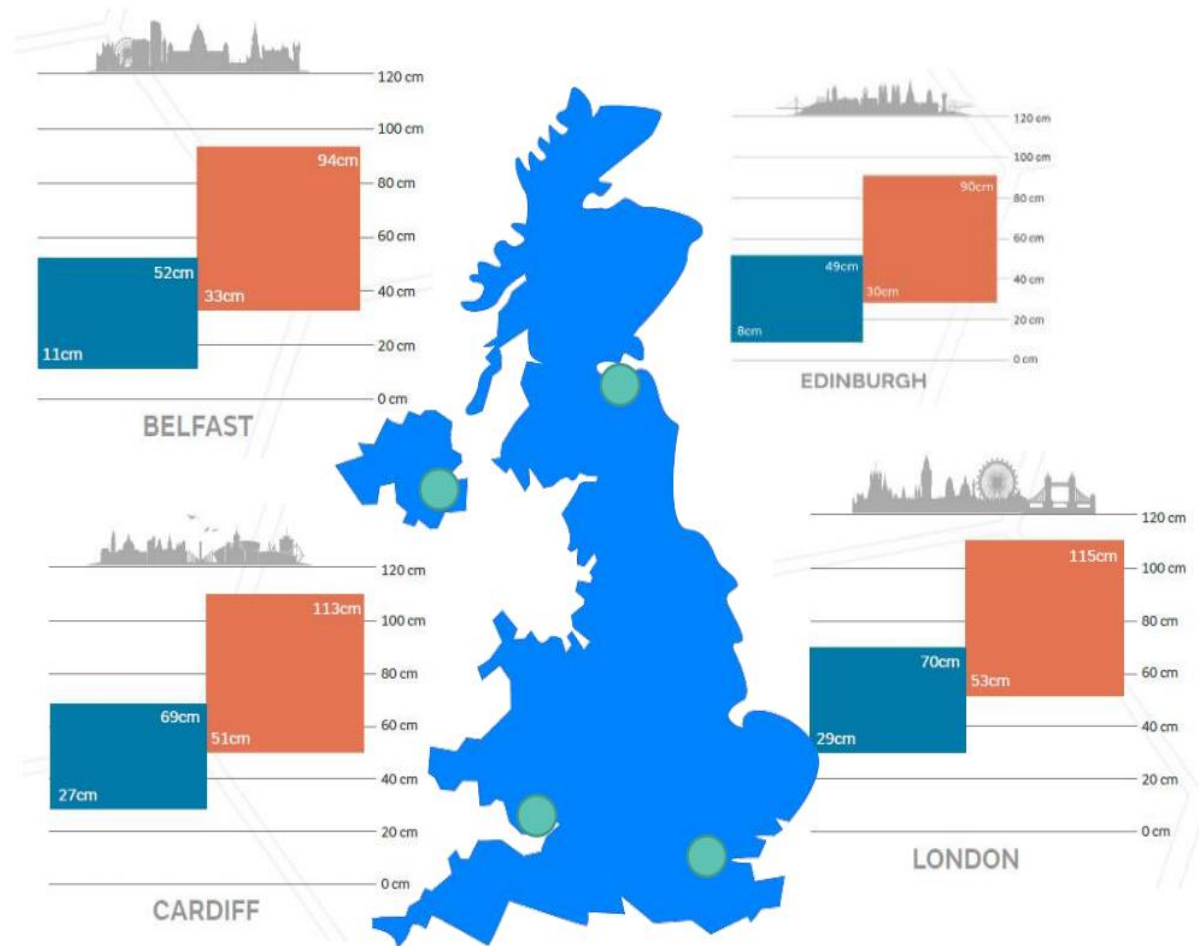
Sea-level Rise

Sea-level rise

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



(by 2100 relative to 1981-2000)



Thank You

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