

# Communicating the state of the UK Climate

## Met Office:

Mike Kendon

**Mark McCarthy**

Dan Hollis

Tim Legg

Ian Simpson

Grahame Madge

Alison Richards

Katrina MacNeill

Ailsa Barrow

## National Oceanography Centre:

Svetlana Jevrejeva

Andrew Matthews

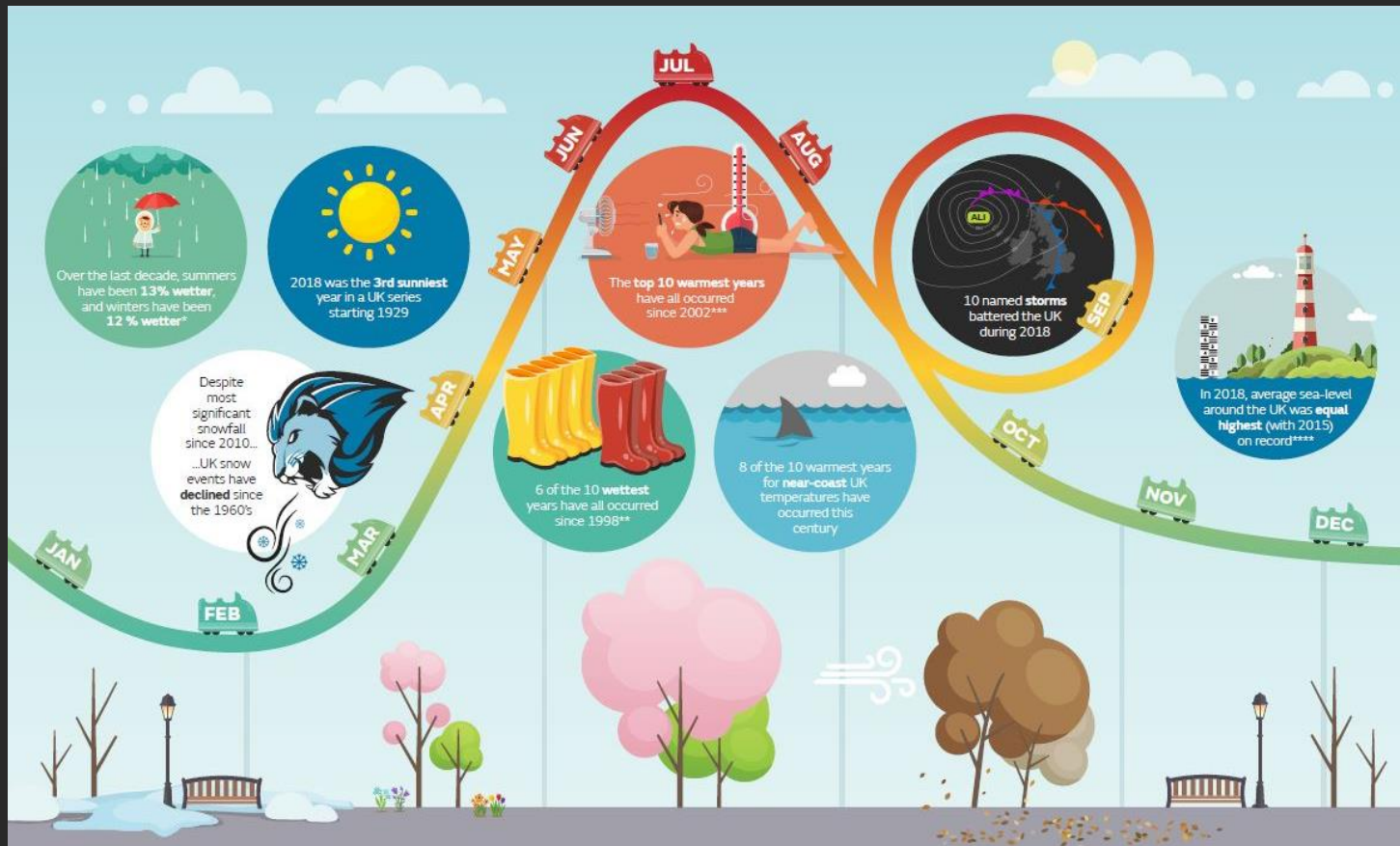
## Royal Meteorological Society:

Liz Bentley

Catherine Muller

## Wiley:

Beverley Harnett



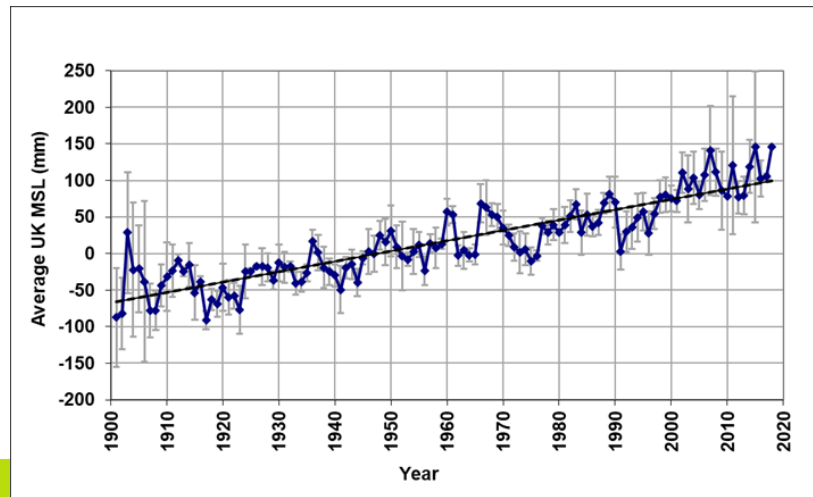
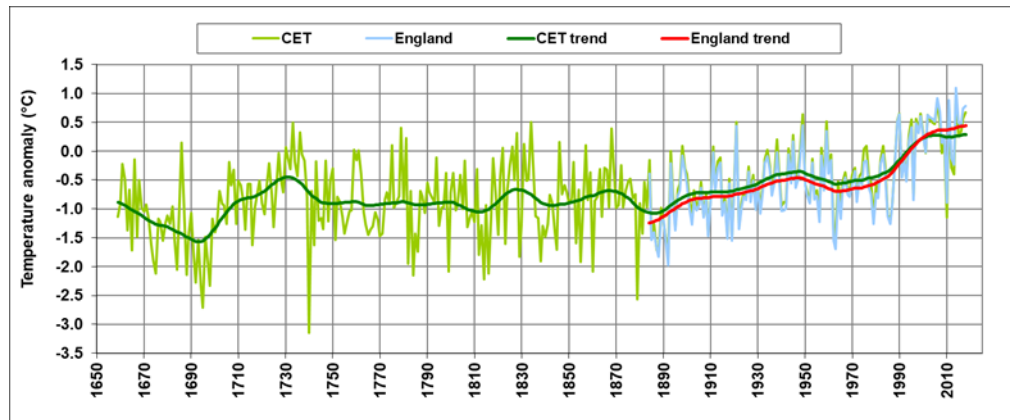
# The short story

Met Office Hadley Centre for climate science and services

- AND we provide routine climate monitoring.
- BUT our audience is broad and varied, so its challenging to cater for everyone.
- THEREFORE an annual communication of the “State of the UK Climate” provides a powerful opportunity to promote the national climate conversation.

# What we're doing.....

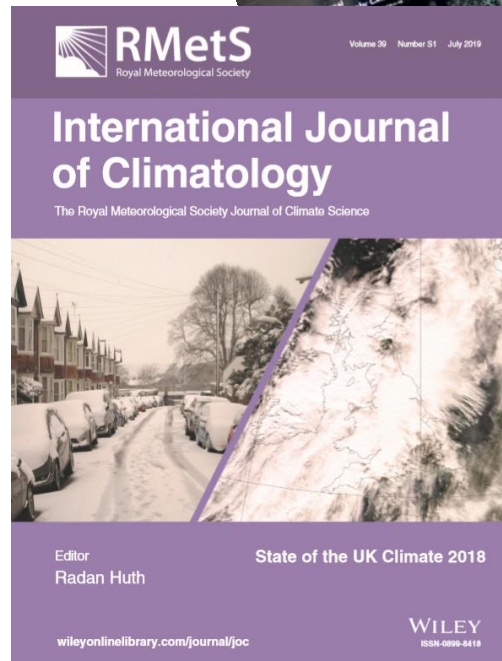
- Climate monitoring bulletins
  - Continuous series from 1860
- Climate data series
  - 1659 - present
- Observational records





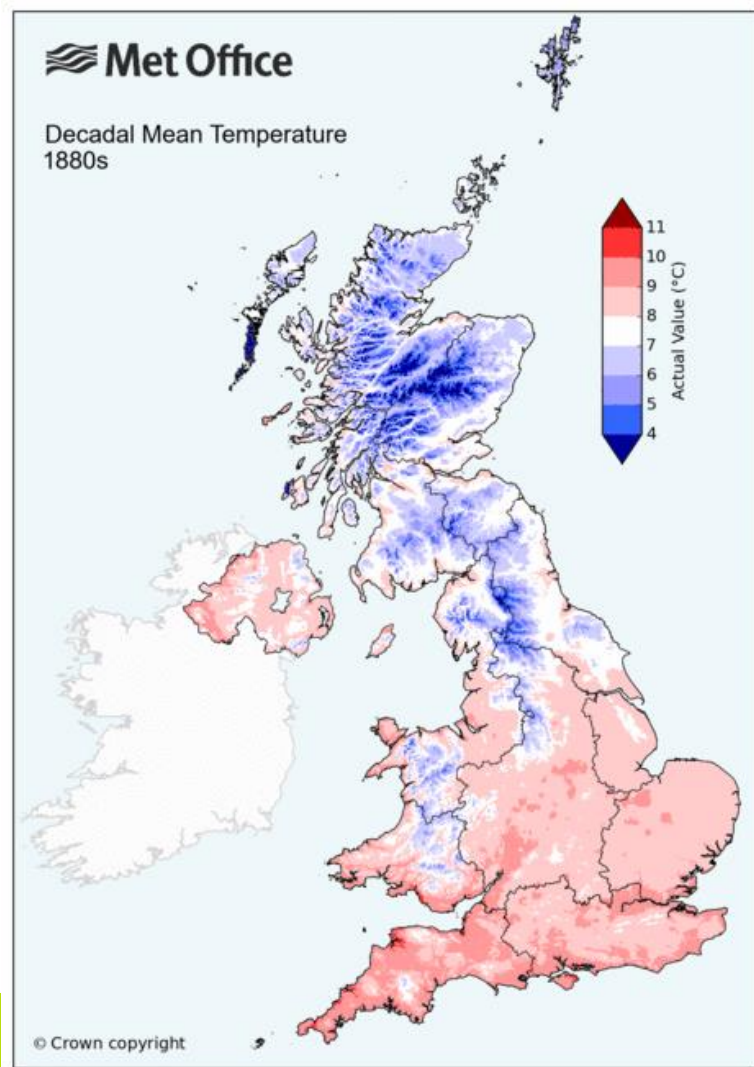
# State of the UK Climate

- Up-to-date assessment of UK climate trends, variations and extremes
- Based on climate quality datasets from UK land weather station network
- Internal review only 2014 to 2016
- External review 2017 onwards
- 2018 report – new 1km gridded dataset
- Open Access - [available via CEDA archive](#)



# Why we're doing it...

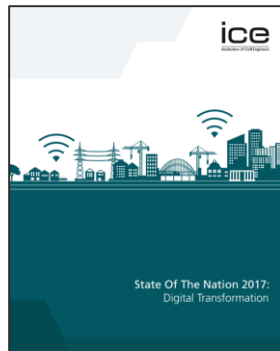
- National Memory
- Weather and climate into context
- UK climate variability and change



# State of the ...



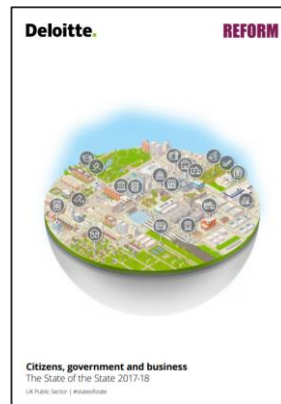
Social  
mobility



Infrastructure



Health and  
social care



Citizens,  
government,  
business



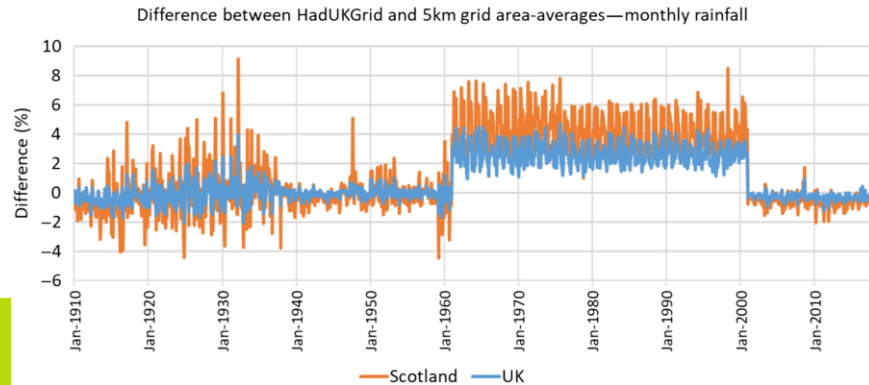
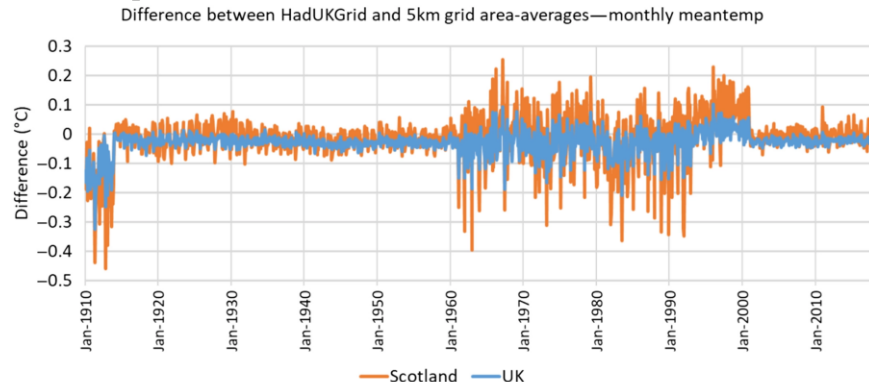
Birds



Mental  
health

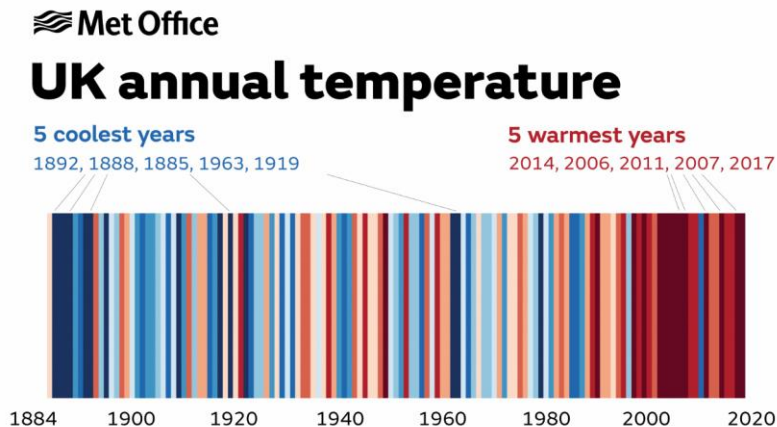
# Who we're doing it for... Our peers

- Peer review
  - Thanks to Wiley, Royal Met Soc and peer reviewers.
- Peer reviewed data
  - **Hollis et al. Poster P61 session OSA3.2**
- Traceable and reproducible
- Open data



# Who we're doing it for...Government

- “Headline messages are particularly useful”
  - Briefings for new ministers
  - ‘Top facts’ on climate for PM
- “Visualisations are particularly impactful”
- “Context is useful but needs right balance”





# Who we're doing it for....Public

- Press release –headline message...
- Print, radio, TV
- Other voices help



## Climate change: UK's ten warmest years have ALL happened since 2002

31 Jul 2019 Last updated at 11:57



ITV REPORT 31 July 2019 at 11:49am

## UK's 10 hottest years on record have all occurred since 2002



## Britain's ten hottest years have ALL occurred since 2002 highlighting the speed of climate change, say scientists

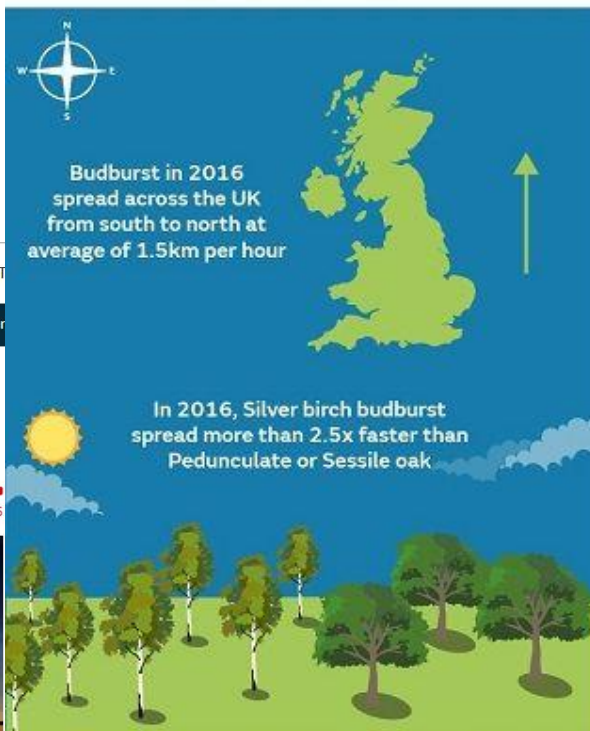
- Met Office looked at temperature records as far back as 1884, rather than 1910
- Dr Michael Byrne of St Andrews said: 'The science of climate change now clear'
- Records now show 1892 as the coldest year, with an average of just over 7C

# Themes

## PHENOLOGY INDICATORS

### BUDBURST SPREAD

### TEMPERATURE INFLUENCE



A 1 °C change in average UK spring temperatures can advance or delay the timing of budburst by 4 - 5 days



March temperatures are the biggest influence on budburst date for 9 of 11 species



Alder



Field maple



European larch



Beech



Rowan



Horse chestnut



Sycamore



Ash



Pedunculate oak



Sessile oak



Silver birch



@metoffice\_sci



/themetoffice

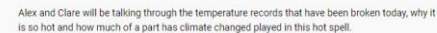


/metoffice

### Met Office starts tracking 'Tropical Nights' in Britain as weather becomes more extreme



- 
- The UK's weather in 2015**
- JAN** Over the last decade summers have been 3.3% wetter, and winters 3.2% wetter.
- FEB** Despite most significant snowfalls since 2012... UK snow events have declined since the 1960s.
- MAR** 6 of the 10 wettest years have occurred since 1960\*\*.
- APR** The top 10 wettest years have all occurred since 2002\*\*\*.
- MAY** 6 of the 10 wettest years for near-coastal UK temperatures have occurred this century.
- JUN** 10 named storms battered the UK during 2015.
- JUL** In 2015, average sea level around the UK was again highest (with 2015) on record\*\*\*\*.
- AUG**
- SEP**
- OCT**
- NOV**
- DEC**
- \* Compared to 1961-1990 \*\* UK winter during 1862 \*\*\* UK winter during 1864 \*\*\*\* In a winter starting 1961 | Produced by the Met Office, Met Office and the Met Office app, using open licensed data | © Crown Copyright 2016, Met Office 610235



# Lessons learned....

- Hierarchy of information. Headline to peer review to data.
- Strong narrative – climate story that is local and now.
  - [Repetition]
  - Themes
  - Bridge to wider context
- Supporting voices/experts



From BBC Weather 

# Lessons learned...

- Handling errors and clarifications
  - Mistakes in print...
- Communicating uncertainties
- Becoming the story
- Wider context:
  - [Repetition]
  - “So how much of last years .... was due to climate change?”
  - “That’s all very well, but there’s nothing we can do about it is there?”
  - “Harry and Meghan plan to have only 2 children should we all commit to that?”





# Complementary information

