



Department
for Environment
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Met Office
Hadley Centre



Environment
Agency

UK Climate Projections Project

Newsletter - April 2019

Welcome to the first UKCP18 newsletter since the launch in November

Liz Parkes, Deputy Director Climate Change, Environment Agency introduces this edition, reflecting on the launch and the importance of how we now best use the climate projections.

As well as news from the launch, there is an update on new datasets for the probabilistic projections. These provide projected changes for not only river basin regions and administrative regions but also the UK and its devolved administrations. These are now available on the [User Interface](#).

We look at UKCP18 in 2019 and beyond as work on the UK Climate Projections continues and we prepare the high resolution 2.2km projections of climate change over the UK for release later in the year. We are also adding ongoing improvements to existing products and services. You may have already seen us or wish to join us at the numerous events planned around the UK.

As always your feedback is welcome, please send your thoughts, comments and ideas.

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Editorial from Liz Parkes, Deputy Director Climate Change and Business Services Environment Agency

It was a privilege for me to be invited to speak at the launch of UKCP18 in November - the culmination of many years of hard work by some of this country's very best climate scientists, shaped by collective experiences about how we can make better use of that science in decision making. And what particularly brought the event to life for me, wasn't so much hearing from the great and the good but the excited chatter of all the school children around us in the cherished Science Museum. The expectation that they are going to be reaching out and actually touching the objects that are so formative in shaping our futures as well as our history.



I had cause to reflect on that recently as I travelled through the South Kensington subway bursting at the seams with children enjoying their half term outings. I was on my way to a Royal Meteorological Society event where we focused on user's experience of the projections and it was great to see the science being brought to life in decisions about the natural environment. However, the thing that really struck me was the question about whether we might be at risk of missing something when we assume that more climate projections are going to be the answer? When we haven't yet worked out what all the questions are?

The new UKCP18 projections – developed with a clear focus on users – are vital to understanding climate change. But, have we got what we need to help us to think in the radically different ways that this scale of climate change now demands?

Having heard the clarion call from the international science community with the IPCC 1.5 degree report last year, I'm seized by the urgency and responsibility that we all have to transform how we think and talk about the changing climate. Understanding what's likely to happen isn't enough. It's what we do about it now that matters.

UKCP18 launch

The UK Climate Projections 2018 (UKCP18) were launched on 26 November at an event at the Science Museum in London with national media in attendance.

The announcement highlighted the need for further urgent action. Opening the launch, Environment Secretary Michael Gove said: "This cutting-edge science opens our eyes to the extent of the challenge we face and shows us a future we want to avoid. "By having this detailed picture of our changing climate, we can ensure we have the right infrastructure to cope with weather extremes, homes and businesses can adapt, and we can make decisions for the future accordingly."

Following the Environment Secretary were presentations from Defra's Chief Scientific Adviser Ian Boyd and Met Office Chief Scientist Stephen Belcher.

Defra's Chief Scientific Adviser Ian Boyd stated how UKCP18 could help everybody make better decisions, from those buying a house to people making large infrastructure investments. Met Office Chief Scientist Stephen Belcher provided detail on how new science in UKCP18 enables us to move from looking at trends and long term averages associated with climate change, to describing changes in future weather patterns.

They were joined for a Q&A session by Chair of the Environment Agency, Emma Howard Boyd, who stated the importance of governments, business, and communities working together to mitigate the impacts of climate change and adapt to a different future.

The launch event was followed by a stakeholder event where Met Office Head of Climate Services, Prof Jason Lowe provided existing and potential users of UKCP18 data with the headline findings and using real life examples explained why the projections matter.

Presentations followed from Environment Agency's Deputy Director Climate Change, Liz Parkes who portrayed the value of UKCP18 from a government perspective, and Jon Gascoigne from Willis Towers Watson covered the business viewpoint.

Examples of how UKCP18 data can be used were demonstrated by Mike Walkden from WSP in relation to UKCP18 sea level rise data can be used to better understand increase in shoreline erosion. While Ben Rabb from University of Leeds spoke about the ICASP pilot with regional stakeholders in Yorkshire in order to make use of UKCP18 to manage flood and drought.

[Read more here](#)

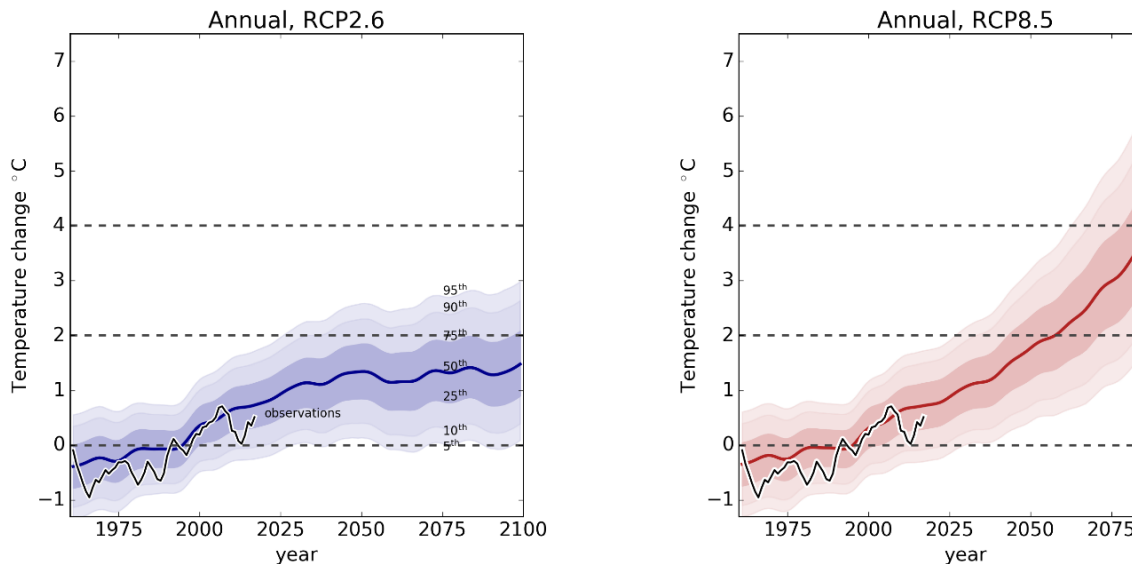
Probabilistic data for aggregated regions now available

The data for aggregated regions for the probabilistic projections are now available on the [UKCP User Interface](#) and [CEDA data catalogue](#). They are available for individual countries, administrative regions and large river basins across the UK from 1961 to the end of the 21st century.

You can explore year-to-year variability as well as 20 and 30 year average changes. On the key results pages of website <https://www.metoffice.gov.uk/research/collaboration/ukcp>, you can find material such as maps, time series as well a key findings spreadsheet summarising the key statistics. You can also create your own maps and graphs as well as download data from the UKCP User Interface.

More information on the science underpinning the regional projections can be found in the technical note.

UK temperature difference from 1981-2000 average



UKCP18 UK area mean temperature for the lowest (RCP2.6, blue) and highest emission scenario (RCP8.5, red). The shading boundaries show the 5th, 10th, 25th, 50th (median, central solid line), 75th, 90th, and 95th percentiles. Observations from the [National Climate Information Centre](#) are shown as a black line for the historical part of the curves. Values are expressed relative to the 1981-2000 baseline used in UKCP18 projections.

UKCP18 in 2019 and beyond

The work on the UK Climate Projections continues as we focus our efforts on preparing the high resolution 2.2km projections over the UK. We are also adding to and carry out ongoing improvements to existing products and services. You may also wish to join us at the numerous events around the UK to which we are contributing.

Your feedback is important: At the November 2018 joint meeting of the UKCP user groups, there was an agreement to continue to meet with a focus on the 2.2km products and sharing of experiences of using the projections. We currently have over 1400 registered users on the UKCP User Interface and they have been testing and providing useful feedback. We have been working through issues and requests: the user interface is updated about every 2 weeks with improvements and you can find out more [here](#). Feedback is provided through the Weather Desk and we are using this to also improve the guidance and frequently asked questions. Please do let us know how you're getting on with the products and services through the Feedback Form

In the longer term: We are developing online training material for using UKCP18 with learning specialists at the Met Office – at the moment we are scoping the requirements through a survey and in-depth interviews. We are currently prioritising and preparing other data products requested by users such as sea surface temperature and North Atlantic Oscillation index. The timeframe for the release of these products will be announced on the website in due course. Further analysis of the climate projections is also planned to

provide information on climate extremes alongside the [observed extreme metrics](#) and the water balance as well as the role of using storylines to explore the range of possible climate futures (provided by the global and regional projections).

Events

Future events

[CIWEM Conference \(Coin Street Conference Centre, London, 30 April\)](#)

The Met Office will be presenting UKCP18 at the Climate Resilience and Extreme Incidents: Building Resilient Infrastructure and Communities event organised by CIWEM. The conference will provide an up to date picture of the preparedness for a range of extreme incidents including flooding, freeze-thaw and drought, the lessons learnt from government, critical infrastructure providers and a wide range of other stakeholders from recent events and provide a longer-term view towards the requirements for resilience to our critical infrastructure and communities. [Click here to book your place](#)

[UKCP18: Northern Ireland Climate Projections Explained \(City Hall, Belfast, 22 May\)](#)

Climate NI and the Met Office are inviting Northern Ireland stakeholders to hear about the UK Climate Projections 2018 (UKCP18). [Click here to book your place](#).

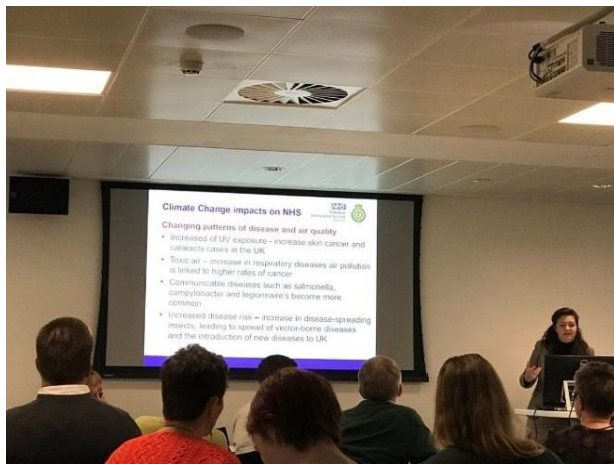
Recent events

[British Ecological Society workshop - Bringing the new UKCP18 climate projections into ecology \(Met Office 18 March\)](#)

This one-day workshop was an opportunity to enable researchers to learn about and understand the best way to use the UK's latest projections directly from the people involved in developing them. The workshop was co-organised by the British Ecological Society's Special Interest Group and the Met Office. The event helped ecologists and climate scientists understand some of the important questions climate-related ecological research and how climate projections data could potentially support analysis into climate impacts on nature.

[UK Climate Projections 2018 workshop \(Edinburgh Centre for Carbon Innovation, 11 March\)](#)

Over 50 Scottish stakeholders (including the Dr Jenny Pirret, Met Office) took part in a workshop to discuss not only UKCP18 but also how best to develop a longer-term network of collaboration for knowledge and experience sharing. The event was organised by the James Hutton institute and funded by SEFARI.



[Yorkshire Regional Forum \(8 March\)](#)

Prof Jason Lowe and Dr Fai Fung, Met Office, introduced UKCP18 key results and products to the Yorkshire Regional Forum at a workshop organised by University of Leeds and funded by iCASP and Yorkshire Water. Participants also heard from a range of users from health (Alexis Percival, Yorkshire Ambulance Services pictured) to water resources management (Nevil Muncaster, Yorkshire Water, keynote speaker). One of the objectives of the day was also to share ideas for future iCASP activities relating to climate change risk and adaptation, making use of UKCP18.



Royal Meteorological Society Meeting (Imperial College London, 20 February)

As mentioned by Liz Parkes in the editorial, the Royal Meteorological Society event “The role for climate services in handling climate change risk: contributions of UKCP18” explored how the UKCP18 climate tools were produced, including their strengths and limitations. It showcased examples of how users are starting to exploit UKCP18 results and consider their plans for use ahead of the next UK climate change risk assessment. It also considered the need and opportunity for alternative approaches to generating decisions–relevant climate projections.

Speakers included ([link to bio pdf](#)).

- Prof Sir Brian Hoskins, University of Reading and Grantham Institute; Baroness Brown, Adaptation Committee of CCC;
- Prof Jason Lowe, Dr Matt Palmer and James Murphy from the Met Office;
- Dr Mike Morecroft, Natural England;
- Dr Geoff Darch, Anglian Wats
- Dr Ella Howe, CEFAS.

[View the presentations here](#)

Adaptation Scotland, ClimateXChange (Edinburgh Centre for Carbon Innovation (ECCI), 24 January)

Scottish stakeholders heard more about the UKCP18 projections and to discuss how we can make the most of them including new projects and climate services. [More information on Adaptation Scotland and the Scottish perspective of UKCP18 is available here.](#)

London Climate Change Partnership (City Hall, 10 January)

Hot on the heels of the launch of UKCP18, the Met Office project team briefed stakeholders in London and neighbouring areas about the UK’s latest climate projections. [More information on LCCP and the event is available here.](#)

If you have any queries relating to this newsletter, please contact the [Project Team](#).

Issued on behalf of Defra, BEIS and Environment Agency by the Met Office



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