



## UK Climate Projections Project Newsletter - August 2016

The UK Climate Projections will have a major upgrade to make sure decision-makers have the most up-to-date information on the future of our climate. This was announced by the Department of Environment, Food and Rural Affairs on 15 January 2016.

The UKCP18 project will build upon the current set of projections (UKCP09), which provide crucial information about how we can expect our climate to change over future decades. These tools help decision-makers assess the range of risks from the changing climate and advise how we can adapt.

Benefiting from £12m of government investment, the UKCP18 project is harnessing the latest science and supercomputing capabilities from the Met Office Hadley Centre, combined with the expertise of the Environment Agency and Defra to build on the success of UKCP09.

Website



### Scientific Peer Review Panel established

A Peer Review Panel has been set up which is chaired by Professor Sir Brian Hoskins and includes Professor Mat Collins (University of Exeter), Professor Jim Hall (University of Oxford), Dr Ed Hawkins (University of Reading), Professor Gabi Hegerl (University of Edinburgh), Dr Erik Kjellström (Rosby Centre, SMHI, Sweden), Professor Christoph Schär (Swiss Federal Institute of Technology in Zurich (ETH Zurich)), Professor Ted Shepherd (University of Reading), Dr Claudia Tebaldi (National Center for Atmospheric Research (NCAR)), and Professor Dr Bart Van Den Hurk (Institute for Environmental Studies at the VU University, Amsterdam).

The Panel met in May 2016 and UKCP18 project team scientists had open and frank discussions about the underlying science. In its report to the project's Governance Board, the Peer Review Panel "commended the Met Office for project planning and for undertaking both scientific and operational aspects".

#### Professor Sir Brian Hoskins



Professor Sir Brian Hoskins is currently Director of the Grantham Institute for Climate Change at Imperial College and Professor of Meteorology at the University of Reading. He is also a member of both the UK Committee on Climate Change and the science academies of the UK, USA, China and Europe.

Sir Brian was involved in the Inter-governmental Panel for Climate Change Fourth Assessment Report, Working Group 1, as Review Editor and Author for the Summary for Policy Makers and Technical Summary (2005 - 2007). He also played a major part in the 2000 Report by The Royal Commission on Environmental Pollution that first proposed a 60% target for UK carbon dioxide emission reduction by 2050.

He specialises in weather and climate research, in particular the understanding of atmospheric motion from frontal to planetary scales.

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### What will UKCP18 look like?

The UKCP18 project will update the UKCP09 projections providing greater regional detail and further analysis of the risks we face, both nationally and globally. It will provide more information on potential extremes and impacts of climate change.

It is made up of four elements:



#### 1. Observational reports and datasets

The annual State of the UK Climate report, produced as part of the Met Office Hadley Centre Climate Programme, will be branded as UKCP in summer 2017

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#### 2. Future projections over land

The land projections will consist of 3 components:

1. update to probabilistic projections, introduced in 2009, taking account of improved methods
2. a set of around 20 global realisations or storylines that will provide information at about 60km scale using the latest Hadley Centre global climate model which should lead to improved representation of the North Atlantic storm track
3. a set of downscaled projections of weather at a resolution of less than 5km and driven by the global model. This is designed to provide an improved simulation of extreme weather.



#### 3. Sea level rise projections

This will include new estimates of regional time mean sea-level rise, based on IPCC 5th assessment methods plus some additional improvements. They will be accompanied by new simulations of changes in storm surges, including looking at the impact of various mean sea level rise estimates on an historical storm surge event.



#### 4. The climate service

Several aims supported by governmental and non-governmental user groups include: ensuring suitable user metrics are included and properly evaluated in the model simulations; helping to design and implement suitable data and information delivery systems; facilitating user case studies; and developing guidance.

### How are users getting involved?

Two user groups have been set up to draw on the experience of users in order to inform the updated projections and how they are delivered:

The first user group is made up of representatives from all government departments and other relevant government organisations.

The second user group, appointed following the expression of interest process, comprises academics, businesses, consultants and NGOs representing agriculture, built environment, businesses and services, energy, health, infrastructure, marine, natural environment and water sectors.

Get in touch



So far we have had user group workshops on lessons learnt from UKCP09, user-relevant metrics, the reporting of past climate and future projections in light of recent improvements in climate science. To address special topics of interests, we have set up workshops on marine/coastal protection and using information at the daily to sub-daily scale. The feedback obtained is being used to inform the setup of model experiments and to understand how the data and knowledge could be delivered to users.

A workshop is planned for September 2016 and further engagement events every quarter until Spring 2018.

### Transition from UKCP09 to UKCP18

A technical note on the Met Office website assesses the extent to which advice from UKCP09 remains an appropriate tool for adaptation planning in light of recent improvements in climate science. It focuses on the land component and concludes that UKCP09 continues to provide a valid assessment of future UK climate over land and can still be used for adaptation planning.

A similar one will be created for the marine component and for UKCP18 Project outputs.

Read more



### Feedback

The next newsletter will be issued towards the end of the year. If you have any feedback, requests for information or suggestions for content, please email us.

Email us

