Met Office

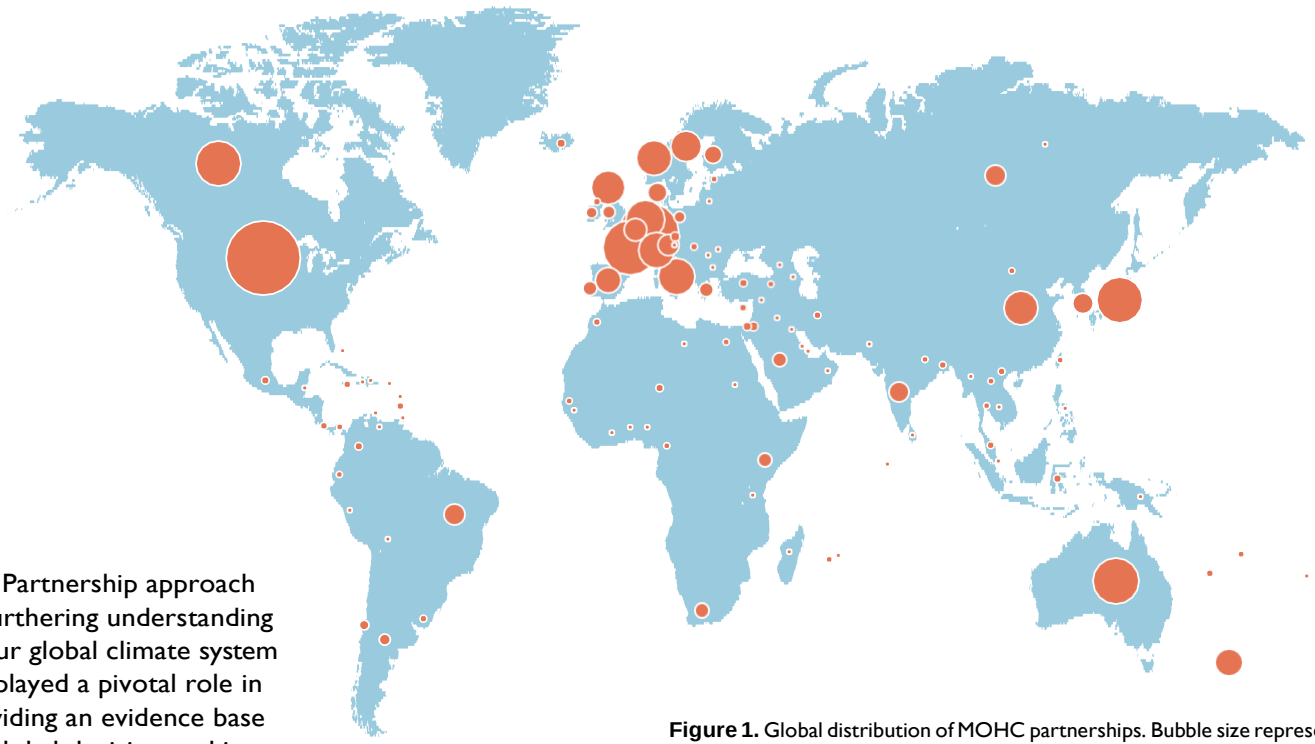
COP25: Met Office Hadley Centre

Our purpose

The Met Office Hadley Centre (MOHC) provides climate science and services to help people make better decisions to stay safe and thrive. We do this by working with partners around the globe to carry out world leading research. This science is used for services which are developed together with end-users to find the most effective approach to managing climate risk.

Global partnerships

Since its foundation in 1990, the Met Office Hadley Centre (MOHC) has been recognised as a **global partner** of choice for climate science and services. Through our years of pioneering research, our scientist have been working alongside international researchers from over **1715 organisations** institutions and **138 countries** outside of the UK.



The Partnership approach to furthering understanding of our global climate system has played a pivotal role in providing an evidence base for global decision-making.

Figure 1. Global distribution of MOHC partnerships. Bubble size represents the number of papers that the Met Office has Co-authored in each country.

World-leading research

The MOHC has been at the forefront of climate research by:

- Contributing to all six Assessment Reports by the Intergovernmental Panel on Climate Change (IPCC), with 2 Lead Authors, 2 Coordinating Lead Authors, and 1 Review editor for the latest report, AR6.
- Publishing more than **2,377 peer-reviewed articles** in scientific literature since 1990, with **100 articles** published in 2019 so far (1st October 2019).
- Publishing across **224 different journals**.
- Producing high impact publications that have been cited more than **187,179 times**.

Figure 2. Peer-reviewed articles from 1990 - 2018 (shows 2019 so far)

Met Office Climate Centre Climate Programme

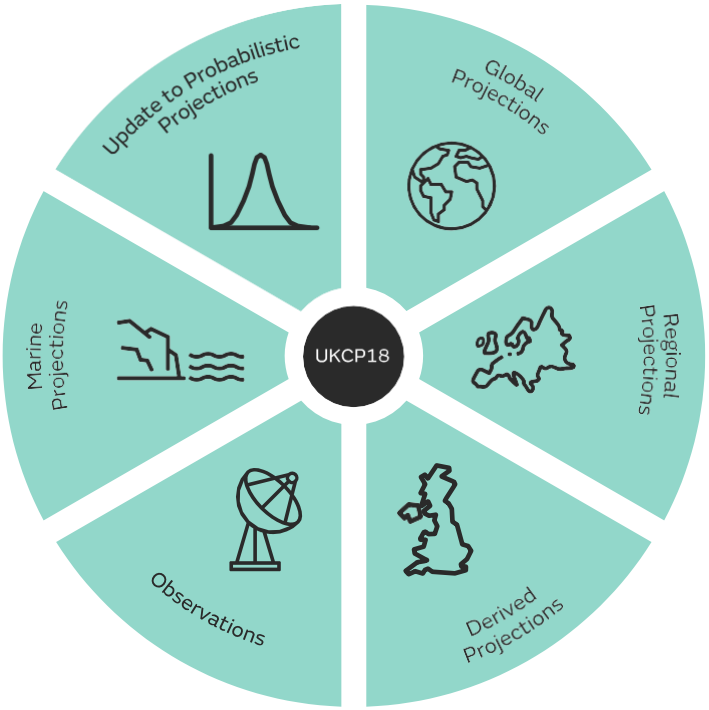
A major component of its science work is through the Met Office Hadley Centre Climate Programme. Supported by the UK Department of Business, Energy and Industrial Strategy (BEIS) and the Department for Environment, Food and Rural Affairs (Defra), it delivers world-leading scientific evidence on climate variability and change, benefitting the UK climate science base while serving the needs of UK Government.

CMIP6 models

UK scientists are using the new generation of climate models as part of the 6th Coupled Model htercomparison Project (**CMIP6**) experiments. This includes two new flagship UK models, developed by scientists at the Met Office and the Natural Environment Research Council (NERC), the HadGEM3-GC3.1 physical model and UKESM1 Earth System model. Outputs from these simulations will be extensively used in the IPCC 6th Assessment report.

WMO Lead Centre for Annual to Decadal Climate Predictions

When modelling our weather and climate, there is a gap between short-term weather forecasts and long-term climate predictions. In 2007, an Annual Decadal Climate Prediction (ADCP) system was proposed to bridge this gap. The Met Office has been crucial for the development of decadal forecasts, and based on its work in utilising decadal forecasts, the MOHC has been designated a World Meteorological Organisation Lead Centre for Decadal Forecasts.



UKCP18 2.2km projections

The UK Climate Projections (UKCP) is a climate analysis tool that forms part of the Met Office Hadley Centre Climate Programme. This year, the Met Office was able to produce projections at a scale of 2.2km – this is the highest resolution yet, and is a significant step up in modelling capability.