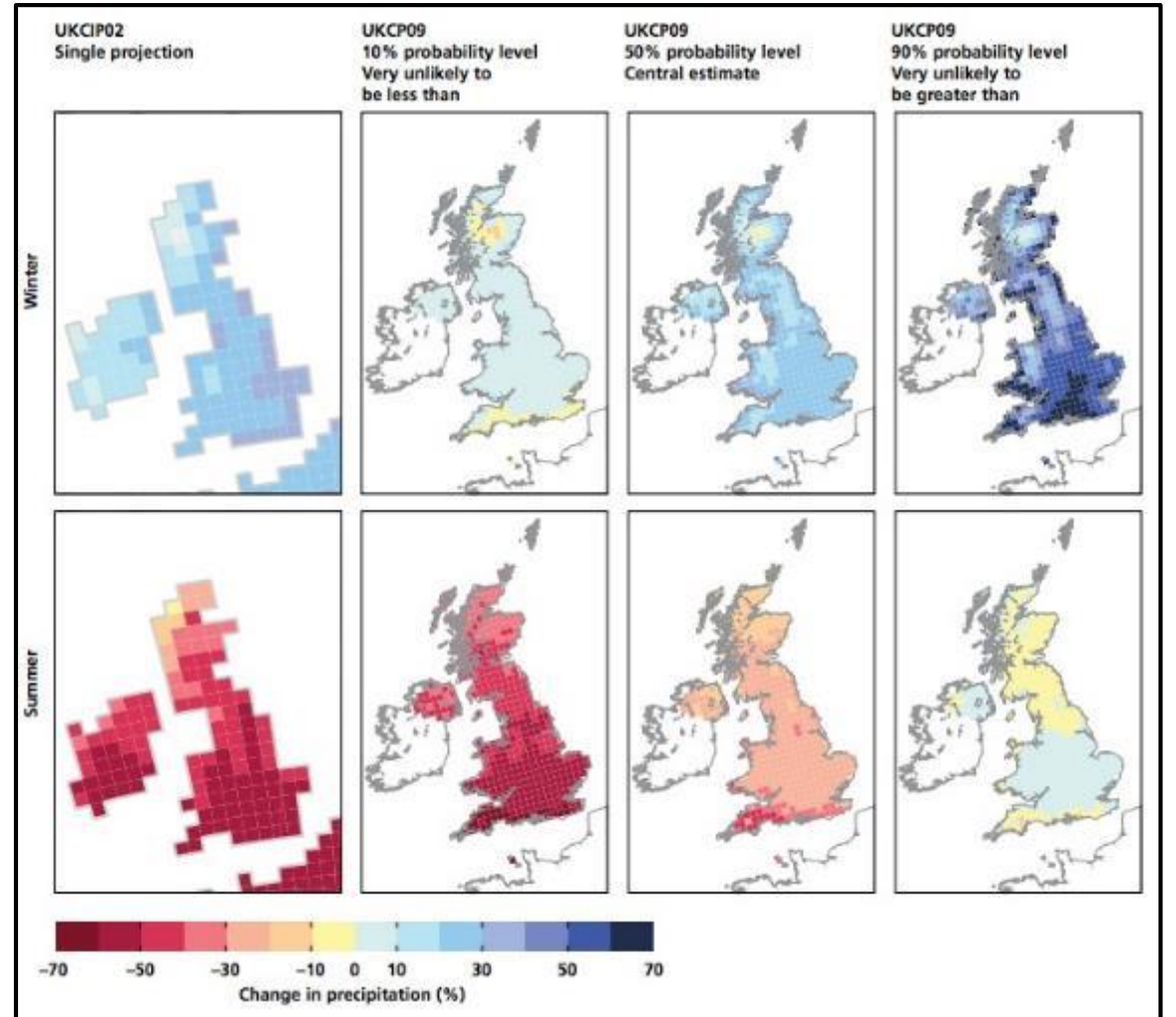
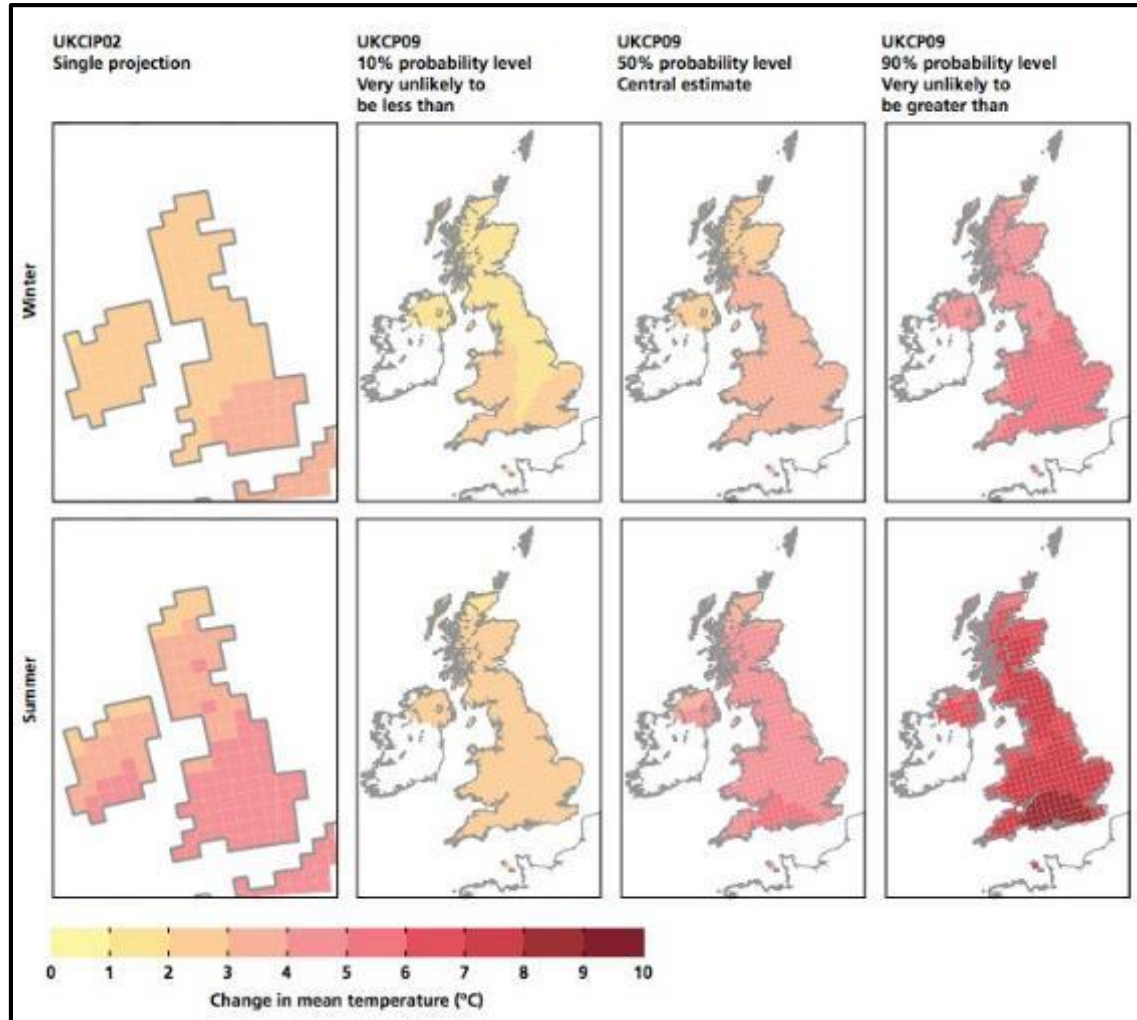
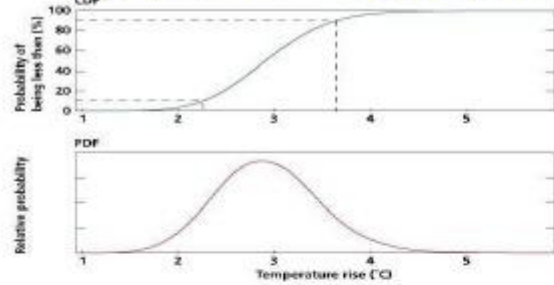


UKCP09 – Results



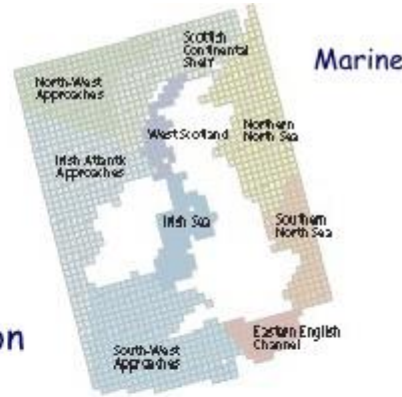
UKCP09 – Results

UKCP09 – Responding to Users



Uncertainty

Spatial resolution



Marine

25 km grid

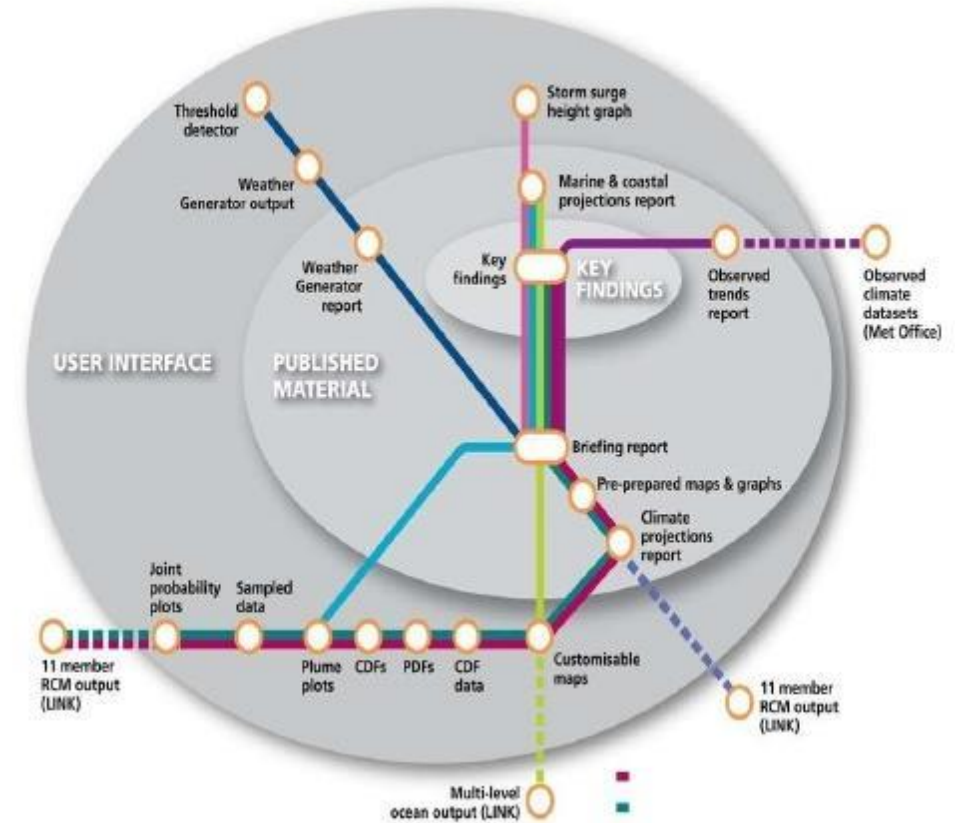
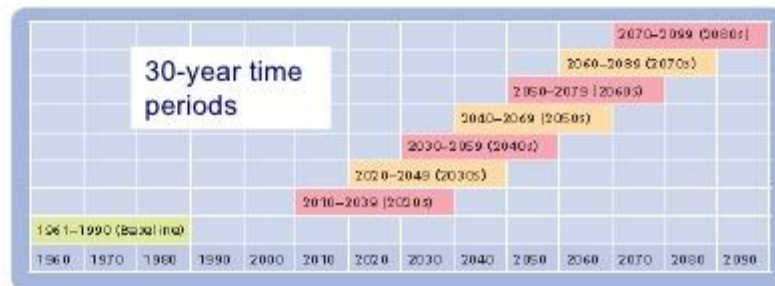
Administrative

River Basin



Variable	Unit	Change	Temporal Averaging
Mean daily temperature	°C	°C	Month, season, year
Mean daily maximum temperature	°C	°C	Month, season, year
Mean daily minimum temperature	°C	°C	Month, season, year
50th percentile of daily maximum temperature	°C	°C	Season
1st percentile of daily maximum temperature	°C	°C	Season
50th percentile of daily minimum temperature	°C	°C	Season
1st percentile of daily minimum temperature	°C	°C	Season
Precipitation rate	mm/day	%	Month, season, year
50th percentile of daily precipitation rate	mm/day	%	Season
Specific humidity	g/kg	K	Month, season, year
Relative humidity	%	% (or %)	Month, season, year
Total cloud	fraction	%	Month, season, year
Net surface long wave flux	W/m ²	W/m ²	Month, season, year
Net surface short wave flux	W/m ²	W/m ²	Month, season, year
Total downward short wave flux	W/m ²	W/m ²	Month, season, year
Mean sea level pressure	hPa	hPa	Month, season, year

Temporal resolution



Probabilistic Climate Projections (Land)
 Probabilistic Climate Projections (Marine)
 Multi-level output

UKCP18 – Launched on 26 Nov 2018

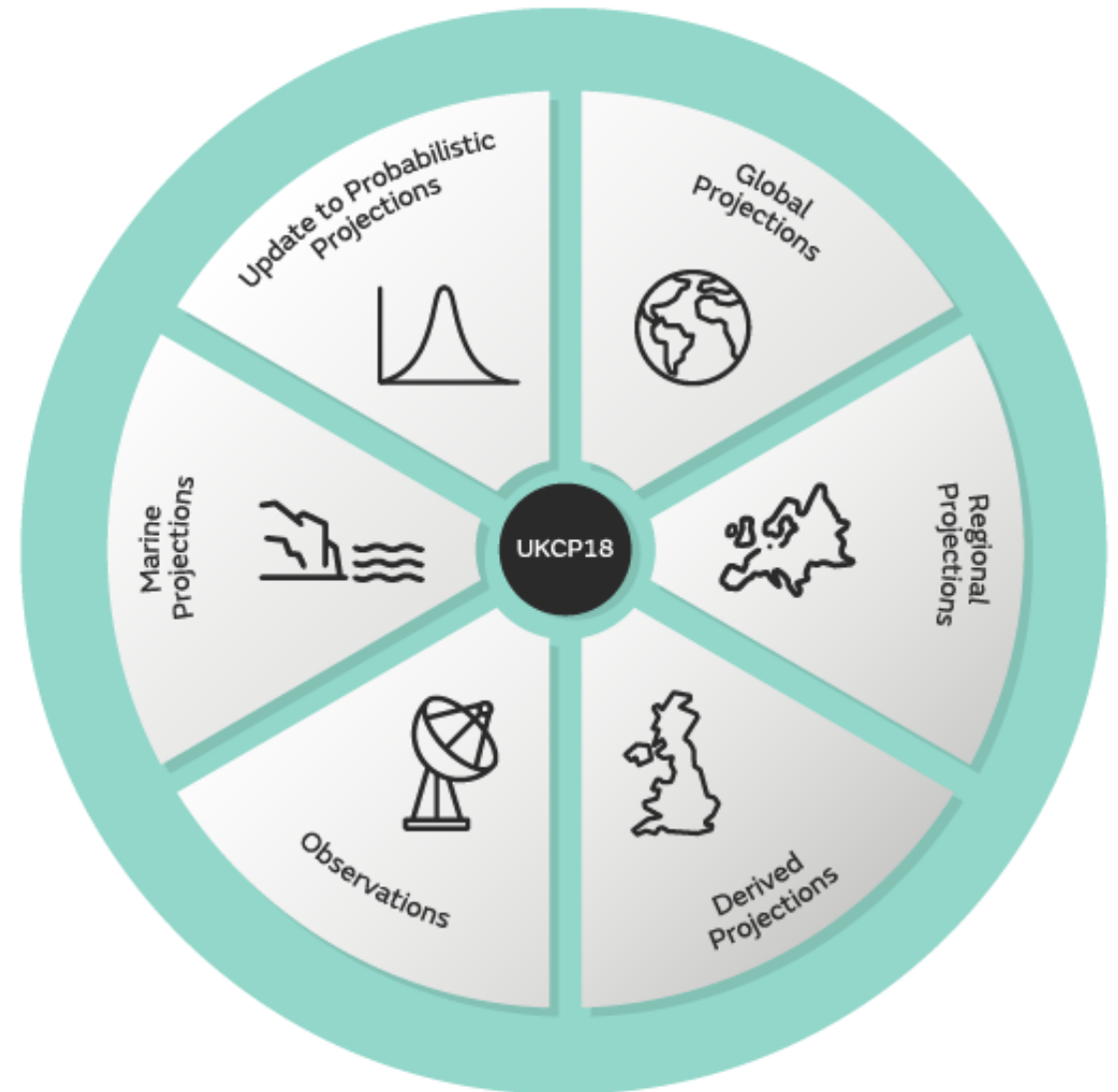
“Tackling climate change is not a binary process which requires us to champion the planet over national prosperity. Indeed market mechanisms, like reverse auctions for new clean energy capacity and the carbon price on electricity generation, have been hugely successful in delivering these cuts in emissions.”

Secretary of State Michael Gove
Speech on UK Climate Change Projections



UKCP18 – Features

- Observations (from late 1980s)
- Update to Probabilistic Projections
- Land Projections
- Marine Projections
- Global Projections (60km)
- Regional Projections (12km)
- Data available
 - Derived Projections
 - Temperature
 - Precipitation
 - Sea level rise and storm surge
 - Weather types
 - Wind



UKCP18 – Features

The screenshot shows the UK Climate Projections website. At the top left is the logo. Below it is a navigation bar with links: Home, Using Climate Projections, Maps & key findings, Reports & guidance, and Case studies. A prominent announcement states: "From 31 December 2018, the UKCP09 service will permanently close. From this date, the UKCP09 website will be available in archived format only. There will be no further updates to material on the UKCP09 website and no further access to the UKCP09 helpdesk, User Interface or search function. Underlying UKCP09 data will still be available from the CEDA catalogue. For more information on these changes, see [here](#). For the new climate projections released in 2018, please visit the UKCP18 website [here](#) from Monday 26 November 2018." Below this is a section titled "Use UKCP09 to assess climate risk to adapt" and another titled "Using Climate Projections Features". A "Before you start" section mentions that some content is archived. At the bottom, there are links for "SEARCHABLE", "PAGES", "BACKGROUND", and "UKCP18 FAQs".



The screenshot shows the Met Office website. The top navigation bar includes "Weather", "Climate", "Learning", "Research", "Products", "News", and "Weather Ready". Below this is a grid of links: "Overview and strategy", "Climate science", "Our scientists", "Research news", "Foundation science", "Collaboration", "Modelling systems", "Applied science", "Technology", "Weather science", and "Monitoring". The main content area features a large aerial photograph of a rural landscape with a dark overlay containing the text "UK Climate Projections". Below the photo, there is a section titled "UKCP18" with a description: "UKCP18 provides the most up-to-date assessment of how the climate will change over the 21st century. Find information to help with assessments and adaptation plans." To the right of this text are social media sharing icons for Facebook, Twitter, LinkedIn, and Email. Below the main text is a "Related pages" section with links: "About UKCP18", "Download UKCP18 data", "Information for UKCP09 users", "UKCP18 Newsletters", and "Contact us". At the bottom right, there are "Watch later" and "Share" buttons. The page footer includes the word "Monday" and a "Related links" section.

UKCP18 – Updated Projections

Product	UKCP09	UKCP18
Observations	5km 25km in rotated pole grid* to match probabilistic projections Administrative regions and river basins	5km 25km in Ordnance Survey's British National Grid+ to match probabilistic projections Countries , administrative regions and river basins 12km and 60km in in Ordnance Survey's British National Grid+ to match global and regional projections
	Daily, monthly, long-term averages No daily precipitation	Daily, monthly, long-term averages Daily precipitation



UKCP18 – Updated Projections

Product	UKCP09	UKCP18
Probabilistic Projections	25km in rotated pole grid* Administrative regions and river basins	25km in Ordnance Survey's British National Grid+ Countries , administrative regions and river basins
	Monthly, seasonal, annual	Same
	30-year averages	30-year averages and monthly time series
	SRESB2 (low) SRESA1B (medium) SRESA1FI (high)	SRESA1B RCP2.6, RCP4.5, RCP6.0, RCP8.5
	10,000 samples	3,000 samples



UKCP18 – Updated Projections

Product	UKCP09	UKCP18
Spatially coherent climate model data	25km in rotated pole grid* Daily time series	60km global projections (daily+) 12km regional projections over Europe (daily+) 2.2km regional projections over UK (subdaily+)
Spatially coherent projections	25km in rotated pole grid* 30-year averages	No longer available. Replaced by spatially coherent <ul style="list-style-type: none">• 60km global projections• 12km regional projections over Europe• 2.2km regional projections over UK• 60km derived projections over UK
Weather generator	Daily and hourly	No longer available. Replaced by <ul style="list-style-type: none">• Daily data from global and regional models• Sub-daily data from 2.2km regional projections

UKCP18 – Updated Projections

Product	UKCP09	UKCP18
Marine Projections	Time-mean sea level to 2100	Time-mean sea level to 2100 Exploratory time-mean sea level to 2300
	H++	Not updated but are still valid
	Storm-surge trend	Best estimate is for zero storm-surge trend, see Extreme still water return levels
		Case studies



UKCP18 – Dataset Examples (Sea level rise and storm surge)

Dataset	Description	Emission Scenarios	Time Period	Domain
Time mean sea Level (12km)	Projections of future changes in sea water level	RCP2.6 RCP4.5 RCP8.5	2007-2100	UK Coastline
Storm surge trend (12km)	Projections of storm surge trend excluding mean sea level changes	RCP8.5	2007-2100	UK Coastline
Storm surge simulations	Time series of gridded historical and future simulations of sea level excluding mean sea level changes	RCP8.5	1970-2099	UK
Short event case studies	Time series of gridded historical and future simulations of sea level for 3 events	N/A	6 Dec 2013 3 Feb 2014 11 Jan 2015	UK
Time mean sea level (12km)	Exploratory projections of future changes in sea level	RCP2.6 RCP4.5 RCP8.5	2007-2300	UK
Projected future still water return level	Projected future still water levels at tide gauges	RCP2.6 RCP4.5 RCP8.5	2007-2300	UK tide gauges