

EUCP: Overview of research towards a European Climate Prediction system

Professor Jason A. Lowe

EUCP Science convenor

29th May 2019



A busy year for national climate projections



Met Office
Hadley Centre

Headline result:

“a greater chance of warmer, wetter winters and hotter, drier summers”



UKCP18 and CH2018 both launched in November 2018

Working together on UK Climate Projections
 www.metoffice.gov.uk © Crown Copyright 2018, Met Office

CH2018

Climate Scenarios for Switzerland



New climate scenarios for Switzerland

The CH2018 Climate Change Scenarios show where and how climate change affects Switzerland. “Dry summers”, “Heavy precipitation”, “More hot days”, and “Snow-Scarce Winters” are some of the expected consequences of unchecked climate change.

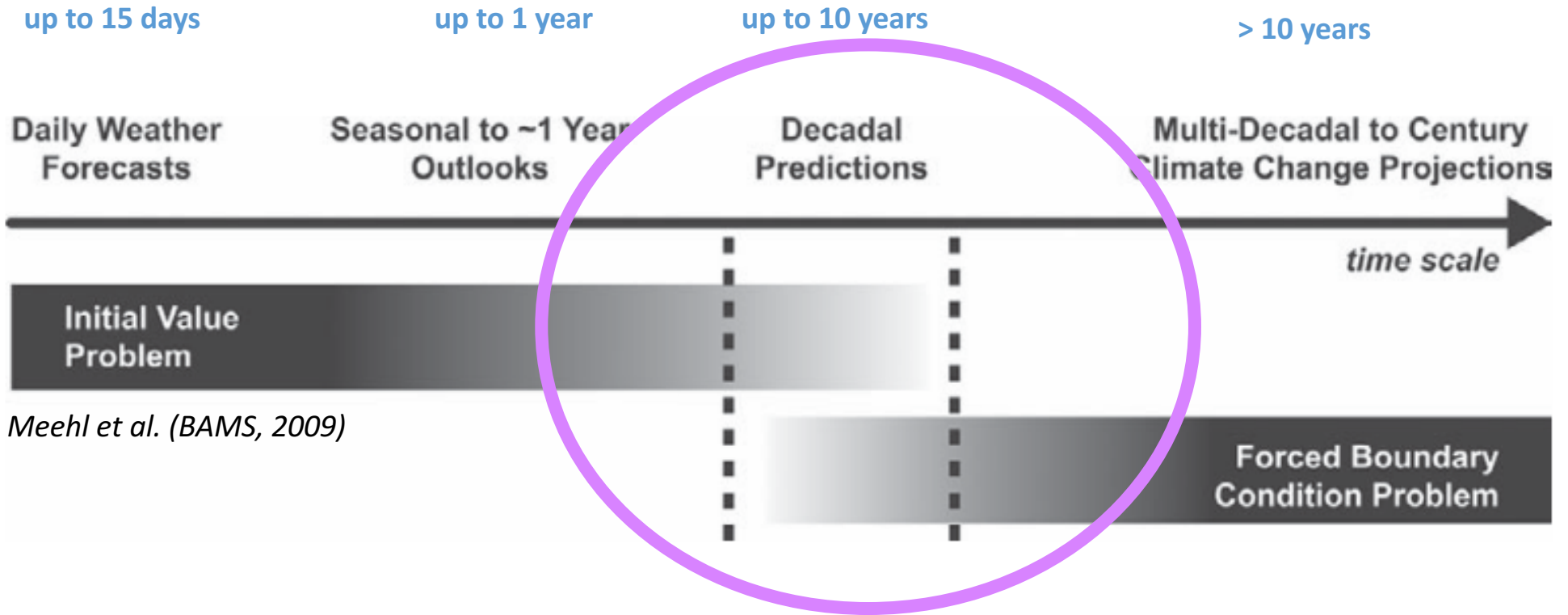
[CH2018 web atlas](#)

[CH2018 Climate Scenarios](#)

[NCCS web portal](#)

[NCCS - about us](#)

1. Towards a seamless near-term European climate prediction system



Meehl et al. (BAMS, 2009)



Planting and harvesting dates

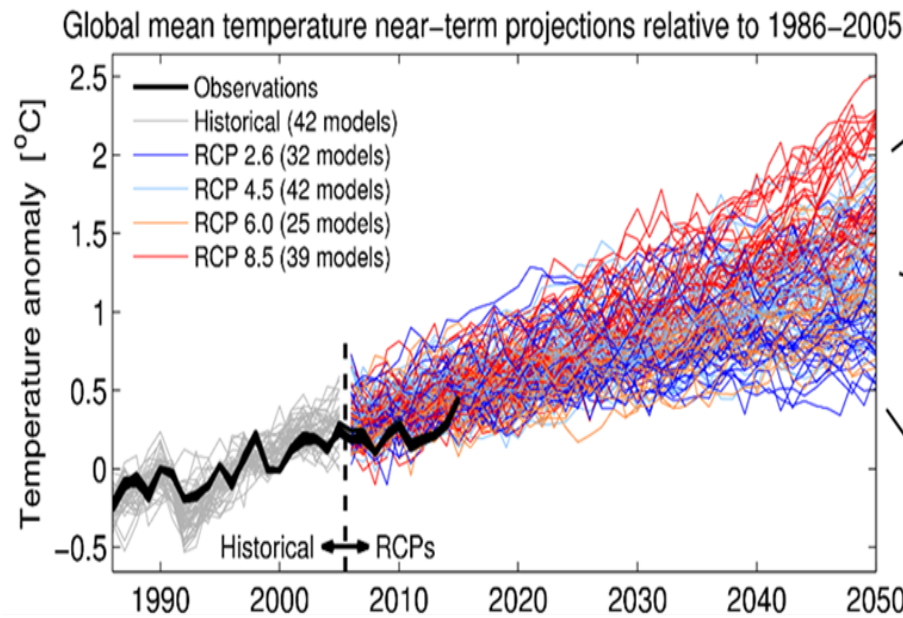


Seed choices and new varieties



Infrastructure for the future and business diversification

2. Beyond one model-one vote on the 10-40+ year time-scale

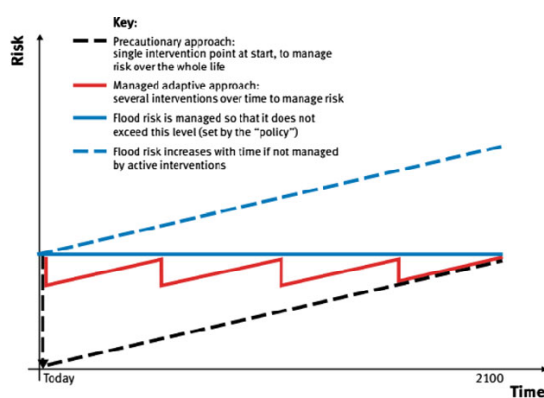


Evaluation of the utility of observational and emergent constraints.

Explore, test and apply a range of methodologies for producing UQs/PDFs, including estimates of the contributions of natural variability, model uncertainty and forcing uncertainty to the UQs/PDFs.

Deriving methods to produce a small, but efficient, ensemble of realisations.

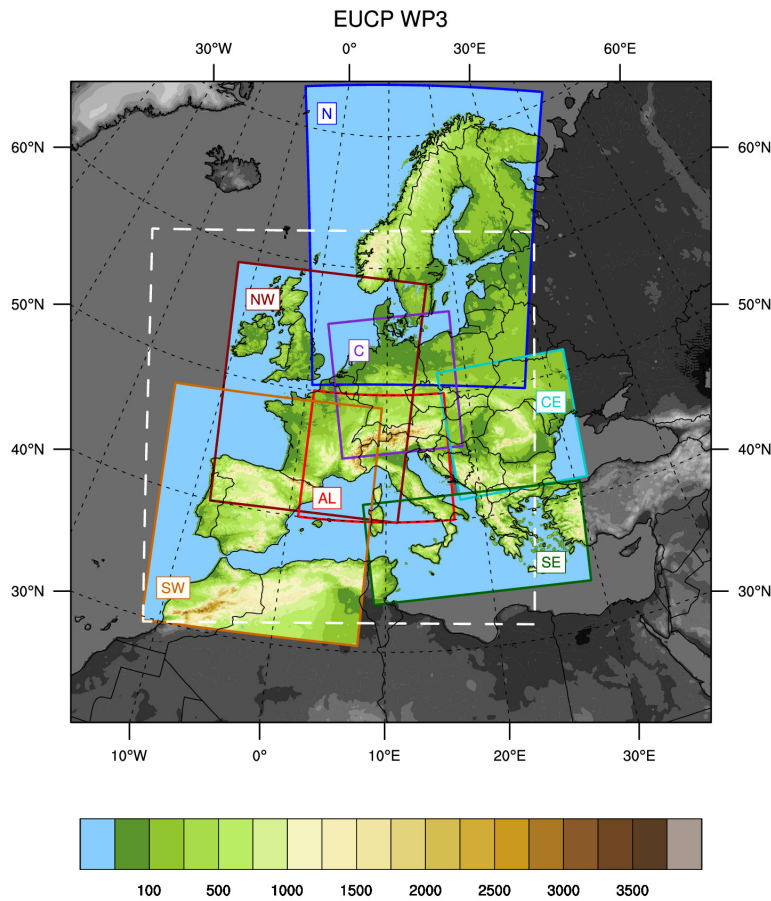
Enabling better long-term adaptation planning



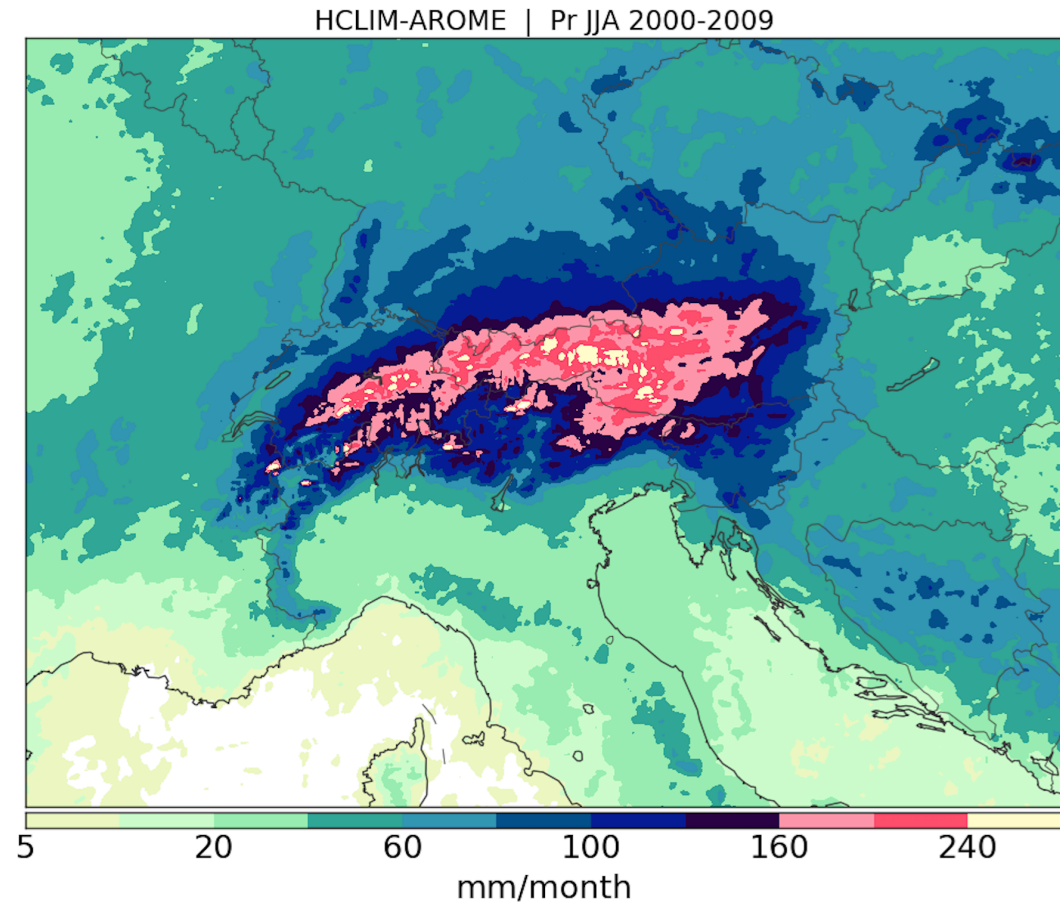
3. The first pan-European convective permitting model simulations



Domain and simulation strategy approved



Example from ERA-Interim driven runs



Enabling better simulation of weather and climate extremes