

Delivering Climate Services for Adaptation and Mitigation



Preparing for the future

Protecting our cities

Managing our water



Feeding the world



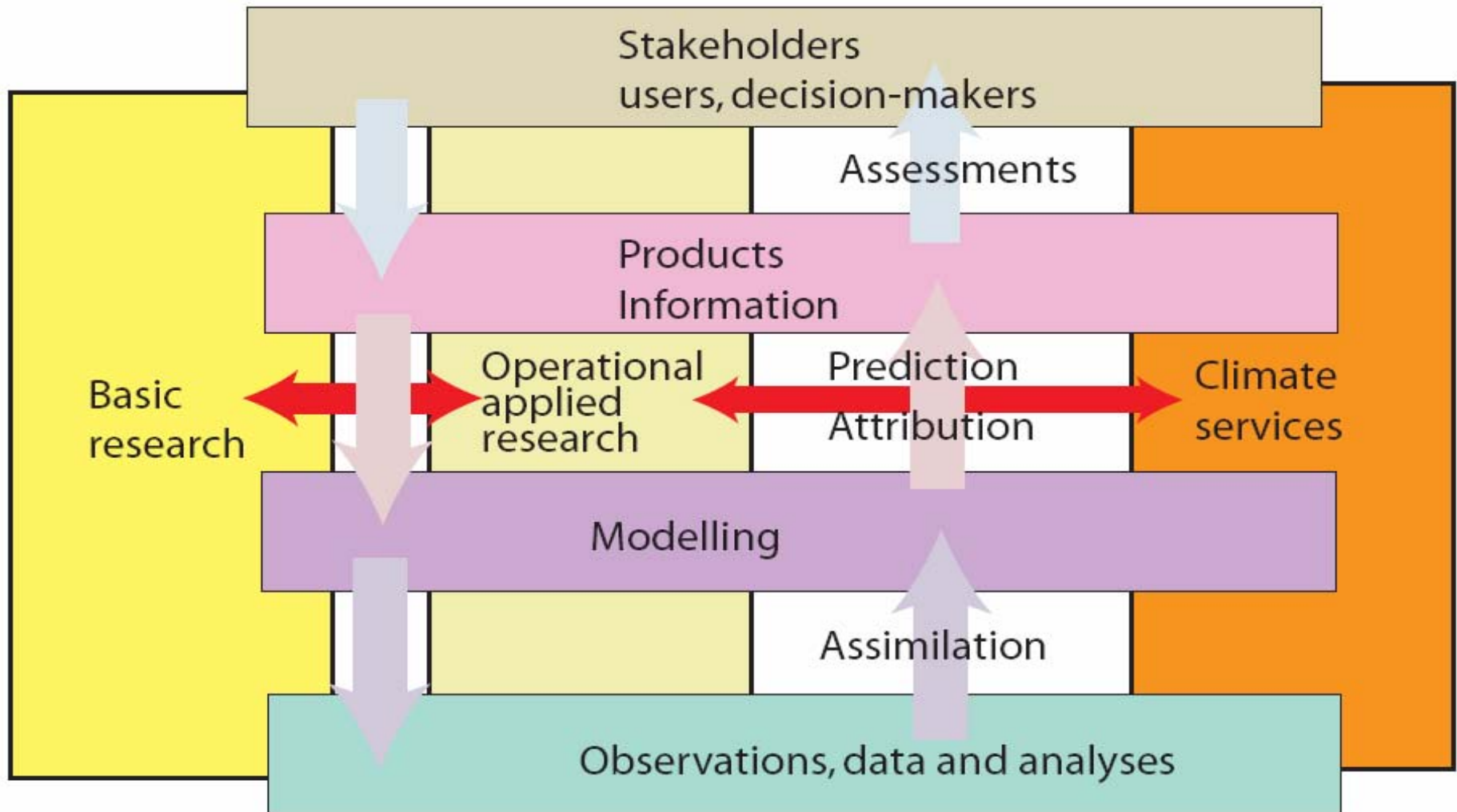


Operationalising Climate Prediction Delivering Climate Services

Goal:

- Trustworthy predictions for weeks to decades;
- Risks of hazardous weather and climate extremes,
- Risks of dangerous climate change;
- Timely products and advice for planning and adaptation to climate variability and climate change;
- Scientific advice on the climate benefits and risks associated with mitigation policies.

Climate Services – Working in Partnerships

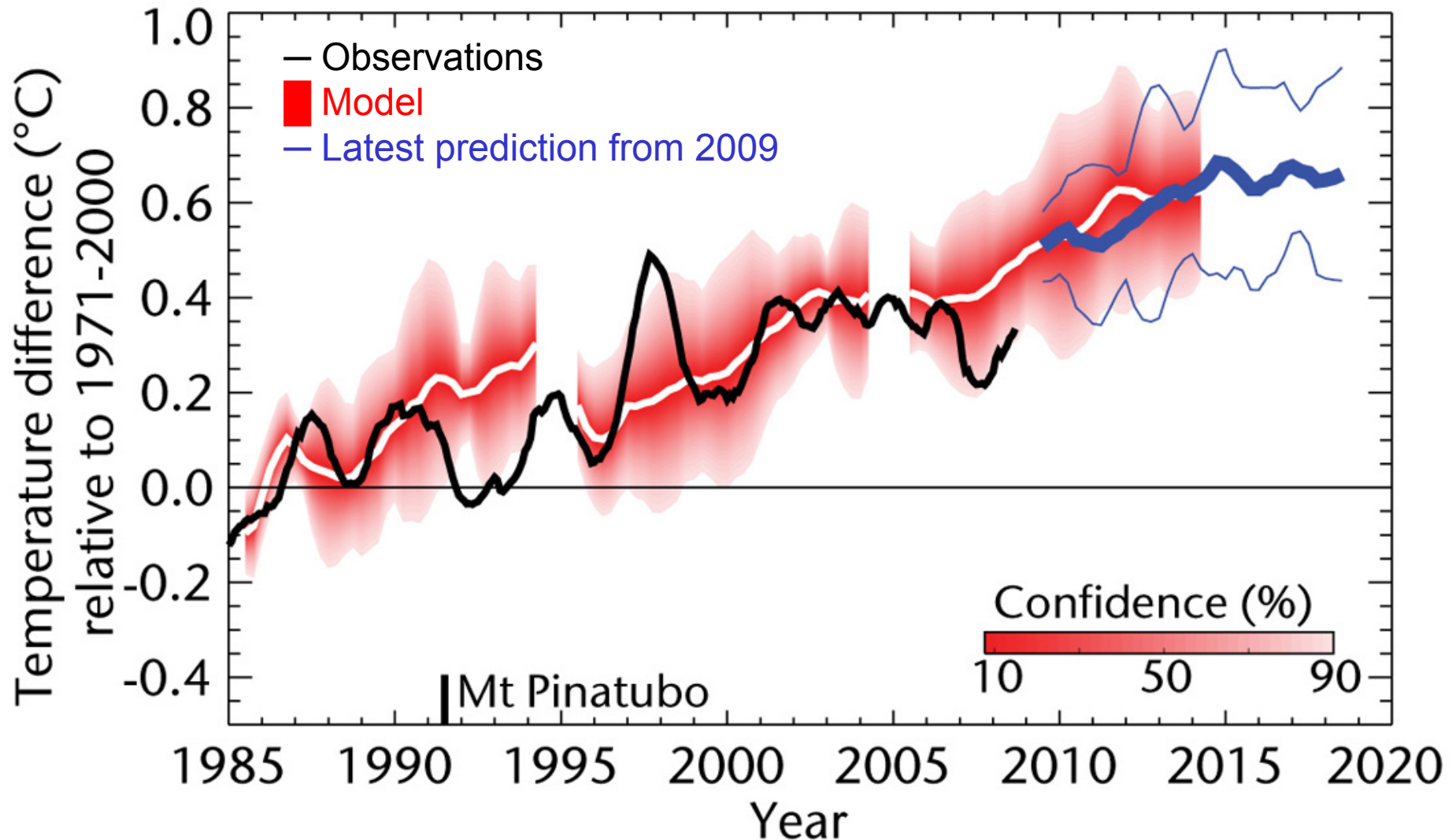




What is a Climate Service?

- Delivers information, guidance and bespoke products on the current and future climate, in ways that address user needs.
- Users: general public, governments, service providers, business, industry and NGOs.
- User needs: local, regional, global
- Climate information includes:
 - Climate observations, monitoring and historical data – detection, attribution of trends and extremes, assessment of current state of the climate.
 - Predictions - outlooks, advisories and warnings on regional climate extremes and the statistics of weather with lead times of months to decades.
 - Projections and scenarios for the 21st century and beyond – advice on mitigation policy, assessment of dangerous climate change.

Global average temperature forecast for the next decade



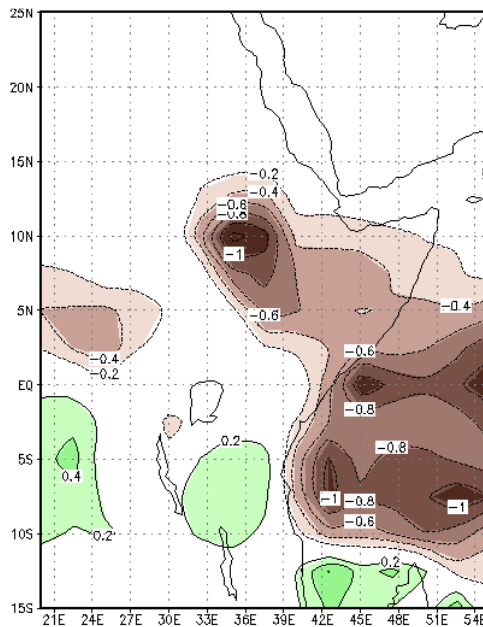


Dealing with climate vulnerability now

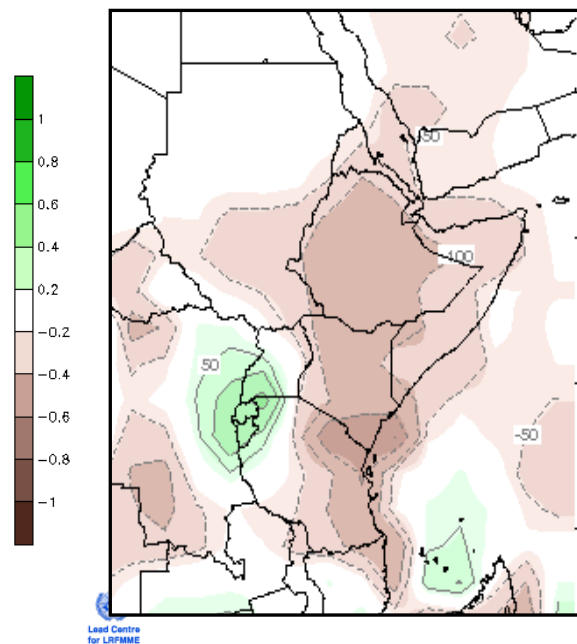
February 2009 forecast for Horn of Africa

March-April-May 'long' rains

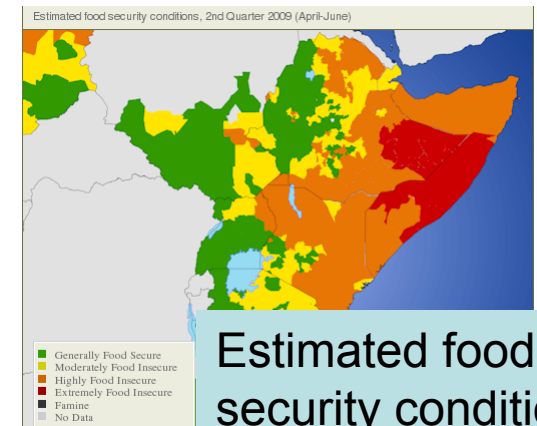
10 model multi-model
ensemble-mean prediction



Observed rainfall
Anomalies: Below normal



Regional Climate
Outlook Forum
consensus:
Increased probability
of drought



Estimated food
security condition,
April-June

Reuters May 12, 2009:
Somalia's worst drought in a decade is pushing growing numbers of children into near-famine conditions and deepening the humanitarian crisis caused by political violence, the United Nations warned ...

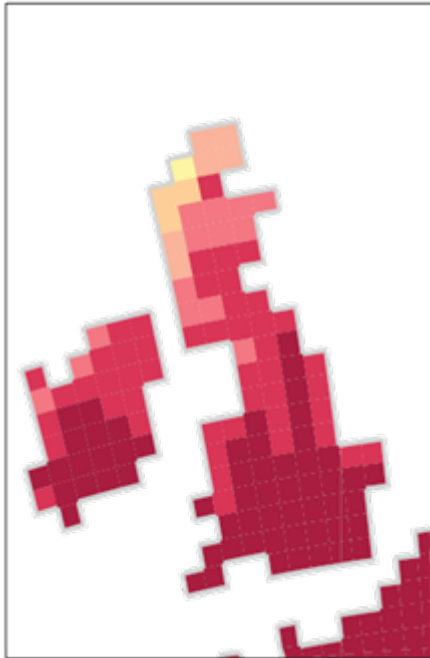


Met Office

Moving from uncertainty to probability to aid decision-making

UKCIP02

Single
projection



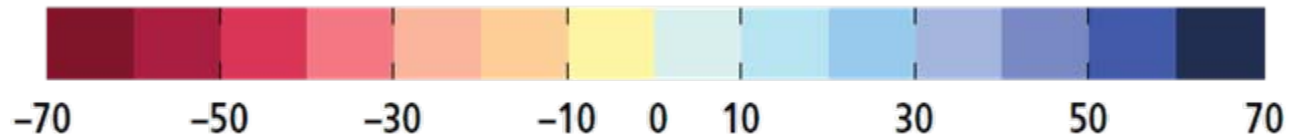
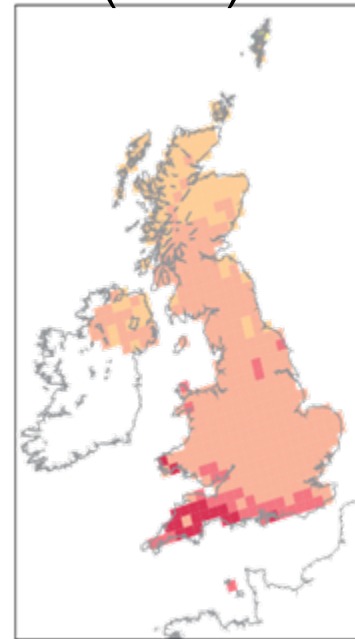
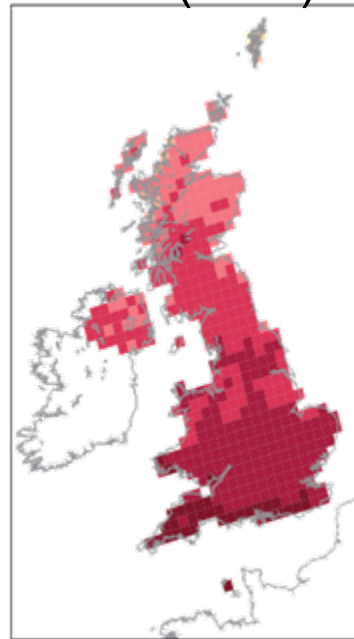
UKCP09

Very unlikely
to be less
than (10%)

Central
estimate
(50%)

Very unlikely
to be more
than (90%)

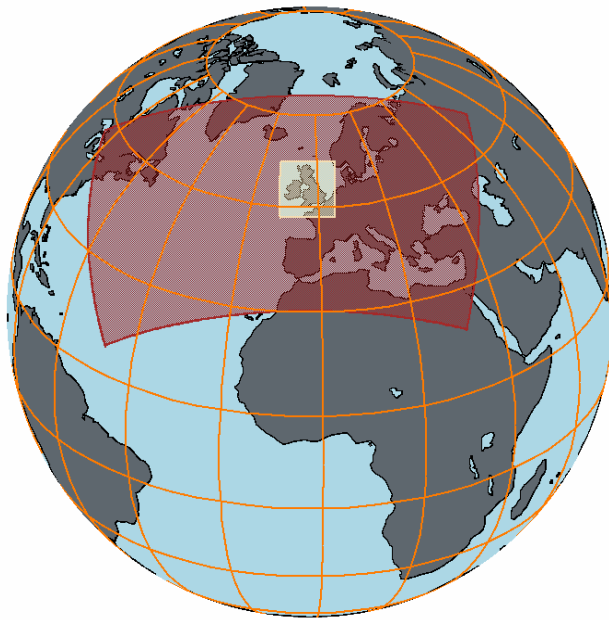
Summer Rainfall 2080's



Change in precipitation (%)

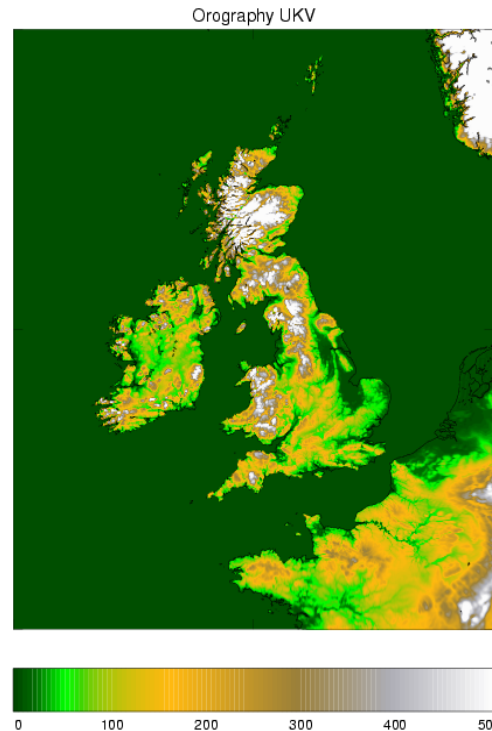
Future for Climate Services:

Integrated weather and climate prediction
for estimating hazards and risk



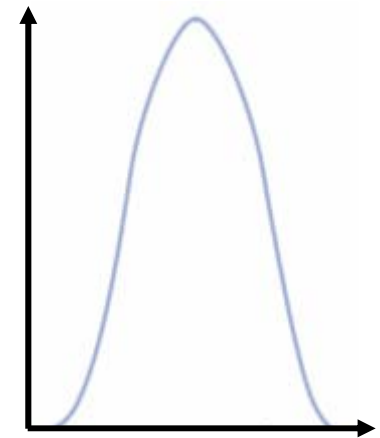
N x Global predictions
at ~20km with lead
times of days to years:

Synoptic drivers



<N x Regional predictions
at ~1km:

Local meteorology



Probability of local
hazard:

Impacts

Climate Services – Working in Partnerships

