



Winter 2006-07 forecast

Ofgem winter outlook consultation

Wednesday 27th September

Dr Matt Huddleston

Temperature forecast

- Over much of the European region, the situation is now finely balanced with approximately **even chance that the winter will be colder or warmer-than-average**.
- For the UK temperatures **near the 1971-2000 average are slightly favoured** for the winter season as a whole. However, later in the winter season, there is a signal for lower temperatures (relative to average) and an increase in the frequency of cold snaps.
- Note that even an average winter is likely to include some notable cold snaps and snowfalls.

Rainfall forecast

- For this winter, wetter-than-average conditions are favoured over central and southern Europe, although for the UK, there are approximately **even chances of a wetter or drier-than-average winter.**
- Last winter saw much drier-than-average conditions across northern Europe and all parts of the UK – much as last autumn's forecast had suggested. In the south-east of England this was the continuation of a long period of dry weather starting in November 2004, continuing through to the summer of 2006.

Winter forecast 2006-07



Forecast uncertainties

- The current forecast has moved away from our early signal for a mild winter, and there are signs that the **trend towards a colder winter outlook may continue** as emerging signals become established. Further developments in the situation are therefore expected, as evolution of ocean temperatures in the North Atlantic takes place.

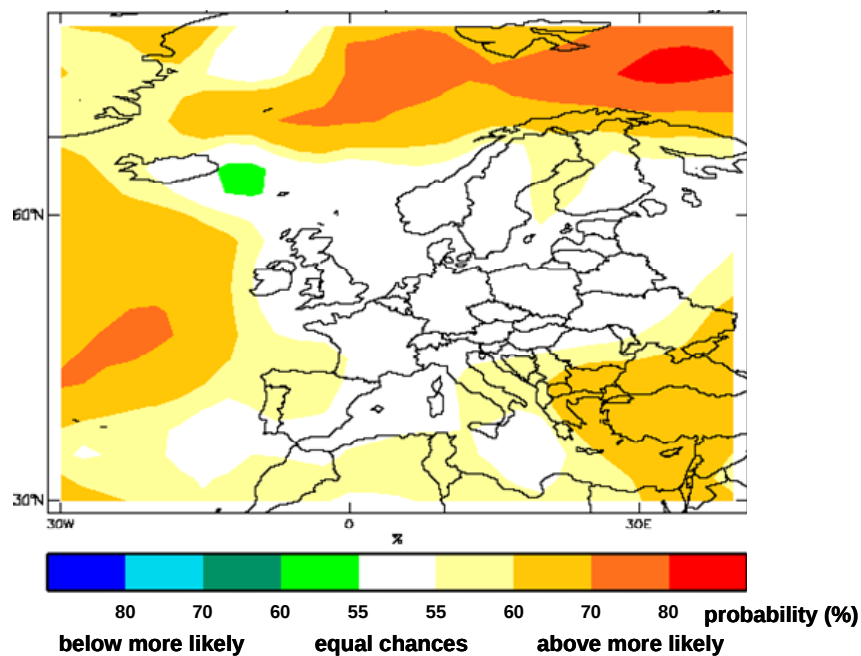
Background

- Met Office winter forecasting methods are based primarily on the influence of North Atlantic Ocean temperatures on the European winter climate. Seasonal trends usually affect quite large geographic areas, so the forecast for the UK is cast in the broader picture for Europe as a whole.
- A statistical method and a number of global forecasting models are used to provide information on the outlook for winter 2006-7.
- **El Niño conditions** – which have widespread weather impacts across the globe - are now becoming established in the Pacific Ocean. There is evidence that El Niño has an effect on European winter climate and this will continue to be monitored.

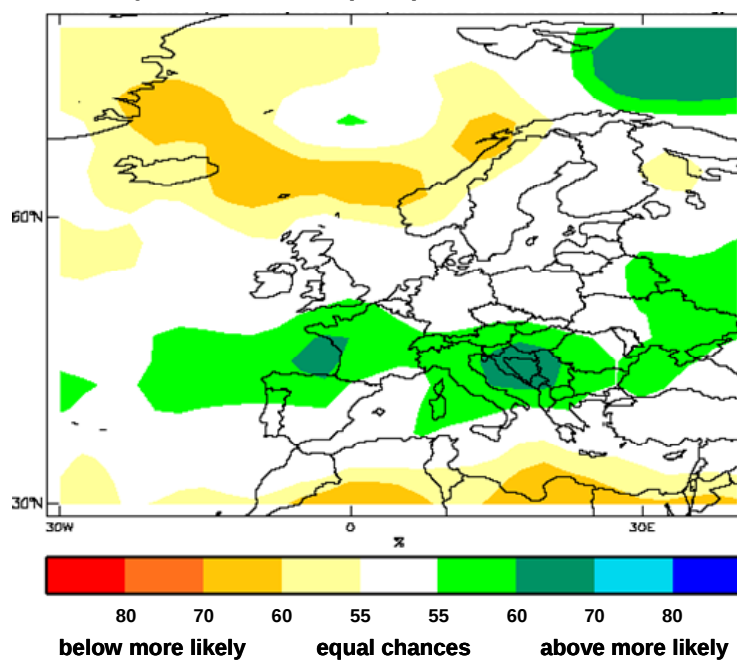
Winter forecast 2006-07



Probability of winter-mean temperature above/below average



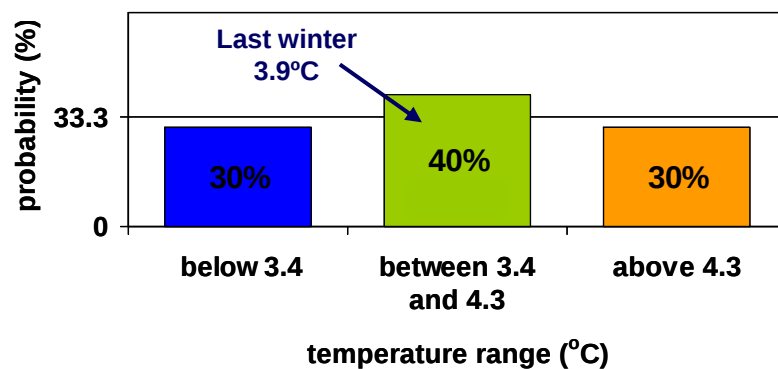
Probability of winter-mean precipitation above/below average



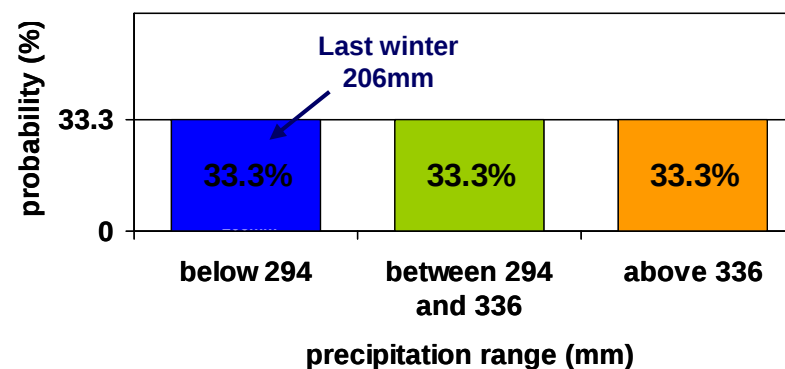
Winter forecast 2006-07

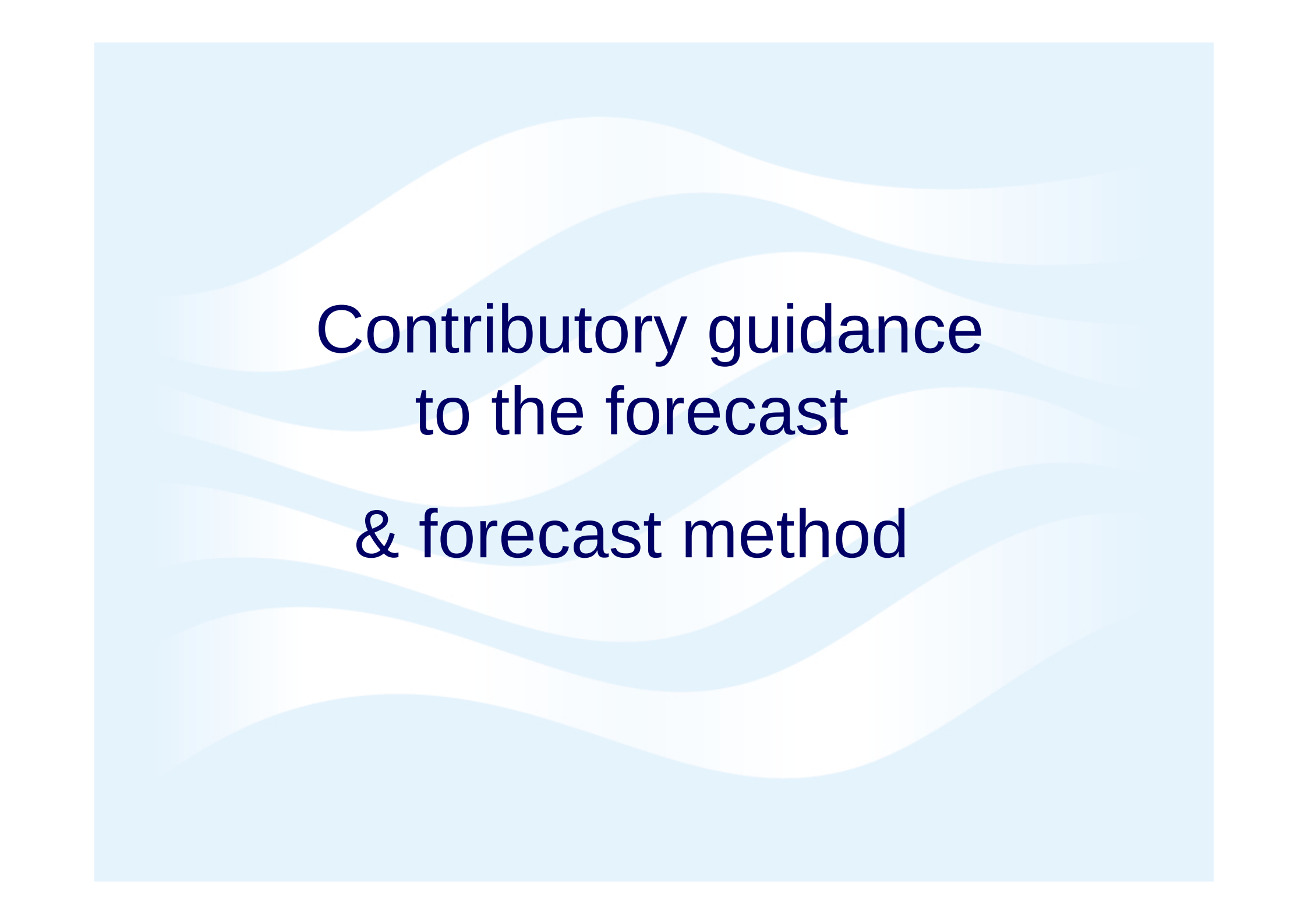


Probability of UK winter-mean temperature:
2006/7



Probability of UK winter precipitation:
2006/7





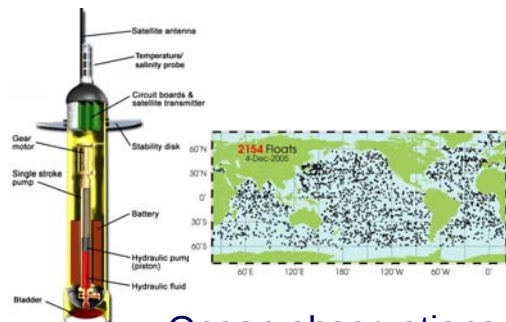
Contributory guidance to the forecast & forecast method

Forecasting the coming seasons for Europe & the globe



Recent global atmospheric
wind, rain, solar heating etc

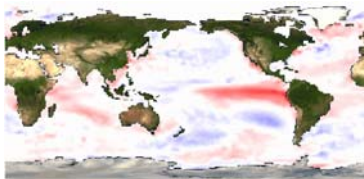
Statistical models (e.g. NAO),
Climate signals (e.g. El Niño)
Global warming trends



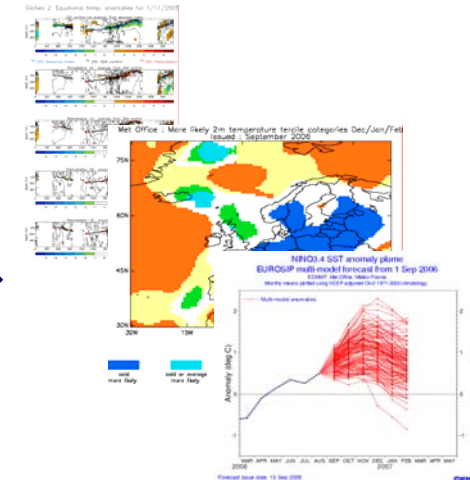
Ocean observations
Including ARGO floats



Met Office climate model +
super computers



Sea Surface Temperature
(NCEP, USA)



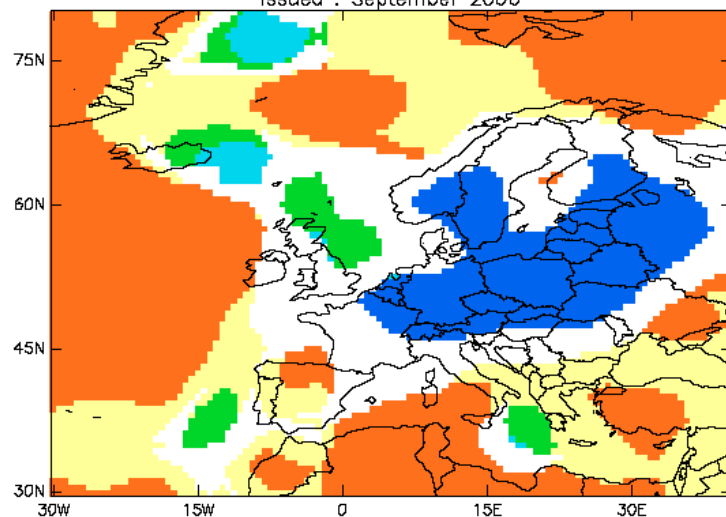
EURO-SIP
Include ECMWF and Météo-France
model output

Global model forecast guidance (Sep 2006)



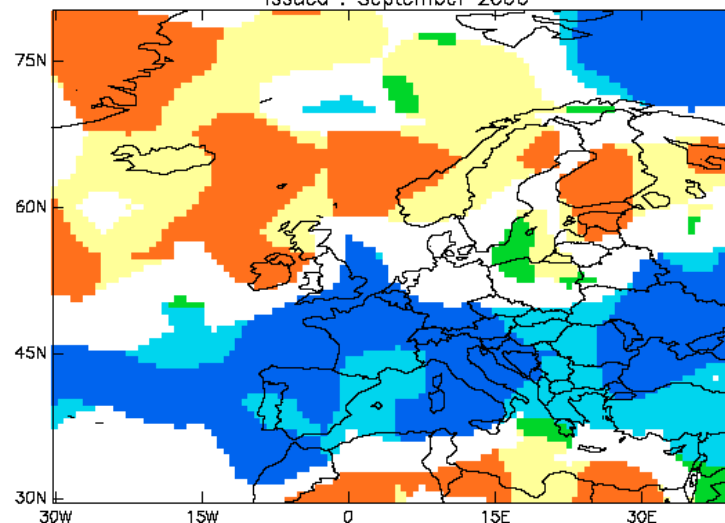
Temperature

Met Office : More likely 2m temperature tercile categories Dec/Jan/Feb
Issued : September 2006



Precipitation

Met Office : More likely precipitation tercile categories Dec/Jan/Feb
Issued : September 2006

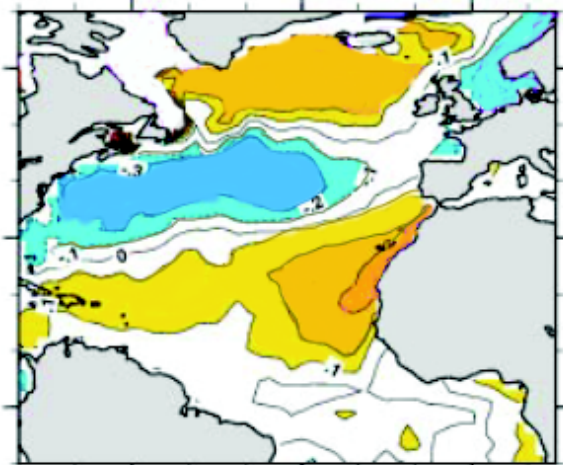


Forecast skill for the model at this range for Europe is **low**
These signals will be monitored and updated in our public forecasts

The North Atlantic in winter



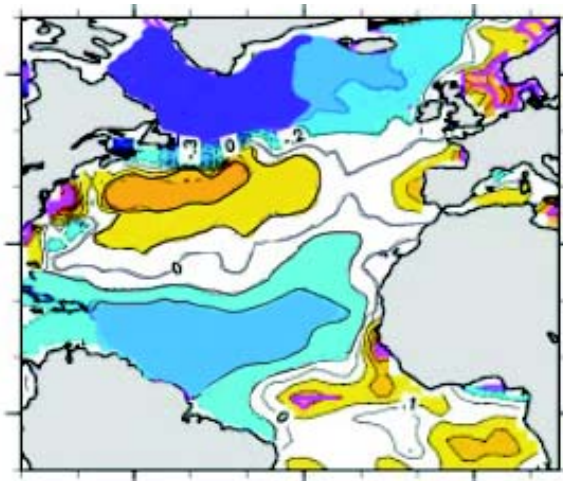
Sea-surface temperature anomalies



Negative NAO

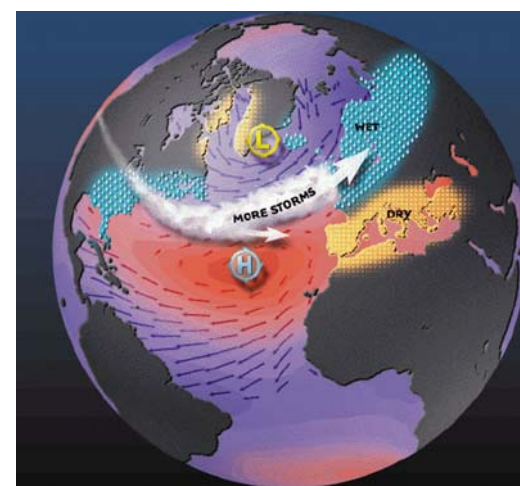
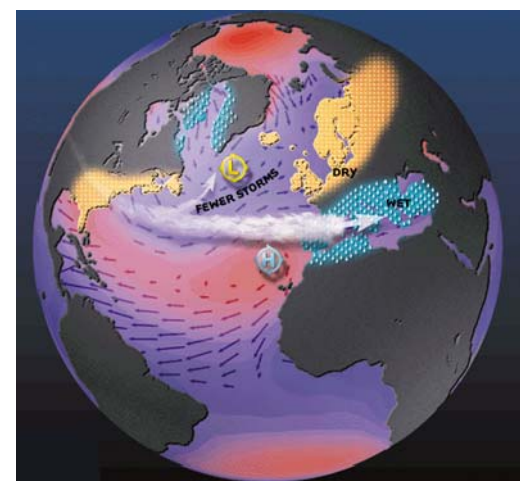


WINTER



Positive NAO

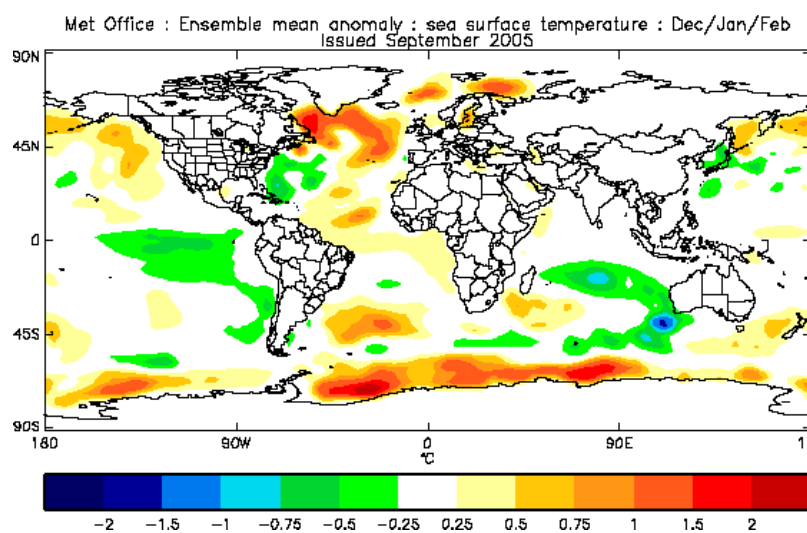
North Atlantic Oscillation



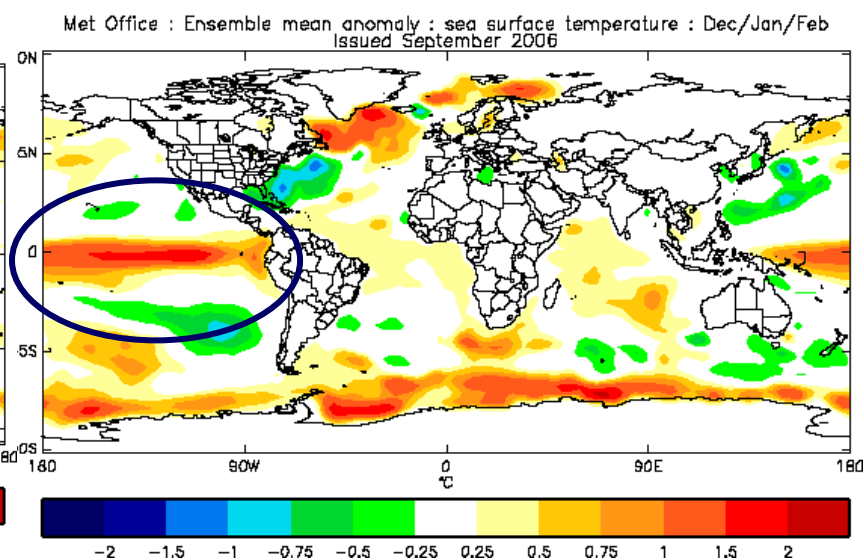
El Niño



2005



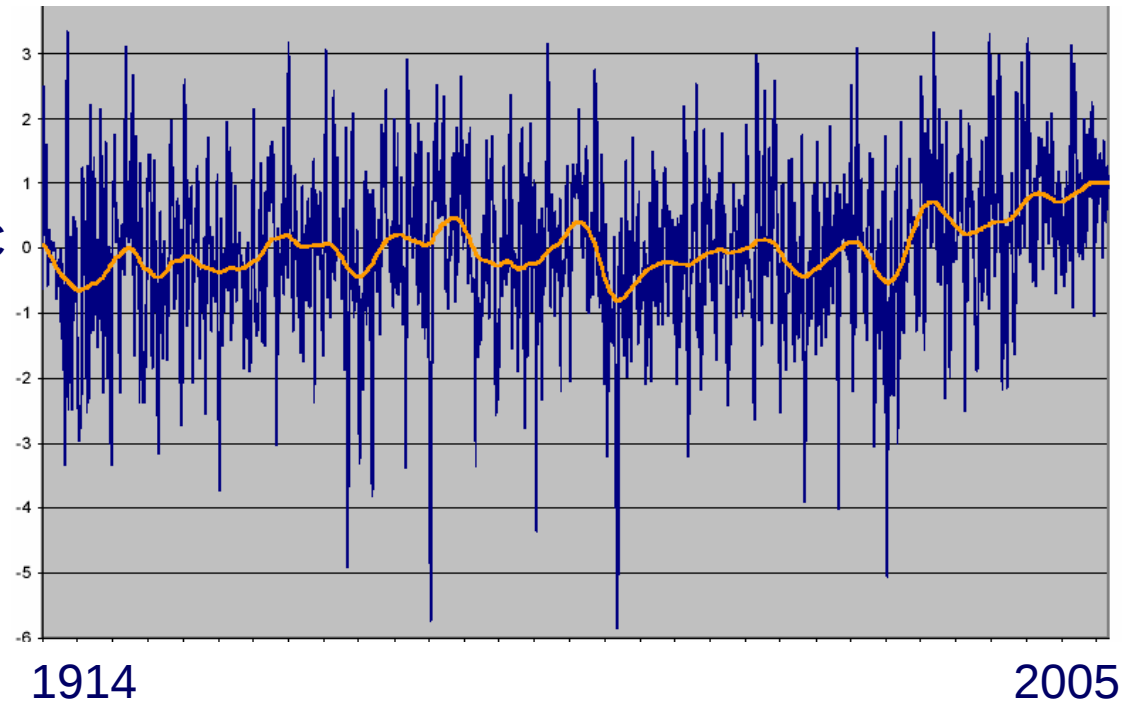
2006



UK's changing climate



UK
Mean Temp °C



Extreme winters are less likely due to global warming

1 in 50 cold winter

- Standard definition gives a UK 3 month mean of less than 1.3°C
 - 1939/40
 - 1946/7
 - 1962/3
 - 1978/9

The Changing climate

UK area averages Dec-Feb

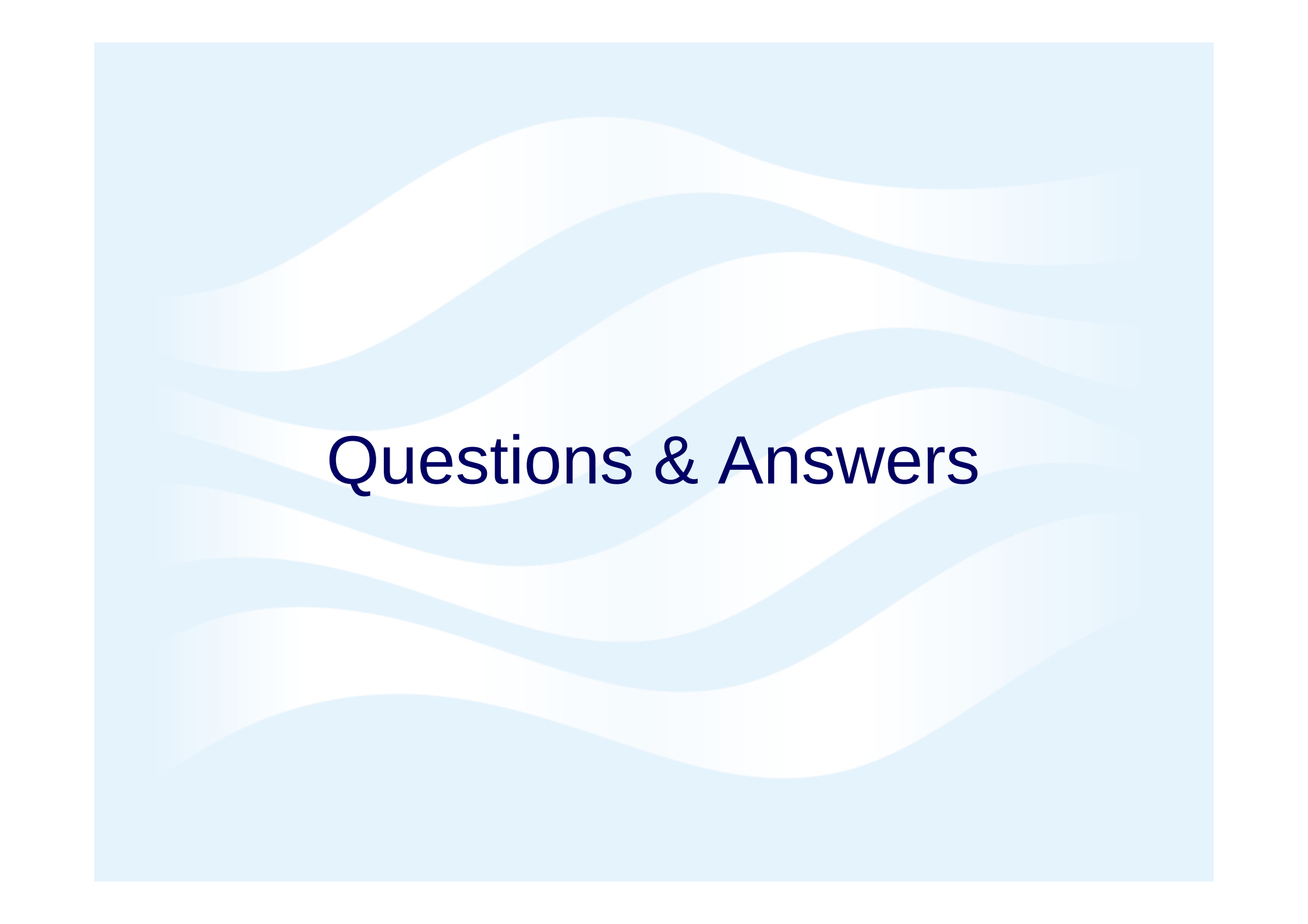
1961-1990 **3.3°C**

1971-2000 **3.7°C**

1987-2001 **4.0°C**

- **Temperature forecast**
- Over much of the European region, the situation is now finely balanced with **equal likelihood that the winter will be colder or warmer-than-average.**
- For the UK temperatures **near the 1971-2000 average are slightly favoured** for the winter season as a whole. However, later in the winter season, there is a signal for lower temperatures (relative to average) and an increase in the frequency of cold snaps.
- Note that even an average winter is likely to include some notable cold snaps and snowfalls.

- **Updates and reviews of the forecast**
- It is expected that updates to the forecast will be issued at the beginning of November (10am on 1st), early December and January.
- A monthly appraisal of the winter will start in early January 2007.
- Winter, in this context, is defined as the months of Dec, Jan and Feb, although it is recognised that winter weather can extend beyond this period, especially in northern Britain.



Questions & Answers

More information?



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