

CLIVAR Workshop on Atlantic Climate Predictability

Preface to the Special Issue of the *Journal of Climate*

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In the development of climate predictions for seasonal-to-interannual time scales the tropical Pacific Ocean and ENSO have long been center stage. But of course there are many phenomena beyond the boundaries of the Pacific region for which climate predictions are needed, and the Pacific Ocean is not the only source of significant memory in the climate system. At the present time, for example, there is great interest in the extent to which Atlantic hurricane activity (numbers, intensity, or tracks) may be predictable at seasonal or longer lead times. ENSO is one, but only one, factor that must be considered in developing such predictions.

It was to give focus to the multiple challenges of predicting the climate of the Atlantic sector that a CLIVAR workshop was organized at the University of Reading, United Kingdom, in April 2004. The workshop brought together scientists from North and South America, Africa, and Europe. It included many representatives of operational forecasting agencies as well as academics and others involved in more basic research.

The aims were as follows:

- 1) To provide an up-to-date assessment of the state of knowledge concerning the predictability of climate in the Atlantic sector, with particular emphasis on the role of the Atlantic Ocean.
- 2) To improve communication between the operational prediction centers and regional forums and the research community concerning the predictability of Atlantic sector climate.
- 3) To identify gaps in knowledge, and in observing systems, required for the further development of systems for forecasting Atlantic sector climate.
- 4) To recommend priorities for future research, observational programs, and development of prediction systems.

This special issue presents a selection of the key review papers that were prepared for the workshop. The first two papers (Kushmir et al. and Latif et al.) address the physical basis for prediction of Atlantic sector climate. The next three (Nobre et al., Van den Dool et al., and Rodwell et al.) address predictability and prediction for the continents that surround the Atlantic Ocean, and are complemented by a fourth paper (focusing on southern African climate) that has appeared in the *Bulletin of the American Meteorological Society* (Reason, C. J. C., W. Landman, and W. Tennant, 2006, Vol. 87, 941–955). The last two papers (Stockdale et al. and Pohlmann et al.) address the predictability of tropical Atlantic sea surface temperatures, and of the Atlantic Meridional Overturning Circulation and its influence of European climate.

The full proceedings of the workshop, including the recommendations produced, can be downloaded from http://eprints.soton.ac.uk/18771/01/icpo_pub_81.pdf.

The workshop was funded by the National Oceanic and Atmospheric Administration, the Met Office, and the U.K. Natural Environment Research Council.