Geophysical Research Abstracts, Vol. 9, 08494, 2007
SRef-ID: 1607-7962/gra/EGU2007-A-08494

CLIMATE VARIABILITY AND PREDICTABILITY OVER THE ATLANTIC SECTOR

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The Climate Variability and Predictability (CLIVAR) project of the WCRP (World Climate Research Programme) aims at describing, analyzing, modeling and predicting the variability of the global climate from seasonal to centennial timescales.

It is well known that the ocean holds the primary memory of the climate system. The wind driven circulation carries deep heat and freshwater anomalies around the ocean basins, which present a slowly changing SST field to the winter atmosphere. The thermohaline circulation, involving high latitude sinking and distributed upwelling and mixing at lower latitudes, is heavily involved in the longer time scales of climate variability. Tropical SST changes have displayed decadal trends and strong correlations with long-term rain and drought cycles as well as tropical storm frequency.

CLIVAR in the Atlantic sector is addressing the following scientific objectives:

- to describe and understand decadal to centennial climate variability and predictability through the analysis of observations and the modelling of the coupled climate system;
- to extend the record of decadal to centennial variability through paleoclimatic studies, data archaeology, reanalysis of atmospheric and oceanic data;
- to develop and implement appropriate observing, computing and data archiving and dissemination programmes needed to understand the mechanisms of decadal to centennial climate variability and predictability, in co-operation with other relevant climate research and observing programmes.

The CLIVAR Atlantic community has established close links with IGBP GLOBEC and IMBER projects as well as focusing on predicting anthropogenic climate change and extreme events

Further information can be found at: http://www.clivar.org/organization/atlantic/atlantic.php