



e-zine N° 16 – December 2009

## Science Highlights

### **Special Collection J. Climate: US CLIVAR Drought Initiative**

This special collection focuses on the physical mechanisms that produce drought, in particular multi-season, multi-year droughts, and in a broader sense provides a coordinated assessment of our current modeling capabilities and understanding of hydroclimatic variability throughout the world. Several articles are expected to appear in J. Climate over the next several months. The first of these are now downloadable from [AMS Journals Online](#).

### **GRL article: Evidence of long-term warming in the USA**

A research team lead by Gerry Meehl, WGCM Co-chair, showed that the daily record high temperatures occurred twice as often as record lows over the last decade across the continental United States. By using computer simulation they predict that the US ratio of daily record high to record low temperatures would increase to about 20 to 1 by midcentury and 50 to 1 by 2100. This study will soon appear in Geophysical Research Letters. [Read more](#).

### **SPARC and the Montreal Protocol**

The recent published book "Twenty Years of Ozone Decline: Proceeding of the Symposium for the 20th Anniversary of the Montreal Protocol" features a chapter on SPARC Science supporting the Montreal Protocol by M. A. Geller and M.-L. Chanin. The chapter lists few examples of the SPARC contributions to the WMO/UNEP Ozone Assessments that provides the scientific bases for changes in the Montreal Protocol. [Download and read the chapter](#).

### **GRL article: Indian Ocean Dipole preconditioning Australia bush fires**

A shift in the Indian Ocean pattern can be the cause of the bush fires that swept across southeastern Australia in February, killing more than 170 people. Wenju Cai (Chair of WCRP/CLIVAR Pacific Ocean Panel) and his colleagues showed a link between the Indian Ocean sea-surface temperature anomaly and the severe drought in southeastern Australia in a recent paper published in Geophysical Research Letter. [Read the article](#).

### **Nature Article : El Nino in a Changing Climate**

A different kind of El Nino has become more common during the late twentieth century, in which warm sea surface temperature (SSTs) in the central Pacific are flanked on the east and west by cooler SSTs. A recent article published in the current issue of Nature (24 September 2009) attributes this phenomenon to anthropogenic global warming. [Read more](#) about the article.

### **Tracking Changes in Earth's Global Energy: an Imperative for Adaptation**

The first issue of *Current Opinion in Environmental Sustainability* features an article by Dr Kevin Trenberth, Chair of WCRP/WOAP, on the importance of tracking changes of energy within the Earth's climate system. The article tries to assess the current ability to track changes in reservoirs and flows of energy and argue that such ability is important for interpreting global and regional climate change, and prospect for the future. [Read more](#).

## Awards in the WCRP Community

### **Milutin Milankovic Medal awarded to WGCM former Co-chair Pascale Braconnot**

The 2009 Milutin Milankovic Medal is awarded to Pascale Braconnot for her original work on understanding the relative roles of obliquity and precession during the last interglacial period and, in particular, for her major involvement in the Paleoclimate Modeling Intercomparison Project for the Mid-Holocene (PMIP). [Read more.](#)

### **AMS Special Award to the CMIP3 team at PCMDI**

The American Meteorological Society has made a Special Award to the CMIP-3 team at PCMDI for their outstanding efforts in archiving and making available the CMIP3 multi-model dataset. The award will be presented at the AMS Annual Meeting in Atlanta, Georgia, in January 2010. This is a well-deserved tribute to PCMDI for their support of WGCM model intercomparison initiatives over the years, culminating in the CMIP3 effort. WCRP looks forward to continue collaboration for CMIP5.

### **2010 Carl-Gustaf Rossby Research Medal to Dr Tim Palmer**

Tim Palmer (CLIVAR Co-chair 2003-2009) has been awarded the 2010 Carl-Gustaf Rossby Research Medal by the American Meteorological Society. The Rossby Prize is presented to individuals on the basis of outstanding contributions to the understanding of the structure or behaviour of the atmosphere. It represents the highest honour that the AMS can bestow upon an atmospheric scientist.

## In the News

### **UNEP Climate Change Science Compendium 2009**

This is a review of 400 major scientific contributions to our understanding of Earth Systems and climate since the close of research for consideration by the IPCC AR4. It discusses findings from the International Polar Year and from new technologies that enhance our abilities to see the Earth's Systems in new ways. Evidence of unexpected rates of change in Arctic sea ice extent, ocean acidification, and species loss emphasizes the urgency needed to develop management strategies for addressing climate change. [Download and read](#) the document.

### **CINDY2011 and DYNAMO: The two process studies received the CLIVAR endorsement**

The CINDY2011 and the U.S. project DYNAMO are the field campaigns with special emphasis on the tight relationship with numerical studies. The campaign is designed to improve our knowledge on the intraseasonal variability in the tropical Indian Ocean with focus on the initiation process of convection in the Madden-Julian Oscillation, and its field experiment is planned to take place in and around the Indian Ocean from October 2011 through January 2012. Read more on [CINDY2011](#) and [DYNAMO](#).

### **Major new initiative on climate change and agriculture**

The Challenge Program on Climate Change, Agriculture and Food Security (CCAFS) is a new 10-year research programme that will explore new ways of helping vulnerable rural communities adjust to global changes. CCAFS is an initiative of the Consultative Group on International Agricultural Research and the Earth system Science Partnership. [Read more.](#)

### **ELSEVIER journal "Current Opinion in Environmental Sustainability"**

The inaugural issue of the new ELSEVIER journal featured the strategy paper on "Developing a common strategy for integrative global environmental change research and outreach: Earth System Science Partnership (ESSP)". The paper is a collective response of the recent review of ESSP. [Read the article.](#)

### **A successful GEWEX-iLEAPS joint conference on Water in a Changing Climate**

The Sixth International Scientific Conference on the Global Energy and Water Cycle and the Second Integrated Land Ecosystem-Atmosphere Study (iLEAPS) Science Conference were held in conjunction in Melbourne, Australia on 24-28 August 2009. The conference provided the opportunity for cross-fertilization between the sciences represented by both WCRP-GEWEX and IGBP-iLEAPS in addressing present and future climate and global change challenges. The parallel conferences featured three joint sessions that broadly cover the following themes:

1) Land in the climate system; 2) Aerosol, cloud, precipitation, climate interactions; and 3) Future generation of integrated observation and modelling systems. The conferences keynote talks, oral and poster presentations are available at the [conference website](#).

## Events

### **22<sup>nd</sup> session of the GEWEX Scientific Steering Group**

The 22<sup>nd</sup> session of the GEWEX Scientific Steering Group will take place in New Delhi, India, 25-29 January 2010.

### **6<sup>th</sup> session of the CLiC Scientific Steering Group**

The 6<sup>th</sup> session of the CLiC Scientific Steering Group will take place in Valdivia, Chile, 4-9 February 2010

### **31<sup>st</sup> session of the Joint Scientific Committee for WCRP**

The 31<sup>st</sup> session of the Joint Scientific Committee for WCRP will take place in Antalya, Turkey, 15-19 February 2010, and it will hold a joint session with the 15<sup>th</sup> session of the Commission for Climatology. See [details](#) about the meeting.

### **Capacity Building: The 2010 Southwestern Hemisphere Workshop Series on Climate Change: CO<sub>2</sub>, the Biosphere and Climate**

The workshop, co-sponsored by ICTP, GFDL/NOAA, Princeton University and the FCEyN/University of Buenos Aires, will take place in Buenos Aires, Argentina, 15-26 March 2010. It is mainly intended for young researchers and PhD students working in the areas of Physics, Chemistry, Atmospheric Physics and Dynamics, Climatology and Oceanography, from Central and South America countries that are members of the United Nations, UNESCO or IAEA. The workshop sessions include: 1) Earth history of climate change, 2) The present and future of greenhouse gases and climate forcing, 3) Characteristics of the new earth system model and 4) The quality of climate prediction. [Applications should be submitted online](#) no later than **15 December 2009**.

### **4<sup>th</sup> session of the WCRP Observation and Assimilation Panel**

The 4<sup>th</sup> session of the WCRP Observation and Assimilation Panel (WOAP) will take place in Hamburg, Germany, 29-31 March 2010. Read [more](#) about the meeting.

### **Mathematical and Statistical Approaches to Climate Modelling and Prediction: 11 August-22 December 2010**

A six-month research programme to be held in Cambridge, UK, will bring together world-leading researchers in climate modelling, mathematics and statistics in order to make progress in solving some of the major issues facing climate prediction. Many uncertainties remain in predictions derived from climate models, yet governments are increasingly reliant on model predictions to inform mitigation and adaptation strategies. This programme will focus on themes that require the close collaboration of mathematicians, statisticians and climate scientists in order to improve climate models and the interpretation of their output. [Read more](#) about the programme.

### **CCMAP: Integrating Climate Change Mitigation and Adaptation into Development Planning project**

The WMO, IPCC, UNEP, and START recently initiated an effort to promote communication at the science-policy interface on issues of climate change risks, adaptation, and mitigation through a collaborative effort with the Bangladesh Centre for Advances Studies, the University of Ghana and the University of Dar es Salaam. The project engages science and policy communities in West Africa, East Africa and South Asia through a series of national science-policy dialogues, training workshops and knowledge assessments at local to regional scales. Support for this project is provided by the European Commission with co-funding from UNEP. [Read more](#).