

**NOTES FROM THE FOURTH FORMAL COORDINATED ENERGY AND WATER-CYCLE
OBSERVATIONS PROJECT (CEOP) TELECONFERENCE ON AMERICAS REGIONAL
HYDROCLIMATE PROJECTS AND REFERENCE SITE ISSUES HELD ON
20 October 2009
First DRAFT, 20 October 2009**

1. INTRODUCTION

The 4th Americas RHP and Reference Sites Teleconference related to the Coordinated Energy and Water-Cycle Observations Project (CEOP) took place on Tuesday 20 October 2009 at 20:00 UTC.

The issues that were discussed on the subject conference call included:

- (i) Results from the 3rd CEOP Annual Meeting at Melbourne, Australia from 19-21 August 2009;
- (ii) Current status of the CEOP Reference Site Data Archive with focus on the sites located in the Americas;
- (iii) LBA, CPPA, LPB RHPs status and issues;
- (iv) Americas Reference Sites status and issues.

Participants

The participants were:

Toshio Koike	(CEOP Co-Chair)
Ron Stewart	(CEOP Co-Chair)
Luiz Horta	(LBA reference site data manger)
Alessandro Araujo	(LBA representative)
Debora Roberti	(LPB representative)
Hugo Berbery	(LPB representative)
Scot Loehrer	(CEOP Reference Site Data Archive manager)
Steve Williams	(Data WG Co-Chair; CPPA and ARM representative)
Sam Benedict	(CEOP International Coordination Function)

Drs Jin Huang (Silver Spring, Maryland, USA; Representing GAPP Reference Sites), Antonio Manzi, Julio Tota, Jair Maia (LBA representatives), Erin Thompson and Alan Barr (Saskatoon, Canada; MAGS/BERMS site representative) and Tilden Meyers did not participate in the call.

2. NEXT CONFERENCE CALL

The next, **5th CEOP Americas RHP and Reference Sites Teleconference** is proposed to take place on **Tuesday 12 January 2009 at 20:00 UTC, however, this date is subject to change as part of an overall strategy associated with CEOP activities.** **Benedict** has the **action (A1)** to inform the group of the details of the next call nearer to the time of the call.

3. CEOP AND CEOP DATA GROUP GENERAL ISSUES

3.1 Opening

(3.1a) Koike introduced items of interest to the participants that came out of the Third Annual meeting of the Coordinated Energy and water cycle Observations Project (CEOP), held from 19-21 August 2009 at Melbourne, Australia. He noted that the meeting focused on how CEOP is being organized and implemented. All of the presentation material provided by the participants at the meeting, on the Internet through the CEOP Home Page at: <http://www.ceop.net>. The more

detailed science findings and progress toward its main scientific goal to: “understand and predict continental to local-scale hydroclimates for hydrologic applications”, were left for detailed presentation, review and discussion at the Sixth International Scientific Conference on the Global Energy and Water Cycle that took place from 24-28 August 2009, at Melbourne, Australia.

(3.1b) The main actions from the meeting included:

(i) Action was assigned to the Data Management Working Group to submit a proposal with an implementation scheme and schedule for defining and organizing a CEOP 10 year dataset.

(ii) The CEOP Co-Chairs agreed to take action to use existing material contained in the CEOP submittal to the WCRP/GEWEX Legacy document to develop a draft of the initial CEOP Synthesis Document by the end of October 2009, with submission set for early 2010. However, this action will involve many members of the CEOP community before it is submitted for publication.

(iii) Activation of a number of small Task Teams including a Hydrologic Applications Project (HAP) Team, Land Modeling Team and a Global to Regional Scale Analysis Team.

(iv) It was agreed that CEOP would embrace some of the main tenets of Adaptation to Climate Change (ACC) and would look into ways of contributing to those in a direct manner. Some ideas related to this consensus were:

- (i) Identifying Regional to local Impacts of ACC on the hydroclimate in RHP basins,
- (ii) Quantifying uncertainty by using CEOP data infrastructure,
- (iii) Testing models and ACC scenarios by apply WEBS analysis techniques and
- (iv) Exploiting CEOP/RHP connections to local/basin scale model Centers to assist in ACC work

3.2 On-going Actions for Reference Site Managers and RHP Representatives: Review/Update of Reference Site Meta-data on the CEOP Data Management Web Page.

The **Reference site Managers and RHP Representatives were asked to under take action A2**, namely, to put themselves in the place of users of the CEOP data archive and to go on line to review all the documentation for their Reference sites that is available through the following web site: <http://www.eol.ucar.edu/projects/ceop/dm/insitu/sites/> and to verify that it is complete and accurate.

In particular, it was specified that the **Reference site Managers and RHP Representatives were asked to under take action A3**, namely, to reconfirm the latitude and longitude center locations for their sites and to provide this information for any new sites for Phase 2. The satellite data available in the CEOP Satellite data archive and the scene center coordinates during Phase1 for 35 Reference Sites are available at the following web sites respectively: <http://monsoon.t.u-tokyo.ac.jp/ceop/data/eop-1/satellite/doc/>; http://monsoon.t.u-tokyo.ac.jp/ceop/data/eop-1/satellite/doc/ref_site_info_r03.txt;

4. Status and Update of the CEOP Reference Site data archive: RHP and Reference Site Reports

4.1 Summary status of the reference site archive at NCAR/EOL

Williams and Loehrer introduced the current status of the CEOP reference site data archive, which can be accessed on the Internet at: http://data.eol.ucar.edu/master_list/?project=CEOP/EOP-3/4.

UPDATES FOR THE CEOP AMERICAS SITES AS OF 20 OCTOBER 2009

(i) Data that are in house from the BERMS and ARM Sites including some datasets through 2007 and 2008 respectively are now in the queue for checking or for format conversion. The ARM data that are in house are being collected into three year sets for more efficient checking and handling.

(ii) Data received from LBA for January-March 2005 has been checked and placed into the database

4.2 CliC/BERMS sites (no representative on the call)

Williams pointed out the commendable effort by the BERMS representatives on behalf of CEOP, with respect to their agreement to continue to participate in CEOP and their subsequent data submissions from 2007 onward. Everyone on the call felt this was a significant contribution to the success of CEOP data and research in an area of interest to the climate research community.

4.3 CPPA sites by Steve Williams

(4.3a) **Meyers was not available for the call, but** Williams reported that the data from the CPPA sites continued to be processed. The CPPA management has followed through on an agreement to provide additional support to resolve remaining issues with the Fort Peck and Oak Ridge data for CEOP Phase 1 so that they can be included in the CEOP reference site archive. That data and the Bondville data for the 2005 – 2006 are undergoing gap filling and are expected to be submitted by the end of November 2009. Ancillary carbon study data from Fort Peck including possibly LAI, Biomass, and derived NDVI products is still being looked at as an auxiliary CEOP dataset.

(4.3b) **Williams** reported that the Mt. Bigelow site had become a contribution to the Biosphere II experiment and that contact with the University of Arizona indicated that not only was the site still in operation but that instrumentation at the site was being upgraded. In addition, data collected previously at the site which were fragmented at best, were now being reworked with the potential of their eventually being brought up to an acceptable standard for submission to CEOP. **Williams** accepted the **action (A2)** to further clarify the situation with the Mt. Bigelow site.

4.4 LBA sites by Luiz Horta and Alessandro Araujo

(4.4a) **Horta and Araujo** reported that since the time of the 3rd CEOP Annual meeting at Melbourne, Australia (19-21 August 2009) the remaining issues with the Manaus data had been resolved. Data from Manaus for the period January to March 2009 had been transferred to the CEOP EOL/NCAR data base for placement on the Internet. The next priority is the data for the rest of the year 2005. This data is expected to be submitted to CEOP by the end of November 2009. Following that effort, data from both the forest and pasture sites at Rondonia will be reviewed by LBA. The plan is for data from that site, which had stopped being collected in 2004 and newer data from 2006, when the site was reactivated, to be checked by LBA using similar methods to those that were used to reconcile the Manaus data and submitted to CEOP in 2010.

(4.4b) **Araujo and Horta** agreed to undertake **Action A3** to continue to work with the data from Manaus and the two stations from the Rondonia site to ensure the data would be transferred from the sites to CPTEC in the CEOP format, where it would be pre-validated and transferred to the CEOP database at EOL/NCAR. This commitment applies to the current phase of CEOP.

(4.4c) **Horta** agreed to **Action A4** to review missing items in the LBA site documentation at the CEOP Data Management Web page.

4.5 LPB

(4.5a) **Roberti** reported on the status of the Cruz Alta, LPB site. Data collected at the site for 2008 are expected to be checked and formatted for submission to the CEOP database by the end of November 2009. Horta and Araujo were acknowledged for assisting LPB with their site data handling in the context of the CEOP requirements. **Roberti** has **action A5** to continue to work with the **LBA site and data managers** and with **Williams** to be sure the Cruz Alta data are collected, quality checked, formatted and submitted in accordance with the CEOP site data standards.

(4.4b) **Roberti** agreed to check (**action A5a**) the existing site documentation at the CEOP data management Internet site that includes documentation for all CEOP Reference sites including those of the Americas: <http://www.eol.ucar.edu/projects/ceop/dm/insitu/sites/> and using the form and content of the documentation from existing sites, documentation from Alta Cruz will be submitted by **Roberti**.

(4.4c) **Roberti** agreed to verify the station coordinates that CEOP currently has for Cruz Alta (**action A5b**). These data are needed by the various Global Model Centers which will be producing model profiles (MOLTS) for this station and the University of Tokyo will use it to create satellite sub sectors. The current information, which needs confirmation and in the case of elevation, a specific value (if available) is:

Cruz Alta
Latitude: 28.6 S
Longitude: 53.4 W
Elevation: ?