

**NOTES FROM THE SECOND FORMAL COORDINATED ENERGY AND WATER-CYCLE  
OBSERVATIONS PROJECT (CEOP) TELECONFERENCE ON AMERICAS REGIONAL  
HYDROCLIMATE PROJECTS AND REFERENCE SITE ISSUES HELD ON  
17 MARCH 2009  
Final DRAFT, 19 April 2009**

**1. INTRODUCTION**

The 2nd Americas RHP and Reference Sites Teleconference related to the Coordinated Energy and Water-Cycle Observations Project (CEOP) took place on Tuesday 17 March 2009 at 20:00 UTC.

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

(i) **Special Announcements:** (a) Calendar of upcoming calls, (b) Outcome of CEOP Report at the GEWEX SSG meeting 19-23 January 2009: Reference document provided for this discussion: (Rapporteurs Report on CEOP doc), (c) Plans for Third Annual meeting (19 – 21 August 2009) and (d) GEWEX/iLEAPS Science Conference (24-29 August 2009) both at Melbourne, Australia.; Benedict/Koike

(ii) **On-going Requests to Reference Site managers:** (a) Reference Site satellite scene center (250km x 250km square area around the site) (b) Elevation of the MOLTS points (site stations) – please reconfirm/provide the information of elevation of the sites/stations – (needed by the Model group): Steve Williams (Reference document provided for this discussion: “CEOP\_AmRS\_elev\_satcenter.xls”).

(iii) **Individual Reference Site Documentation Review:** Documentation for all Reference sites must be discussed and reviewed.

(iv) **Status and Update of the CEOP Reference Site data archive:** Reference document provided for this discussion: “CEOP Americas Region Reference Site Data Status Report.doc and Americas Ref Site Update doc” (Steve Williams, Scot Loehrer)

(v) RHP/Reference Site data providers/managers reports – update on past activities and perspectives with respect to CEOP

Participants

<b>Toshio Koike</b>	<b>(CEOP Co-Chair)</b>
<b>Tilden Meyers</b>	<b>(CPPA - site manager)</b>
<b>Jair Maia</b>	<b>(LBA RHP Chair)</b>
<b>Luiz Horta</b>	<b>(LBA reference site data manger)</b>
<b>Alessandro Araujo</b>	<b>(LBA representative)</b>
<b>Julio Tota</b>	<b>(LBA site manager)</b>
<b>Scot Loehrer</b>	<b>(CEOP Reference Site Data Archive manager)</b>
<b>Steve Williams</b>	<b>(Data WG Co-Chair)</b>
<b>Sam Benedict</b>	<b>(CEOP International Coordination Function)</b>
<b>Petra Koudelova</b>	<b>(CEOP International Coordination Function)</b>

Drs Jin Huang (Silver Spring, Maryland, USA; Representing GAPP Reference Sites), Hugo Berbery (Maryland, USA; LPB RHP Co-Chair); Antonio Manzi (LBA Executive Manager), Ron Stewart (Winnipeg, Canada; CEOP Co-Chair), Assuncao Silva Dias (Director of CPTEC and co-chair of LPB) and Erin Thompson (Saskatoon, Canada; MAGS/BERMS site representative) did not participate in the call. Osvaldo Moraes (Cruz Alta (LPB) and Alan Barr (Saskatoon, Canada; Representing MAGS/BERMS) were unable to participate due to technical issues related to joining the call.

## 2. NEXT CONFERENCE CALL

The next, **3rd CEOP Americas RHP and Reference Sites Teleconference** is proposed to take place on **Tuesday 30 June 2009 at 20:00 UTC**. **Benedict** has the **action (A1)** to inform the group of the details of the next call nearer to the time of the call and to coordinate the origination of the call (**action A1a**). In this context, a calendar of the dates and times of all the CEOP conference calls for 2009-2010 was distributed to the participants for their future reference.

## 3. CEOP AND CEOP DATA GROUP GENERAL ISSUES

### 3.1 Opening

(3.1a) **Benedict** welcomed everyone on the call and introduced the agenda, reference material that was circulated prior to the call. All participants were reminded that the **latest version of the CEOP Strategic Implementation Plan (SIP)** was available through the CEOP Home Page at: <http://monsoon.t.u-tokyo.ac.jp/ceop2/implementationplan.html>. It was pointed out that the current version was an updated one dated on 1 December 2008 that reflected and responded to the comments from GEWEX SSG earlier this year.

In this context, Koike asked everyone to review the Rapporteurs Report on CEOP that came from the review of CEOP by the GEWEX SSG at the 19-23 January 2009 meeting at Irvine California, USA. Koike summarized the main points made by the SSG. Namely that:

(i) the CEOP/GEWEX Regional Hydroclimate Projects (RHP) in each region (CPPA, LBA and LPB for the Americas Region) must cooperate more closely at the Regional Scales with the main CEOP and GEWEX crosscutting science teams (Extremes, WEBS, Aerosols and Isotopes) and the four CEOP and GEWEX Climate Foci Teams (Monsoons, High Elevations, Cold-Regions and Semi-arid Studies);

(ii) the RHP's must work together on improving knowledge of their regional water and energy budget cycles and to compare and unifying their findings in a manner that contributes to the overall objectives of GEWEX and WCRP to better understand water and energy cycles on a global scale;

(iii) the RHPs must utilize their regional cooperative contacts and work with the CEOP Hydrological Applications Project (HAP) to bridge the gap between the science communities and the operational hydrological services and related stakeholders in their regions. This item reflects the need for the RHP's to outreach to and participate in efforts that contribute to overcoming this gap including GEO and its related water cycle initiatives such as the Asian Water Cycle Initiative (AWCI) and the African Water Cycle Initiative now under way in the GEO/GEOSS framework.

(3.1b) 3rd CEOP Annual Meeting to be held at Melbourne, Australia, 19 – 21 August 2009 in Conjunction with the GEWEX/iLEAPS joint Science Conference (24-28 August 2009) at the same location.

Everyone was reminded that all of the presentation material provided by the participants at the 2nd CEOP Annual Meeting held in Geneva, Switzerland 15-17 September 2008 along with the meeting report, was available on the Internet through the CEOP Home Page at: <http://monsoon.t.u-tokyo.ac.jp/ceop2/meetings.html>.

Everyone was also reminded that the next, **3<sup>rd</sup> CEOP Annual Meeting** would be held in Melbourne, Australia, 19 – 21 August 2009, i.e. the event will precede the GEWEX and iLEAPS science conferences. The venue for the CEOP meeting will be the Bureau of Meteorology (BoM). Further details and the meeting website will be released in due course. The participants on the call were asked to consider their participation in this important event and also possible

contribution to the ensuing GEWEX/iLEAPS conferences that will take place in Melbourne, Australia, 24 – 28 August 2009. The conference website is available at: [http://www.gewex.org/2009gewex\\_ileaps\\_conf.html](http://www.gewex.org/2009gewex_ileaps_conf.html). Abstracts for all sessions are currently being accepted and can be submitted on-line through the meeting website. The **deadline for abstract submission has been extended to 31 March 2009.**

### 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](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](http://data.eol.ucar.edu/master_list/?project=CEOP/EOP-3/4). Additionally, they had provided an update to the document that had been distributed at the time of the first call for the sites in the Americas region that took place on 9 December 2008 and which was also attached as a baseline reference document to the announcement of this call.

The Update included reference to data that had been received from various Americas sites since the 9 December 2008 conference call. Specific items noted in the update were:

#### **UPDATES FOR THE CEOP AMERICAS SITES AS OF 14 MARCH 2009**

- (i) CliC BERMS SFC, STM and TWR submitted for 2005-2006. In our queue for checking.
- (ii) Other ARM NSA SFC conversion has been completed for 2005-2007. Now in queue for checking.
- (iii) Other ARM NSA SONDE is now available from our CEOP database through 2008.
- (iv) Other ARM SGP SFC, STM, FLX, TWR and SONDE data now in house through 2008. Now undergoing initial ARM QC interpretation. Will then be in queue for conversion to the CEOP format.

**Williams** reiterated the three main issues that were highlighted at the time of the 9 December 2008 call that must be considered by the participants including (i) missing data for the Phase 1 period (October 2002 – December 2004); (ii) submissions for the transition period January 2005 – December 2006; and (iii) submissions for the current phase of CEOP, i.e. January 2007 – December 2011. It was mentioned that it would be highly desirable to complete data submissions

for all three periods in order to obtain a long data series that are critical for many CEOP and other energy and water cycle related studies and the site representatives were asked to consider such commitment.

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

**Williams** pointed out the progress that had been made with respect to the participation of the BERMS sites as noted in the Status Update item 4.1(i) above. The effort by the BERMS representatives on behalf of CEOP, in this respect, was commended by the participants as a major move forward. In addition, **Williams** reported that per the action he had accepted at the time of the 9 December 2008 call he had corresponded with the BERMS representatives and determined that they would continue to participate in CEOP and would, therefore, be providing data submissions from 2007 onward.

#### 4.3 CPPA sites by Tilden Meyers and Steve Williams

(4.3a) **Meyers** reported that the data from the CPPA sites continued to be processed. The CPPA management will 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. The Bondville data for the 2005 – 2006 period may be submitted in the near future. In addition, **Meyers** explained that due to another study being undertaken at the Fort Peck site, ancillary carbon study data would be available from that site. This data might include LAI, Biomass, and derived NDVI products. The group felt that this was an excellent outcome and fully supported the idea of this data being available from the CEOP archive. **Williams** interjected that such **data related to clouds, carbon, and other scientific issues** would be welcomed and appreciated if such observations exist at the sites. These items would not be included in the current common format files but additional files would be created. Based on the availability of such data, the Data Management group will propose an adequate format. **Williams and Meyers** accepted the **action (A4)** to work on an appropriate format and method for the Fort Peck ancillary data to be entered into the CEOP database.

(4.3b) **Williams** reiterated that the Mt. Bigelow site would most likely not be able to continue to provide the data to CEOP and also completing the Phase 1 commitments might be difficult. **Williams** accepted the **action (A4)** to clarify the situation with Mt. Bigelow site.

(4.3c) **Meyers** further mentioned that another grassland site in the Walnut Gulch watershed was available and could provide data to CEOP. **Koike and Williams** took the **action (A4a)** to discuss with **Ron Stewart**, CEOP Co-Chair, about the preferences in case of this additional grassland site considering the scientific point of view.

(4.4d) **Williams** reported on the status of the ARM Sites. As noted in items 4.1 (ii-iv) above there had been a good progress at the ARM sites since the last report on 9 December 2008. This information was well received by the group.

#### 4.4 LBA sites by Luiz Horta and Alessandro Araujo

(4.4a) **Horta and Araujo and Tota** reported that they were aware of the remaining issues with the Phase 1 data and were committed to address them. The new system for transferring data from Manaus to CPTEC for validation has been implemented between the time it was announced at the 9 December 2008 call and the present. In addition, an additional resource has been provided in the form a full time person to work with the data. This has resulted in data from 2004 being at CPTEC in the CEOP format and pre-validated against ranges provided by the site managers. It was agreed that **Horta** would take **Action A5** to work with **Williams and Loehrer** to transfer this data directly to the CEOP EOL/NCAR data base for further screening and placement on the Internet. It was agreed that if data were successfully transferred in this way and was

found to be fully ready for placement in the database that it would not be necessary to utilize the quality check support system developed at the University of Tokyo. This closes the action that was given to **Araujo and Tamagawa** at the time of the last call to communicate and undertake the necessary steps to set up a transfer process directly between Manaus and the UT.

(4.4b) **Araujo and Horta** agreed to undertake **Action A6** to ensure that data from Manaus and two stations from the Rondonia site (one in pasture and one in forest) 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 through 2013, with the stipulation that:

(i) data from Manaus and the Rondonia pasture station would be continuous from 2004 onward through the end of the current Phase of CEOP in 2013;

(ii) data from the Rondonia forest station would be designated as data from Rondonia site but identified in the file record sent to EOL as having come from the Jarú station and that data would only be available from Jarú as from late 2007 onward. **Williams and Horta** have **action A6a** to ensure that proper site documentation for both Rondonia stations is in the database and particularly that the site/station locations are reconciled and consistent with the CEOP policy and nomenclature (including MOLTS) for other sites that are providing data from multiple stations such as at the Lindenberg site.

(4.4c) **Araujo** further reported that most probably ONLY three of the LBA sites would continue to provide the data including Manaus and two Rondonia stations (pasture and forest). Other sites may not be available in the future. In this context **Araujo** accepted responsibility (**action A6b**) for addressing the items flagged by Williams/Loehrer in their assessment of data from the LBA sites that is already at the CEOP EOL/NCAR data Center. This commitment extends only to the Brasilia, Rondonia and Manaus sites. It was agreed, therefore, that the issues with data from those three sites noted in the Status Report distributed with the reference material for this call and the previous call for the Americas region would be resolved by the time of the next call on 30 June 2009. It was further agreed that issues for the other LBA sites noted in the Status report namely Pantanal, Caxiúana, and Santarém would not be addressed in the same timeframe but may be dealt with at some time in the future.

#### 4.5 LPB

There was no representative on the call for the LPB site. This could have been due to a technical difficulty of getting into the call. Hopefully, this situation will be addressed by the time of the next call. LPB will be asked for a written input to be added to the final version of these notes.