

CEOP Overall Status and Issues - A few comments

SOME HISTORY

When the GEWEX commenced in 1988 with a focus on global products, its lead scientists recognized that the global data sets needed to be evaluated at regional scales

1990 GCIP

1994 GEWEX Hydrometeorology Panel

1995/96 CEOP idea started ...

2001 CEOP spun off

2007 CEOP merged with GHP

...

2009 Here we are in the third meeting

GOAL

The goal of CEOP is: To understand and predict continental to local-scale hydroclimates for hydrologic applications

STRATEGIC OBJECTIVES

1: Produce quality data sets complete with error descriptions of the Earth's energy budget and water cycle and their variability and trends on interannual to decadal time scales

2: Enhance the understanding of and quantification of how energy and water cycle processes contribute to climate feedbacks.

3: Improve the predictive capability for key water and energy cycle variables and feedbacks through improved parameterizations to better represent hydrometeorological processes, and determine the geographical and seasonal characteristics of their predictability over land areas

4: Undertake joint activities with operational hydrometeorological services, relevant ESSP Projects program and hydrological research programs to demonstrate the value of GEWEX research, data sets and tools for assessing the consequences of climate predictions and global change for water resources

Associated Technical Issues

Specific technical issues that are being addressed as part of the objectives mentioned above include:

1. Developing an integrated hydroclimate data set that can be used to answer the main scientific questions noted above.
2. Developing the capability to handle and disseminate a large amount of amount of data from diverse sources
3. Analyzing and comparing with model simulations this diverse data to understand the underlying mechanisms and model deficiencies.
4. Assimilating and integrating the data with newly developed models.
5. Transferring CEOP methodologies to other regions, sectors, and applications

The CEOP Elements

1. Regional Hydroclimate Projects (RHPs)
2. Regional Cross Cutting Studies
3. Topical Cross Cutting Studies
4. Models
5. Data Management

Science Progress

regional climate science within a global context
water cycling in many regions and degrees of extreme
impact of anthropogenic factors (surface, aerosols ...)
model assessment
prediction contributions
...

many details to be shown this week and next week

DATA and OTHER PROGRESS

Comprehensive datasets
Common data-related features
Prototype
...

again, many details to be shown this week and next week

ALL SUCH PROGRESS ...

However, needs to be smoothly linked back to the overall goal

OTHERS ...

REQUESTED ACTIONS

GEWEX SSG January 2009 items include:

1. Clarify connections with African and Asian water studies
2. Concern for data archiving activities in US
3. Ensure that needs of hydrological community are met
4. HAP membership to include more focus on hydrology
5. AMMA links to be improved
6. Data under CEOP to be interactively linked with GWSP data on water availability and reservoir storage
7. Coordinate with CliC on cold region studies

RAPPORTEURS' COMMENTS

General:

1. Multitude of activities a concern
2. Maintain a clear focus
3. RHPs only activities in WCRP for regional water cycle processes ... challenge modelling, satellites and work with GRP/GMPP
4. RHP's role in regional datasets
5. Need for key scientific achievements

RAPPATEURS' COMMENTS

Specifics:

1. Added value of satellite studies beyond GRP?
2. clarification on AMMA
3. eventual links on land surface fluxes to Landflux and GLASS
4. future collaboration of HAP with GRP ...
5. HAP and seasonal forecasting ... extremes connections
6. water budget closure issue
7. buoys for oceans ...
8. more links on prediction with various other groups
9. transferability study a way for integrating RHP activities
10. aerosols and monsoon studies .. transfer approach?
11. validation of extremes in models and GMPP interactions
12. general strategy for high resolution gridded datasets?

CEOP-RELATED COMMENTS

Too big

Not doing enough

Many pieces

Unique aspects

Progress

...

STATUS

Lots underway, huge potential, lots of good will

Need to synthesize, extract, exploit ...

but how?

SYNTHESIZE ... underway

No particular order ...

1. transferability results
2. dataset development, sharing, and visualization
model, satellite, in-situ ...
3. integrated science
4. ...

CEOP COLLECTIVE ARTICLE: BAMS

1. Introduction (background, objectives, strategy)
2. Datasets and data integration (model, observations)
3. Science Progress (regions, issues, global perspective)
4. Implications (models, remote sensing, monitoring, climate change)
5. Concluding Remarks (the problem, progress, to be done, plans)

material: Input to WCRP/GEWEX Legacy: 33 pages

AUTHORS ...

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AND SO ...

The goal of CEOP is: To understand and predict continental to local-scale hydroclimates for hydrologic applications

How are we doing?

identify key issues

assemble datasets

carry out assessments

examine critical processes

propose improvements in techniques

work with those affected (including adaptation - climate change)

CONCLUSIONS

CEOP ... Important, success, concerns, forward ...

At this meeting,

let's really discuss ways to move forward