

i. Review/Realignment of CEOP Science Foci/Organization

- Understand the role of water and energy cycles within the general circulation at global and regional scales on diurnal to seasonal time scales
 - i. Atmosphere, land surface, snow cover, and coupled interactions
 - ii. Implications for predictability
- New foci will begin to look at
 - i. Interannual variations and extreme events
 - 1. Subsurface variations in water
 - 2. Connections to global circulation (ocean and cryosphere variations)
 - ii. Connections to subgrid processes, possibly via higher resolution non-hydrostatic models (e.g. GCSS)

ii. Milestones/Results achieved/remaining in Phase I

- GLDAS established, ICTS established, proposed global model intercomparison
- Individual model assessments beginning with CEOP datasets
 - i. Diurnal cycle
 - ii. Vegetation interaction
 - iii. Surface fluxes and variables
 - iv. Seasonal variations in different climatic regimes

and Planned for Phase II

- RMIP, focus on semi-arid regions in Asia and globally
 - i. Others?
- Identification and explanation of observed extreme events and their relationship to the historical time period
- Use results of Phase I comparisons to improve global, regional, land surface and process models
 - i. Develop metrics to show improvements in the models

iii. Evaluation of Current Data Collection/Archive/Application processes

- Heterogeneity and sub-grid scale processes associated with reference sites
- Upscaling of reference site data for comparison with model output
- Downscaling of model output for comparison with reference site data
- Need Application of CEOP data for hydrology and water resources

iv. New/Different In-situ, Satellite, Model Data Requirements

- Additional CEOP satellite data for application to WESP
- Use of satellite data for identifying reference site region heterogeneity
- Develop level 3 global physical products
- Augment the CEOP database with available global and tower products for model comparison during the historical time period
- Reevaluation of current model output contributions
- New inventory of available in-situ observations
- It would be desirable to have additional flux stations and subsurface measurements, as well as measurements in select regions of importance (particularly in arid and semi-arid regions) during CEOP, e.g. Ameriflux and BSRN
- We support the development of new catchment measurements

v. Frameworks for accommodating new Science Foci

- We may need to disaggregate WESP into more focused projects (e.g. global, regional, land, extremes) WESP is currently very broad.

VI. Connections/Joint activities with other Projects including unified test cases

- WESP and CIMS regional model intercomparisons and developments
- Coupled land atmosphere predictability
- Extreme events are also part of monsoon studies