Global Models (Project?)

Data Needs

- Model group originally provider to support CEOP Science objectives
- Model providers are users of the CEOP observation data (validation and inter comparison)
  - CEOP could become a legacy development period for many centers
- At the Breakout – a need for ensemble of CEOP analyses was identified
- Cloud data is needed – Identified in Paris, Some satellite data, need RHP Clouds

Data Infrastructure Need Purpose

- Model data is stored at Model and Data Center
- This should be maintained as a benchmark for verification metrics after future developments
- MOLTS formats should be frozen
- Grib formats will continue to be model output, but should we have a NetCDF CF?
- Model&Data Documentation

Climate Region Commonality

- It is likely that the global models exhibit dramatic differences across RHP
- The model group could help researchers in RHP understand their results
- Similarly, crosscutting science activities may find significant variance across all contributed model data
- It is challenging to intercompare results across climate regimes, and the model groups could use the feedback from the regional projects

Need for upscaling / downscaling

- MOLTS are already available for point stuides

- Regional / Basin scale studies would need to recognize different model grids (among other differences)

- Data is available for RHP/Crosscut use, but may not be simple

Need for Pilot demonstrations

- To address global uncertainty, we will develop an ensemble of analyses (so far 8 EOP3/4 analyses) –Multi-Model Analysis as in GSWP2
  - Start with monthly means, high priority variables, common grid, mean and variance
    - Will tie into GRP data
  - A daily ensemble will also be developed, but may be a limited time to start
- Should be useful to the contributing model centers and also a starting point for CEOP science components to get started
- We need input from interested researchers to configure the variables (likely can't do all)

Clarification of Limitations

- Reprocessing is not easy or a given for many centers
- So far, most analyses intercomparisons have focused on MOLTS (e.g. Yang et al)
- Documentation at Model&Data needs substantial updates
- Gridded data transfers from Model&Data are fairly slow (online storage, Faster networks)