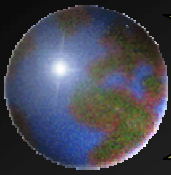


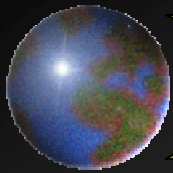
# *Working Group 1: Test Beds* ■

Breakout Report #1



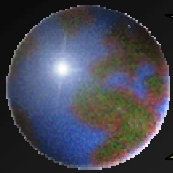
# *What is a Test Bed?*

- ⊗ Setting for specific HEPEx experiments
- ⊗ Test bed is **not** the same as a basin
  - ⊗ Could be a single basin (and its subbasins)
  - ⊗ Could be a collection of basins
  - ⊗ Could be a (gridded) region



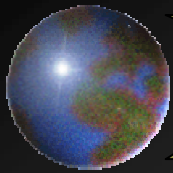
## *Ideal Situation at Test Beds*

- ⊗ Available retrospective atmospheric forecasts (spanning decades) at short-, medium-, and long-ranges (as appropriate)
- ⊗ Historical record of surface forcings
- ⊗ Available land surface information to support hydrologic modeling
- ⊗ Investigation at multiple scales (e.g. a basin and its subbasins)
- ⊗ Nonregulated rivers
- ⊗ Existing hydrologic forecasting capabilities



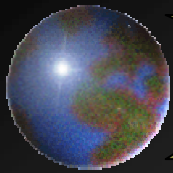
# *What Test Beds are Out There?*

- Selected MOPEX (DMIP) basins
- LDAS
- U.S. (East and West-wide Forecasting Systems)
- Canadian (Great Lakes/St. Lawrence System)
- EFAS
- Brazil (San Francisco, Parana, & others)
- Bangladesh Forecasting System
- GE<sup>2</sup> (including potential GAPP/NAME basins)



# *Data Considerations*

- Changing land use conditions is an issue in some forecasting and design problems (nonstationarity)
- Atmospheric reforecasts from short- to long-ranges:
  - CDC reforecasts
  - NCEP GFS (15 member global ensembles) since 1979
  - Regional reanalysis could be used to make short-range reforecasts (3 hourly @ 32 km). HEPEX recommendation needed to help secure resources for such an effort.
- Short-range hydrologic forecasting needs — atmospheric forecasts and downscaling to produce forcings at 1 km subhourly scales



# *Recommendations*

- Criteria for an official HEPEX test bed:
  - A location, or set of locations, that can test specific HEPEX science objectives
  - Data resources are freely available
  - A sponsoring group or agency who can help facilitate experiments [?]
  - Existing forecasting capabilities for benchmarking and comparison [?]