



# Proposed Role of Non-ECVs in Inventory

Jeff Privette

Revealing the Past, Interpreting the Present, and Informing the Future



# Issue

- Some Inventory records submitted for variables and indicators that are not GCOS ECVs or Products
- Examples:
  - Normalized Difference Vegetation Index (NDVI) – biomass, health proxy
  - Lambertian Equivalent Reflectivity – simplified surface albedo proxy
  - Absorbing aerosol index -- UV-absorbing aerosols (e.g., dust, soot) proxy
  - Mass change -- Greenland / Antarctica, Ocean-bottom pressure, etc.
  - Carbon Flux from Biomass Burning
  - Sea-ice type -- proxy to ice age, related to ice thickness
  - Likely future submissions on derivative and statistical characterizations, e.g., extremes



# Considerations

- Past practice
  - Accept some CDRs addressing non(-space-observable) GCOS variables
    - Very few cases
    - Based on references in GCOS-IP, *e.g.*, as auxiliary/proxy data to GCOS variables or non-space-observable GCOS variables



# Recommendations

- Accept in systematic manner and with caveats
  - Label as *non-GCOS*, *non-validated (caveat emptor)*, and/or *experimental*
  - Require summary of demonstrated or potential climate value
  - Require summary of validation or correlation with climate phenomena
  - To relieve WGC from approving role, instruct agencies to provide these records in future updates of Inventory
    - Still need plan/policy for non-agency submissions





# Rationale

- GCOS ECVs/IP represent only part of total climate community activity
  - Some non-ECVs already have strong record of climate value (e.g, NDVI)
  - GCOS cannot be completely current or comprehensive
- CDR production is expensive and often competitively awarded
  - Generally pursued based on legitimate (expected) societal and/or scientific value
  - Caveat: some fields are residual, intermediate, ephemeral, for debugging!
- Inventory already has records of insufficient length for climate applications
- Inventory process can be adjusted to handle non-ECVs at low(er) cost
  - Eliminate review, validation or gap analysis
- Greatest Inventory cost is the framework, not the data
  - IMO: it is a great tool and its potential value should be explored, utilized as reasonable
  - IMO: WGC's role must be bounded, but overall goal is help science, society