

Chemistry-Ecosystems-Climate Working Group Report

1. GCAP version

- Need a manual about where to get archived meteorology and source code
- Archived meteorology: driven by SSPs; time slices vs. transient simulation
- Need benchmark results
- HEMCO compatible with GCAP
- Provide interface between CESM (GISS Model E) and GEOS-Chem
- GCAP model in Cloud

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2. Coupling of ecosystems with GEOS-Chem

- Two way coupling with YIBs (Led by Xu Yue, drive by MET fields and conc. of species from GEOS-Chem; YEMS provides outputs of LAI, carbon flux, dry deposition, etc.)
- Hg simulation needs simulation of ecosystem
- Archive highest resolution (quarter degree) outputs of concentrations of chemical species over 1985-present for studies on the impacts of air pollutants on ecosystems
- Consideration of urbanization (eg. coupling with mutiscale urban canopy model, UHI effects, ...)