

6. BGC-Interface Code Structure

- subroutine: for all: (i) **clm-bgc** (ii) **Interface-clm-bgc** (iii) **Interface-PFLOTRAN**
- **subroutine: clm-bgc only**
- **subroutine: clm-bgc or Interface-clm-bgc**
- **subroutine: Interface only**
- **subroutine: Interface-clm-bgc only**
- **subroutine: Interface-PFLOTRAN only**

Level-1 (called in clm_drv)	Level-2
..... clm_drv_init downscale_forcings/CanopyHydrology SoilTemperature/SoilFluxes clm_drv_patch2col HydrologyNoDrainage SnowAge_grain	
CNEcosystemDynNoLeaching1	←flux_vars%SetValues: C/N/P ←CNNDeposition ←CNNfixation ←<CNNFert; CNSoyfix> ←CNMResp ←decomp_verprofiles (nfixation_prof) ←CNAllocation1_PlantNPDemand
<i>get_clm_bgc_data</i>	
<i>clm_pf_run</i> <i>update_bgc_data_pf2clm</i>	
clm_bgc_run update_bgc_data_clm2clm	↓ decomp_rate_constants ← CNDecompAlloc ← CNAllocation2_ResolveNPLimit
CNEcosystemDynNoLeaching2	↓ decomp_rate_constants ← CNDecompAlloc ← CNAllocation2_ResolveNPLimit ← CNDecompAlloc2 ← CNAllocation3_PlantCNPAlloc ← CNPhenology ← CNGResp ← CStateUpdate0 ← StateUpdate1: C/N/P (Column + Patch) ← CNSoilLittVertTransp ← CNGapMortality ← StateUpdate2 & 2h: C/N/P (Column + Patch) ← CNWoodProducts ← CNFireArea/FireFluxes ← StateUpdate3: C (Column + Patch)
CNAnnualUpdate	
HydrologyDrainage	
CNEcosystemDynLeaching	← PWeathering/PAdsorption/PDesorption/POcclusion/PBiochemMin/PLeaching ← CNNLeaching ← StateUpdate3: N/P (Column + Patch) ← CNPrecisionControl ← Flux%Summary: C/N/P ← Summary_interface ← State%Summary: C/N/P
BalanceCheck: Water/Energy	
BalanceCheck: C/N/P	