

# Technical developments in CABLE

- New implementations
- New functionalities
- Tools

# New implementations

- Tree – demography model **POP** (Physiology-Order-Population) including **POP – LUC** (Land-Use-Change)
- Climate driven Phenology
- Fire model **BLAZE**
- Weathergenerator **WGEN**

# New Functionalities

Revision of how CABLE is driven:

- Start and ending dates are no longer depending on met files.
- Multiple years can be run at once
- CASA-ONLY functionality (CASA-DUMP files are written annually)
- Reinstating of the CASA-CNP biome depending parameter file
- New spin-up functionality
- A list of new helper routines in *cable\_common.f90*

ALL OLD FUNCTIONALITIES ARE STILL IN PLACE!!!

# New Functionalities

The *PLUME-MIP* framework for new datasets

- Can (should) be used to implement new (met-)datasets
- it's modular and feeds into CABLE variables
- It determines all necessary settings (e.g. leap-years, CO2...)
- Is coupled to the weathergenerator
- Landpoint selection based on land\_mask files
- “*Direct-Read*” mode for netCDF – input for fast testing (small number of points)
- Currently implemented: PLUME-MIP – projections; CRU-NCEP

# Tools

Python-tools are available:

- Create\_landmask (for testing, region-only simulations...)
- Cable\_extract. Similar to the above but generates GSWP2 – format input in “*land*”-mode comes with a quick-plot routine for quick-check of results.

ALL OF THE AFOREMENTIONED  
IS AVAILABLE IN  
PARALLEL !!!!!