

AGENDA

- **1:15-2:00 pm (Seminar room)**

FATES Practical Orientation:

“Running FATES: what do you need to know?”

- **2:00 - 4:45 (Library)**

Self guided FATES practical

- **4:45 (Library)**

CLM Tutorial Wrap Up

- **5:15**

Bus pick-up

RUNNING FATES: WHAT DO YOU NEED TO KNOW?

- NGEET/fates github website
- Navigating the code and folder system
- CLM <-> FATES compatibility
- Modifying a run:
 - FATES namelist
 - FATES parameters
- Modifying output (history)
- Practical sessions

[HTTPS://GITHUB.COM/NGEET/FATES](https://github.com/NGEET/FATES)

NGEET / fates Private Unwatch 42 ★ Star 3 Fork 18


Code Issues 70 Pull requests 2 Projects 0 Wiki Insights Settings










repository for the Functionally Assembled Terrestrial Ecosystem Simulator (FATES) Edit


Add topics

802 commits 16 branches 12 releases 10 contributors

Branch: **master** New pull request Create new file Upload files Find file Clone or download

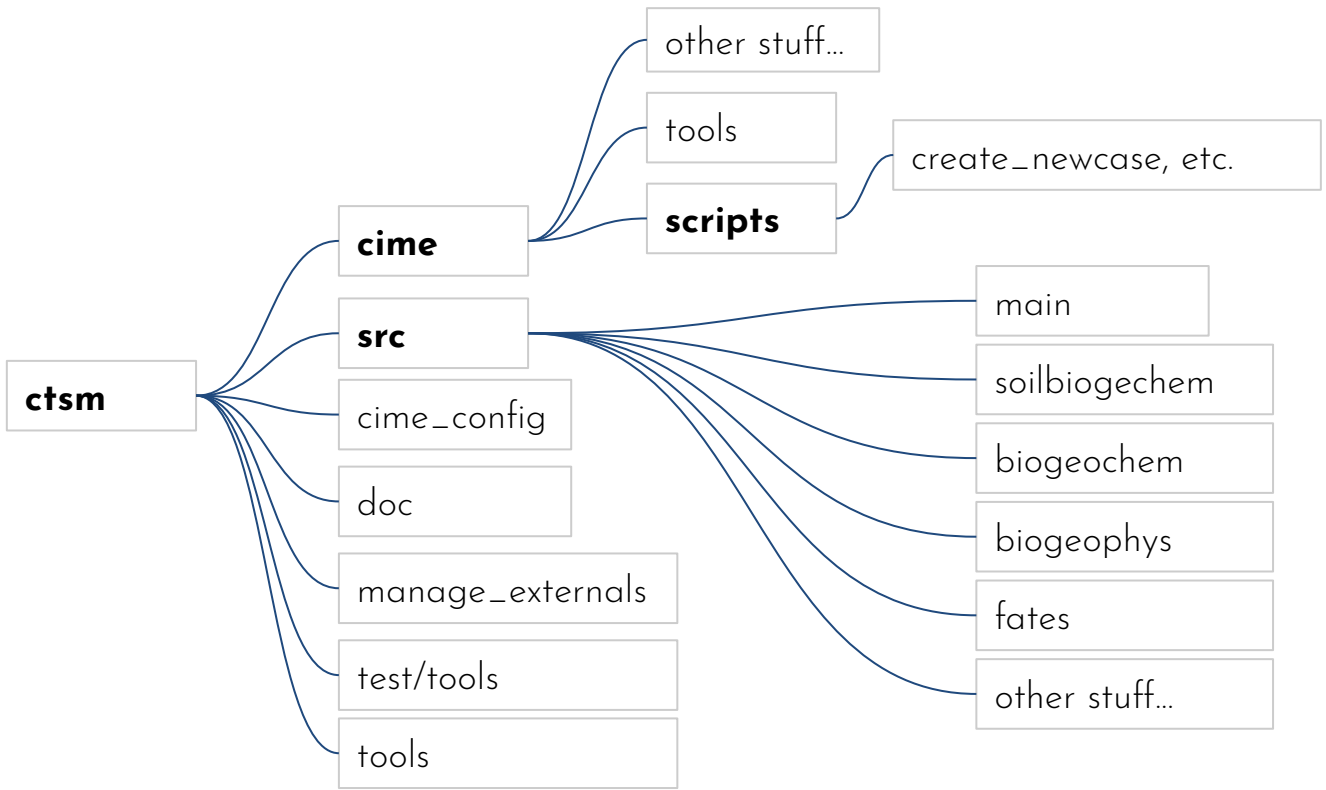
 **rgknox** committed 13 hours ago Merge pull request #327 from rgknox/rgknox-ncar-s1.4.1_a3.0.0_rev2 ... Latest commit 865431c 13 hours ago

 <a>.github	Edited language in the PR template	12 days ago
 <a>biogeochem	Conflict resolution merging NCAR/NGEET. Trivial, resolution, both sid...	14 hours ago
 <a>biogeophys	modular allometry: moved some prep functions to outside the specific ...	4 months ago
 <a>fire	Changed file permissions on fire	3 months ago
 <a>main	Conflict resolution merging NCAR/NGEET. Trivial, resolution, both sid...	14 hours ago
 <a>tools	added execution permission on pftindexswapper and added silent mode o...	11 days ago
 <a>CONTRIBUTING.md	added link to developer repo policy and fixed a couple typos	11 days ago
 <a>LICENSE.txt	updated copyright year in license file to 2018	12 days ago
 <a>README.md	Update README.md	27 days ago

 README.md

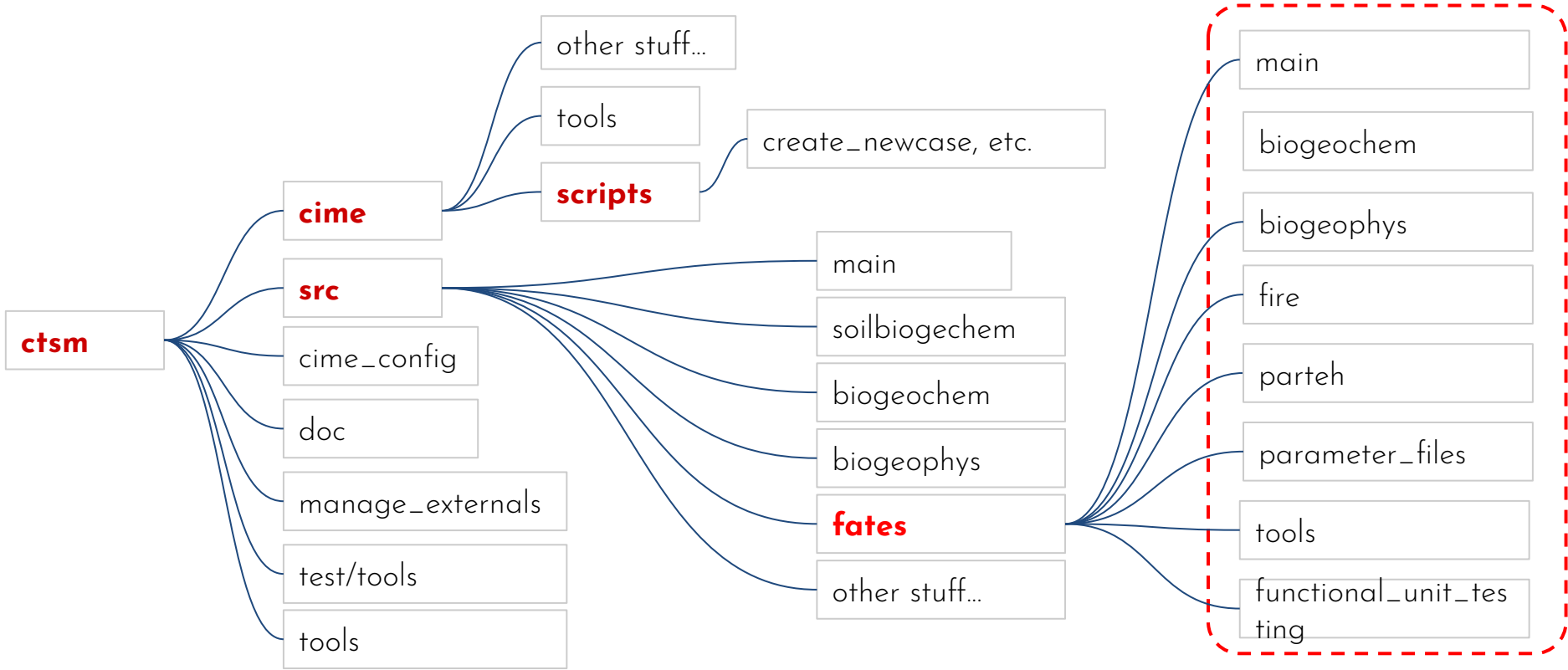


WHERE DOES THE FATES CODE LIVE? (IN **CTSM**)



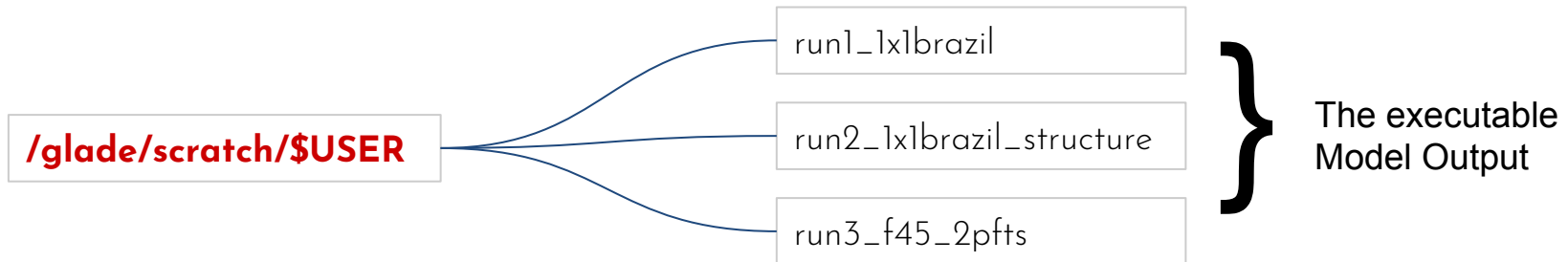
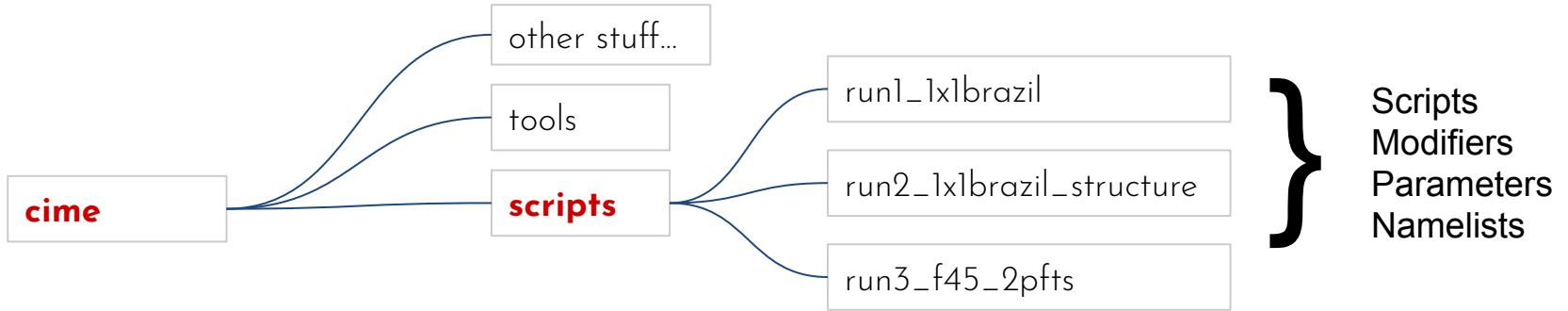


WHERE DOES THE FATES CODE LIVE? (IN **CTSM**)





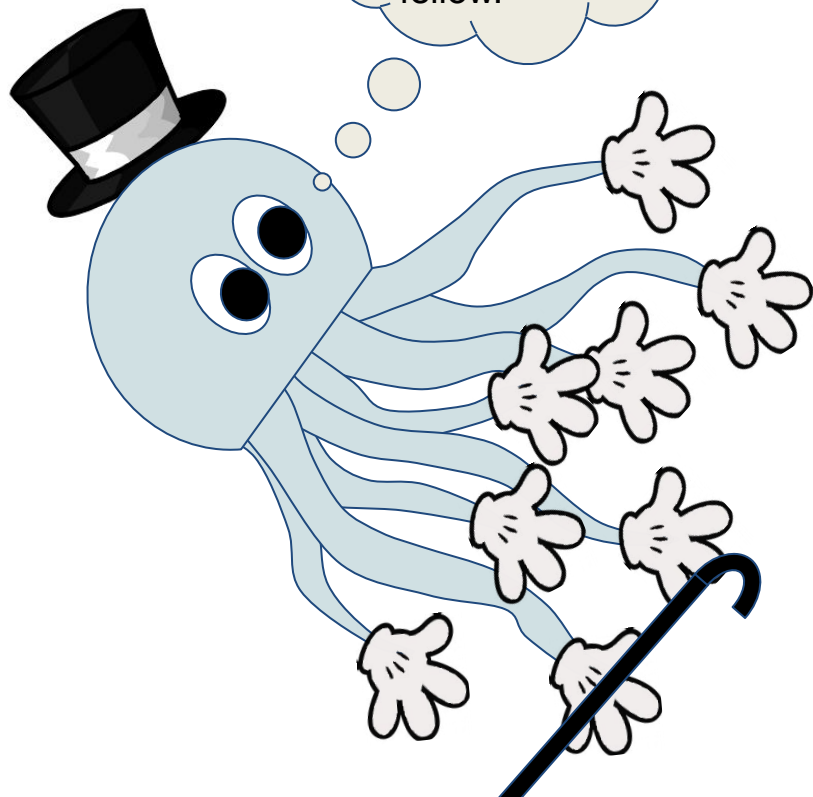
WHERE WILL OUR PRACTICE RUNS LIVE?



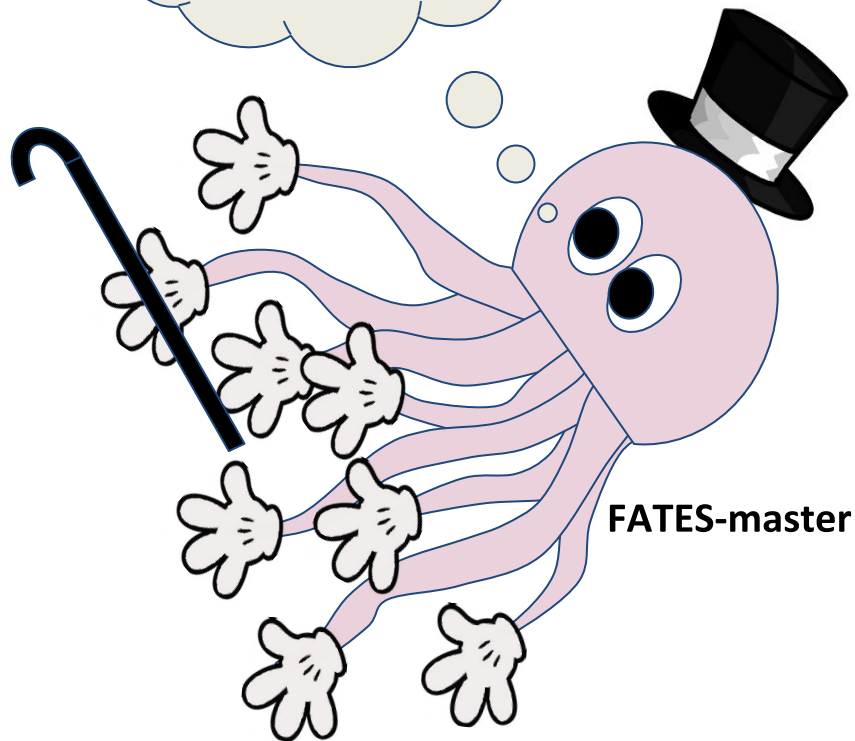
CLM <-> FATES COMPATIBILITY

CLM-master

Master
FATES,
shake my
hand good
fellow.



What is this
rubbish, who
holds their
cane in their
7th hand!

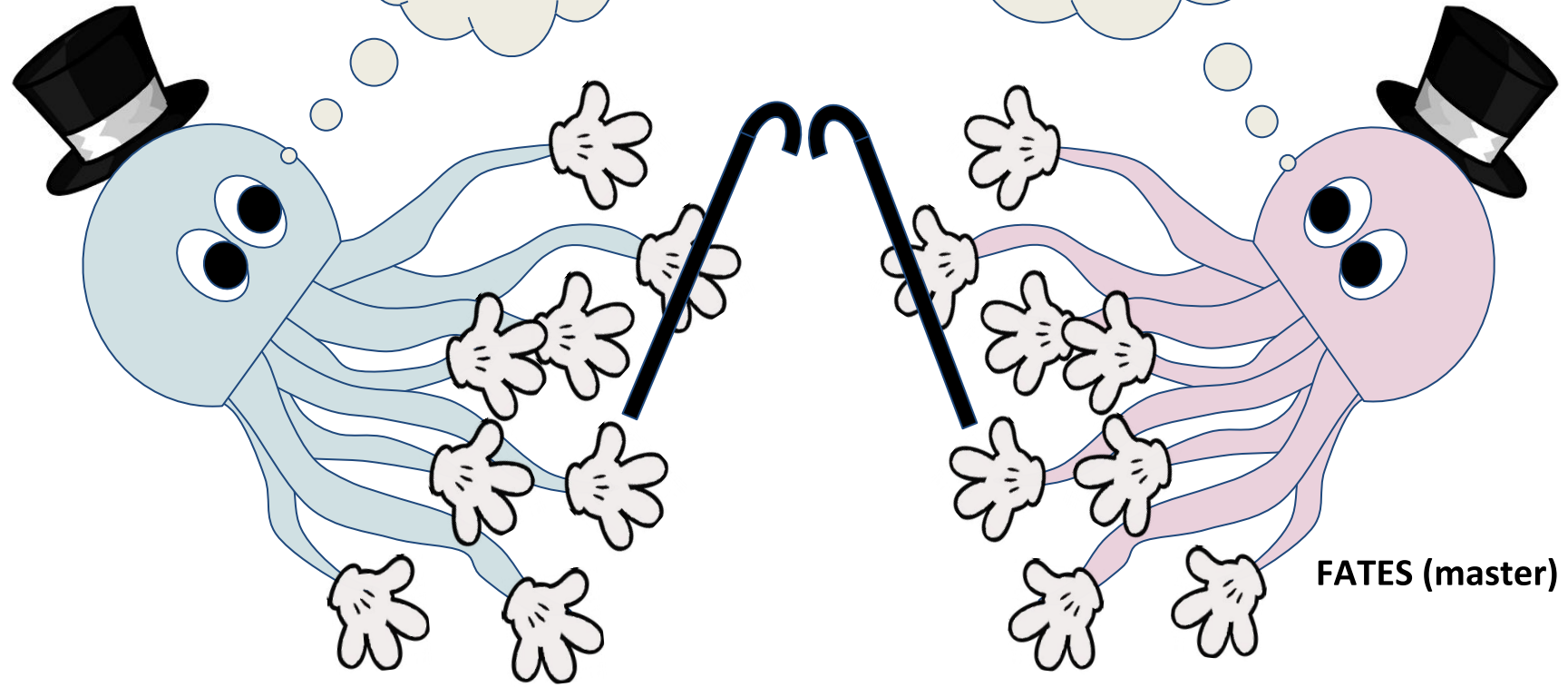


FATES-master

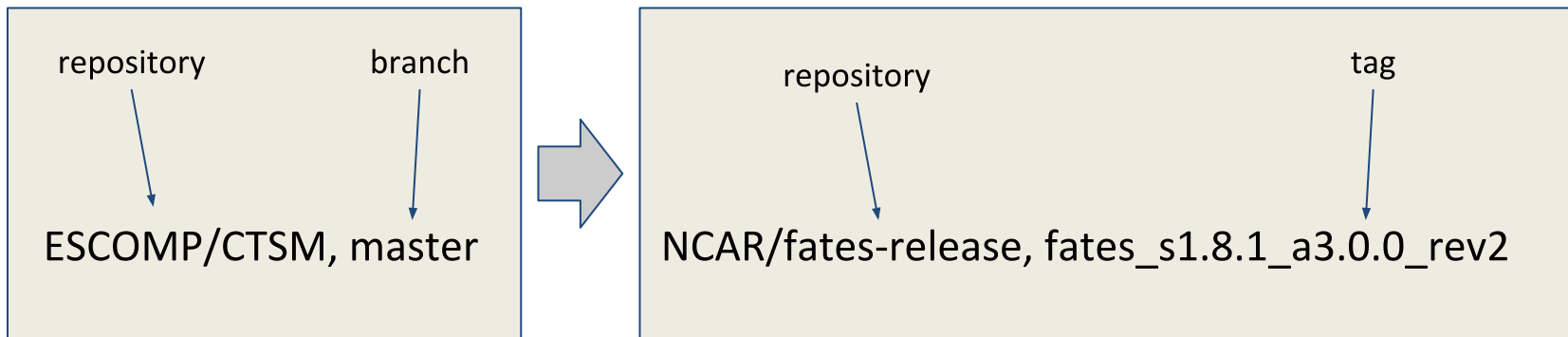
CLM (fates_next_api)

Yes, yes,
much
better

Yes indeed.



FATES (master)

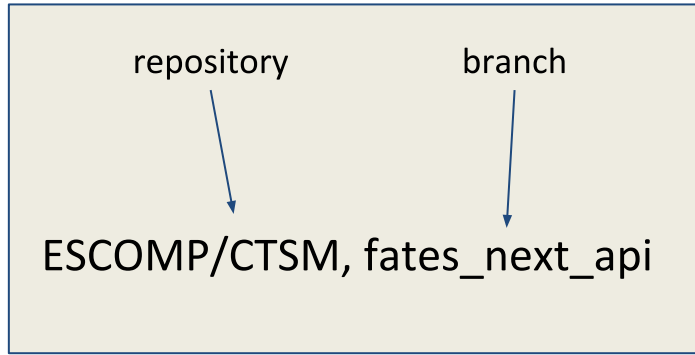


Cutting edge

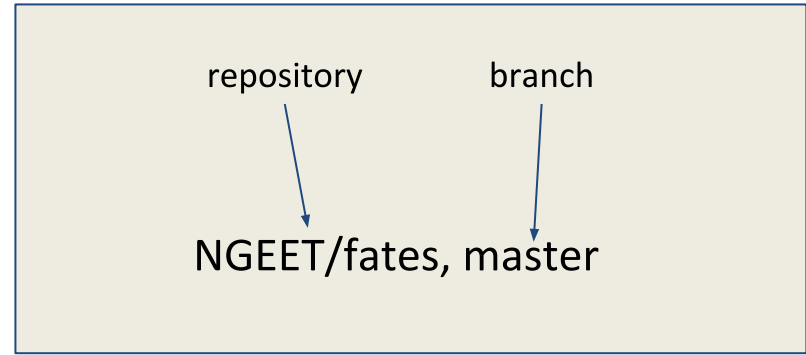
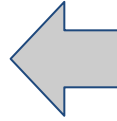
Not cutting edge

CTSM master will automatically checkout a compatible FATES tag from their repository when you run:

`./manage_externals/checkout_externals`



Not cutting edge



Cutting edge

To use the cutting-edge FATES code. You will need the master branch from the NGEET/ repository, and use git commands to checkout:

fates_next_api

MODIFYING A RUN - NAMELIST

FATES NAMELIST CONTROLS

<https://github.com/NGEET/fates/wiki/Namelist-Options-and-Run-Time-Modes>

Contact: jkshuman@ucar.edu

Contact: maoyi.huang@pnnl.gov

Contact: cxu@lanl.gov

Contact: rgknox@lbl.gov

Contact: cdkoven@lbl.gov

Contact: rgknox@lbl.gov

Contact: rgknox@lbl.gov

Option	Type	Default w/FATES compset	Description
use_fates	true/false	.true.	Turns on/off fates!
fates_paramfile	String (filepath)	default file	path to an alternative netcdf fates parameter file
use_fates_spitfire	true/false	.false.	SPITFIRE fire model
use_fates_logging	true/false	.false.	Turns on/off the logging module
use_fates_planthydro	true/false	.false.	Turns on/off the plant hydrodynamics module
use_fates_ed_st3	true/false	.false.	Turns on/off Static Stand Structure mode
use_fates_ed_prescribed_phys	true/false	.false.	Turns on/off Prescribed Physiology mode
use_fates_inventory_init	true/false	.false.	Turns on/off initialization from plant inventory data
fates_parteh_mode	integer	1	Specifies which plant allocation model to use
fates_inventory_ctrl_filename	String (filepath)	blank	When inventory initialization true, points to control file

FATES PARAMETER FILES & MANIPULATION

https://github.com/NGEET/fates/tree/master/parameter_files

<https://github.com/NGEET/fates/wiki/Useful-Stuff>

FATES HISTORY VARIABLES,
WHERE THE MAGIC HAPPENS.

<https://github.com/NGEET/fates/blob/master/main/FatesHistoryInterfaceMod.F>

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WHAT IF I WANT TO BE A DEVELOPER?

<https://github.com/NGEET/fates/blob/master/CONTRIBUTING.md>

RUNNING FATES: A WALK THROUGH, FEBRUARY 2019

[HTTPS://GITHUB.COM/NGEET/FATES/WIKI/RUNNING-FATES:-A-WALK-THROUGH,-FEBRUARY-2019](https://github.com/NGEET/fates/wiki/Running-Fates:-A-Walk-Through,-February-2019)

MODEL RUN 1 - (GETTING A RUN GOING)

1. Learn how to execute a simple fates run
2. Two optional methods of evaluating output

MODEL RUN 2 - (STUDYING OUTPUT)

1. Learn about different sorts of FATES output
2. Learn about adding new history variables.
3. Plotting up FATES-specific size-structured output (python)

MODEL RUN 3 - (STUDYING PARAMETERS)

1. Learn about FATES PFTs
2. Learn about changing PFT file.
3. Do a global run
4. Plot output of global run. (matlab)

EXTRA SLIDES



WHERE DOES THE FATES CODE LIVE? (IN E3SM)

