## try ABoVE

export domainPath=/home/groups/chen\_group/mengluo/ABoVE\_Demeter\_CLM/

export domainFile=domain\_ABOVE\_025\_v1\_c220315.nc

export surfdataFile=surfdata\_ABOVE\_025\_v1\_c220328.nc

export landuseFile=landuse.timeseries\_ABOVE\_025\_SSP126\_c220328.nc

export RES=CLM\_USRDAT

export COMPSET=SSP126\_DATM%GSWP3v1\_CLM50%BGC\_SICE\_SOCN\_RTM\_SGLC\_SWAV

export COMPILER=gnu

export MACH=chtc

export CASE\_NAME=/home/groups/chen\_group/mengluo/ABoVE\_CLM\_Demeter\_2015\_2100\_1

cd /home/groups/chen\_group/CLM/clm5.0/cime/scripts

./create\_newcase --compset ${COMPSET} --res ${RES} --case ${CASE\_NAME} --compiler ${COMPILER} --mach ${MACH} --run-unsupported

cd ${CASE\_NAME}

./xmlchange DATM\_MODE="CLMGSWP3v1",DATM\_CLMNCEP\_YR\_START='2015',DATM\_CLMNCEP\_YR\_END='2100'

./xmlchange LND\_DOMAIN\_FILE=${domainFile}

./xmlchange ATM\_DOMAIN\_FILE=${domainFile}

./xmlchange LND\_DOMAIN\_PATH=${domainPath}

./xmlchange ATM\_DOMAIN\_PATH=${domainPath}

./xmlchange NTASKS=256,STOP\_N=15,STOP\_OPTION=nyears,JOB\_WALLCLOCK\_TIME="20:00:00",RUN\_STARTDATE="2015-01-01",REST\_N=5,REST\_OPTION=nyears,RESUBMIT=6

#./xmlchange JOB\_QUEUE=pre

./xmlchange CIME\_OUTPUT\_ROOT=/home/groups/chen\_group/CESM/output

cat >> user\_nl\_clm << EOF

finidat = '/home/groups/chen\_group/CESM/output/try\_ABoVE\_clm\_2022\_28\_monthly/run/try\_ABoVE\_clm\_2022\_28\_monthly.clm2.r.2015-01-01-00000.nc'

hist\_nhtfrq = 0,-8760

hist\_mfilt = 12,1

hist\_empty\_htapes = .true.

hist\_fincl1 = 'FSA', 'FSR', 'FSH', 'EFLX\_LH\_TOT', 'FPSN', 'GPP', 'NPP', 'NEP', 'NEE', 'SR', 'AR', 'HR', 'ER', 'LEAFC', 'LIVESTEMC', 'DEADSTEMC', 'SOILC', 'LAND\_USE\_FLUX', 'DWT\_CLOSS'

hist\_fincl2 = 'FSA', 'FSR', 'FSH', 'EFLX\_LH\_TOT', 'FPSN', 'GPP', 'NPP', 'NEP', 'NEE', 'SR', 'AR', 'HR', 'ER', 'LEAFC', 'LIVESTEMC', 'DEADSTEMC', 'SOILC', 'LAND\_USE\_FLUX', 'DWT\_CLOSS'

fsurdat = '${domainPath}${surfdataFile}'

flanduse\_timeseries = '${domainPath}${landuseFile}'

check\_dynpft\_consistency = .false.

EOF

./case.setup

srun -n1 -N1 -p pre --time=20:00:00 ./case.build

echo SUCCESS

# ---------------------------------------------------------------------------- #

# \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* #

# ---------------------------------------------------------------------------- #

files1=""

for i in {2015..2100}

do

for j in {1..12}

do

if [ $j -lt 10 ];

then

files1="${files1}gfdl-esm4\_r1i1p1f1\_w5e5\_ssp126.Prec.$i-0$j.nc\n"

else

if [ $i -eq 2100 ] && [ $j -eq 12 ];

then

files1="${files1}gfdl-esm4\_r1i1p1f1\_w5e5\_ssp126.Prec.$i-$j.nc"

else

files1="${files1}gfdl-esm4\_r1i1p1f1\_w5e5\_ssp126.Prec.$i-$j.nc\n"

fi

fi

done

done

cp ${CASE\_NAME}/CaseDocs/datm.streams.txt.CLMGSWP3v1.Precip ${CASE\_NAME}/user\_datm.streams.txt.CLMGSWP3v1.Precip2

chmod +rw ${CASE\_NAME}/user\_datm.streams.txt.CLMGSWP3v1.Precip2

sed '30,208d' ${CASE\_NAME}/user\_datm.streams.txt.CLMGSWP3v1.Precip2 > ${CASE\_NAME}/user\_datm.streams.txt.CLMGSWP3v1.Precip

rm ${CASE\_NAME}/user\_datm.streams.txt.CLMGSWP3v1.Precip2

chmod +rw ${CASE\_NAME}/user\_datm.streams.txt.CLMGSWP3v1.Precip

export LC\_CTYPE=en\_US.UTF-8

export LC\_ALL=en\_US.UTF-8

perl -w -i -p -e "s@/home/groups/chen\_group/CESM/inputdata/atm/datm7/atm\_forcing.datm7.GSWP3.0.5d.v1.c170516/Precip@/home/groups/chen\_group/CESM/inputdata/atm/datm7/atm\_forcing.GFDL-ESM4-w5e5\_c211108/Precip@" ${CASE\_NAME}/user\_datm.streams.txt.CLMGSWP3v1.Precip

perl -w -i -p -e "s@clmforc.GSWP3.c2011.0.5x0.5.Prec.2015-01.nc@${files1}@" ${CASE\_NAME}/user\_datm.streams.txt.CLMGSWP3v1.Precip

sed -i '/ZBOT/d' ${CASE\_NAME}/user\_datm.streams.txt.CLMGSWP3v1.Precip

# ---------------------------------------------------------------------------- #

# \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* #

# ---------------------------------------------------------------------------- #

files2=""

for i in {2015..2100}

do

for j in {1..12}

do

if [ $j -lt 10 ];

then

files2="${files2}gfdl-esm4\_r1i1p1f1\_w5e5\_ssp126.Solr.$i-0$j.nc\n"

else

if [ $i -eq 2100 ] && [ $j -eq 12 ];

then

files2="${files2}gfdl-esm4\_r1i1p1f1\_w5e5\_ssp126.Solr.$i-$j.nc"

else

files2="${files2}gfdl-esm4\_r1i1p1f1\_w5e5\_ssp126.Solr.$i-$j.nc\n"

fi

fi

done

done

cp ${CASE\_NAME}/CaseDocs/datm.streams.txt.CLMGSWP3v1.Solar ${CASE\_NAME}/user\_datm.streams.txt.CLMGSWP3v1.Solar2

chmod +rw ${CASE\_NAME}/user\_datm.streams.txt.CLMGSWP3v1.Solar2

sed '30,208d' ${CASE\_NAME}/user\_datm.streams.txt.CLMGSWP3v1.Solar2 > ${CASE\_NAME}/user\_datm.streams.txt.CLMGSWP3v1.Solar

rm ${CASE\_NAME}/user\_datm.streams.txt.CLMGSWP3v1.Solar2

chmod +rw ${CASE\_NAME}/user\_datm.streams.txt.CLMGSWP3v1.Solar

export LC\_CTYPE=en\_US.UTF-8

export LC\_ALL=en\_US.UTF-8

perl -w -i -p -e "s@/home/groups/chen\_group/CESM/inputdata/atm/datm7/atm\_forcing.datm7.GSWP3.0.5d.v1.c170516/Solar@/home/groups/chen\_group/CESM/inputdata/atm/datm7/atm\_forcing.GFDL-ESM4-w5e5\_c211108/Solar@" ${CASE\_NAME}/user\_datm.streams.txt.CLMGSWP3v1.Solar

perl -w -i -p -e "s@clmforc.GSWP3.c2011.0.5x0.5.Solr.2015-01.nc@${files2}@" ${CASE\_NAME}/user\_datm.streams.txt.CLMGSWP3v1.Solar

sed -i '/ZBOT/d' ${CASE\_NAME}/user\_datm.streams.txt.CLMGSWP3v1.Solar

# ---------------------------------------------------------------------------- #

# \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* #

# ---------------------------------------------------------------------------- #

files3=""

for i in {2015..2100}

do

for j in {1..12}

do

if [ $j -lt 10 ];

then

files3="${files3}gfdl-esm4\_r1i1p1f1\_w5e5\_ssp126.TPQWL.$i-0$j.nc\n"

else

if [ $i -eq 2100 ] && [ $j -eq 12 ];

then

files3="${files3}gfdl-esm4\_r1i1p1f1\_w5e5\_ssp126.TPQWL.$i-$j.nc"

else

files3="${files3}gfdl-esm4\_r1i1p1f1\_w5e5\_ssp126.TPQWL.$i-$j.nc\n"

fi

fi

done

done

cp ${CASE\_NAME}/CaseDocs/datm.streams.txt.CLMGSWP3v1.TPQW ${CASE\_NAME}/user\_datm.streams.txt.CLMGSWP3v1.TPQW2

chmod +rw ${CASE\_NAME}/user\_datm.streams.txt.CLMGSWP3v1.TPQW2

sed '34,212d' ${CASE\_NAME}/user\_datm.streams.txt.CLMGSWP3v1.TPQW2 > ${CASE\_NAME}/user\_datm.streams.txt.CLMGSWP3v1.TPQW

rm ${CASE\_NAME}/user\_datm.streams.txt.CLMGSWP3v1.TPQW2

chmod +rw ${CASE\_NAME}/user\_datm.streams.txt.CLMGSWP3v1.TPQW

export LC\_CTYPE=en\_US.UTF-8

export LC\_ALL=en\_US.UTF-8

perl -w -i -p -e "s@/home/groups/chen\_group/CESM/inputdata/atm/datm7/atm\_forcing.datm7.GSWP3.0.5d.v1.c170516/TPHWL@/home/groups/chen\_group/CESM/inputdata/atm/datm7/atm\_forcing.GFDL-ESM4-w5e5\_c211108/TPHWL@" ${CASE\_NAME}/user\_datm.streams.txt.CLMGSWP3v1.TPQW

perl -w -i -p -e "s@clmforc.GSWP3.c2011.0.5x0.5.TPQWL.2015-01.nc@${files3}@" ${CASE\_NAME}/user\_datm.streams.txt.CLMGSWP3v1.TPQW

sed -i '/ZBOT/d' ${CASE\_NAME}/user\_datm.streams.txt.CLMGSWP3v1.TPQW

# ---------------------------------------------------------------------------- #

# \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* #

# ---------------------------------------------------------------------------- #

./case.submit

echo SUCCESS