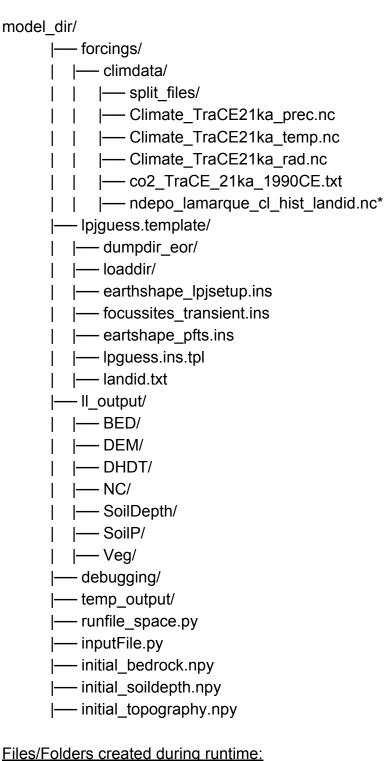
LPJGUESS - Landlab - Coupling Documentation -- V.0.5

<u>Initial Folderstructure needed:</u>



- temp_lpj/
 - temp_output/
current_output.no

<u>Important Files / Modules for input/output handling and conversion:</u>

Landlab Component dynveg_lpjguess.py / create_input_for_lpjguess.py (../landlab/landlab/components/dynveg_lpjguess)

This component handles the the calls to LPJGUESS during model-runtime and the conversion of current landlab output to lpjguess subpixel input at each timestep

File create input for landlab.py

Todo: This file needs to be incorporated in the framework of the component mentioned above. Right now it needs to sit in the model base-directory. It handles the conversion and spatial mapping of lpjguess subpixel output to landlab grids during runtime.

Landlab Component landformClassifier.py (../landlab/landlab/components/landform_classifier)

This is a theoretically separate component that can be used without the LPJGUESS coupling of landlab. This handles the classification of each cell within a landlab model grid into different Landforms during runtime. This however absolutely necessary for the coupled simulations

Known issues/Todo:

- LPJGUESS is compiled in my folder locally (check inputFile.py for location).
 This could be done globally if more people are using it. WILLI
- The location and filename(!!) of the forcing-files are right now hardcoded in dynveg_lpjguess.py. It works, but since this is a global landlab-module, the naming of the input_files needs to be the same for all simulations. Right now its /forcings/climdata/Climate TraCE21ka prec/ temp; rad].nc. Manu
- The output timestep (inputFile.py, variable outInt) is the same for the spin-up period as well as the transient period. Since we are mostly not interested in the spin-up we create a huge chunk of data, that we basically don't use. This is also a runtime issue, since the creation of output takes a lot of time.
 Willi/Manu

• Since time is/was a little tight on my side, I never switched to the landlab branch that Willi created which incorporates the new inputFile format (not the python file). Since I adapted my workflow on this, honestly I am planning to

continue on this. This also mean, that I added a lot of stuff to the input File which is not in the "new" version, which needs to go there. Willi