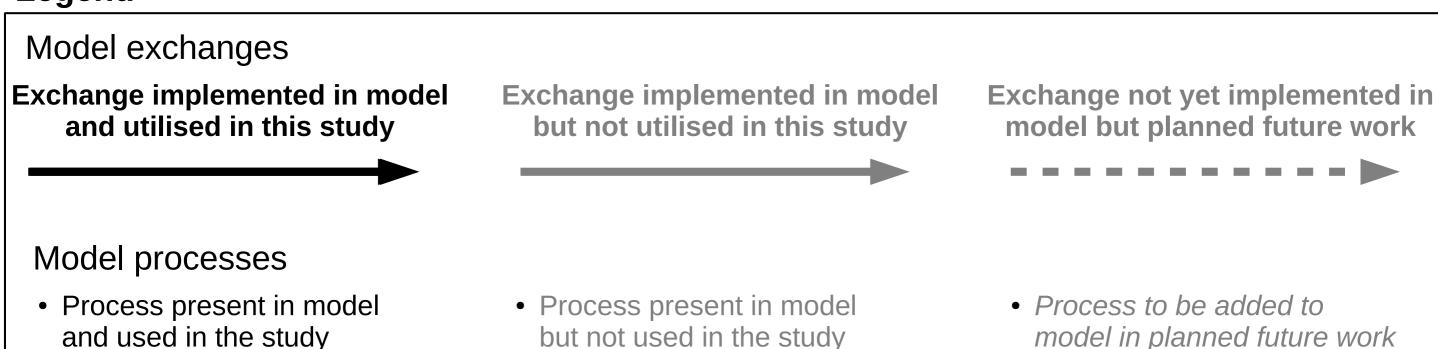
Soil properties (initialisation only) **LPJ-GUESS EMAC Climate state** temperature, precipitation, net shortwave radiation • Photosynthesis (with N limitation) and respiration **Chemical concentrations and fluxes** atmospheric CO2 concentration, N deposition Allocation and growth • Atmospheric circulation Vegetation dynamics **Vegetation state and fluxes** Atmospheric chemistry NPP, LAI, height, cover fractions (all per PFT) Soil hydrology Ocean circulation Additional climate variables (for fire modelling) • Litter and soil C and N e.g. humidity, windspeed, max/min temperatures Ocean biogeochemistry dynamics **Hydrological state and fluxes** • Dynamic sea ice Human land use and land e.g. soil water content, evapotranspiration cover change • Biogenic volatile compound emissions • Biogenic volatile compound land cover class fractions, transitions emissions Trace gases • Alternative fire models e.a. Ozone, dust **Trace gases** Methane emission and

Legend



e.g. biogenic volatile, fire or methane emissions

permafrost