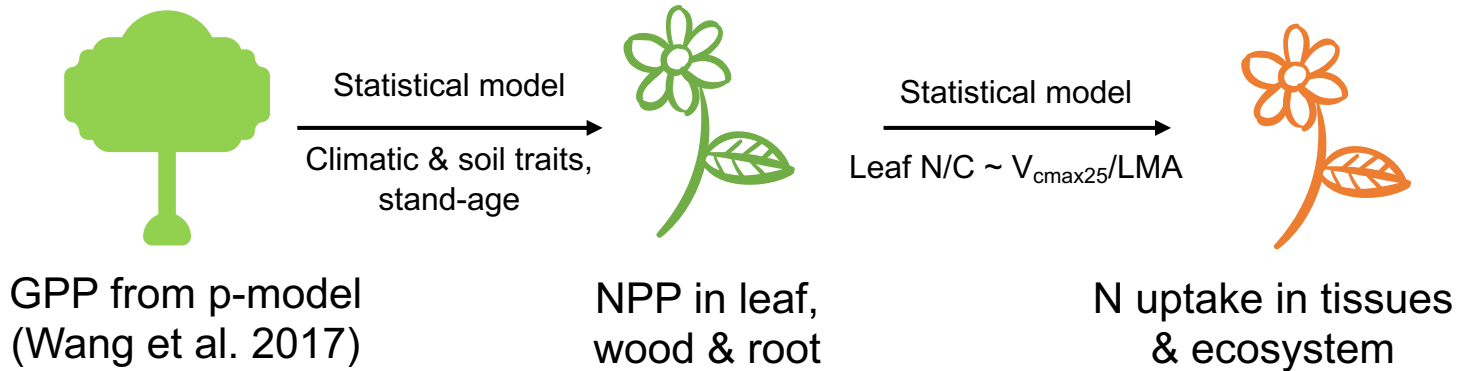


Combining diverse data for the quantification of terrestrial carbon and nitrogen allocations

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Summary: Plant adaptations result in higher ANPP, leaf NPP and leaf N flux under warmer, wetter, more abundant light and N-rich soil conditions → such environment will support higher rate of photosynthesis with greater N investment in the leaf.

Statistical model: using comprehensive datasets of NPP in tissues & measured traits.

Global simulations: using global gridded data for those covariates.

Forest statistical models:

$\text{Logit NPP/GPP} \sim \text{C:N} + \text{age} + (\text{AET/PET}) + \text{fAPAR}$

$\text{Logit ANPP/GPP} = \text{C:N} + \text{age} + (\text{AET/PET}) + \text{fAPAR}$

$\text{Logit NPP}_{\text{leaf}} / \text{ANPP} = \text{PPFD} + T_g + \text{vpd}$

$\text{Leaf N}_{\text{mass}} \sim (\text{Vcmax25/LMA})$

$\text{logit NRE} = T_g + \ln \text{vpd}$ (-) (+)

