

Example

Level of complexity

Abstraction



Detail

$$X(t) = S(X, t) - C(X, t)X(t)$$

Nonlinear kinetics

$$X(t) = BU(t) - A\xi(t)KX(t)$$

Globally Fixed
value

$f(\text{PFT})$

Static vegetation
distribution

$f(\text{DV})$

Fixed value with
vegetation type

$f(\text{trait})$

1

Mass balance, rate heterogeneity
time-dependent drivers

2

Plant allocation, environmental modifier,
donor pool-controlled transfer

3

Mortality rate varies with plant
functional type (PFT)

4

Mortality rate varies with dynamic
vegetation (DV), such as ED, PPA, FATES

5

Connecting plant and microbial traits to
rate of mortality or decomposition