

Example

Abstraction



Detail

$$x(t) = s(x, t) - c(x, t)x(t)$$

Nonlinear kinetics

$$x(t) = BU(t) - \underline{A}(t)KX(t)$$

Globally Fixed value
 $f(PFT)$

Static vegetation
distribution
 $f(DV)$

Fixed value with
vegetation type
 $f(trait)$

Level of complexity

- 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